Exploring Moderators of the Relationship Between Maladaptive Perfectionism and Eating Disorder Symptomatology Among College Women

A Senior Honors Thesis

Presented in Partial Fulfillment of the Requirements for graduation

with distinction in Psychology in the undergraduate colleges

of the Ohio State University

by

Samantha Koch

The Ohio State University
June 2006

Project Advisor: Professor Tracy L. Tylka, Department of Psychology

Abstract

In recent years, the relationship between eating disorder symptomatology and perfectionism has been the subject of much study; however, research has not been consistent on whether a relationship exists between these two variables. Therefore, the present study investigated whether third variables (i.e., body surveillance, body shame, and self-esteem) moderated this relationship with 307 college women. Hierarchical multiple regression analyses indicated that the proposed variables did not moderate the relationship between maladaptive perfectionism and eating disorder symptomatology. However, it was noted that maladaptive perfectionism directly contributed unique variance to eating disorder symptomatology above and beyond the variance of the proposed moderators, suggesting that it is a unique predictor of disordered eating for college women.

Exploring Moderators of the Relationship Between Maladaptive Perfectionism and Eating Disorder Symptomatology Among College Women

In recent years, perfectionism has been identified as a variable associated with multiple negative psychological outcomes, including depression (Rice, Ashby, & Slaney, 1998), low self-esteem (Preusser, Rice, & Ashby, 1994), and eating disorder symptomatology (Axtell & Newlon, 1993). Perfectionism has been conceptualized as a multidimensional trait with adaptive (normal) and maladaptive (neurotic) dimensions (Hamanchek, 1978; Flett & Hewitt, 2002). According to Hamanchek (1978, p. 27), normal perfectionists are those who set high expectations for themselves, but refrain from excessively harsh self-evaluation: "People like this want and need approval as much as anyone else. They interpret it as an additional good feeling on top of their own and use it as encouragement to continue on and even improve their work." Neurotic perfectionists, however, set similarly high expectations, yet severely criticize themselves for anything short of absolute perfection. In fact, according to Hamanchek (1978, p. 27), "[Neurotic perfectionists] are unable to feel satisfaction because in their own eyes they never seem to do things good enough to warrant that feeling."

Research suggests that adaptive perfectionism has psychological benefits. This type of perfectionism may lead to excellence and rewards for meeting such excellence. Furthermore, adaptive perfectionism may not be correlated with psychological distress (Slade & Owens, 1998). In one of the first studies to distinguish between adaptive and maladaptive perfectionism, Frost et al.., found that adaptive perfectionism was positively correlated with positive affect and not correlated with negative affect (Frost, Heimberg, Holt, Mattia, & Neubauer, 1993). The authors further noted that adaptive perfectionism represents the "adaptive aspect of personal motivation" (Frost et al., 1993); this observation is underscored in a study which found adaptive

perfectionism to be associated with higher self-confidence and competitiveness in a sample of undergraduate women (Hill, McIntire, & Bacharach, 1997). Given the apparent advantages of adaptive perfectionism, the present study will not focus on this dimension of perfectionism.

The present study is instead designed to address maladaptive perfectionism, which has been shown to have multiple negative psychological correlates. The excessive self-criticism unique to maladaptive perfectionism may have a negative impact on a woman's eating habits, such as excessive dieting and disordered eating. The present study will conceptualize eating behavior along a continuum of degree, with one extreme of this continuum reflecting symptomatology characterized by clinical eating disorders and the other end reflecting the absence of such symptomatology. Women can fall at various points along this continuum, with a number of women falling in between these extremes as they display some, but not all, of the characteristics of clinical eating disorders. Conceptualizing eating disorders along a continuum has received increased attention in the past three decades (e.g., Mintz & Betz, 1988; Tylka & Subich, 1999), as various degrees of eating disorder symptomatology can be identified among young women on college campuses (Pyle, Halvorson, & Mitchell, 1991).

In recognition of the seriousness and prevalence of eating disorder symptomatology among college women, many epidemiological studies have focused on the link between perfectionism and eating disorder symptomatology. In 1995, a study indicated women with perfectionism appear to require themselves to meet specific body standards which they derive from others (Hewitt, Flett, & Ediger, 1995). Similarly, researchers found in several samples that college- aged women with eating disorders exhibit higher levels of maladaptive perfectionism in comparison with non-eating disordered populations (Ashby, Rice, & Martin, 1998). The results

of two studies of anorexic and healthy females showed that anorexics scored significantly higher than healthy females on two measures of maladaptive perfectionism (Halmi, et al.., 2000).

However, although many researchers found a positive correlation between maladaptive perfectionism and eating disorder symptomatology, this result is not entirely conclusive. Multiple studies have reported little or no correlation between the two variables (Alvarez Franco, Macilla, & Vazquez, 2003; Escarria & Haro, 2000; Tylka & Subich, 1999) in populations of women across the eating disorder continuum. The different outcomes obtained in these studies lead to the possibility that other variables moderate this relationship.

No published study has addressed the role of moderating variables in the relationship between eating disorder symptomatology and maladaptive perfectionism. In order to more fully understand this association, the present research considers the possible role of three variables which may moderate (by strengthening or buffering) the relationship between maladaptive perfectionism and disordered eating among women. These variables are body surveillance, body shame, and self-esteem. Provided next is a rationale for the inclusion of each variable in the proposed moderational model.

Body Surveillance

In their theory of objectification, Fredrickson and Roberts (1997) asserted that women in Western culture are constantly faced with sexual objectification, in which "they are treated *as bodies*" (p.175) available for the pleasure and judgment of others. Objectification may come from a variety of sources, although the media has been identified as one especially salient source that perpetuates an unattainable thinness ideal (Calogero, Davis, & Thompson, 2005). In response to this kind of sexual objectification, it has been proposed that Western women often participate in self-objectification. Self-objectification is characterized by an individual's

internalization of the perspectives of others; in response, the individual increasingly monitors her own appearance (Calogero et al., 2005). Previous research has shown a strong relationship between self-objectification and eating disorder symptomatology (Calogero et al., 2005; Tylka & Hill, 2004; Tiggemann & Kuring, 2004).

It is well documented that focusing attention on the body is strongly related to eating disorder symptomatology (Striegel-Moore, Silberstein, & Rodin, 1986; Tylka, 2004). Focusing on and monitoring body appearance may provide an avenue for maladaptive perfectionism to influence eating disorder symptomatology, such that women who channel their maladaptive perfectionism toward their body appearance may be more susceptible to higher levels of eating disorder symptomatology than women who channel their maladaptive perfectionism in other areas (e.g., academics). Therefore, it is hypothesized that women with high levels of maladaptive perfectionism who also habitually monitor their body appearance will exhibit higher levels of eating disorder symptomatology than women with high levels of maladaptive perfectionism but who do not habitually monitor their body appearance. Thus, self-objectification via body surveillance is expected to moderate by strengthening the relationship between perfectionism and eating disorder symptomatology.

