

PERFECTIONISM, SELF-DISCREPANCY, AND DISORDERED EATING  
IN BLACK AND WHITE WOMEN

---

A Thesis presented to the Faculty of the Graduate School  
University of Missouri-Columbia

---

In Partial Fulfillment  
Of the Requirements for the Degree  
Master of Arts

---

by

AMANDA S. WEISHUHN

Dr. Anna Bardone-Cone, Thesis Supervisor

AUGUST 2006

The undersigned, appointed by the Dean of the Graduate School,  
have examined the thesis entitled

PERFECTIONISM, SELF-DISCREPANCY, AND DISORDERED EATING  
IN BLACK AND WHITE WOMEN

presented by  
Amanda S. Weishuhn

a candidate for the degree of Master of Psychology

and hereby certify that in their opinion is worthy of acceptance.

---

Professor Anna Bardone-Cone

---

Professor Pamela Hinton

---

Professor Douglas Steinley

To all those who offered their support during this endeavor...

ESPECIALLY (in ABC order)...

Karyn Boatwright, Nicholas DeYoung, Stephanie Getz, Alissa Johnston, Sara Kellogg,  
Gail Larkin, Vanessa Larkin, Sara Mijares, Christine Maldonado, Ines Segert, Julie  
Valentine, "T" a.k.a. Surrogate Mamma, Casey Weise, and Jan Wheeler.

Infinite Thanks.

Mike...

Infinite Thanks x 10.

Mom and Dad...

Infinite Thanks x 100.

The data are the data. You all are amazing.

## ACKNOWLEDGEMENTS

Many thanks to the faculty, undergraduate students, and graduate students who supported me and contributed to this work. My sincere thanks to Team Selves—Liz Cairns, Melinda Kampmann, Sara Mijares, Cathy Poepsel, Sucheta Thekkedam, and Nathan Weidner. Your dedication, hard work, responsibility, and commitment to serious scoring was appreciated more than you know. To the members of my committee, thank you for your invaluable feedback. Pamela Hinton, your suggestions, especially during the early stages of project refinement, were extremely helpful. Douglas Steinley, your assistance in my data analysis was crucial to my thesis success. Finally, to my committee chair and advisor, Dr. Anna Bardone-Cone, my endless gratitude for your guidance. Thank you for everything, the reading of many drafts, challenging me, believing in me, and supporting me. This thesis would not have been possible without you.

## TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	ii
LIST OF TABLES.....	v
LIST OF FIGURES.....	vi
ABSTRACT.....	vii
CHAPTERS	
1. INTRODUCTION.....	1
Conceptualizing Perfectionism	
Perfectionism and Disordered Eating	
Anorexic symptoms.	
Bulimic symptoms.	
Self-Discrepancy Theory	
Self-discrepancy and Disordered Eating.	
Perfectionism, Self-Discrepancy, and Disordered Eating	
Considering Race	
The Current Study	
Question 1: Comparing Perfectionism and Self-Discrepancy	
Question 2: Race, Perfectionism, Self-Discrepancy and later Dieting	
Question 3: Race, Perfectionism, Self-Discrepancy and later Bulimic	
Symptoms	
2. METHOD.....	17
Participants and Procedures	
Measures	
Perfectionism	
Self-discrepancy	
Anorexic symptoms	
Bulimic symptoms	
3. RESULTS.....	21
Descriptive Statistics	
Data Analytic Strategies	
Addressing Question 1: Comparing Perfectionism and Self-Discrepancy	
Black Women	
White Women	
Addressing Question 2: Dieting	
Race x Adaptive Perfectionism (SOP) x Ideal Self-Discrepancy	

Race x Adaptive Perfectionism (SOP) x Ought Self-Discrepancy  
 Race x Maladaptive Perfectionism (SPP) x Ideal Self-Discrepancy  
 Race x Maladaptive Perfectionism (SPP) x Ought Self-Discrepancy  
 Addressing Question 3: Bulimic Symptoms  
 Race x Adaptive Perfectionism (SOP) x Ideal Self-Discrepancy  
 Race x Adaptive Perfectionism (SOP) x Ought Self-Discrepancy  
 Race x Maladaptive Perfectionism (SPP) x Ideal Self-Discrepancy  
 Race x Maladaptive Perfectionism (SPP) x Ought Self-Discrepancy

4. DISCUSSION.....30  
 Addressing Q1: Comparing Perfectionism and Self-Discrepancy  
 Addressing Q2: Dieting  
 Addressing Q3: Bulimic Symptoms  
 Limitations  
 Strengths  
 Future Directions

APPENDIX

1. FOOTNOTES.....40  
 2. TABLES.....41  
 3. FIGURES.....50  
 REFERENCES.....58  
 VITA.....70

## LIST OF TABLES

Table	Page
1. Descriptive Statistics: Means and Standard Deviations for Predictor and Outcome Variables Presented Separately for Black and White Women.....	41
2. Race, Time 1 Adaptive Perfectionism (SOP), and Time 1 Ideal Self-Discrepancy in the Prediction of Time 2 Dieting Controlling for Time 1 Dieting.....	42
3. Race, Time 1 Adaptive Perfectionism (SOP), and Time 1 Ought Self-Discrepancy in the Prediction of Time 2 Dieting Controlling for Time 1 Dieting.....	43
4. Race, Time 1 Maladaptive Perfectionism (SPP), and Time 1 Ideal Self-Discrepancy in the Prediction of Time 2 Dieting Controlling for Time 1 Dieting.....	44
5. Race, Time 1 Maladaptive Perfectionism (SPP), and Time 1 Ought Self-Discrepancy in the Prediction of Time 2 Dieting Controlling for Time 1 Dieting.....	45
6. Race, Time 1 Adaptive Perfectionism (SOP), and Time 1 Ideal Self-Discrepancy in the Prediction of Time 2 Bulimic Symptoms Controlling for Time 1 Bulimic Symptoms.....	46
7. Race, Time 1 Adaptive Perfectionism (SOP), and Time 1 Ought Self-Discrepancy in the Prediction of Time 2 Bulimic Symptoms Controlling for Time 1 Bulimic Symptoms.....	47
8. Race, Time 1 Maladaptive Perfectionism (SPP), and Time 1 Ideal Self-Discrepancy in the Prediction of Time 2 Bulimic Symptoms Controlling for Time 1 Bulimic Symptoms.....	48
9. Race, Time 1 Maladaptive Perfectionism (SPP), and Time 1 Ought Self-Discrepancy in the Prediction of Time 2 Bulimic Symptoms Controlling for Time 1 Bulimic Symptoms.....	49

## LIST OF FIGURES

Figure	Page
1. Time 2 Dieting Levels, Controlling for Baseline Dieting Levels, Predicted by Race, Adaptive Perfectionism (SOP), and Ideal Self-Discrepancy.....	50
2. Time 2 Dieting Levels, Controlling for Baseline Dieting Levels, Predicted by Race and Ought Self-Discrepancy, Collapsed Across Levels of Adaptive Perfectionism.....	51
3. Time 2 Dieting Levels, Controlling for Baseline Dieting Levels, Predicted by Race and Ideal Self-Discrepancy, Collapsed Across Levels of Maladaptive Perfectionism.....	52
4. Time 2 Dieting Levels, Controlling for Baseline Dieting Levels, Predicted by Race, Maladaptive Perfectionism (SPP), and Ought Self-Discrepancy.....	53
5. Time 2 Bulimic Symptom Levels, Controlling for Baseline Bulimic Symptom Levels, Predicted by Adaptive Perfectionism (SOP) and Ideal Self-Discrepancy, Collapsed Across Race.....	54
6. Time 2 Bulimic Symptom Levels, Controlling for Baseline Bulimic Symptom Levels, Predicted by Race, Adaptive Perfectionism (SOP), and Ought Self-Discrepancy...	55
7. Time 2 Bulimic Symptom Levels, Controlling for Baseline Bulimic Symptom Levels, Predicted by Race and Maladaptive Perfectionism (SPP), Collapsed Across Ideal Self-Discrepancy.....	56
8. Time 2 Bulimic Symptom Levels, Controlling for Baseline Bulimic Symptom Levels, Predicted by Race, Maladaptive Perfectionism (SPP), and Ought Self-Discrepancy.....	57



PERFECTIONISM, SELF-DISCREPANCY, AND DISORDERED EATING  
IN BLACK AND WHITE WOMEN

Amanda S. Weishuhn

Dr. Anna Bardone-Cone, Thesis Supervisor

ABSTRACT

*Objective:* The current study investigates the relation between perfectionism and self-discrepancy, and whether their confluence predicts later disordered eating in a sample of Black and White college women. The combination of high perfectionism and high self-discrepancy was expected to prospectively predict dieting and bulimic symptoms after controlling for baseline dieting and bulimic symptoms. *Method:* Self-report questionnaires were administered to 97 Black and 179 White college women at two time points spaced about five months apart. Maladaptive and adaptive perfectionism and ideal and ought self-discrepancies were assessed. Dieting was measured using the Restraint subscale of the Three-Factor Eating Questionnaire (TFEQ) and bulimic symptoms were measured using the Bulimia Test-Revised (BULIT-R). *Results:* In general the study hypotheses were not observed. However, important racial differences in the interaction of these risk factors were evidenced. *Conclusion:* Ideal and ought self-discrepancies, alone and in interaction with perfectionism, were consistent predictors of subsequent dieting and bulimic symptoms, though not always in the hypothesized directions. These risk factors seem to function differently for Black women compared to White women.

Perfectionism, Self-Discrepancy, and Disordered Eating in  
Black and White Women

Introduction

The personality trait of perfectionism has been substantiated as a putative risk factor for dieting and bulimic symptoms (Bastiani, Rao, Weltzin, & Kaye, 1995; Garner, Olmstead, & Polivy, 1983; Jacobi, Hayward, de Zwaan, Kraemer, & Agras, 2004; Killen et al., 1994; Sutandar-Pinnock, Woodside, Carter, Olmsted, & Kaplan, 2003; Toner, Garfinkel, & Garner, 1986; Vohs, Bardone, Joiner, Abramson, & Heatherton, 1999). Despite this well-established link, the vast majority of these empirical investigations have conceptualized perfectionism unidimensionally, employing scales that yield a single perfectionism score. Emerging work, however, supports the notion that perfectionism is multi-faceted, including both adaptive and maladaptive dimensions, and that by using unidimensional measures in empirical studies we may be limiting our understanding of this personality construct and its relation to well-being and psychopathology (Bieling, Israeli, & Antony, 2004; Flett & Hewitt, 2002; Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991b). Accordingly, a shift toward a multidimensional measure of perfectionism within psychopathology research can be seen in studies of anxiety and depression (Alden, Bieling, & Wallace, 1994; Hewitt & Flett, 1991a). Within the field of eating disorders, the utility and relevance of a multidimensional conceptualization of perfectionism has recently been highlighted (Bardone-Cone, Wonderlich et al., 2006; Sherry, Hewitt, Besser, McGee, & Flett, 2004).

The literature also implicates negative self-beliefs as a putative risk factor for disordered eating behavior (Jacobi et al., 2004). Similar to the more recent conceptualizations of perfectionism, Higgins' (1987) self-discrepancy theory implements a multidimensional framework for understanding the impact of these beliefs on affect and well-being—specifically, Higgins (1987) differentiates beliefs about perceived distance from one's ideal and beliefs about perceived distance from what one feels one ought be. Studies of dieting and bulimic symptoms employing self-discrepancy theory provide preliminary evidence suggesting that problematic eating behaviors are differentially predicted by separate types of negative self-beliefs (Forston & Stanton, 1992; Strauman, Vookles, Berenstein, Chaiken, & Higgins, 1991).

In this paper I will first present an overview of the literature including: the conceptualization of perfectionism and the relations of adaptive and maladaptive dimensions to dieting and bulimic symptoms; Higgins' (1987) theory of self-discrepancy and our present understanding of how self-beliefs predict disordered eating patterns; a review of the emerging literature examining the relations between perfectionism and self-discrepancy and a discussion of how these variables may combine interactively in the prediction of dieting and bulimic symptoms; support for looking at racial differences in how the aforementioned variables predict dieting and bulimic symptoms; an elaboration of the questions in the current investigation. Second, I will detail the methods used to address these questions. Third, I will present the data analytic strategies and results. Finally, I will discuss these results in terms of theoretical implications, strengths and limitations, and future directions.

### *Conceptualizing Perfectionism*

Though the literature has evolved to include multidimensional conceptualizations of perfectionism, the unidimensional perfectionism subscale of the Eating Disorder inventory (EDI; Garner et al., 1983) is the perfectionism measure most often employed within the eating disorder field (Bardone-Cone, Wonderlich et al., 2006). The EDI was designed to be used as a tool for both research and clinical purposes to evaluate behavioral and personality characteristics thought to be related to the development and maintenance of eating disorders. The perfectionism subscale (EDI-P) reflects cognitive and behavioral aspects of perfectionism (e.g., “I feel that I must do things perfectly or not do them at all,” Garner et al., 1983). Interestingly, factor analyses of the EDI-P support the two-dimensionality of this purported unidimensional measure (Joiner & Schmidt, 1995; Sherry et al., 2004).

One of the most commonly used multidimensional measures of perfectionism is the Hewitt and Flett Multidimensional Perfectionism Scale (MPS-HF; Hewitt & Flett, 1991b). The MPS-HF is divided into three subscales: self-oriented perfectionism (SOP), socially prescribed perfectionism (SPP), and other-oriented perfectionism (OOP), and has no overall perfectionism score. SOP measures the extent to which an individual strives to be perfect because of high expectations that she has set for herself. SPP refers to the desire to be perfect as a result of perceived or real pressure from others to measure up to unrealistic standards. OOP is the extent to which an individual holds high standards for others and expects others to be perfect (Hewitt & Flett, 1991b). Research supports SOP as a facet of adaptive perfectionism and substantiates SPP as a facet of maladaptive perfectionism (Bieling et al., 2004; Cox, Enns, & Clara, 2002; Frost, Heimberg, Holt,

Mattia, & Neubauer, 1993; Klibert, Langhinrichsen-Rohling, & Saito, 2005), but the data are less clear for OOP which does not appear to be significantly related to negative affect or positive affect (Frost et al., 1993). Though many researchers support this maladaptive/adaptive perfectionism distinction, others advocate conceptualizing an intrapersonal dimension (e.g., SOP) and an interpersonal dimension (e.g., SPP) and view perfectionism as generally maladaptive (Hewitt & Flett, 1991b; Hewitt & Flett, 1993).

### *Perfectionism and Disordered Eating*

*Anorexic symptoms.* According to the *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition (*DSM-IV*; APA, 1994) anorexic individuals have an intense fear of gaining weight despite a below-normal body weight and often have a disturbed body perception. These individuals tend to base their self-evaluation disproportionately on weight and shape and attempt to attain a thin ideal body by engaging in stringent dieting, severely restricting their food intake (Thompson, 2004). A subset of these individuals engage in occasional bingeing and purging (APA, 1994).

Perfectionism, regardless of its conceptualization, has generally been shown to be associated with anorexic symptoms. Studies using the unidimensional EDI-P have typically observed high perfectionism levels in individuals who display anorexic symptoms (Bastiani et al., 1995; Garner et al., 1983; Sutandar-Pinnock et al., 2003; Toner et al., 1986) and, in some cases, have found that perfectionism predicts later development of anorexic symptoms (Tyrka, Waldron, Graber, & Brooks-Gunn, 2002).

Studies using the MPS-HF have found higher levels of SOP and SPP in anorexic individuals compared to normal controls (Bastiani et al., 1995; Cockell et al., 2002) and higher levels of both SOP and SPP in individuals who score high on measures of

anorexic symptoms (Hewitt, Flett, & Ediger, 1995; McLaren, Gauvin, & White, 2001). Other work, however, has demonstrated a relation between SOP, but not SPP, and anorexic-type disordered eating patterns (McVey, Pepler, Davis, Flett, & Abdoell, 2002). The eating disorder literature seems to support SOP as especially important in predicting anorexic symptoms compared to other problem eating behaviors and body image concerns. For example, Hewitt et al. (1995) found that while both SOP and SPP were associated with dieting, SOP was especially related to anorexic symptoms ( $r = -.37$ ,  $p < .001$ ), compared to bulimic symptoms ( $r = .12$ ,  $ns$ ), body image disturbance ( $r = .14$ ,  $ns$ ), and appearance self-esteem ( $r = -.23$ ,  $ns$ ).

In summary, research conceptualizing perfectionism unidimensionally demonstrates an association between perfectionism and anorexic symptoms. When the MPS-HF has been employed, both SOP (adaptive perfectionism) and SPP (maladaptive perfectionism) have been related to anorexic symptoms with the exception of one study. Overall, these findings provide evidence for an association between both the adaptive and maladaptive dimensions of perfectionism and anorexic symptoms.

*Bulimic symptoms.* According to the *DSM-IV* (APA, 1994), symptoms of bulimia nervosa include recurrent binge eating episodes followed by inappropriate compensatory behaviors, such as vomiting, using laxatives, fasting, or excessive exercise, in an attempt to prevent weight gain. A binge is typically defined as consuming abnormally large quantities of food in a discrete period of time while experiencing a perceived loss of control. Similar to anorexic individuals, self-evaluation for bulimic individuals is overly dependent on weight and shape (Thompson, 2004).

Empirical studies using both unidimensional and multidimensional measures of perfectionism have produced conflicting results regarding perfectionism's relation with bulimic symptoms. Some studies using the unidimensional EDI-P have found a relation between perfectionism and bulimic symptoms. For example, Vohs et al. (1999) found that high levels of perfectionism predict later development of bulimic symptoms. Similarly, Killen et al. (1994) found high initial levels of perfectionism in adolescent girls who developed a partial-syndrome eating disorder (i.e., displaying bulimic symptoms) within a three-year time interval. Joiner, Heatherton, & Keel (1997), however, found that while unidimensional perfectionism (EDI-P) predicted later *DSM*-based bulimic symptoms, it did not predict participants' scores on the bulimia subscale of the EDI. Other empirical investigations have also failed to observe an association between perfectionism and bulimic symptoms using this measure (Killen et al., 1996; Shaw, Stice, & Springer, 2004; Tyrka et al., 2002; Vohs et al., 2001). From a multidimensional perspective, Hewitt et al. (1995) found that bulimic symptoms were related to SPP (maladaptive perfectionism), but not to SOP, (adaptive perfectionism). However, in a separate study of obese women with binge eating disorder (BED), normal-weight women with bulimia, and obese, non-eating-disordered individuals, Pratt, Telch, Labouvie, and Agras (2001) found similar levels of SPP and OOP among the three groups, but a higher level of SOP in the bulimia and BED groups.

One possible explanation for these conflicting findings is that bulimic individuals seem to fall into three different personality style subtypes: high functioning/perfectionistic, constricted/overcontrolled, and emotionally dysregulated/undercontrolled (Espelage, Mazzeo, Sherman, & Thompson, 2002; Westen & Harnden-Fischer, 2001;

Wonderlich et al., 2005). It could be that differences in the distribution of these personality types in separate research samples explain the inconsistent findings related to perfectionism. It is also possible that perfectionism's link to bulimic symptoms requires a moderator variable such as the stress of feeling overweight (Joiner, Heatherton, Rudd, & Schimdt, 1997; Vohs et al., 1999).

In summary, despite mixed results concerning the relations of both unidimensional perfectionism and the adaptive and maladaptive facets of multidimensional perfectionism, with bulimic symptoms, meta-analytic work of Stice (2002) supports perfectionism as a risk factor for bulimia, though this relation may be best represented by interactive models with perfectionism as a vulnerability factor.

#### *Self-Discrepancy Theory*

Introduced by Higgins (1987; 1989), self-discrepancy theory provides a structure for understanding representations of the self and the consequences of inconsistent self-beliefs. According to self-discrepancy theory, beliefs about the self can be divided into three distinct self-domains: (a) the actual self, consisting of characteristics that an individual believes she actually possesses; (b) the ideal self, consisting of characteristics that an individual ideally wishes for or desires; (c) the ought self, consisting of characteristics that an individual feels a duty, responsibility, or obligation to possess. These three self-domains, the actual, ideal, and ought selves, can be expressed from either that individual's perspective, the "own standpoint," or from the imagined perspectives of significant others, the "other standpoint" (e.g., mother, father, or romantic partner). The ideal and ought selves expressed from either the own or other standpoint are what Higgins refers to as self guides. Throughout this literature review, actual-ideal self-



discrepancies from the own standpoint will be denoted “actual-own:ideal-own”; actual-ideal self-discrepancies from the other standpoint will be denoted “actual-own:ideal-other”; actual-ought self-discrepancies from the own standpoint will be denoted “actual-own:ought-own”; actual-ought self-discrepancies from the other standpoint will be denoted “actual-own:ought-other”.

According to self-discrepancy theory, incongruence between the actual self and the ideal and ought self-guides leads to negative emotional experiences (Higgins, 1987). Discrepancies between the actual self and the ideal self are believed to bring about dejection-related emotions such as sadness, shame, and disappointment, while discrepancies between the actual self and ought self are thought to result in agitation-related emotions, such as fear, guilt, and restlessness (Higgins, 1987; Higgins, Bond, Klein, & Strauman, 1986; Higgins, Klein, & Strauman, 1985; Higgins, Shah, & Friedman, 1997; Scott & O'Hara, 1993; Strauman, 1989; Strauman & Higgins, 1987, 1988). For example, if an individual believes that she is of average attractiveness, but would *ideally* like to be beautiful, she would likely feel discontent or frustrated; however, if an individual believes that she is of average attractiveness and thinks that she *ought* to be beautiful, this may cause her to feel guilty, nervous, or agitated.

In clarifying his theory, Higgins (1999) stated that the likelihood of evidencing these unique relations is moderated by the self-discrepancy's magnitude, accessibility, contextual relevance, and importance to that person. If an individual has a small, inaccessible, contextually irrelevant, and/or unimportant actual-own:ideal-own (or actual-own:ought-own) self-discrepancy, it would be unlikely that this discrepancy would demonstrate a unique association to depressive symptomatology (or anxious

symptomatology). For example, if an overweight individual, who highly values appearance and wishes that she were thin, has lunch with some of her physically trim friends, it is likely that she will feel sad. In this situation, her self-discrepancy evokes this specific emotion, depression, because the discrepancy is large in magnitude (i.e., she is actually overweight, but ideally would like to be thin), highly-valued (i.e., physical appearance is important to her), accessible (i.e., her self-discrepancy is activated by the presence of her trim friends), and contextually relevant (i.e., her weight self-discrepancy is germane to situations involving food).

Recent work has challenged elements of self-discrepancy theory, asserting that actual:ideal and actual:ought self-discrepancies are indiscernible (Gonnerman, Parker, Lavine, & Huff, 2000; Phillips & Silvia, 2005; Tangney, Niedenthal, Covert, & Barlow, 1998). For example, principal-axis factor analysis conducted by Phillips and Silvia (2005) found evidence for a clear one-factor solution, lumping actual-own:ideal-own and actual-own:ought-own self-discrepancy scores into a single construct. The uniqueness of the relations between separate ideal and ought self-discrepancies and emotional experiences has also been questioned (Gramzow, Sedikides, Panter, & Insko, 2000; Ozgul, Heubeck, Ward, & Wilkinson, 2003; Phillips & Silvia, 2005; Tangney et al., 1998). For example, Tangney and her colleagues (1998), attempting to replicate the early work of Higgins and his colleagues (1985), observed that all types of ideal and ought discrepancies were related to proneness to shame, but not to guilt. One explanation for why the theoretical assertions of self-discrepancy theory were not observed might be that prerequisite moderators (i.e., magnitude, accessibility, contextual relevance, and importance) were not present. Though these findings challenge the predictions of self-

discrepancy theory, the literature in general supports the ability of incongruent self-beliefs to predict specific negative emotional states when the aforementioned moderators are present and compels further exploration to flesh out the idiosyncrasies of these relations.

### *Self-Discrepancy and Disordered Eating*

Research applying the framework of self-discrepancy theory to understanding how incongruent beliefs about the self predict disordered eating is limited. Related to anorexic symptoms, however, a relation between actual-own:ought-other discrepancies with these disordered eating behaviors has generally been supported (Higgins et al., 1985; Strauman et al., 1991). For example, Higgins et al. (1985) compared the correlation between weight loss and the actual-own:ideal-other discrepancy to the correlation between weight loss and the actual-own:ought-other discrepancy and found that the actual-own:ought-other discrepancy was especially related to weight loss. Strauman et al. (1991) found that actual-own:ought-other self-discrepancy predicted anorexic symptoms after controlling for actual-own:ideal-own self-discrepancy and dieting behaviors.

Related to bulimic symptoms, actual-own:ideal-own self-discrepancies have been found to predict these disordered eating patterns (Forston & Stanton, 1992; Higgins, Vookles, & Tykocinski, 1992; Snyder, 1997; Strauman et al., 1991). Findings are mixed, however, as to whether these relations hold true for actual-own:ideal-own self-discrepancies more generally defined (i.e., self-discrepancy scores including attributes related to one's personality, intelligence, motivation, appearance, etc.) or if these relations exist only for actual-own:ideal-own self-discrepancies related to appearance. Strauman and his colleagues (1991) found that general actual-own:ideal-own self-

discrepancies predicted bulimic symptoms after controlling for appearance related attributes and general actual-own:ought-other self-discrepancies. Work of Forston and Stanton (1992), however, demonstrated that the relation between actual-own:ideal-own self-discrepancies and bulimic symptoms was present for appearance-related attributes but not general self-discrepancies, after controlling for the actual-own:ought-own self-discrepancy.

To our knowledge, only one study has looked at self-discrepancy in conjunction with another risk factor and to predict disordered eating. Harrison (2001) examined a mediational model of self-discrepancy, thin-ideal media exposure, and eating disorder symptoms, and found that actual-own:ideal-own self-discrepancies, but not actual-own:ought-other self-discrepancies mediated the relations between thin-ideal television exposure and dieting, bulimic symptoms, drive for thinness, and body dissatisfaction.

In summary, research on self-discrepancy and disordered eating patterns suggests that the actual-own:ought-other self-discrepancy is especially important in the prediction of dieting and anorexic symptoms, while the actual-own:ideal-own self-discrepancy is especially important in the prediction of bulimic symptoms. Related to bulimic symptoms, the question of whether the relation between actual-own:ideal-own self-discrepancy and bulimic symptoms holds true for self-discrepancies in general or only for discrepancies within the appearance domain has yet to be answered. The potential for third-variable models including self-discrepancy to predict disordered eating patterns is supported.

### *Perfectionism, Self-Discrepancy, and Disordered Eating*

In their description of dimensions of perfectionism, Hewitt and Flett (1991a; 1991b) assert that ideal self-discrepancy is implicated in their definition of self-oriented perfectionism (SOP) and that ought self-discrepancy is implicated in their definition of socially prescribed perfectionism (SPP). Research on the association of perfectionism and self-discrepancy with depressive emotions evidences that adaptive perfectionism (SOP) and ideal discrepancies are uniquely related to depressive symptoms (Alden et al., 1994; Hankin, Roberts, & Gotlib, 1997; Hewitt & Flett, 1991a; Minarik & Ahrens, 1996; Strauman, 1989). Research on the association of self-discrepancy with anxious emotions supports ought discrepancies as uniquely related to symptoms of anxiety (Hankin et al., 1997; Strauman, 1989). Maladaptive perfectionism (SPP), however, appears associated with both anxious and depressive symptomatology, as opposed to having a unique link with either type of affective distress (Hankin et al., 1997; Hewitt & Flett, 1991a; Juster et al., 1996; Minarik & Ahrens, 1996). For example, Hankin et al. (1997) found that actual-own:ideal-own self-discrepancies and SOP were related to depressive symptoms after controlling for anxious symptoms, that actual-own:ought-other self-discrepancies were related to anxious symptoms after controlling for depressive symptoms (although significance here was marginal,  $p = .09$ ), and that SPP was related to both depressive symptoms and anxious symptoms in general and did not demonstrate a unique relation with either form of affective distress.

Research examining the relation between these two putative risk factors, perfectionism and self-discrepancy, is limited. Snyder (1997) found that both actual-own:ideal-own and actual-own:ought-other appearance-related self-discrepancies were

significantly associated with scores on the unidimensional EDI-P when the relations of these self-discrepancies with the EDI-P were considered separately. However, when partial correlations considering both types of self-discrepancies simultaneously were calculated, neither type of self-discrepancy was significantly related to perfectionism. Evaluating multidimensional perfectionism, Hankin and his colleagues (1997) observed that maladaptive perfectionism (SPP), was associated with actual-own:ideal-own discrepancies, but not actual-own:ought-other discrepancies. No significant relation was found between adaptive perfectionism (SOP) and either type of discrepancy.