Body Shame

Past research indicates that body shame is a consequence of self-objectification/ body surveillance among college women (McKinley & Hyde, 1996; Noll & Fredrickson, 1998; Tiggemann & Slater, 2001). Body shame results from an individual's perception of his or her physical shortcomings in comparison to a societal ideal. In response to these shortcomings, the individual may be motivated to diet or use other methods to control his or her weight. This implies that women exhibiting body shame may be at a greater risk for eating disorder

symptomatology (Fredrickson & Roberts, 1997; Noll & Fredrickson, 1998; Tiggemann & Slater, 2001).

Similar to body surveillance, feelings of body shame may provide an avenue for maladaptive perfectionism to influence eating disorder symptomatology, such that women who direct their perfectionism toward their bodies and feel shame as a result of not being able to live up to a nearly impossible thin-ideal standard may be more susceptible to higher levels of eating disorder symptomatology than women who express their maladaptive perfectionism in other areas (e.g., academics). It is therefore hypothesized that body shame will moderate by strengthening the relationship between perfectionism and eating disorder symptomatology. More precisely, women with high levels of maladaptive perfectionism who also display high levels of body shame will exhibit higher levels of eating disorder symptomatology than women with high levels of maladaptive perfectionism and low levels of body shame.

Self-Esteem

The third variable of interest is self-esteem. Self-esteem has been described as an individual's judgment of his or her own self-worth (Rosenberg, 1965). Low self-esteem has been associated with a number of negative consequences including poor academic performance, depression, and juvenile delinquency (Rosenberg, Schooler, & Schoenbach, 1989). It is also widely considered to be a predisposing factor of disordered eating (Fisher, Pastore, Schneider, & Pegler, 1994; Sassaroli & Ruggiero, 2005; Vitousek & Hollon, 1990).

Unfortunately, low self-esteem is common to many female adolescents and young adults. A study of 15-16 year olds found classified 43% of the females as having low self-esteem; this number seems to especially increase during life transitions (Button, 1997). Maladaptive perfectionists appear to experience low self-esteem as a result of the "failures" which they feel

may arise when their achievements fall short of expectations. In response, some perfectionists may compensate for reductions in self-esteem by enforcing dietary restrictions and paying increased attention to their figures (Sassaroli & Ruggiero, 2005).

Indeed, self-esteem has been found to buffer the relationship between environmental stress and psychological distress (Tylka & Phan, in press). Based on this finding and the aforementioned research regarding maladaptive perfectionism, the present study hypothesizes that women with high levels of maladaptive perfectionism, in combination with low levels of self-esteem, will display higher levels of eating disorder symptomatology in comparison with females with high levels of maladaptive perfectionism and high levels of self-esteem. Thus, it is expected that self-esteem will buffer the relationship between maladaptive perfectionism and eating disorder symptomatology among college women.

Summary

The goal of the present study is to more fully identify the nature of the relationship existing between maladaptive perfectionism and disordered eating. As previously mentioned, body shame, body surveillance, and self-esteem may act as moderators of this relationship by strengthening (i.e., body surveillance and body shame) or buffering (i.e., self-esteem) this association. Although recent studies have examined perfectionism in moderation models (e.g. Chang & Rand, 2000; Chang & Sanna, 2001; Wei, Mallinckrodt, Russell, & Abraham, 2004), no researchers to date have investigated moderators of the relationship between multidimensional perfectionism and disordered eating. Evidence in support of such moderators may have implications for the treatment and testing of eating disorder patients and the mental health community as a whole.

Method

Participants

Participants were 312 female undergraduate students (mean age =18.5, standard deviation= 1.32) at The Ohio State University. Roughly 79% of the sample identified themselves as Caucasian, 7% as African American, 5.6% as Asian American, and 3.6% as Latina. Women in the remaining part of the sample identified themselves as "Other": most women in this group specified themselves as Asian. Each woman was enrolled in an introductory psychology course and elected to participate in this study as a means of obtaining course credit through Ohio State's REP program.

Variables and Measures

Maladaptive perfectionism. The Almost Perfect Scale- Revised (Slaney, Rice, Mobley, Trippi, & Ashby, 1992) measures adaptive and maladaptive levels of perfectionism. It is a 23 item scale (e.g. "My best just never seems good enough for me") with three subscales: the Standards subscale (see Appendix B, items 13-19), the Discrepancy subscale (see Appendix B, items 1-12), and the Order subscale (see Appendix B, items 20-23). Given the present study's focus on maladaptive perfectionism, special attention was paid to the Discrepancy subscale which measures this specific dimension of perfectionism (e.g. "I hardly ever feel that what I've done is good enough.") All subscales are rated on a 7 point gradient, with 1 indicating *strongly disagree* and 7 indicating *strongly agree*. Internal consistency reliability has been demonstrated, with alphas of 0.82 for the Standards subscale, 0.87 for the Discrepancy subscale, and 0.86 for the Order subscale (Rice & Slaney, 2002). Convergent validity has been shown with the Comparative Feeling of Inferiority Index and other perfectionism measures (Ashby & Kottman, 1996). Alpha for the present study was .89.

The Perfectionistic Self-Presentation Scale (see Appendix C) is a 27 item measure with three components of items, each of which measures maladaptive perfectionism: perfectionistic self-promotion, nondisplay of imperfection, and nondisclosure of imperfection. A sample item is "I need to be seen as perfectly capable in everything I do." Participants address each item on a 7 point scale, with 1 as *strong disagreement* and 7 as *strong agreement*. A higher score indicates a higher level of perfectionistic self-presentation. Internal consistency has been shown to be high, with alpha equal to 0.86 (Hewitt et al., 1995). Similarly, the scale's solid convergent validity has been verified (Hewitt et al., 2002). The present study reported an alpha of .92.

Body surveillance. Body surveillance may be defined as the degree to which a female monitors and gives attention to the way her body looks. The Body Surveillance subscale of the Objectified Body Consciousness Scale (McKinley & Hyde, 1996) quantifies this construct (see Appendix D.) This subscale contains eight items (e.g. "I rarely think about how I look") that are rated on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*.) Answers are averaged to obtain a total score, with higher scores indicating greater body surveillance. Research has demonstrated the strong internal consistency reliability of this subscale ($\alpha=0.89$), its test-retest reliability within a two-week period ($r=0.79$), and its convergent validity via its relation to public self consciousness ($r=0.79$) in a sample of undergraduate women (McKinley & Hyde, 1996). Its alpha level for the present study was .78.