Despite the conceptual overlap of these two constructs and their ability to predict emotional distress similarly, the literature supports self-discrepancy and perfectionism as distinguishable. Perfectionism and self-discrepancy are similar in that the role of self-standards is considered integral for both. Self-discrepancy theory, however, contends that perceived distance from some self-standard predicts emotional well-being, while perfectionism's predictive ability is derived from the magnitude of the self-standard regardless of perceived nearness to that standard (Hankin et al., 1997).

While both self-discrepancies and perfectionism independently predict affective distress, it may be that the confluence of these variables is most important in predicting negative outcomes (e.g., disordered eating patterns). Harkening back to the meta-analysis of Stice (2002), perfectionism in the context of disordered eating may be best understood in interactive models. For example, empirical investigations using the unidimensional EDI-P have found that the relationship between perfectionism and bulimic symptoms is moderated by additional variables, including body dissatisfaction and self-efficacy (Bardone, Vohs, Abramson, Heatherton, & Joiner, 2000; Bardone-Cone, Abramson,

Vohs, Heatherton, & Joiner, 2006; Joiner, Heatherton, Rudd et al., 1997; Vohs et al., 1999; Vohs et al., 2001). McGee, Hewitt, Sherry, Parkin, and Flett (2005) looked at self-presentational perfectionism, appearance satisfaction, and disordered eating, and demonstrated that appearance satisfaction and an ideal appearance self-discrepancy moderated the relationship between perfectionistic self-presentation and eating disorder symptoms.

### *Considering Race*

Racial differences in disordered eating (e.g., dieting and bulimic symptoms) and the correlates of these behaviors are important to consider. Studies looking at *DSM-IV* diagnosable eating disorders support significantly higher rates of anorexia nervosa and somewhat higher rates of bulimia nervosa for White females compared to Black females (Mulholland & Mintz, 2001; Smith, Marcus, Lewis, Fitzgibbon, & Schreiner, 1998; Striegel-Moore et al., 2003). Regarding the prevalence of disordered eating, White females appear to diet more than Black females, however, regarding binge eating White females seem to have similar (or perhaps lower) rates compared to Black females (Striegel-Moore, Wilfley, Pike, Dohm, & Fairburn, 2000; White & Grilo, 2005). The bulimic symptom of self-induced vomiting following binge eating, however, seems to be more common for White females compared to Black females (Striegel-Moore, Schreiber et al., 2000; White & Grilo, 2005).

Though the accruing data are beginning to provide a clearer picture of disordered eating prevalence and eating disorder rates within racial groups, much less is known about racial differences in the correlates and causal pathways of disordered eating and eating disorders. Preliminary evidence supports that at least some correlates are similar

across race (Bardone-Cone, Weishuhn, & Boyd, 2006; M. Perez & Joiner, 2003) . For example, work by Bardone-Cone, Weishuhn, et al. (2006) found that maladaptive perfectionism, an identified risk factor for eating disorders and disordered eating in predominantly White samples, operates similarly for Black females to predict bulimic symptoms and body dissatisfaction. Perez and Joiner (2003) reported that body image dissatisfaction predicted bulimic symptoms for both Black and White college-age young women. To our knowledge, self-discrepancy according to Higgins' (1987) conceptualization has not been looked at in racially diverse samples in the context of disordered eating.

### *The Current Study*

The current study investigates the relations between two putative vulnerability factors for disordered eating, perfectionism and self-discrepancy, and their interaction in the prediction of later dieting and bulimic symptoms (after controlling for baseline dieting and bulimic symptom levels) in a sample of Black and White young women. These relations were analyzed separately for adaptive perfectionism (SOP) and maladaptive perfectionism (SPP) dimensions and separately for ideal self-discrepancies and ought self-discrepancies.

*Q1.* How are adaptive dimensions and maladaptive dimensions of perfectionism related to ideal and ought self-discrepancies? Are these relations similar for Black and White women? No specific hypotheses were made concerning these relations.

*Q2.* What is the relation between perfectionism, self-discrepancy, and dieting among Black and White women? More specifically, do perfectionism and self-discrepancy interact to predict dieting? Are these relations similar for Black and White



women? These analyses will be longitudinal, controlling for Time 1 (T1) dieting levels. It was hypothesized that a significant interaction would reflect the combination of high perfectionism and large self-discrepancies being associated with the highest levels of dieting at Time 2 (T2) (controlling for baseline levels of dieting). In particular, it was thought that these relations should be the strongest for adaptive perfectionism (SOP) and ought self-discrepancies. No particular predictions were made regarding racial differences.

*Q3.* What is the relation between perfectionism, self-discrepancy, and bulimic symptoms among Black and White women? More specifically, do perfectionism and self-discrepancy interact to predict bulimic symptoms? Are these relations similar for Black and White women? These analyses will be longitudinal, controlling for T1 bulimic symptoms. It was hypothesized that a significant interaction would reflect the combination of high perfectionism and large self-discrepancies associated with the highest levels of bulimic symptoms at T2 (controlling for baseline bulimic symptoms). In particular, it was thought that these relations would be the strongest for maladaptive perfectionism (SPP) and ideal self-discrepancies. No particular predictions were made regarding racial differences.

## Method

### *Participants and Procedures*

Participants were 276 women attending a Midwestern university. One hundred seventy-nine (65%) self-reported as Caucasian non-Hispanic (White) and 97 (35%) as African American (Black). Participants were recruited from introductory psychology courses and the campus community at large, where students responded to posted fliers and email distribution lists. Special efforts were made to oversample Black women to ensure a sufficient number of Black participants to address the research questions related to racial differences in disordered eating. This study was reviewed and approved by the university's Institutional Review Board.

The present study involved two separate testing phases. At T1, participants completed questionnaires on personality, health, and behavior. Approximately five months later at T2 participants completed the same questionnaire packet. Of the 276 Black and White women who participated at T1, 226 also participated at T2 (81.9% retention rate). Completers were compared to non-completers on the variables of interest in this study (i.e., race, T1 adaptive perfectionism (SOP) and maladaptive perfectionism (SPP), T1 ideal and ought self-discrepancies, and T1 dieting and bulimic symptoms). Significantly more White women completed T2 (87.2%) compared to Black women (72.2%) ( $\chi^2(1, N = 276) = 9.52, p < .01$ ), but otherwise completers and noncompleters did not differ on the study variables. When attrition analyses were done within racial group, no differences were found between completers and noncompleters on any of these variables. All analyses for the current study, including descriptive and inferential, were

conducted only on the Black women and White women who participated in both time points ( $n = 226$ ).

### *Measures*

*Perfectionism.* Perfectionism was measured using the Hewitt and Flett Multidimensional Perfectionism Scale (MPS-HF; Hewitt & Flett, 1991b). The MPS-HF is a 45-item self-report questionnaire using a 7-point response scale. Each subscale, SOP, SPP, and OOP, consists of 15 items. Based on previous research demonstrating that an individual's level of OOP is not related to her eating behavior (Hewitt et al., 1995), the OOP subscale was omitted from this study. The conceptual underpinnings of this scale have been discussed in detail in the introduction. Reliability (Cronbach alpha values greater than .70) and validity of the MPS-HF has been adequately demonstrated (Hewitt & Flett, 1991b; Hewitt, Flett, Turnbull-Dovovan, & Mikail, 1991). In this sample, coefficient alphas were .91 for the SOP and .87 for the SPP MPS-HF subscales.

*Self-Discrepancies.* Self-discrepancies were measured using the Selves Questionnaire (Higgins et al., 1985). The Selves Questionnaire is an idiographic measure that assesses chronically accessible beliefs and discrepancies related to the self. In completing this measure, participants first read descriptions of each self-domain where the actual self is described as the attributes or characteristics she believes she actually possesses now, the ideal self is described as the attributes or characteristics she would ideally like to possess (i.e., the type of person she wishes, desires, or hopes to be), and the ought self is described as the attributes or characteristics she feels she should or ought to possess (i.e., the type of person she believes it is her duty, obligation, or responsibility to be). Participants were instructed to list as many attributes as possible, up to ten, for each

self-domain. On a scale from one to four, ranging from “slightly” to “extremely,” participants also rated the extent to which the attribute listed was a part of that particular self, actual, ideal, or ought. Though self-discrepancy theory hypothesizes about both the own and other standpoints, participants in the current study listed attributes only from the own standpoint.

The Selves Questionnaire was scored according to protocol developed by Higgins and his colleagues (1985). We first eliminated synonymous and antonymous attributes within each self-domain. Each remaining attribute listed for the ideal and ought selves was compared to each attribute listed for the actual self. If an attribute listed for the ideal or ought self was a synonym of an attribute listed for the actual self and they differed in extent rating by one or less, this pair was scored as a match. If an attribute listed for the ideal or ought self was a synonym of an attribute listed for the actual self, and they differed in extent rating by two or more, this pair was scored as a mismatch of degree. If an attribute listed for the ideal or ought self was an antonym of an attribute listed for the actual self, this pair was scored as a mismatch. To calculate, for example, the ideal self-discrepancy score, the number of matches, mismatches of degree, and mismatches across the actual and ideal selves were summed individually. Matches were weighted as -1, mismatches of degree were weighted as 1, and mismatches were weighted as 2, and the ideal self-discrepancy score resulted from the sum of the weighted totals of the matches, mismatches of degree, and mismatches. *Positive* net scores resulting from this scoring system represent overall *discrepancy* of the ideal self from the actual self and *negative* net scores resulting from this scoring system represent overall *congruence* of the ideal self with the actual self. This same protocol was used to compute the ought self-

discrepancy score. See Higgins et al. (1985) for a more detailed description of the questionnaire and scoring process.

*Anorexic symptoms.* Anorexic symptoms were measured using the Cognitive Restraint subscale of the Three-Factor Eating Questionnaire (TFEQ; Stunkard & Messick, 1985). The Cognitive Restraint subscale of the TFEQ includes 21 items, measured using true-false and Likert scale responding, and is a measure of an individual's conscious control of eating behavior. It is generally considered a measure of "successful dieting" (i.e., actual food restriction) rather than only attempts at dieting (Laessle, Tuschl, Kottaus, & Pirke, 1989; van Strien, 1999). This subscale has demonstrated adequate psychometrics including high reliability and test-retest reliability (Gorman & Allison, 1995; Stunkard & Messick, 1985). In this sample, alpha was .92 at T1 and .92 at T2.

*Bulimic symptoms.* Bulimic symptoms were measured using the Bulimia Test— Revised (BULIT-R; Thelen, Farmer, Wonderlich, & Smith, 1991). The BULIT-R is a 36-item, five-choice multiple choice, self-report measure (with 28 items going toward score computation) based on *DSM-III-R* (Thelen et al., 1991) and *DSM-IV* (Thelen, Mintz, & Vander Wal, 1996) criteria for bulimia nervosa. Psychometrics of the BULIT-R are good and it has been successfully used to aid in diagnosis of bulimia nervosa and in measurement of bulimic symptom severity in clinical and non-clinical populations (Thelen et al., 1991; Williamson, Anderson, Jackman, & Jackson, 1995). In this sample, alpha was .94 at T1 and .95 at T2.

## Results

### *Descriptive Statistics*

Means, standard deviations, and bivariate correlations of adaptive perfectionism (SOP) and maladaptive perfectionism (SPP), the self-discrepancy variables,<sup>1</sup> and the disordered eating variables are presented in Table 1. Descriptive statistics are presented separately for Black and White women. Of note, the correlations at T1 of adaptive perfectionism (SOP) and maladaptive perfectionism (SPP) ( $r = .33$  for Black women;  $r = .56$  for White women) support these two perfectionism dimensions as related but distinct. The intercorrelations of the ideal and the ought self discrepancies ( $r = .42$  for Black women;  $r = .63$  for White women) also support these self-discrepancies as related but distinct. T1 and T2 outcome variables were highly correlated (TFEQ,  $r = .63$  for Black women and  $r = .82$  for White women; BULIT-R,  $r = .88$  for Black women and  $r = .88$  for White women). Thus, these high intercorrelations left limited variance in the T2 outcome variables to predict in the regression analyses over and above baseline (T1) levels of dieting and bulimic symptoms. On average participants reported congruence between their actual self and ideal self ( $M = -.32$  for Black Women and  $M = -.25$  for White women) and their actual self and ought self ( $M = -1.01$  for Black Women and  $M = -1.28$  for White women). These means are similar, and in some cases slightly higher, to the means typically attained from using the idiographic Selves Questionnaire and its original scoring protocol (Boldero & Francis, 2000; Petrocelli & Smith, 2005). Recall that higher scores on the Selves Questionnaire indicate greater self-discrepancies.

### *Data Analytic Strategies*

Consistent with the recommendations of Meng, Rosenthal, & Rubin (1992), a Z (normal curve) test for the significance of the difference between two correlation coefficients within the same population was conducted to test the strengths of the bivariate correlations of each perfectionism dimension with each self-discrepancy (e.g., to compare the strength of the SOP/ideal self-discrepancy correlation with the SOP/ought self-discrepancy correlation). This test was conducted separately for Black and White women (*Q1*).

Consistent with the recommendations of Cohen, Cohen, West, and Aiken (2003), a hierarchical multiple regression procedure was used to test the 3-way interaction between race, perfectionism, and self-discrepancy in the prospective prediction of T2 dieting (*Q2*) and T2 bulimic symptoms (*Q3*). Continuous predictors were centered in these analyses. Analyses proceeded according to the following steps: Step 1) entry of T1 dieting (*Q2*) or T1 bulimic symptoms (*Q3*) as a covariate; Step 2) entry of the race variable dummy coded 0 for White women and 1 for Black women; Step 3) simultaneous entry of the T1 main effects of one perfectionism dimension and one self-discrepancy (e.g., T1 maladaptive perfectionism (SPP) and T1 ideal self-discrepancy); Step 4) simultaneous entry of the three 2-way interaction terms between main effects (e.g., T1 maladaptive perfectionism (SPP) x T1 ideal self-discrepancy, T1 maladaptive perfectionism (SPP) x race, and T1 ideal self-discrepancy x race); Step 5) entry of the 3-way interaction between race, perfectionism dimension, and self-discrepancy (e.g., race x T1 maladaptive perfectionism (SPP) x T1 ideal self-discrepancy). The various forms of this interactive model included all combinations of perfectionism dimensions (adaptive

(SOP) and maladaptive (SPP)) and self-discrepancies (ideal and ought). In total there were eight separate 3-way interactive models run predicting T2 disordered eating, four of which looked at dieting (*Q2*) and four of which looked at bulimic symptoms (*Q3*).

When a 3-way interaction was not significant, model revision was conducted similarly to the procedures recommended by Aiken and West (1991), in which nonsignificant, scale-invariant predictors are sequentially removed from the model in a step-down fashion. First, if the 3-way interaction was not significant, the step prior to entry of the nonsignificant 3-way interaction (the step where the three 2-way interactions are the highest order predictors) was examined in order to evaluate the 2-way interactions. The sum of squares residual was noted for this model. All predictors significant at a  $p < .10$  level were retained in the model. For the 2-way interactions that were not significant at this  $p < .10$  cutoff, the model was rerun separately without each 2-way interaction that did not meet this criterion. (For example, if the model contained one significant 2-way interaction (A) and two nonsignificant 2-way interactions (B & C), the model would be rerun twice, once with the significant 2-way interaction (A) and one nonsignificant 2-way interaction (B) together and once with the significant 2-way interaction (A) and the other nonsignificant 2-way interaction (C) together.)

The sum of squares residual, the error term, was noted in all cases where a nonsignificant 2-way interaction was dropped and then compared to the sum of squares residual for the model containing all three 2-way interactions. The nonsignificant 2-way interaction that increased the sum of squares residual the least after being left out of the model (i.e., explained the least amount of variance in the dependent variable) was then permanently dropped from the model. If in this revised model (now containing two 2-way



interaction terms (e.g., A & B), both 2-way interactions met the  $p < .10$  cutoff, model revision stopped and this model was reported. If one of the 2-way interactions did not meet the  $p < .10$  cutoff, however, it was dropped from the analyses. The model was then rerun with only one 2-way interaction term, and this revised model was reported. There were no cases in which model revision resulted in a model with main effects only. In other words, all the interactive models reported in the current study contain at least one marginally significant interactive term.<sup>2</sup>

To shed light on the nature of the interactions, significant 3-way and 2-way interactions were depicted in figures derived from the regression equations, where high and low values of predictor variables were based on one standard deviation above and below the mean, respectively (Figures 1-8).

*Addressing Q1: How are adaptive and maladaptive dimensions of perfectionism related to ideal and ought self-discrepancies in Black and White women?*

*Black women.* Following Meng et al. (1992), a Z (normal curve) test for the significance of the difference between the adaptive perfectionism (SOP)/ideal self-discrepancy correlation and the adaptive perfectionism (SOP)/ought self-discrepancy correlation (.02 vs. -.14) did not reach statistical significance ( $Z = 1.20, p = .23$ ). The test for the significance of the difference between the maladaptive perfectionism (SPP)/ideal self-discrepancy correlation and the maladaptive perfectionism (SPP)/ought self-discrepancy correlation (-.07 vs. .11) did not reach statistical significance ( $Z = -1.39, p = .16$ ). In sum, for Black women neither the ideal nor the ought self-discrepancy was especially related to adaptive perfectionism (SOP) or to maladaptive perfectionism (SPP).

*White women.* Following Meng et al. (1992), a Z (normal curve) test for the significance of the difference between the adaptive perfectionism (SOP)/ideal self-discrepancy correlation and the adaptive perfectionism (SOP)/ought self-discrepancy correlation (-.10 vs. -.09) did not reach statistical significance ( $Z = -.10, p = .92$ ). The test for the significance of the difference between the maladaptive perfectionism (SPP)/ideal self-discrepancy correlation and the maladaptive perfectionism (SPP)/ought self-discrepancy correlation (.17 vs. .15) did not reach statistical significance ( $Z = .25, p = .80$ ). In sum, for White women neither the ideal nor the ought self-discrepancy was especially related to adaptive perfectionism (SOP) and neither self-discrepancy was especially related to maladaptive perfectionism (SPP).

*Addressing Q2: What are the relations between perfectionism, self-discrepancies, and later dieting (controlling for baseline dieting levels) among Black and White women?*

*Race x Adaptive Perfectionism (SOP) x Ideal Self-Discrepancy.* The 3-way interaction between race, adaptive perfectionism (SOP), and the ideal self-discrepancy in the prediction of dieting at T2 (after controlling for baseline dieting levels) was significant ( $t(190) = 1.97, p = .048$ ). Table 2 contains the results of this model, and Figure 1 depicts the 3-way interaction. In examining Figure 1, it appears that, for Black women high in adaptive perfectionism (SOP), higher ideal self-discrepancies are associated with higher levels of dieting at T2 (after controlling for baseline dieting levels) and for Black women low in adaptive perfectionism (SOP), lower ideal self-discrepancies are associated with higher levels of dieting at T2. For White women, it appears that lower ideal self-discrepancies are associated with higher levels of dieting at T2, but more so for

White women high in adaptive perfectionism (SOP) than for White women low in adaptive perfectionism (SOP).

*Race x Adaptive Perfectionism (SOP) x Ought Self-Discrepancy.* The 3-way interaction between race, adaptive perfectionism (SOP), and the ought self-discrepancy in the prediction of dieting at T2 (after controlling for baseline dieting levels) was not significant ( $t(190) = -.78, p = .43$ ). Model revision procedures revealed a significant 2-way interaction between race and the ought self-discrepancy ( $t(193) = 2.14, p = .03$ ). Table 3 contains the results of this final model, and Figure 2 depicts the 2-way interaction. In examining Figure 2, it appears that, regardless of level of adaptive perfectionism (SOP), higher ought self-discrepancies are associated with higher levels of dieting at T2 (after controlling for baseline dieting levels) for Black women, but lower ought self-discrepancies are associated with higher levels of dieting at T2 for White women.

*Race x Maladaptive Perfectionism (SPP) x Ideal Self-Discrepancy.* The 3-way interaction between race, maladaptive perfectionism (SPP), and the ideal self-discrepancy in the prediction of dieting at T2 (after controlling for baseline dieting levels) was not significant ( $t(191) = .40, p = .69$ ). Model revision procedures revealed a significant 2-way interaction between race and the ideal self-discrepancy ( $t(194) = 2.04, p = .04$ ). Table 4 contains the results of the final revised model, and Figure 3 depicts the 2-way interaction. In examining Figure 3, it appears that, regardless of level of maladaptive perfectionism (SPP), higher ideal self-discrepancies are associated with higher levels of dieting at T2 (after controlling for baseline dieting levels) for Black women, while lower ideal self-discrepancies are associated with higher levels of dieting at T2 for White women.

*Race x Maladaptive Perfectionism (SPP) x Ought Self-Discrepancy.* The 3-way interaction between race, maladaptive perfectionism (SPP), and the ought self-discrepancy in the prediction of dieting at T2 (after controlling for baseline dieting levels) was not significant ( $t(191) = .75, p = .46$ ). Model revision procedures revealed a marginally significant 2-way interaction between maladaptive perfectionism (SPP) and the ought self-discrepancy ( $t(193) = -1.77, p = .08$ ) and a significant 2-way interaction between race and the ought self-discrepancy ( $t(193) = 1.97, p = .048$ ). Table 5 contains the results of the final revised model, and Figure 4 depicts the two 2-way interactions together. In examining Figure 4, it appears that for Black females high maladaptive perfectionism (SPP), ought self-discrepancies have a minimal effect on dieting at T2 (after controlling for baseline dieting levels), but for Black women low in maladaptive perfectionism (SPP) higher ought self-discrepancies are associated with higher levels of dieting at T2. For White women, lower ought self-discrepancies are associated with higher levels of dieting at T2, but more so for those high in maladaptive perfectionism (SPP) than for those low in maladaptive perfectionism (SPP).

*Addressing Q3: What are the relations between perfectionism, self-discrepancies, and later bulimic symptoms (controlling for baseline bulimic symptom levels) among Black and White women?*

*Race x Adaptive Perfectionism (SOP) x Ideal Self-Discrepancy.* The 3-way interaction between race, adaptive perfectionism (SOP), and the ideal self-discrepancy in the prediction of bulimic symptoms at T2 (after controlling for baseline bulimic symptom levels) was not significant ( $t(211) = -.52, p = .60$ ). Model revision procedures revealed a significant 2-way interaction between adaptive perfectionism (SOP) and the ideal self-

discrepancy ( $t(214) = 3.30, p = .001$ ). Table 6 contains the results of the final revised model, and Figure 5 depicts the 2-way interaction. In examining Figure 5, it appears that regardless of race, lower ideal self-discrepancies are related to higher bulimic symptom levels at T2 (after controlling for baseline bulimic symptom levels) for women low in adaptive perfectionism (SOP), while higher ideal self-discrepancies are related to higher bulimic symptom levels at T2 for women high in adaptive perfectionism (SOP).

*Race x Adaptive Perfectionism (SOP) x Ought Self-Discrepancy.* The 3-way interaction between race, adaptive perfectionism (SOP), and the ought self-discrepancy in the prediction of bulimic symptoms at T2 (after controlling for baseline bulimic symptom levels) was not significant ( $t(211) = .05, p = .96$ ). Model revision procedures revealed a significant 2-way interaction between adaptive perfectionism (SOP) and the ought self-discrepancy ( $t(213) = 2.55, p = .01$ ) and a significant 2-way interaction between race and the ought self-discrepancy ( $t(213) = 2.05, p = .04$ ). Table 7 contains the results of the final revised model, and Figure 6 depicts these 2-way interactions together. In examining Figure 6, it appears that for Black women, higher ought self-discrepancies are related to higher bulimic symptom levels at T2 (after controlling for baseline bulimic symptom levels) for those high in adaptive perfectionism (SOP), while ought self-discrepancies seem to have a minimal effect on bulimic symptoms at T2 for those low in adaptive perfectionism (SOP). For White women, lower ought self-discrepancies appear to be related to higher bulimic symptom levels at T2 for those low in adaptive perfectionism (SOP), while ought self-discrepancies seem to have a minimal effect on bulimic symptoms at T2 for those high in adaptive perfectionism (SOP).

*Race x Maladaptive Perfectionism (SPP) x Ideal Self-Discrepancy.* The 3-way interaction between race, maladaptive perfectionism (SPP), and the ideal self-discrepancy in the prediction of bulimic symptoms at T2 (after controlling for baseline bulimic symptom levels) was not significant ( $t(212) = -.60, p = .55$ ). Model revision procedures revealed a marginally significant 2-way interaction between race and maladaptive perfectionism (SPP) ( $t(215) = -1.64, p = .10$ ). Table 8 contains the results of the final revised model, and Figure 7 depicts the 2-way interaction. In examining Figure 7, it appears that regardless level of ideal self-discrepancy, lower maladaptive perfectionism (SPP) is related to higher bulimic symptom levels at T2 (after controlling for baseline bulimic symptom levels) for Black women, but higher maladaptive perfectionism (SPP) is related to higher bulimic symptom levels at T2 for White women.

*Race x Maladaptive Perfectionism (SPP) x Ought Self-Discrepancy.* The 3-way interaction between race, maladaptive perfectionism (SPP), and the ought-self-discrepancy in the prediction of bulimic symptoms at T2 (after controlling for baseline bulimic symptom levels) was significant ( $t(212) = 2.41, p = .02$ ). Table 9 contains the results of this model, and Figure 8 depicts the 3-way interaction. In examining Figure 8, it appears that for Black women, higher ought self-discrepancies are related to higher bulimic symptom levels at T2 (after controlling for baseline bulimic symptom levels) for those high in maladaptive perfectionism (SPP), while lower ought self-discrepancies are related to higher bulimic symptom levels at T2 for those low in maladaptive perfectionism (SPP). For White women, lower ought self-discrepancies, are related to higher bulimic symptom levels at T2, but more so for those high in maladaptive perfectionism (SPP) than for those low in maladaptive perfectionism (SPP).

## Discussion

The present study looked at two risk factors for disordered eating and eating disorders, perfectionism—both adaptive and maladaptive perfectionism dimensions, and self-discrepancy—both ought and ideal self-discrepancies, examining their interrelations, as well as how these risk factors might interact prospectively to predict dieting and bulimic symptoms. Racial differences in these relations were also assessed. In other words the present study looked at how setting high *self*-standards (i.e., adaptive perfectionism, SOP) and feeling pressure from *others* to be perfect (i.e., maladaptive perfectionism, SPP), as well as having the *desire* to be somehow different (i.e., ideal self-discrepancy) and feeling a *duty* to be somehow different (i.e., ought self-discrepancy) relate to one another and to later dieting and bulimic symptoms separately for Black women and White women. The findings related to each research question, *Q1*, *Q2*, and *Q3*, strengths and limitations of the present study, and future research directions will now be discussed.

*Q1: How are adaptive and maladaptive dimensions of perfectionism related to ideal and ought self-discrepancies in Black and White women?*

Regarding the first research question (*Q1*), we found, for Black and White women, that the strength of the association of adaptive perfectionism (SOP) and ideal self-discrepancy was similar to the strength of the association between adaptive perfectionism (SOP) and ought self-discrepancy. Similarly, we found, for Black and White women, that the strength of the association of maladaptive perfectionism (SPP) and ideal self-discrepancy was similar to the strength of the association between

maladaptive perfectionism (SPP) and ought self-discrepancy. Thus, there were no significant differences in the intercorrelations of any perfectionism dimension, adaptive or maladaptive, with any self-discrepancy, ideal or ought, for Black women or White women.

Looking at the individual bivariate correlations of the adaptive and maladaptive perfectionism dimensions and the ideal and ought self-discrepancies within this sample, the only significant correlation of any perfectionism dimension with any self-discrepancy was the correlation of maladaptive perfectionism (SPP) with the ideal self-discrepancy for White women. This finding was partially consistent with the work of Hankin and his colleagues (1997), who observed that maladaptive perfectionism (SPP) was associated with actual-own:ideal-own self-discrepancies, but not actual-own:ought-other self-discrepancies and that there were no significant relations between adaptive perfectionism (SOP) and either type of self-discrepancy. Based on the present study and that of Hankin et al. (1997), perfectionism dimensions and self-discrepancies do not seem to be associated at a bivariate level, except perhaps in the case of maladaptive perfectionism (SPP) and the ideal self-discrepancy, and only for specific racial groups. Further, the strengths of the correlations of each perfectionism dimension, adaptive and maladaptive, with each type of self-discrepancy, ideal and ought, appear to be similar.