Body shame. The Body Shame subscale of the Objectified Body Consciousness Scale (McKinley & Hyde, 1996) measures a woman's negative beliefs regarding failure to comply with society's expectations of her body (see Appendix E). The subscale has eight items (e.g. "When I'm not the size I think I should be, I feel ashamed") which are scored on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*). Higher average scores represent greater body shame in

response to objectification. Research shows good internal consistency (α=0.75), test-retest reliability over two-weeks (*r*=0.79), and convergent validity, as it was negatively correlated with the Body Esteem Scale (*r*=-0.46) (McKinley & Hyde, 1996). Alpha for the present study was .72.

Self-esteem. The Rosenberg Self Esteem Scale (Rosenberg, 1965) is a 10-item scale used to assess an individual's global self esteem (see Appendix F). For example, one item states "I feel that I am a person of worth, at least on an equal plane with others." Participants responded on a scale of 1 (*strongly disagree*) to 4 (*strongly agree*.) Items were averaged to obtain a total score, with higher scores reflecting greater self esteem. This scale has been shown to be related to other measures of self esteem, and has also demonstrated good internal consistency reliability (α=0.89) and test-retest reliability over a period of two-weeks (*r*=0.85). The alpha reported in this study was .79.

Eating disorder symptomatology. The Eating Attitudes Test- 26 (Garner, Olmsted, Bohr, & Garfinkel, 1982) is a 26 item scale used to measure levels of eating disorder symptomatology (see Appendix G.) Items (e.g., "I avoid eating when I am hungry") are rated on a scale of 1 (*never*) to 6 (*always*) and are averaged for a total score. A high score indicates a greater degree of eating disorder symptomatology. In 1999, Mazzeo tested the scale's internal consistency reliability and test-retest reliability over three weeks among college women, finding α= 0.91 and *r*= 0.86, respectively. Finally, the Eating Attitudes Test- 26 has been significantly positively correlated with measures of drive for thinness (Mazzeo, 1999). Alpha for this study was .91.

Procedure

Each study session consisted of 25-50 women. Participants were administered the questionnaires upon arrival and completed them individually. Questionnaires were

counterbalanced to control for order effects. They were presented in one of two versions; half the participants received the first version and half the participants received the second. The order of the first version was as follows: Rosenberg Self Esteem Scale, Body Surveillance subscale of the Objectified Body Consciousness Scale, Body Shame subscale of the Objectified Body Consciousness Scale, Perfectionistic Self-Presentation Scale, Almost Perfect Scale- Revised, and Eating Attitudes Test-26. The order of the second version was as follows: Almost Perfect Scale-Revised, Perfectionistic Self-Presentation Scale, Body Surveillance subscale of the Objectified Body Consciousness Scale, Body Shame subscale of the Objectified Body Consciousness Scale, Rosenberg Self Esteem Scale, and Eating Attitudes Test-26.

Prior to participation, each woman was informed that she could stop the study at any time if the study subject matter caused distress. Upon completion, each woman was given a list of resources she could contact in order to address any concerns regarding the present study. The resources included the locations and phone numbers of the Counseling and Consultation Center and the Psychological Services Center, both of which offer counseling resources for undergraduate students of The Ohio State University.

Results

Descriptive and Preliminary Analyses

Measures with more than 25% of data points missing were dropped from the study. Otherwise, missing data points were handled by substituting participants' mean scale score for the missing value. Five women were excluded due to insufficient completion; as such, 98.4% of participants completed the study. Table 1 presents the correlations, means, and standard deviations for the various measures used in this study. Maladaptive perfectionism was measured through two measures: the Perfectionistic Self-Presentation Scale (PSPS) and the Almost Perfect

Scale-Revised (APS-R). As such, HMR was performed separately using scores of each measure. Maladaptive perfectionism, as measured by the APS-R, was moderately related to body shame in the positive direction and self-esteem in the negative direction. It was slightly to moderately related to body surveillance. Maladaptive perfectionism, as measured by the PSPS, was moderately to strongly related to body surveillance. It was strongly related to body shame in the positive direction, and moderately related to self-esteem in the negative direction. Eating disorder symptomatology was found to be strongly related to both body shame and body surveillance. It was found to be moderately related to self-esteem in the negative direction. The correlation between eating disorder symptomatology and maladaptive perfectionism was also examined. A moderate to strong correlation was found between the two variables, for both measures of maladaptive perfectionism; however, a slightly stronger correlation was found between eating disorder symptomatology and perfectionism as measured by the PSPS.

Hierarchical Multiple Regression (HMR)

Hierarchical multiple regression was used to examine whether the proposed variables of body surveillance, body shame, and/ or self-esteem moderated the relationship between maladaptive perfectionism and eating disorder symptomatology. This analysis (HMR) is recognized as the best method to detect the presence or absence of moderating effects (Aiken & West, 1991). Data was entered in two steps in a procedure outlined by Aiken and West (1991). First, the predictor (e.g., maladaptive perfectionism score) and proposed moderator were entered at Step 1. Second, the predictor and proposed moderator were multiplied together and this interaction term was entered at Step 2. A statistically significant ΔR^2 noted at Step 2 indicates the presence of a moderation effect. It is recommended that ΔR^2 values at or above .02 signify unique contributions to the overall criterion (Cohen, 1992). However, given the notoriously

difficult nature of moderation detection, the use of liberal alphas (i.e., αs of .10 or .25) is recommended (McClelland & Judd, 1993). Due to the number of regressions used in the present study (i.e., 3), alpha was set at .033, or .10/3. Results from each analysis are presented in Table 2.

Body shame. I first examined whether body shame moderated the relationship between maladaptive perfectionism (as measured by the PSPS) and eating disorder symptomatology. In contrast to my original hypothesis, body shame did not moderate the maladaptive perfectionism-eating disorder symptomatology relation, β = .182, t(305) = .710, $\Delta R^2 = 0.001$. I next examined whether body shame moderated the relationship between maladaptive perfectionism, as measured by the APS-R, and eating disorder symptomatology. It was found that body shame does not moderate this relationship, β = ..395, t(305) = 1.287, $\Delta R^2 = 0.003$.

Body surveillance. Contrary to expectations, body surveillance did not moderate the relationship between eating disorder symptomatology and maladaptive perfectionism, as measured by the PSPS, β = ..187, t(305) = .586, $\Delta R^2 = 0.001$. There was also no moderation effect between eating disorder symptomatology and maladaptive perfectionism, as measured by the APS-R, β = .828, t(305) = 2.359, $\Delta R^2 = 0.011$.