*Q2: What are the relations between perfectionism, self-discrepancies, and later dieting (controlling for baseline dieting levels) among Black and White women?*

Regarding the second research question (Q2), our original hypothesis that the combination of *high* levels of perfectionism and *high* levels of self-discrepancies would predict the highest levels of T2 dieting (after controlling for baseline dieting levels), and



that this relation would be most pronounced for women high in *adaptive* perfectionism (SOP) and with large *ought* self-discrepancies, was not generally supported. Although we did not make any predictions regarding race in this study, race seems to be playing an important role in moderating the effect of these risk factors, perfectionism and self-discrepancy, on dieting. Since race was involved in all four models predicting dieting at T2, the findings related to dieting will be discussed separately for Black women and for White women.

For Black women, those with higher ideal self-discrepancies and with higher ought self-discrepancies typically had higher levels of dieting at T2 (after controlling for baseline dieting levels). In the model where adaptive perfectionism (SOP) was a significant moderator, this relation (i.e., higher ideal self-discrepancies being associated with higher levels of dieting at T2) was evidenced for Black women who were *high* in adaptive perfectionism (SOP), but not for Black women who were low in adaptive perfectionism (SOP) (see Figure 1). This finding is congruent with the study hypotheses. In the model where maladaptive perfectionism (SPP) was a significant moderator, this relation (i.e., higher ought self-discrepancies being associated with higher levels of dieting at T2) was evidenced for Black women who were *low* in maladaptive perfectionism (SPP), but level of self-discrepancy did not influence dieting level for Black women who were high in maladaptive perfectionism (SPP) (see Figure 4). This finding, that the combination of a *high* self-discrepancy and a *low* level of perfectionism predicts higher levels of dieting at T2, runs counter to the hypotheses. Additionally, contrary to the hypotheses, the combination of high adaptive perfectionism (SOP) and high ought self-discrepancies did not produce the highest levels of dieting in Black

women. In fact, adaptive perfectionism (SOP) was not a significant moderator of the relation between the ought self-discrepancy and dieting for Black women.

One final note regarding dieting and Black women is that the interaction of ideal self-discrepancy and adaptive perfectionism produced the most dramatic shift in T2 dieting level (after controlling for baseline dieting level) (see Figure 1). This relation was such that high ideal self-discrepancy in combination with high adaptive perfectionism (SOP) predicted the highest levels of dieting at T2 and low ideal self-discrepancy in combination with high adaptive perfectionism (SOP) predicted the lowest levels of dieting at T2 for Black women across the four models.

In contrast to Black women, for White women, all four models supported that lower ideal self-discrepancies and lower ought self-discrepancies were associated with higher levels of dieting at T2 (after controlling for baseline dieting levels). In the two models where perfectionism was a significant moderator (see Figures 1 and 4), low and high levels of perfectionism were related to higher levels of dieting for lower self-discrepancies, although more so for those high in perfectionism. Additionally, our specific prediction that the combination of high ought discrepancies and high adaptive (SOP) perfectionism would predict the highest levels of dieting at T2 was not observed. Similar to Black women, adaptive perfectionism was not a significant moderator of the relation between the ought self-discrepancy and dieting for White women.

One final note regarding dieting and White women is that the interaction of ought self-discrepancy and maladaptive perfectionism produced the most dramatic shift in T2 dieting level (after controlling for baseline dieting levels) (see Figure 4). This relation was such that low ought self-discrepancy in combination with high maladaptive

perfectionism (SPP) predicted the highest levels of dieting at T2 and high ought self-discrepancy in combination with high maladaptive perfectionism (SPP) predicted the lowest levels of dieting at T2.

In sum, it is curious that these relations regarding dieting were evidenced in these data. Further, exploration is warranted in order to replicate these findings and to better understand more about why these relations were observed.

*Q3: What are the relations between perfectionism, self-discrepancies, and later bulimic symptoms (controlling for baseline bulimic symptom levels) among Black and White women?*

Regarding the third research question (*Q3*), our hypothesis that the combination of high levels of perfectionism (especially maladaptive perfectionism) and high levels of self-discrepancies (especially the ideal self-discrepancy) would predict the highest levels of bulimic symptoms at T2 (controlling for baseline bulimic symptom levels) was supported in some cases, but not in others. As previously mentioned regarding race, although we did not make any predictions about race in this study, race seems to be playing an important role in moderating the effect of these risk factors, perfectionism and self-discrepancy, on bulimic symptoms. For bulimic symptoms, race was involved three of the four models predicting T2 bulimic symptoms. In the model where no racial differences were observed, consistent with our hypothesis, higher self-discrepancies predicted higher T2 bulimic symptoms, for Black and White women with high levels of adaptive perfectionism (SOP). Since race was involved in three of four models predicting T2 bulimic symptoms, the remaining results pertaining to this outcome variable will be discussed separately for Black women and for White women.

For Black women, our hypothesis that the combination of *high* perfectionism and *high* self-discrepancies would predict the highest levels of T2 bulimic symptoms (after controlling for baseline bulimic symptoms) was supported in two of the three models in which race was a significant moderator. Higher ought self-discrepancies in combination with high adaptive perfectionism (see Figure 6) and higher ought self-discrepancies in combination with high maladaptive perfectionism (see Figure 8) predicted higher levels of T2 bulimic symptoms. Though the hypothesized high/high combination of predictors being associated with the highest levels of bulimic symptoms was evidenced, we predicted that these relations would be especially prominent for the combination of ideal self-discrepancy and maladaptive perfectionism. In fact, when the model with ideal self-discrepancy, maladaptive perfectionism (SPP), and race was tested, model revision resulted in maladaptive perfectionism (SPP) predicting lower levels of bulimic symptoms for Black women regardless of level of ideal self-discrepancy (see Figure 7). Perhaps Black women high in maladaptive perfectionism (i.e., feel pressure to live up to standards set by others) interpret this “pressure” as supportive rather than critical.

For White women, the data produced a mixed bag regarding the interaction of these risk factors to predict T2 bulimic symptoms. Findings related to the ought self-discrepancy ran counter to our original hypotheses. In general, higher ought self-discrepancies seemed to be related to lower levels of T2 bulimic symptoms (after controlling for baseline bulimic symptoms) for White women low in adaptive perfectionism (SOP) (see Figure 6) and high and low in maladaptive perfectionism (SPP) (see Figure 8). In one instance, however, ought self-discrepancies had a minimal effect on later bulimic symptoms—for White women high in adaptive perfectionism (SOP). The

finding that higher maladaptive perfectionism predicted higher T2 bulimic symptoms for White women (see Figure 7) was in the hypothesized direction, though the ideal self-discrepancy was not a part of this final model as predicted would be.

In sum, it is curious that these relations regarding bulimic symptoms were evidenced in these data. Further, exploration is warranted in order to replicate these findings and to better understand more about why these relations were observed

### *Limitations*

There were several limitations to the present study. Regarding self-discrepancy, use of the idiographic Selves Questionnaire was limiting. First, the prerequisite moderators mentioned by Higgins' (1999) (i.e., magnitude, accessibility, contextual relevance, and importance of the self-discrepancy) were not measured or manipulated, and in the case of the moderator of contextual relevance, not likely present in the current study. The absence of these moderators is limiting in that they are hypothesized to influence the findings that emerge from work on self-discrepancy. According to Higgins' (1999) their presence increases the likelihood of finding unique relations for ideal and ought self discrepancies. Another limitation related to the use of the Selves Questionnaire is that the data yielded from it did not permit looking at appearance and nonappearance self-discrepancies separately. We attempted to divide general self-discrepancies into appearance and nonappearance categories, but were unable to do so due to the clustering of participants at a discrepancy score of zero within the appearance domain. Our desire to look at racial differences further hindered our investigation of appearance and nonappearance domains, as dividing the sample into two groups significantly reduced the our sample size and increased the clustering of self-discrepancy

scores around a score of zero, especially for Black women. Given that ideas about one's physical appearance are central to dieting and bulimic symptoms, our inability to look at appearance and nonappearance self-discrepancies separately was an unfortunate limitation.

Additional limitations include that, although our sample was racially diverse, the group of White women was nearly twice as large as the group of Black women. Further, the findings of the present study are limited in their generalizability (especially to clinical populations) because of the use of a nonclinical college-age sample. Also, our study used self-report of all predictor variables and dependent variables, which is another limitation. Finally, though significant interactions were observed, effect sizes were small (e.g., .01), and this may have been due in part to there being little variance to explain in the T2 dependent variable (e.g., dieting) after controlling for T1 levels.

### *Strengths*

There were several strengths to this study. First, this study employed a multidimensional measure of perfectionism within the field of eating disorders, which has traditionally relied on use of the unidimensional EDI-P. Second, the multidimensionality of perfectionism (Shafran, et al, 2002; Hewitt, et al., 2003) and self-discrepancy (Gonnerman et al., 2000; Phillips & Silvia, 2005; Tangney et al., 1998) have recently been debated within the literature and the present study lends support to the distinctness of perfectionism and self-discrepancy at least at the bivariate, descriptive level. At the level of interaction, different patterns were observed for adaptive perfectionism (SOP) and maladaptive perfectionism (SPP) regarding the prediction of T2 dieting and T2 bulimic symptoms (after controlling for baseline dieting or bulimic symptoms). Lumping

perfectionism into a single factor would have obscured some of these important relations. Additionally, the present study used a longitudinal design to test a causal pathway to disordered eating and looked at the this causal pathway in terms of interaction between established risk factors for disordered eating. Further, we employed a racially diverse sample. Also, although we do not employ a clinical sample, we are able to look at subclinical levels of dieting and bulimic symptoms that may be more prevalent. Finally, the current study looked at dieting and bulimic symptoms within the same sample using well-established measures.

#### *Future Directions*

Future work should continue to explore self-discrepancy's relation to disordered eating and to test how self-discrepancy may work in concert with perfectionism to predict later disordered eating. Additionally, future studies should look to test the moderators purported as central to self-discrepancy in order to more accurately understand this phenomenon. Looking at moderators may require the use experimental manipulations, such as creating testing environments in which self-discrepancies are contextually relevant. Additionally, future work will want to employ more sensitive measures to permit looking at self-discrepancy within separate domains, for example separately within appearance and nonappearance domains, as it seems to be a fruitful area of research. Also, multidimensional measures of perfectionism should continue to be employed within the field of eating disorders so as to accurately measure this phenomenon and its relation to disordered eating and eating disorders. Further, in order to increase the generalizability of these findings, work on should look to employ clinical samples, as well as more non-student samples that are more racially diverse. Finally

although this study looked at dieting and bulimic symptoms prospectively, future studies should explore self-discrepancy's ability to predict actual change in dieting and bulimic symptoms.



## Footnotes

<sup>1</sup>There was one outlier on the ideal self-discrepancy measure. This participant was excluded from all analyses involving ideal self-discrepancies. Her score was 12 for the overall ideal self-discrepancy; the next highest score reported was 8. The descriptive data of means and standard deviations for the ideal self-discrepancy variable are presented without the outlier (see Table 1) since this portrays a more accurate picture of the phenomenon.

<sup>2</sup>For model revision, the conventional cutoff for marginal significance,  $p < .10$ , was generally adhered to. The model including the interaction of race and maladaptive perfectionism (SPP) in the prediction of bulimic symptoms, however, displayed a nonsignificant trend of  $p = .10$  and was reported. Rationale for reporting on models that were marginally significant, or in the aforementioned case, close to the cutoff for marginal significance, was three-fold. First, due to low power in testing moderator models, reporting effects that approach significance may be important, in that, if this model were tested on a larger sample, these trend level effects may become significant. Second, the preliminary nature of these analyses supports erring on the side of overinclusivity so that the trends may be followed up in future work. Third, the high intercorrelation of T1 and T2 outcome variables left little variance to explain in the outcome variables.

Table 1. *Descriptive Statistics: Means and Standard Deviations for Predictor and Outcome Variables Presented Separately for Black and White Women*

	1	2	3	4	5	6	7	8	Black Women ( <i>n</i> = 70)	White Women ( <i>n</i> = 156)
1. Adaptive Perfectionism (SOP)		.33**	.02	-.14	.22 <sup>^</sup>	.20	.14	.15	70.36 <i>16.09</i>	70.29 <i>17.03</i>
2. Maladaptive Perfectionism (SPP)	.56***		-.07	.11	.22 <sup>^</sup>	.43***	.14	.43***	47.69 <i>13.06</i>	50.42 <i>14.10</i>
3. Ideal Self-Discrepancy	-.10	.17*		.42***	-.16	.01	.000	-.05	-.32 <i>2.05</i>	-.25 <i>2.67</i>
4. Ought Self-Discrepancy	-.09	.15 <sup>^</sup>	.63***		.01	.04	.07	.16	-1.01 <i>2.03</i>	-1.28 <i>2.10</i>
5. TFEQ, T1	.24**	.25**	-.04	-.13		.35**	.63***	.31*	6.00 <i>5.06</i>	9.63 <i>6.09</i>
6. BULIT-R, T1	.20*	.38**	.20*	.08	.49***		.48***	.89***	42.43 <i>14.56</i>	51.96 <i>20.27</i>
7. TFEQ, T2	.27**	.24**	-.10	-.20*	.82***	.45***		.49***	6.86 <i>5.55</i>	9.72 <i>6.20</i>
8. BULIT-R, T2	.24**	.37***	.15 <sup>^</sup>	-.01	.40***	.88***	.47***		40.97 <i>14.58</i>	50.98 <i>21.29</i>

*Note.* Correlations between variables for Black women are above the diagonal; correlations for White women are below the diagonal. Means and standard deviations (italicized) are in the two right hand columns, listed separately for Black and White women. SOP = Self-Oriented Perfectionism. SPP indicates Socially-Prescribed Perfectionism. TFEQ = Restraint Subscale of the Three-Factor Eating Questionnaire. BULIT-R = Bulimia Test-Revised. <sup>^</sup>*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

Table 2. *Race, Time 1 Adaptive Perfectionism (SOP), and Time 1 Ideal Self-Discrepancy in the Prediction of Time 2 Dieting Controlling for Time 1 Dieting.*

Order of entry of predictors	<i>F</i> change for set	$\beta$ for within set predictors	<i>t</i> for within set predictors	<i>p</i>	<i>df</i> for each test	$\Delta$ in $R^2$
1. Time1 TFEQ	324.62***	.79	18.02***	<.001	1, 197	.62
2. Race	.46	-.03	-.68	.50	1, 196	.001
3. Perfectionism Dimension & Self-Discrepancy	1.06			.35	2, 194	.004
-Adaptive Perfectionism (SOP)		.05	.10	.32	194	
-Ideal Self-Discrepancy		-.04	-.97	.33	194	
4. Two-Way Interaction	2.21			.90	3, 191	.01
-SOP x Ideal Self-Discrepancy		.06	1.38	.17	191	
-Race x SOP		-.05	-.91	.36	191	
-Race x Ideal Self-Discrepancy		.10	2.02*	.045	191	
5. Three-Way Interaction	3.88*			.048	1, 190	.01
-Race x SOP x Ideal Self-Discrepancy		.10	1.97*	.048	190	

*Note.* TFEQ = Cognitive Restraint Subscale of Three-Factor Eating Questionnaire. SOP = Self-Oriented Perfectionism. \* $p < .05$ . \*\*\* $p < .001$ .

Table 3. Race, Time 1 Adaptive Perfectionism (SOP), and Time 1 Ought Self-Discrepancy in the Prediction of Time 2 Dieting Controlling for Time 1 Dieting.

Order of entry of predictors	<i>F</i> change for set	$\beta$ for within set predictors	<i>t</i> for within set predictors	<i>p</i>	<i>df</i> for each test	$\Delta$ in $R^2$
1. Time 1 TFEQ	332.07***	.79	18.22***	<.001	1, 197	.63
2. Race	.26	-.02	-.51	.61	1, 196	<.001
3. Perfectionism Dimension & Self-Discrepancy	1.31			.27	2, 194	.01
-Adaptive Perfectionism (SOP)		.03	.74	.46	194	
-Ought Self-Discrepancy		-.06	-1.37	.17	194	
4. Two-Way Interactions	4.59*			.03	1, 193	.01
-Race x Ought Self-Discrepancy		.11	2.14*	.03	193	

Note. TFEQ = Restraint Subscale of Three-Factor Eating Questionnaire. SOP = Self-Oriented Perfectionism. \* $p < .05$ . \*\*\* $p < .001$ .

Table 4. *Race, Time 1 Maladaptive Perfectionism (SPP), and Time 1 Ideal Self-Discrepancy in the Prediction of Time 2 Dieting Controlling for Time 1 Dieting.*

Order of entry of predictors	<i>F</i> change for set	$\beta$ for within set predictors	<i>t</i> for within set predictors	<i>p</i>	<i>df</i> for each test	$\Delta$ in $R^2$
1. Time 1 TFEQ	326.17***	.79	18.06***	<.001	1, 198	.62
2. Race	.49	-.03	-.70	.48	1, 197	.001
3. Perfectionism Dimension & Self-Discrepancy	.57			.57	2, 195	.002
-Maladaptive Perfectionism (SPP)		.002	.05	.96	195	
-Ideal Self-Discrepancy		-.047	-1.06	.29	195	
4. Two-Way Interaction	4.16*			.04	1, 194	.01
-Race x Ideal Self-Discrepancy		.10	2.04*	.04	194	

*Note.* TFEQ = Restraint Subscale of Three-Factor Eating Questionnaire. SPP = Socially-Prescribed Perfectionism. \* $p < .05$ . \*\*\* $p < .001$ .

Table 5. Race, Time 1 Maladaptive Perfectionism (SPP), and Time 1 Ought Self-Discrepancy in the Prediction of Time 2 Dieting Controlling for Time 1 Dieting.

Order of entry of predictors	<i>F</i> change for set	$\beta$ for within set predictors	<i>t</i> for within set predictors	<i>p</i>	<i>df</i> for each test	$\Delta$ in $R^2$
1. Time 1 TFEQ	333.65***	.79	18.27***	<.001	1, 198	.63
2. Race	.28	-.02	-.53	.60	1, 197	.001
3. Perfectionism Dimension & Self-Discrepancy	1.06			.35	2, 195	.004
-Maladaptive Perfectionism (SPP)		.01	.19	.85	195	
-Ought Self Discrepancy		-.06	-1.45	.15	195	
4. Two-Way Interaction	3.84*			.02	2, 193	.01
-SPP x Ought Self-Discrepancy		-.08	-1.77 <sup>^</sup>	.08	193	
-Race x Ought Self-Discrepancy		.10	1.97*	.048	193	

Note. TFEQ = Restraint Subscale of Three-Factor Eating Questionnaire. SPP = Socially Prescribed Perfectionism. <sup>^</sup>  $p < .10$ . \* $p < .05$ . \*\*\* $p < .001$ .

Table 6. Race, Time 1 Adaptive Perfectionism (SOP), and Time 1 Ideal Self-Discrepancy in the Prediction of Time 2 Bulimic Symptoms Controlling for Time 1 Bulimic Symptoms.

Order of entry of predictors	<i>F</i> change for set	$\beta$ for within set predictors	<i>t</i> for within set predictors	<i>p</i>	<i>df</i> for each test	$\Delta$ in $R^2$
1. Time 1 BULIT-R	795.80***	.89	28.21***	<.001	1, 218	.79
2. Race	1.28	-.04	-1.13	.26	1, 217	.001
3. Perfectionism Dimension & Self-Discrepancy	1.04			.35	2, 215	.002
-Adaptive Perfectionism (SOP)		.04	1.11	.27	215	
-Ideal Self Discrepancy		-.03	-.81	.42	215	
4. Two-Way Interaction	10.85**			.001	1, 214	.01
-SOP x Ideal Self-Discrepancy		.10	3.30**	.001	214	

Note. BULIT-R = Bulimia Test-Revised. SOP = Self-Oriented Perfectionism. \*\* $p < .05$ . \*\*\* $p < .001$ .

Table 7. Race, Time 1 Adaptive Perfectionism (SOP), and Time 1 Ought Self-Discrepancy in the Prediction of Time 2 Bulimic Symptoms Controlling for Time 1 Bulimic Symptoms.

Order of entry of predictors	<i>F</i> change for set	$\beta$ for within set predictors	<i>t</i> for within set predictors	<i>p</i>	<i>df</i> for each test	$\Delta$ in $R^2$
1. Time 1 BULIT-R	784.76***	.89	28.01***	<.001	1, 218	.78
2. Race	.40	-.02	-.64	.53	1, 217	<.001
3. Perfectionism Dimension & Self-Discrepancy	1.64			.20	2, 215	.003
-Adaptive Perfectionism (SOP)		.04	1.27	.21	215	
-Ought Self-Discrepancy		-.04	-1.13	.26	215	
4. Two-Way Interaction	5.63**			.004	2, 213	.01
-SOP x Ought Self-Discrepancy		.08	2.55*	.01	213	
-Race x Ought Self-Discrepancy		.08	2.05*	.04	213	

Note. BULIT-R = Bulimia Test-Revised. SOP = Self-Oriented Perfectionism. \* $p = .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .



Table 8. *Race, Time 1 Maladaptive Perfectionism (SPP), and Time 1 Ideal Self-Discrepancy in the Prediction of Time 2 Bulimic Symptoms Controlling for Time 1 Bulimic Symptoms.*

Order of entry of predictors	<i>F</i> change for set	$\beta$ for within set predictors	<i>t</i> for within set predictors	<i>p</i>	<i>df</i> for each test	$\Delta$ in $R^2$
1. Time 1 BULIT-R	798.27***	.89	28.25***	<.001	1, 219	.79
2. Race	1.23	-.04	-1.11	.27	1, 218	.001
3. Perfectionism Dimension & Self-Discrepancy	.48			.62	2, 216	.001
-Maladaptive Perfectionism (SPP)		.01	.35	.73	216	
-Ideal Self-Discrepancy		-.03	-.93	.35	216	
4. Two-Way Interactions	2.68 <sup>^</sup>			.10	1, 215	.003
-Race x SPP		-.06	-1.64 <sup>^</sup>	.10	215	

*Note.* BULIT-R = Bulimia Test-Revised. SPP = Socially Prescribed Perfectionism. <sup>^</sup>*p* = .10. \*\*\**p* < .001.

Table 9. *Race, Time 1 Maladaptive Perfectionism (SPP), and Time 1 Ought Self-Discrepancy in the Prediction of Time 2 Bulimic Symptoms Controlling for Time 1 Bulimic Symptoms.*

Order of entry of predictors	<i>F</i> change for set	$\beta$ for within set predictors	<i>t</i> for within set predictors	<i>p</i>	<i>df</i> for each test	$\Delta$ in $R^2$
1. Time 1 BULIT-R	787.19***	.89	28.06***	<.001	1, 219	.78
2. Race	.37	-.20	-.61	.54	1, 218	<.001
3. Perfectionism Dimension & Self-Discrepancy	1.50			.23	2, 216	.003
-Maladaptive Perfectionism (SPP)		.04	1.15	.25	216	
-Ought Self-Discrepancy		-.05	-1.43	.16	216	
4. Two-Way Interactions	1.69			.17	3, 213	.01
-SPP x Ought Self-Discrepancy		.02	.56	.58	213	
-Race x SPP		-.02	-.39	.70	213	
-Race x Ought Self-Discrepancy		.08	2.22*	.03	213	
5. Three-Way Interaction	5.80*			.02	1, 212	.01
-Race x SPP x Ought Self-Discrepancy		.09	2.41*	.02	212	

*Note.* BULIT-R = Bulimia Test-Revised. SPP = Socially Prescribed Perfectionism.  
\**p* < .05. \*\*\**p* < .001.

Figure 1. Time 2 Dieting Levels, Controlling for Baseline Dieting Levels, Predicted by Race, Adaptive Perfectionism (SOP), and Ideal Self-Discrepancy.

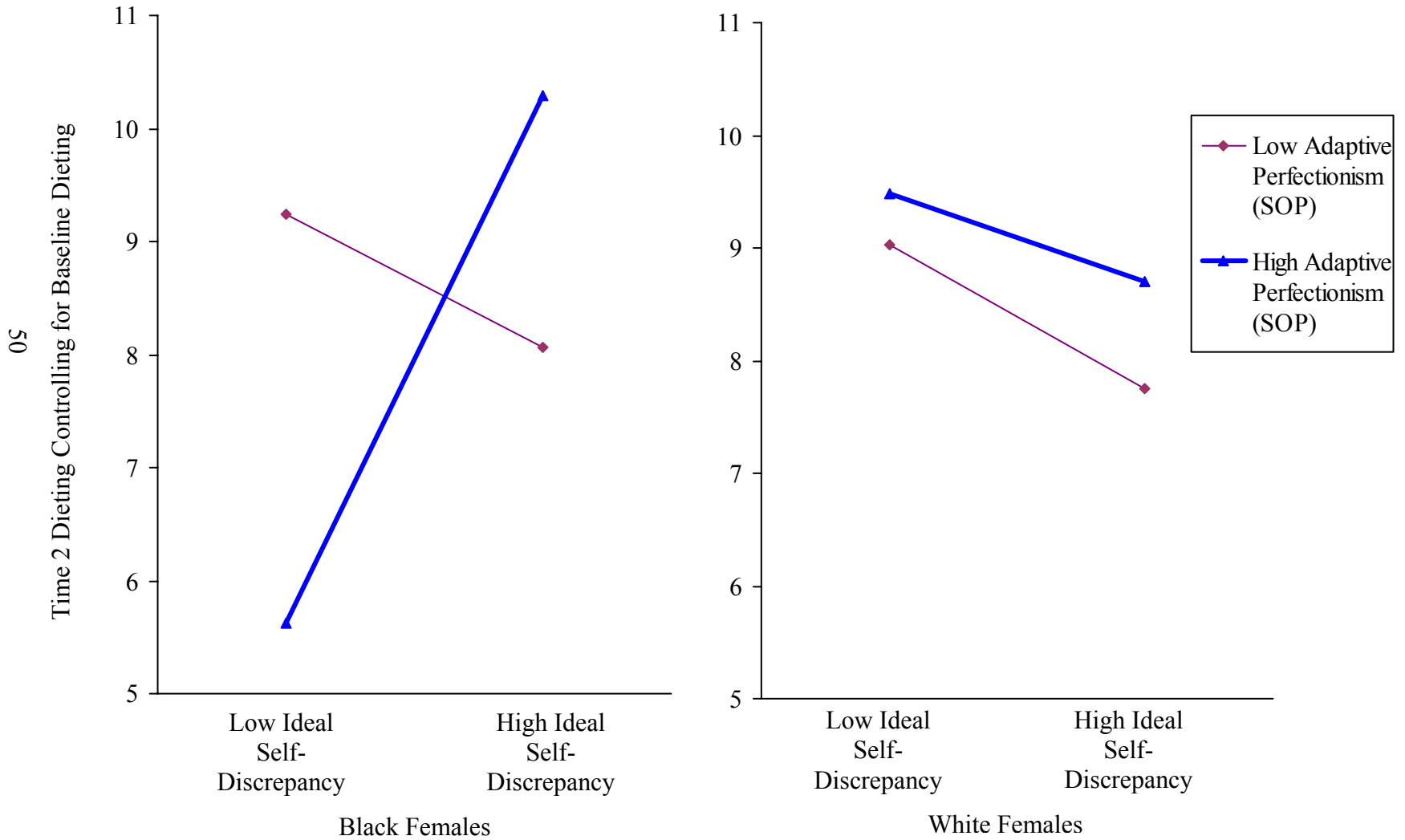


Figure 2. Time 2 Dieting Levels, Controlling for Baseline Dieting Levels, Predicted by Race and Ought Self-Discrepancy, Collapsed Across Levels of Adaptive Perfectionism.