Self-esteem. No significant moderating effect of self-esteem was found on the relationship between eating disorder symptomatology and maladaptive perfectionism as measured by the PSPS, β = .135, t(305) = .461, $\Delta R^2 = 0.001$. Self-esteem was also not a moderator of the relationship between eating disorder symptomatology and maladaptive perfectionism, as measured by the APS-R, β = .401, t(305) = 1.229, $\Delta R^2 = 0.004$.

Post-hoc Analyses.

Given the correlational significance between maladaptive perfectionism and eating disorder symptomatology, a post-hoc analysis was used to determine whether maladaptive perfectionism accounted for unique variance in eating disorder symptomatology above and beyond the variance accounted for by the other predictors. Body shame, body surveillance, and self-esteem were entered at the first step, and maladaptive perfectionism (measured by both the APS and PSPS) was entered at the second step, in the prediction of disordered eating. Results indicated that maladaptive perfectionism (as measured by the APS-R) predicted unique variance in eating disorder symptomatology above and beyond the variance of body shame, body surveillance, and self-esteem, $\Delta R^2 = 0.023$. When measured by the PSPS, maladaptive perfectionism did not predict unique variance in eating disorder symptomatology above and beyond the variance accounted for by body shame, body surveillance, and self-esteem, $\Delta R^2 = 0.003$.

Discussion

The present study sought to further explain the oft-researched relationship between maladaptive perfectionism and eating disorder symptomatology through investigating whether third variables moderate this relationship. Past researchers presented conflicting evidence regarding whether a relationship exists between perfectionism and eating disorder symptomatology (e.g. Halmi et al., 2000; Tylka & Subich, 1999). These conflicting findings suggest that the variables may be related only in the context of a more complex statistical model. Specifically, perhaps the two variables are related only when other psychological variables moderate (by strengthening or buffering) the original relationship. Based on the previous findings of multiple investigators (e.g. Fredrickson & Roberts, 1997; McKinley and Hyde, 1996;

Rosenberg, 1965) body shame, body surveillance, and self-esteem were identified and investigated as potential moderators of this relationship.

In contrast to the original hypotheses, findings indicated that body shame, body surveillance, and self-esteem did not moderate the relationship between maladaptive perfectionism and eating disorder symptomatology. However, a positive correlation was found to exist between the two variables; specifically, maladaptive perfectionism was found to uniquely predict eating disorder symptomatology in addition to contributions in eating disorder symptomatology made by body shame and body surveillance. This finding upholds past research by Hewitt, Flett, and Ediger (1995), in which women exhibiting maladaptive perfectionism were more likely to adhere to rigid body standards. In their 1999 study, Ashby, Kotteman, and Schoen garnered further support for this correlation when their results indicated that a sample of women with eating disorder symptomatology exhibited higher levels of maladaptive perfectionism than a control group. Thus, while body surveillance, body shame, and self-esteem were not found to moderate this relationship, findings were consistent with some past research involving a significant relationship between maladaptive perfectionism and eating disorder symptomatology.

Implications for Theory

The present study attempts to answer a call by researchers (e.g., Hotelling, 2001; Striegel-Moore & Cachelin, 2001) for multidimensional models aimed at identifying how variables combine and interact to predict eating disorder symptomatology, instead of merely identifying correlates of disordered eating. The current theoretical framework regarding maladaptive perfectionism and eating disorder symptomatology focuses strictly on correlations between the two variables. The present study, therefore, provides groundwork for the identification of further variables which may impact the relationship. Furthermore, variables

stemming from both sociocultural factors (i.e. body shame and body surveillance) and personality factors (i.e. self-esteem, maladaptive perfectionism) were examined in this study. As asserted by numerous theorists (e.g. Mintz & Wright, 1993; Tylka & Subich, 2004), eating disorders are multidimensional in nature and thus should be examined in relation to a variety of variable types. Although the original hypotheses were not supported, it is imperative that more complex models of the maladaptive perfectionism/ eating disorder symptomatology relationship are explored in order to understand more fully how perfectionistic tendencies contribute to eating disorder symptomatology.

Results of the study garner further support for objectification theory (Fredrickson & Roberts, 1997). Correlations were found between body surveillance/ body shame and eating disorder symptomatology, supporting claims by researchers (e.g. Fredrickson & Roberts, 1997; Noll & Fredrickson, 1998; Tiggemann & Slater, 2001) that women exhibiting body shame and/ or body surveillance are at greater risk for displaying eating disorder symptomatology.

Finally, results of the current study indicate a lack of convergent validity between the Almost Perfect Scale-Revised and the Perfectionistic Self-Presentation Scale. Although both are considered to measure levels of maladaptive perfectionism (Slaney et al., 1992; Hewitt et al., 1995), results indicate that both are significantly contributing

Implications for Research

The present study is unique in that it is the first to attempt to identify additional variables impacting the maladaptive perfectionism- eating disorder symptomatology relationship. In the future, researchers may wish to explore a mediational model with the variables of the present study. Mediation implies a causal sequence of variables; it may be possible that, for instance, high levels of maladaptive perfectionism lead to high levels of body surveillance and/or body

shame which then results in higher levels of eating disorder symptomatology. Given the results of the present study (and the obvious correlations between the proposed moderators and both eating disorder symptomatology and maladaptive perfectionism,) mediation should be explored.

Further, researchers may consider mediational or moderational models involving additional variables which have previously been associated with perfectionism and/ or eating disorder symptomatology. Two variables to consider may be depressed mood and generalized anxiety, as multiple studies have identified a positive correlations between these variables and maladaptive perfectionism (.g. Ashby, Rice, & Martin, 2006; Delegard, 2005; Flett, Blankstein, Occhiuto, & Koledin., 1994), as well as eating disorder symptomatology (e.g. Delegard, 2005; Fisher, Pastore, Schneider, & Pegler, 1991; Zaider et al., 2000). However, despite the prevalence of depression and anxiety within the literature of perfectionism and eating disorder symptomatology, to date these studies have used only a bivariate correlational design. A more complex model should be incorporated, such as the one proposed in the present study. Specifically, researchers should examine depression as a possible mediator or moderator of the maladaptive perfectionism- eating disorder symptomatology relationship. Support is found for examination of both models.

It may be possible that depression moderates (by strengthening) the predictor-criterion relationship. Research indicates that self-criticism and feelings of inadequacy are highly associated with depression (Blatt & Zuroff, 1992; Nietzel & Harris, 1990). These feelings are similar to those associated with maladaptive perfectionism (Hamanchek, 1978). Perhaps depression enhances the negative feelings a woman who already exhibits maladaptive perfectionism experiences (i.e., the self-criticism she experiences as a result of the depression may be magnified due to her perfectionism). Thus, if a woman focuses on her body and attempts

to overcome her feelings of inadequacy by striving for a physical ideal, she may be at increased risk for eating disorder symptomatology.