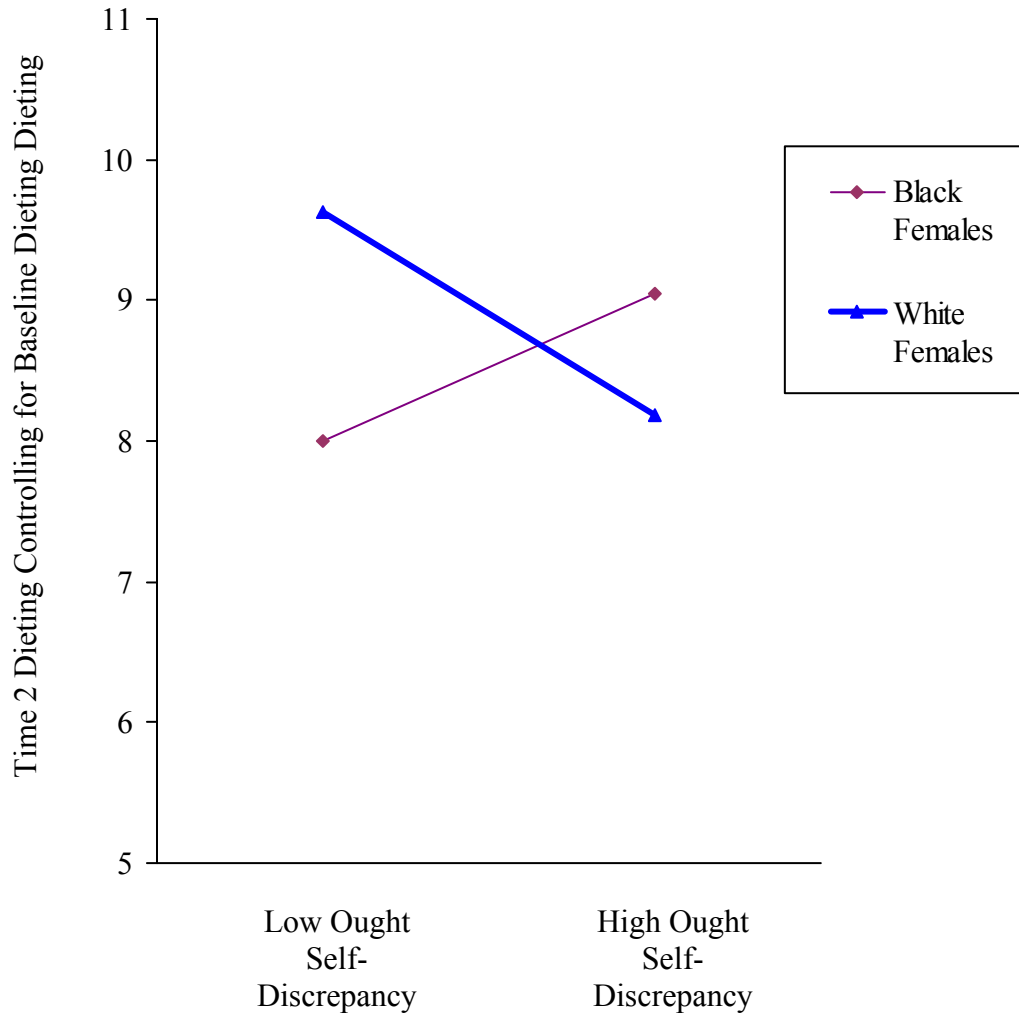


Figure 3. Time 2 Dieting Levels, Controlling for Baseline Dieting Levels, Predicted by Race and Ideal Self-Discrepancy, Collapsed Across Levels of Maladaptive Perfectionism.

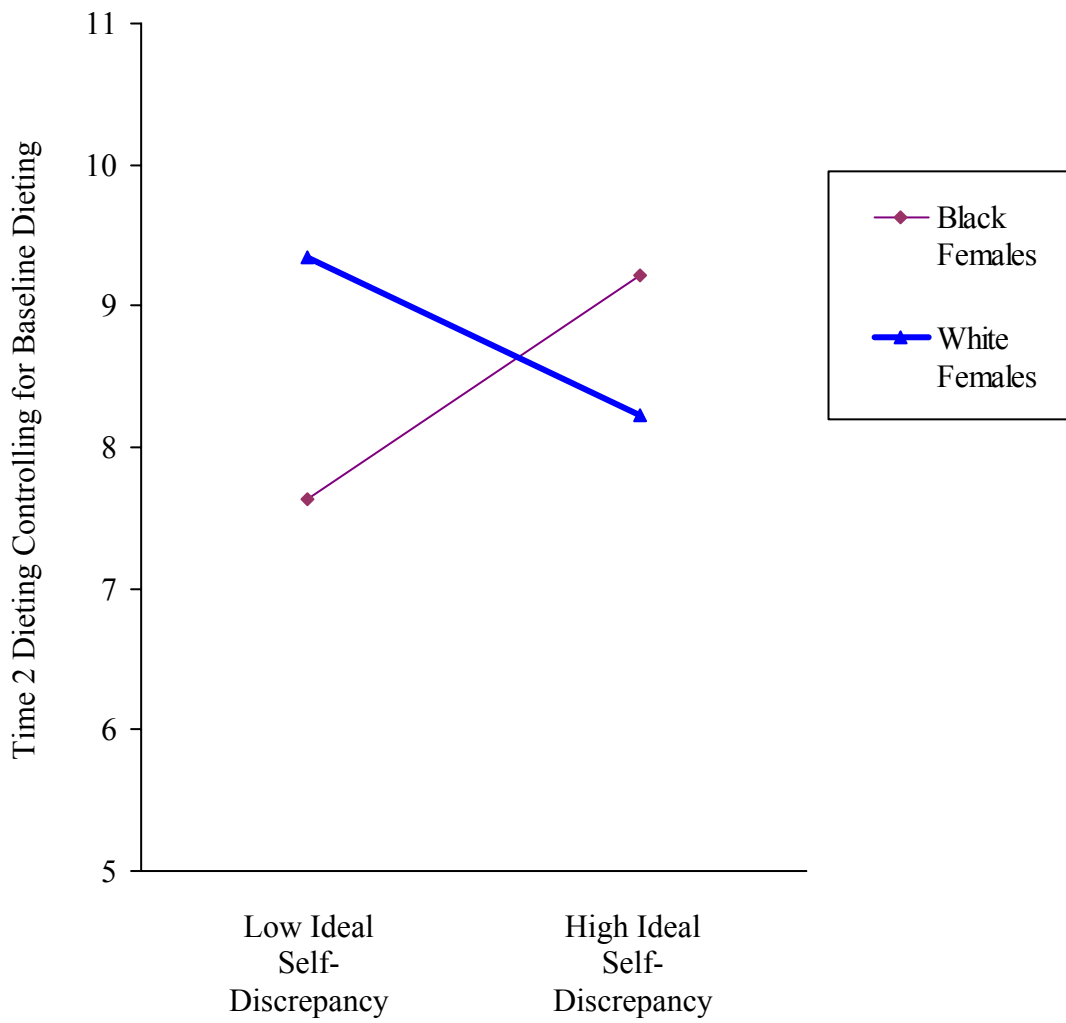


Figure 4. Time 2 Dieting Levels, Controlling for Baseline Dieting Levels, Predicted by Race, Maladaptive Perfectionism (SPP), and Ought Self-Discrepancy.

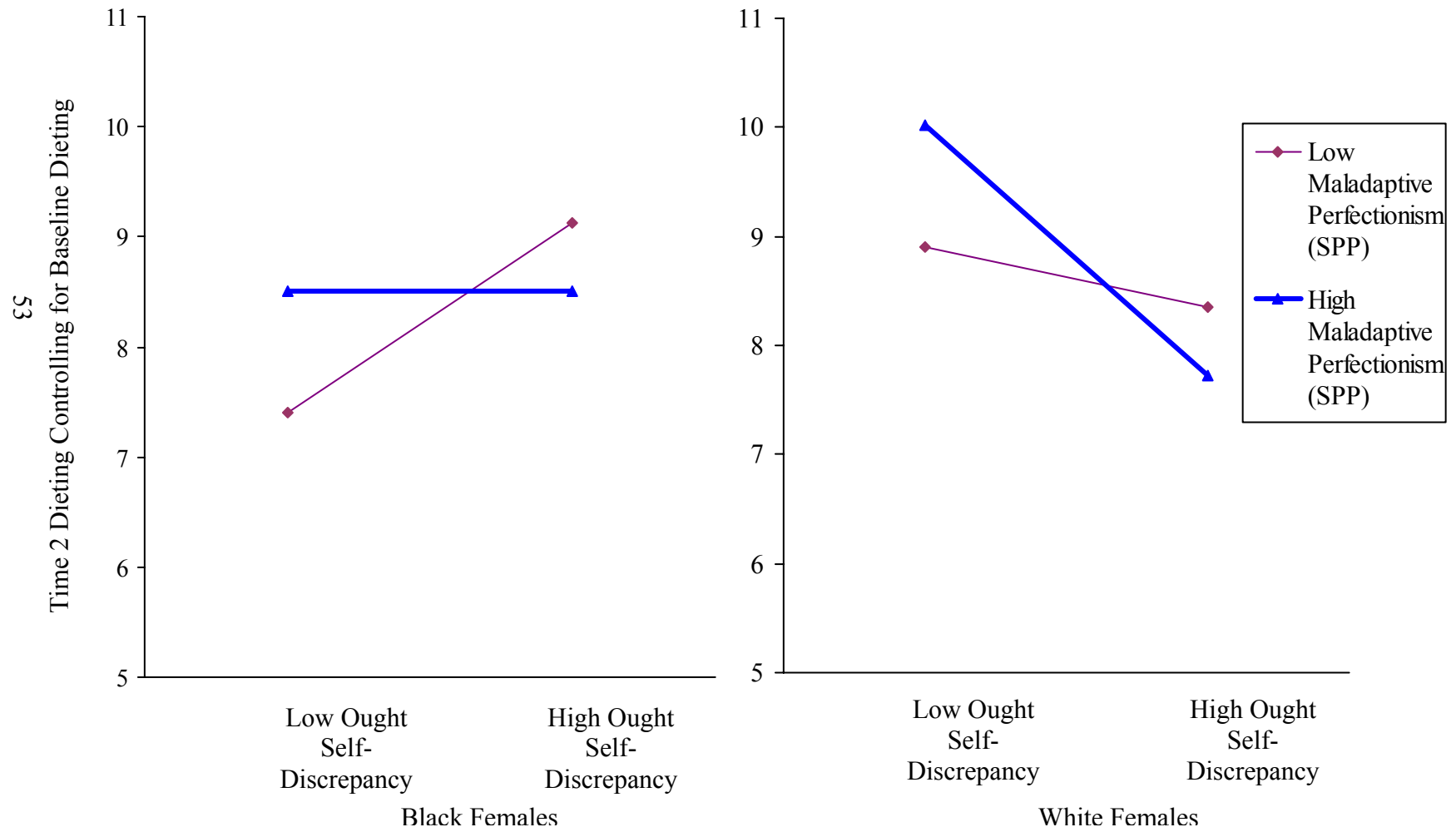


Figure 5. Time 2 Bulimic Symptom Levels, Controlling for Baseline Bulimic Symptom Levels, Predicted by Adaptive Perfectionism (SOP) and Ideal Self-Discrepancy, Collapsed Across Race.

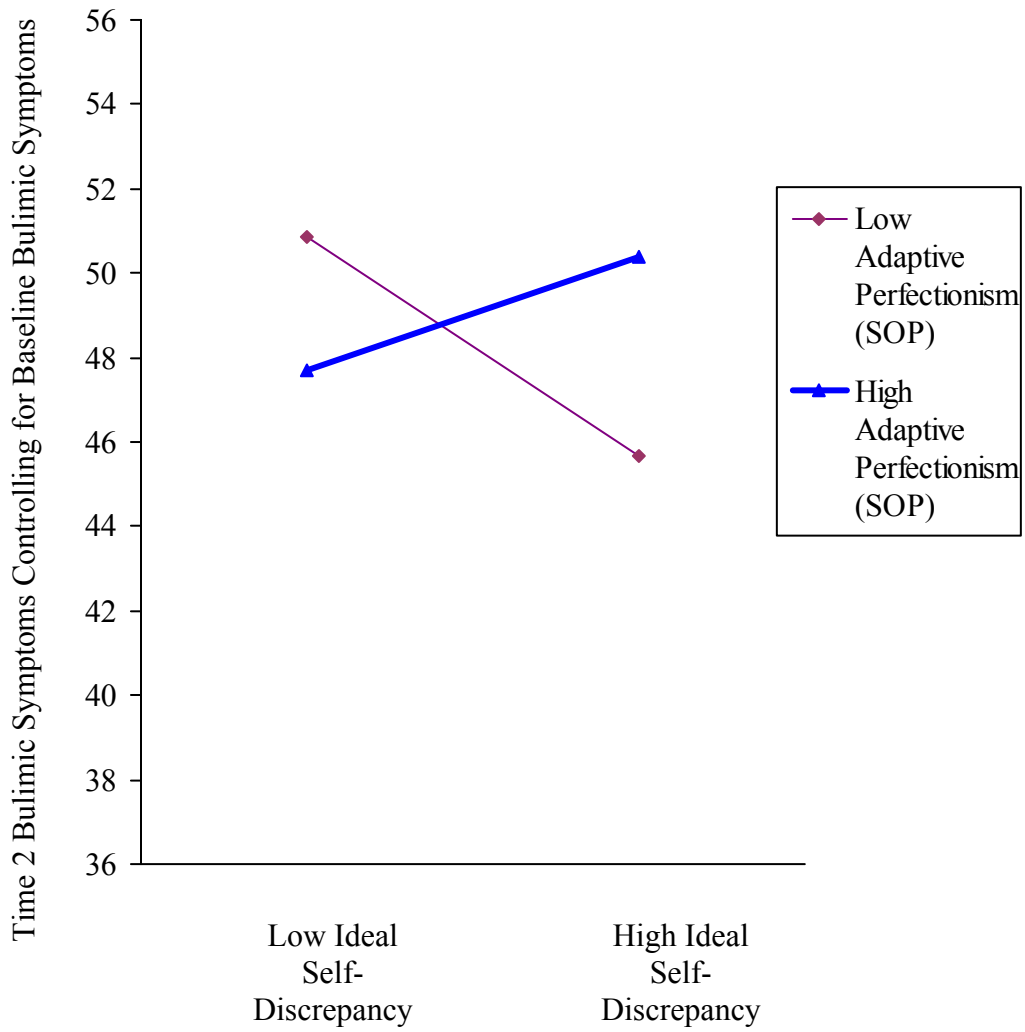


Figure 6. Time 2 Bulimic Symptom Levels, Controlling for Baseline Bulimic Symptom Levels, Predicted by Race, Adaptive Perfectionism (SOP), and Ought Self-Discrepancy.