Conversely, it is also possible that depression may mediate the predictor-criterion relationship, indicating an association between the three variables. In this sense, an individual's need for perfection (especially in the physical sense), and her inability to attain a physical ideal, may actually lead to depression. Depression has repeatedly been associated with a loss of appetite (Paykel, 1977; Casper et al., 1985; Mitchell et al., 1992), and thus, women with depression, whom also have a history of perfectionism, may be more likely to develop eating disorder symptomatomatology as a means of overcoming their feelings of self-loathing.

It may also be beneficial for researchers to explore more fully the relationship between adaptive perfectionism and eating disorder symptomatology. Although previous research (e.g. Slade & Owens, 1998; Frost et al., 1993) has shown no relationship between adaptive perfectionism and eating disorder symptomatology directly, to date no research exists on the impact of negative psychological constructs on the relationship between adaptive perfectionism and eating disorder symptomatology. It would be interesting to identify whether the affect of negative variables is enough to overcome the positive effects of adaptive perfectionism, and thus contribute to disordered eating. For example, studies could be conducted to uncover whether a woman who scores high on adaptive perfectionism and body surveillance would be more likely to develop eating disorder symptomatology than a woman with low levels of adaptive perfectionism and high levels of body surveillance.

It would also be interesting to replicate the present study with a group of women who score highly on measures of eating disorder symptomatology. Due to the self-selective nature of the study, women with clinical eating disorders may have been less likely to participate in the

study. In fact, three women did ask to be removed from the study due to concerns regarding the subject matter of the study. Thus, it may be valuable to ascertain whether results of a study of women with clinical eating disorders may yield different conclusions than those of the current study.

Finally, more research must be conducted regarding the Almost Perfect Scale-Revised and the Perfectionistic Self-Presentation Scale. Although both are considered to measure levels of maladaptive perfectionism (Slaney et al., 1992; Hewitt et al., 1995), results indicate that they must be measuring at least slightly different constructs, as evidenced by the fact that only the APS-R predicts unique variance in eating disorder symptomatology above and beyond the variance accounted for by body shame, body surveillance, and self-esteem. One hypothesis may be that the APS-R measures internalized maladaptive perfectionism, while the PSPS measures a woman's desire to be seen as perfect, thus measuring her externalized perfectionism. In order to understand the type of perfectionism measured, researchers should conduct further examination into the two scales.

Implications for Practice

Results of the present study indicate a need for practitioners to address their clients' perfectionistic tendencies in conjunction with other variables (i.e., body surveillance, body shame, self-esteem) in order to more effectively treat their eating disorder symptomatology. Because both maladaptive perfectionism and eating disorder symptomatology were related to body surveillance and body shame in the positive direction, and self-esteem in the negative direction, counseling which targets these specific variables may be beneficial to women struggling with perfectionism and/ or disordered eating. Specifically, practitioners may choose to utilize the ideas of objectification theory in order to evaluate a client's perception of herself

and how societal objectification may impact her feelings of self-worth and value. Although correlational in design, the present study provides preliminary support that the identification and amelioration of these key variables may be associated with lower maladaptive perfectionism and eating disorder symptomatology.

Limitations

Limitations of the present study should be addressed. Participants of the study were primarily young, middle-class, Caucasian women, seeking an undergraduate degree. As such, generalization of the present findings to individuals of other age, socioeconomic, or ethnic groups is limited. The self-report manner of the study may be another limitation, in that it is susceptible to erroneous reporting and the correlational design precludes any statement about the causal direction between the variables. Further, due to the lengthiness of the questionnaires, the impact of fatigue may be a limitation.

An additional limitation of the present study lies in the nature of a moderational model and the difficulty in detecting this type of effect. Detection of moderators is difficult for several reasons (see McClelland and Judd [1993] for a full review). First, the lack of variable control in nonexperimental research designs increases the likelihood of measurement error. Second, it is difficult to detect interaction effects in this type of design because the hypothesized moderating variables usually do not change the direction of a relation between variables. Thus, the percentages of variance in eating disorder symptomatology accounted for by body shame, body surveillance, and self-esteem (if a moderational effect did exist) would be exceedingly low: usually 1%-3%.

Conclusion

The present study supports previous research (e.g. Ashby et al., 1998; Halmi et al., 2000; Hewitt et al., 1995) indicating a positive relationship between maladaptive perfectionism and eating disorder symptomatology. The study expands previous research and theory on maladaptive perfectionism and eating disorder symptomatology by (a) demonstrating that maladaptive perfectionism predicts eating disorder symptomatology above the contributions accounted for by body shame, body surveillance, and self-esteem, and by (b) highlighting the need for more complex models of the relationship between maladaptive perfectionism and disordered eating. Further, results of the current study provide support for objectification theory (Fredrickson & Roberts, 1997) and the negative impact of body surveillance and body shame, as well as self-esteem. In sum, the present study added incrementally to previous theory and research on eating disorder symptomatology by examining the method by which maladaptive perfectionism impacts disordered eating levels.

References

Aiken, L.S., & West, S.G. (1991). *Multiple regression: Testing and interpreting interactions.* Thousand Oaks, CA: Sage.

Alvarez, R.G., Franco, P.K., Mancilla, D.J.M., & Vázquez, A.R. (2003). Factores cognitivo-conductuales asociados a sintomatología de trastorno alimentario en una muestra de estudiantes mexicanas. In L.E. Aragón, & A. Silva (Eds.), *Evaluación psicológica en el ámbito clínico*. Mexico: Pax Mexico.

Ashby, J.S.& Kottman, T. (1996). Inferiority as a distinction between normal and neurotic perfectionism. *Individual Psychology: Journal of Adlerian Theory, Research & Practice*, 52(3), .237-245.

Ashby, J.S., Kottman, T., & Schoen, E. (1998). Perfectionism and eating disorders reconsidered. *Academic Search Premier,* 20.

Ashby, J.S., Rice, K.J., & Martin, J.L. (2006). Perfectionism, shame, and depressive symptoms. *Journal of Counseling & Development*, 84(2), 148-156.

Axtell, A. & Newlon, B.J. (1993). An analysis of Adlerian life-themes in bulimic women. *Individual Psychology: The Journal of Adlerian Theory, Research, & Practice, 49*, 58-67.

Beck, A. T. (1967). Depression: Clinical, experimental, and theoretical aspects. New York: Hoeber Medical Division, Harper and Row.

Blatt, S., & Zuroff, D. (1992). Interpersonal relatedness and self-definition: Two prototypes for depression. Clinical Psychology Review, 12, 527–562.

Bruch, H. (1973). Eating disorders. New York: Basic Books.

Button, E. J., Loan, P., Davies, J., & Sonuga-Barke, E.J. S. (1997). Self-esteem, eating problems, and psychological well-being in a cohort of schoolgirls aged 15-16: A questionnaire and interview study. *International Journal of Eating Disorders*, 21(1), 39-47.

Chang, E. C. & Sanna, L.J. (2001). Negative attributional style as a moderator of the link between perfectionism and depressive symptoms: Preliminary evidence for an integrative model. *Journal of Counseling Psychology*, 48(4),490-495.

Calogero, R.M., Davis, W.N., & Thompson, J.K. (2005). The role of self-objectification in the experience of women with eating disorders. *Sex Roles, 52*, 43-50.

Casper, R.C., Redmond Jr., D.E., Katz, M.M., Schaffer, C.B., Davis, J.M., & Koslow, S.H. (1985). Somatic symptoms in primary affective disorder. Presence and relationship to the classification of depression. Arch. Gen. Psychiatry 42, 1098–1104.

Chang, E.C., & Rand, K.L. (2000). Perfectionism as a predictor of subsequent adjustment: Evidence for a specific diathesis-stress mechanism among college students. *Journal of Counseling Psychology*, *47*, 129-137.

Delegard, D.K. (2005). The role of perfectionism in anxiety, depression, self-esteem and internalized shame [Electronic version]. Dissertation Abstracts International: Section B: The Sciences and Engineering, 65(7-B), 3702.

Escarria, R., & Haro, H.M. (2000). Anorexia o bulimia y factores de riesgo en residents de una universidad. Tesis de Maestría, UANL-Facultad de Salud Pùblica y Nutrición, Mexico.

Fava, G.A. (1997). Conceptual obstacles to research progress in affective disorders. *Psychotherapy and Psychosomatics*, 66(6),283-285.

Fisher, M., Pastore, D., Schneider, M., & Pegler, C. (1994). Eating attitudes in urban and suburban adolescents. *International Journal of Eating Disorders*, 16(1), 67-74.

Fisher, M., Schneider, M., Pegler, C., & Napolitano, B., (1991). Eating attitudes, health-risk behaviors, self-esteem, and anxiety among adolescent females in a suburban high school. *Journal of Adolescent Health*, 12(5), 377-384.

Flett, G.L. & Hewitt, P.L. (2002). *Perfectionism: Theory, research, and treatment*. Washingon, D.C.: American Psychological Association.

Flett, G.L..,Blankstein, K.R., Occhiuto, M., & Koledin, S. (1994). Depression, self-esteem, and complex attributions for life problems. *Current Psychology: Developmental, Learning, Personality, Social* , 13(3), 263-28.

Fredrickson, B.L., & Roberts, T.A. (1997). Objectification theory: Toward understanding women's lived experiences and mental healthy risks. *Psychology of Women Quarterly*, *21*, 173-206.

Frost, R.O., Heimberg, R.G., Holt, C.S., Mattia, J.I., & Neubauer, A.L. (1993). A comparison of two measures of perfectionism. *Personality and Individual Differences*, *14*, 119-126.

Garner, D.M., Olmsted, M.P., Bohr, Y., & Garfinkel, P.E. (1982). The Eating Attitudes Test: Psychometric features and clinical correlates *Psychological Medicine*, 12(4), 871-878.

Halmi, K.A., Sunday, S.R., Strober, M., Kaplan, A., Woodside, D.B., & Fichter, M. (2000). Perfectionism in anorexia nervosa: Variation by clinical subtype, obsessionality, and pathological eating behavior. *American Journal of Psychiatry*, *157*, 1799-1805.

Hamanchek, D. E. (1978). Psychodynamics of normal and neurotic perfectionism. *Psychology, 15*, 27-38.

Heinberg, L.J., Thompson, J.K., & Stormer, S. (1995). Development and validation of the Sociocultural Attitudes Towards Appearance Questionnaire. *International Journal of Eating Disorders*, *17*, 81-89.

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

Hewitt, P.L., Flett, G.L., Besser, A., Sherry, S.B., & McGee, B. (2002). Perfectionism is multidimensional: A reply to Shafran, Cooper and Fairburn (2002). *Behaviour Research and Therapy*, (10), 1221-1236.

Hewitt, P. L., Flett, G.L. & Ediger, E.(1995). Perfectionism traits and perfectionistic self-presentation in eating disorder attitudes, characteristics, and symptoms. *International Journal of Eating Disorders, 18*, 317-326.

Hill, R.W., McIntire, K., & Bacharach, V.R. (1997). Perfectionism and the big five factors. *Journal of Social Behavior & Personality,* 12(1), 257-270.

Hotelling, K. (2001). At last! Counseling psychology and eating disorders. *Counseling Psychologist* , 29(5), 733-742.

Mazzeo, S.E. (1999). Modification of an existing measure of body image and preoccupation and its relationship to disordered eating in female college students. *Journal of Counseling Psychology*, *46*, 42-50.

McClelland, G.H., & Judd, C.M. (1993). Statistical difficulties of detecting interactions and moderator effects. *Psychological Bulletin*, *114*, 376-390.

McKinley, N.M., & Hyde, J.S., (1996). The objectified body consciousness scale. *Psychology of Women Quarterly, 20*, 181-215.

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

Mintz, L. B.& Wright, D.M. (1993). Women and their bodies: Eating disorders and addictions. In Ellen Piel Cook (Ed), *Women, relationships, and power: Implications for counseling.* p. 211-246. *Women, relationships, and power: Implications for counseling* (pp. 211-246). Alexandria, VA: American Counseling Association.

Mitchell, P., Parker, G., Jamieson, K., Wilhelm, K., Hickie, I., Brodaty, H., Boyce, P., Hadzi-Pavlovic, D., & Roy, K. (1992). Are there any differences between bipolar and unipolar melancholia? *Journal of Affective Disorders*, 25, 97– 106.

Nietzel, M., & Harris, M. (1990). Relationship of dependency and achievement/autonomy to depression. *Clinical Psychology Review*, 10, 279–297.

Noll, S.M., & Fredrickson, B.L. (1998). A mediational model linking self-objectification, body shame, and disordered eating. *Psychology of Women Quarterly*, *22*, 623-636.

Paykel, E.S. (1977). Depression and appetite. *Journal of Psychosomatics*, 21, 401– 407.

Phan, T. & Tylka, T.L. (in press). Exploring a model and moderators of disordered eating with Asian American college women. *Journal of Counseling Psychology.*

Preusser, K.J., Rice, K.G., Ashby, J.S. (1994). The role of self-esteem in mediating the perfectionism-depression connection. *Journal of College Student Development,* 35(2), 88-93.

Pyle, R.L., Neuman, P.A., Halvorson, P.A., & Mitchell, J.E. (1991). An ongoing cross-sectional study of the prevalence of eating disorders in freshman college students. *International Journal of Eating Disorders,* 10(6), 667-677.

Rice, K.G., Ashby, J.S., & Slaney, R.B. (1998). Self-Esteem as a mediator between perfectionism and depression: A structural equations analysis. *Journal of Counseling Psychology, 45*, 304-314.

Rice, K.G. & Slaney, R.B. (2002). Clusters of perfectionists: Two studies of emotional adjustment and academic achievement. *Measurement & Evaluation in Counseling & Development*, 35(1), .35-48.

Rierdan, J. & Koff, E. (1997). Weight, weight-related aspects of body image, and depression in early adolescent girls. *Adolescence*, 32(127), 615-624.

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Rosenberg, M., Schooler, C., & Schoenbach, C. (1989). Self-esteem and adolescent problems: Modeling reciprocal effects. *American Sociological Review,* 54(6), 1004-1018.

Sassaroli, S., & Ruggiero, G.M. (2005). The role of stress in the association between low self-esteem, perfectionism, and worry, and eating disorders. *International Journal of Eating Disorders*, 37(2), 135-141.

Slade, P.D. & Owens, R. G. (1998). A dual process model of perfectionism based on reinforcement theory. *Behavior Modification, 22*(3), 372-390.

Slaney, R.B., Rice, K.G., Mobley, M., Trippi, J., & Ashby, J.S. (1992). The Revised Almost Perfect Scale. *Measurement & Evaluation in Counseling & Developmen,* 34(3), 130-145.

Striegel-Moore, R.H. & Cachelin, F.M. (2001). Etiology of eating disorders in women. *Counseling Psychologist*, 29(5), 635-661.

Striegel-Moore, R.H., Silberstein, L.R.,Rodin, J. (1986). Toward an understanding of risk factors for bulimia. *American Psychologist* , 41(3), 246-263.

Tiggemann, M., & Kuring, J.K. (2004). The role of body objectification in disordered eating and depressed mood. *British Journal of Clinical Psychology, 43*, 299- 311.

Tiggemann, M., & Slater, A.. (2001). A test of objectification theory in former dancers and non-dancers. *Psychology of Women Quarterly,* 25(1), 57-64.

Tylka, T.L. & Hill, M.S. (1999). Objectification theory as it relates to disordered eating among college women. *Sex Roles, 5*1, 719-730.

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. (2004). Examining a Multidimensional Model of Eating Disorder Symptomatology Among College Women. *Journal of Counseling Psychology*, 51(3), 314-328.

Vitousek, K.B. & Hollon, S.D. (1990). The investigation of schematic content and processing in eating disorders. *Cognitive Therapy and Research,* 14(2), 191-214.

Wei, M., Mallinkrodt, B., Russell, D.W., & Abraham, T.W. (2004). Maladaptive perfectionism as a mediator and moderator between adult attachment and depressive mood. *Journal of Counseling Psychology*, 51(2), 201-212.

Zaider, T.I., Johnson, J. G., & Cockell, S.J. (2000). Psychiatric comorbidity associated with eating disorder symptomatology among adolescents in the community. *International Journal of Eating Disorders*, 28(1), 58-67.

Table 1

Means, Standard Deviations, and Correlations among the Measures (N = 306)

Measures	1	2	3	4	5	6
1. Eating Attitudes Test- 26	----					
2. OBC- Body Shame	.71*	----				
3. OBC-Body Surveillance	.58*	.54*	----			
4. Almost Perfect Scale- Revised	.41*	.36*	.23*	----		
5. Perfectionistic Self-Presentation Scale	.45*	.51*	.41*	.47*	----	
6. Rosenberg Self-Esteem Scale	-.34*	-.41*	-.22*	-.40*	-.37*	----
M	3.44	3.73	4.82	4.53	3.68	3.29
SD	.73	.98	1.04	.74	.89	.49

$*p < .05$. OBC = Objectified Body Consciousness Scale

Table 2

Hierarchical Multiple Regression Analyses Predicting Eating Disorder Symptomatology From Maladaptive Perfectionism, Body Shame, Body Surveillance, Self-Esteem, and Interactions (N = 306)

Step	Predictor	β	*t* (305)	Cumulative R^2	Adjusted R^2	Incremental R^2
1	Maladaptive Perfectionism (MP) (measured by APS-R)	.181	4.28*	.528	.525	.528
	Body Shame (BSh)	.641	15.2*			
2	MP x BSh Interaction	.395	1.29	.531	.526	.003
	Overall F (1, 302) = 114.0*					
1	Maladaptive Perfectionism (MP) (measured by APS-R)	.298	6.60*	.417	.413	.417
	Body Surveillance (BSu)	.509	11.3*			
2	MP x BSu Interaction	.828	2.36*	.427	.422	.011
	Overall F (1, 302) = 75.1*					
1	Maladaptive Perfectionism (MP) (measured by APS-R)	.333	5.97*	.206	.200	.206
	Self-Esteem (SE)	-.202	-3.63*			
2	MP x SE Interaction	.401	1.23	.210	.202	.004
	Overall F (1, 302) = 26.7*					
1	Maladaptive Perfectionism (MP) (measured by PSPS)	.121	2.58*	.511	.507	.511
	Body Shame (BSh)	.645	13.8*			
2	MP x BSh Interaction	.182	.710	.511	.507	.001
	Overall F (1, 302) = 105.4*					
1	Maladaptive Perfectionism (MP) (measured by PSPS)	.472	9.56*	.387	.383	.387
	Body Surveillance (BSu)	.255	5.18*			
2	MP x BSu Interaction	.187	.586	.388	.382	.001
	Overall F (1, 302) = 63.7*					
1	Maladaptive Perfectionism (MP) (measured by PSPS)	.377	6.97*	.235	.230	.235
	Self-Esteem (SE)	-.194	-3.59*			
2	MP x SE Interaction	.135	.461	.235	.228	.001
	Overall F (1, 302) = 31.0*					

Note. *p <.025.

APPENDIX A

DEMOGRAPHIC DATA FORM

Age: _____

Ethnic Identification
______ African American ______ Asian American
______ Caucasian/White ______ Native American
______ Latino
______ Other: please specify: ________________________

Relationship status:
______ Single ______ Married
______ Long term relationship ______Other: please specify: __________________
______ Divorced

Year in School:
______ Freshman-or- high school senior ______ Post-bac
______ Sophomore ______ Graduate student
______ Junior ______ Other
______ Senior

Socio-Economic Identification
______ Upper class ______ Middle class
______ Upper-middle class ______ Working class

APPENDIX B
ALMOST PERFECT SCALE-REVISED

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

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

2. My best just never seems good enough for me.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

3. I rarely live up to my high standards.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

4. Doing my best never seems to be enough.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

5. I am never satisfied with my accomplishments.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

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

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

7. My performance rarely measures up to my standards.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

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

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

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

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

10. I am hardly ever satisfied with my performance.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

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

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

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

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

13. I have high standards for my performance at work or at school.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

14. If you don't expect much out of yourself you will never succeed.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

15. I have high expectations for myself.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

16. I set very high standards for myself.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

17. I expect the best from myself.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

18. I try to do my best at everything I do.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

19. I have a strong need to strive for excellence.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

20. I am an orderly person.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

21. Neatness is important to me.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

22. I think things should be put away in their place.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

23. I like to always be organized and disciplined.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

APPENDIX C
PERFECTIONISTIC SELF-PRESENTATION SCALE

Listed below are a group of statements. Please rate your agreement with each of the statements using the following scale. If you strongly agree, circle 7; if you disagree strongly, circle 1; if you feel somewhere in between, circle any one of the numbers between 1 and 7. If you feel neutral or undecided the midpoint is 4.

	Disagree Strongly			Neutral			Agree Strongly
1. It is okay to show others that I am not perfect……………………………	1	2	3	4	5	6	7
2. I judge myself based on the mistakes I make in front of other people………	1	2	3	4	5	6	7
3. I will do almost anything to cover up a mistake…………………………..	1	2	3	4	5	6	7
4. Errors are much worse if they are made in public rather than in private……	1	2	3	4	5	6	7
5. I try always to present a picture of perfection…………………………….	1	2	3	4	5	6	7
6. It would be awful if I made a fool of myself in front of others……………..	1	2	3	4	5	6	7
7. If I seem perfect, others will see me more positively……………………	1	2	3	4	5	6	7
8. I brood over mistakes that I have made in front of others…………………	1	2	3	4	5	6	7
9. I never let others know how hard I work on things……………………….	1	2	3	4	5	6	7
10. I would like to appear more competent than I really am………………….	1	2	3	4	5	6	7
11. It doesn't matter if there is a flaw in my looks…………………………..	1	2	3	4	5	6	7
12. I do not want people to see me do something unless I am very good at it….	1	2	3	4	5	6	7
13. I should always keep my problems to myself…………………………….	1	2	3	4	5	6	7
14. I should solve my own problems rather than admit them to others………..	1	2	3	4	5	6	7
15. I must appear to be in control of my actions at all times………………….	1	2	3	4	5	6	7
16. It is okay to admit mistakes to others……………………………………	1	2	3	4	5	6	7
17. It is important to act perfectly in social situations………………………..	1	2	3	4	5	6	7
18. I don't really care about being perfectly groomed………………………..	1	2	3	4	5	6	7
19. Admitting failure to others is the worst possible thing……………….……..	1	2	3	4	5	6	7
20. I hate to make errors in public………………………………………….	1	2	3	4	5	6	7
21. I try to keep my faults to myself………………………………………..	1	2	3	4	5	6	7

22. I do not care about making mistakes in public……………………………	1	2	3	4	5	6	7
23. I need to be seen as perfectly capable in everything I do…………………..	1	2	3	4	5	6	7
24. Failing at something is awful if other people know about it…….……….	1	2	3	4	5	6	7
25. It is very important that I always appear to be "on top of things"………	1	2	3	4	5	6	7
26. I must always appear to be perfect………………………………………	1	2	3	4	5	6	7
27. I strive to look perfect to others………………………………………..	1	2	3	4	5	6	7

APPENDIX D
OBJECTIFIED BODY CONSCIOUSNESS SCALE- BODY SURVEILLANCE

For each item, please circle the answer that best characterizes your attitudes or behaviors.

1. I rarely think about how I look.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

2. I think it is more important that my clothes are comfortable than whether they look good on me.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

3. I think more about how my body feels than how my body looks.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

4. I rarely compare how I look with how other people look.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

5. During the day, I think about how I look many times.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

6. I often worry about whether the clothes I am wearing make me look good.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

7. I rarely worry about how I look to other people.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

8. I am more concerned with what my body can do than how it looks.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

APPENDIX E
OBJECTIFIED BODY CONSCIOUSNESS SCALE- BODY SHAME

For each item, please circle the answer that best characterizes your attitudes or behaviors.

1. When I can't control my weight, I feel like something must be wrong with me.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

2. I feel ashamed of myself when I haven't made the effort to look my best.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

3. I feel like I must be a bad person when I don't look as good as I could.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

4. I would be ashamed for people to know what I really weigh.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

5. I never worry that something is wrong with me when I am not exercising as much as I should.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

6. When I'm not exercising enough, I question whether I am a good enough person.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

7. Even when I can't control my weight, I think I'm an okay person.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

8. When I'm not the size I think I should be, I feel ashamed.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

APPENDIX F
ROSENBERG SELF-ESTEEM SCALE

For each item, please circle the answer that best characterizes your attitudes or behaviors.

1. **I feel that I am a person of worth, at least on an equal plane with others.**

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

2. **I feel that I have a number of good qualities.**

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

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

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

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

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

5. **I feel I do <u>not</u> have much to be proud of.**

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

6. **I take a positive attitude towards myself.**

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

7. **On the whole, I am satisfied with myself.**

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

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

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

9. **I feel entirely useless at times.**

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

10. **At times, I think that I am no good at all.**

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

APPENDIX G
EATING ATTITUDES TEST- 26

Indicate whether the question is true about you always, usually, often, sometimes, rarely, or never.

1. I am terrified about being overweight.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

2. I avoid eating when I am hungry.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

3. I find myself preoccupied with food.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

4. I have gone on eating binges where I feel that I may not be able to stop.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

5. I cut my food into small pieces.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

6. I am aware of the caloric content of foods that I eat.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

7. I particularly avoid foods with high carbohydrate content.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

8. I feel that others would prefer I ate more.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

9. I vomit after I have eaten.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

10. I feel extremely guilty after eating.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

11. I am preoccupied with a desire to be thinner.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

12. I think about burning up calories when I exercise.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

13. Other people think that I am too thin.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

14. I am preoccupied with the thought of having fat on my body.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

15. I take longer than others to eat meals.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

16. I avoid foods with sugar in them.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

17. I eat diet foods.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

18. I feel that food controls my life.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

19. I display self-control around food.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

20. I feel that others pressure me to eat.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

21. I give too much time and thought to food.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

22. I feel uncomfortable after eating sweets.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

23. I engage in dieting behaviors.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

24. I like my stomach to be empty.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

25. I enjoy trying new rich foods.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

26. I have the impulse to vomit after meals.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never