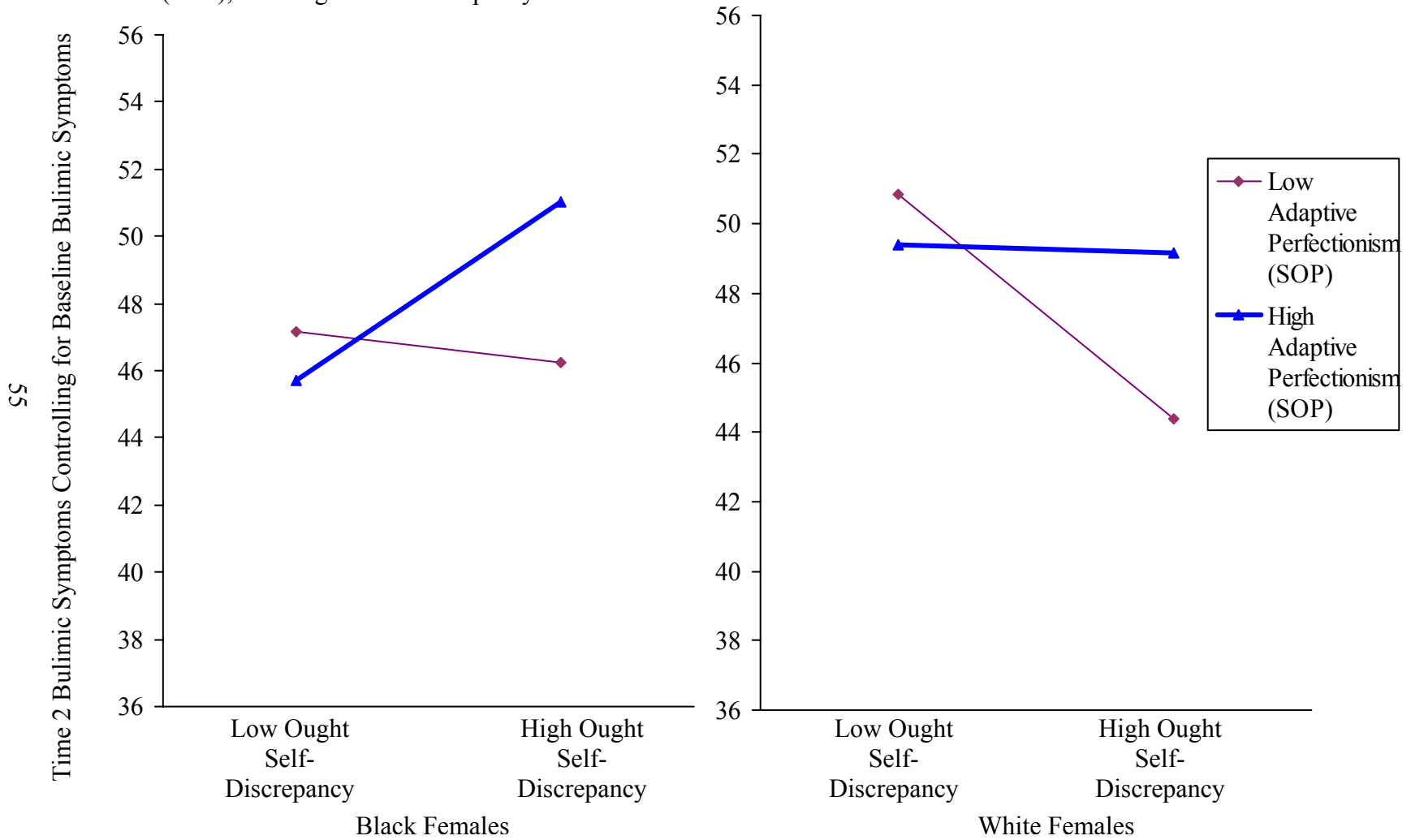




Figure 7. Time 2 Bulimic Symptom Levels, Controlling for Baseline Bulimic Symptom Levels, Predicted by Race and Maladaptive Perfectionism (SPP), Collapsed Across Ideal Self-Discrepancy

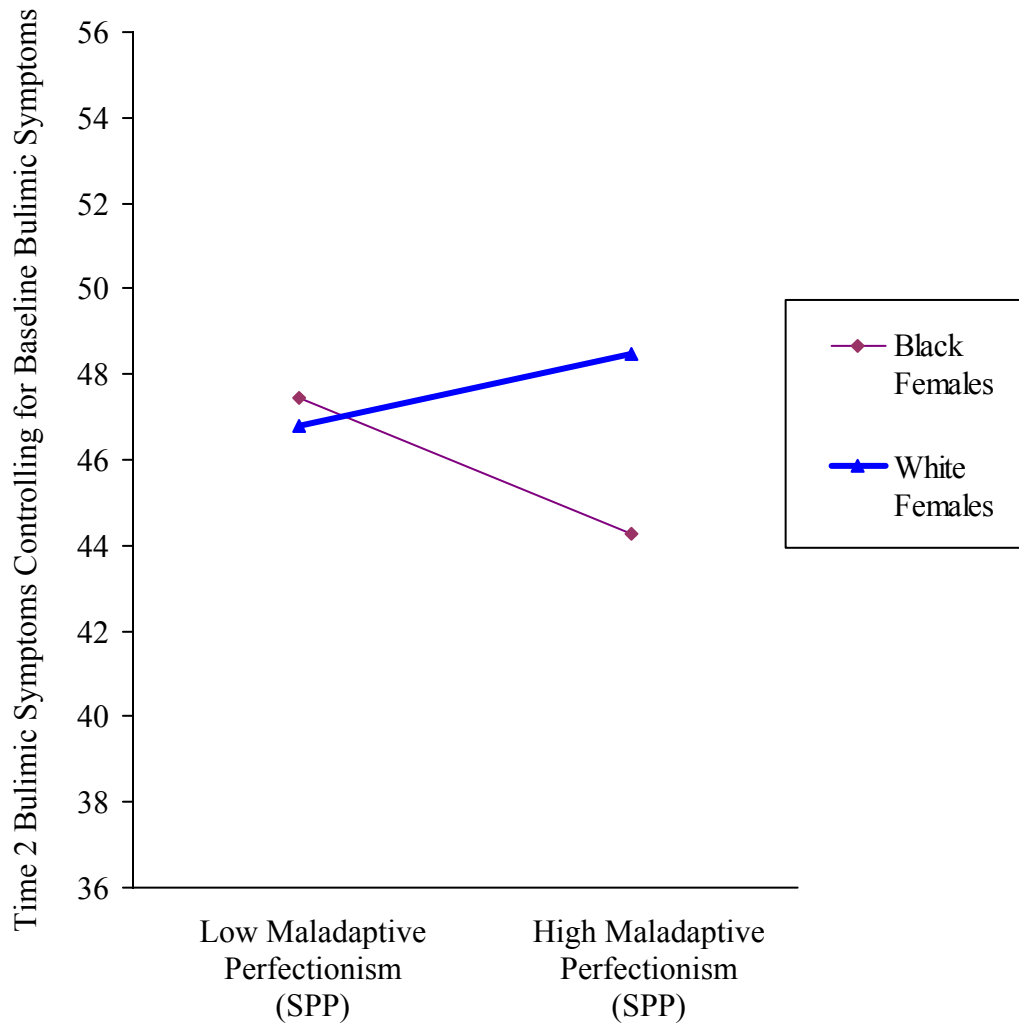
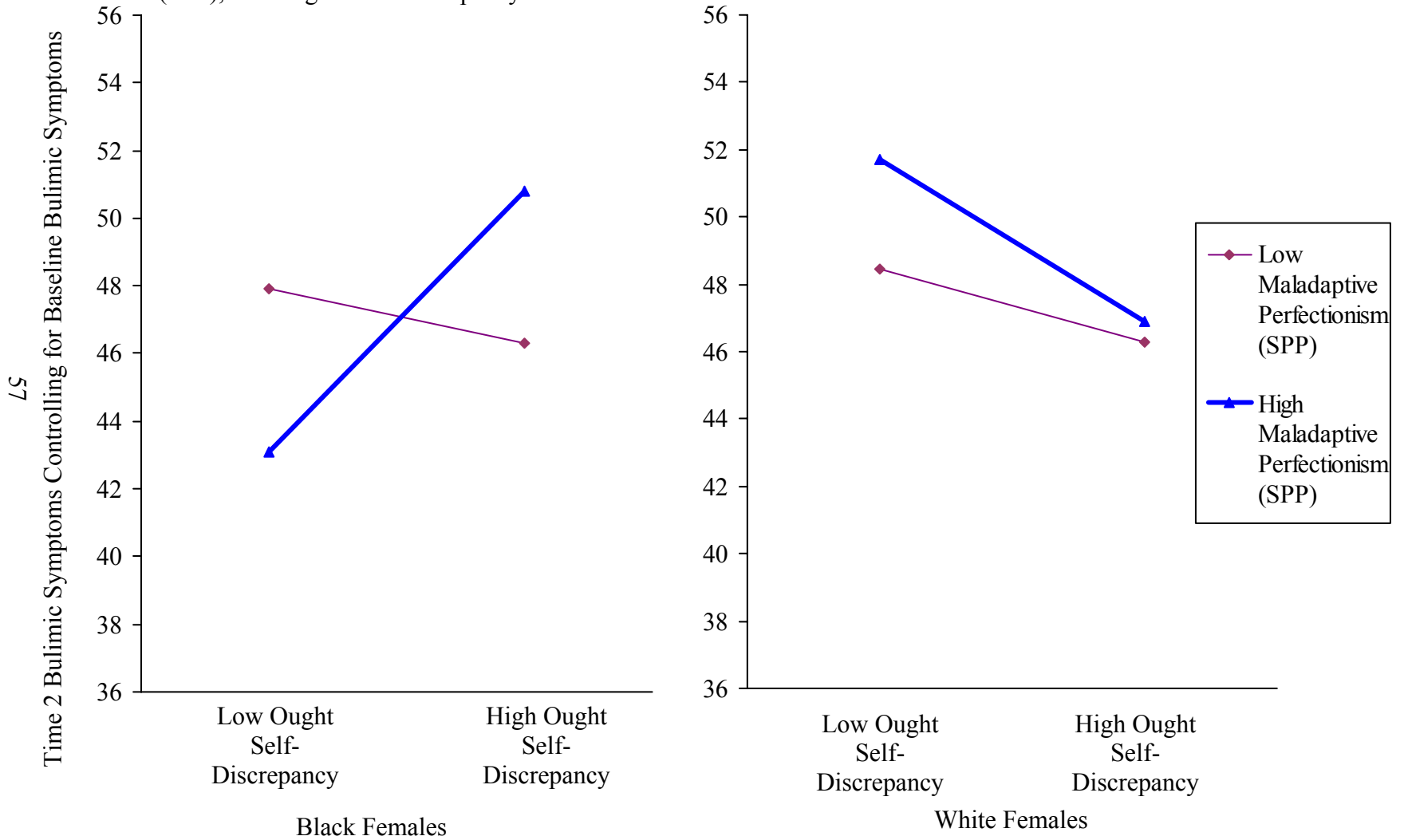


Figure 8. Time 2 Bulimic Symptom Levels, Controlling for Baseline Bulimic Symptom Levels, Predicted by Race, Maladaptive Perfectionism (SPP), and Ought Self-Discrepancy.



## References

- Alden, L. E., Bieling, P. J., & Wallace, S. T. (1994). Perfectionism in an interpersonal context: A self-regulation analysis of dysphoria and social anxiety. *Cognitive Therapy and Research, 18*(4), 297-316.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders*. (4<sup>th</sup> ed.). Washington, DC: American Psychiatric Association.
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Bardone, A. M., Vohs, K. D., Abramson, L. Y., Heatherton, T. F., & Joiner, T. E., Jr. (2000). The confluence of perfectionism, body dissatisfaction, and low self-esteem predicts bulimic symptoms: Clinical implications. *Behavior Therapy, 31*(2), 265-280.
- Bardone-Cone, A. M., Abramson, L. Y., Vohs, K. D., Heatherton, T. F., & Joiner, T. E., Jr. (2006). Predicting bulimic symptoms: An interactive model of self-efficacy, perfectionism, and perceived weight status. *Behaviour Research and Therapy, 44*, 27-42.
- Bardone-Cone, A. M., Weishuhn, A. S., & Boyd, C. A. (2006). *Perfectionism dimensions in relation to bulimic symptoms and body image among black and white women*. Manuscript Submitted for Publication.

- Bardone-Cone, A. M., Wonderlich, S. A., Frost, R. O., Bulik, C. A., Mitchell, J. E., & Uppala, S. (2006). *Perfectionism and eating disorders: Current status and future directions*. Manuscript Submitted for Publication.
- Bastiani, A. M., Rao, R., Weltzin, T., & Kaye, W. H. (1995). Perfectionism in anorexia nervosa. *International Journal of Eating Disorders, 17*(2), 147-152.
- Bieling, P. J., Israeli, A. L., & Antony, M. M. (2004). Is perfectionism good, bad, or both? Examining models of the perfectionism construct. *Personality and Individual Differences, 36*(6), 1373-1385.
- Boldero, J., & Francis, J. (2000). The relation between self-discrepancies and emotion: The moderating roles of self-guide importance, location relevance, and social self-domain centrality. *Journal of Personality and Social Psychology, 78*(1), 38-52.
- Cockell, S. J., Hewitt, P. L., Seal, B., Sherry, S., Goldner, E. M., Flett, G. L., et al. (2002). Trait and self-presentational dimensions of perfectionism among women with anorexia nervosa. *Cognitive Therapy and Research, 26*(6), 745-758.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (Third ed.). Mahwah, NJ: Lawrence Erlbaum Associates.
- Cox, B. J., Enns, M. W., & Clara, I. P. (2002). The multidimensional structure of perfectionism in clinically distressed and college student samples. *Psychological Assessment, 14*(3), 365-373.

- Espelage, D. L., Mazzeo, S. E., Sherman, R., & Thompson, R. (2002). MCMI-II profiles of women with eating disorders: a cluster analytic investigation. *Journal of Personality Disorders, 16*(5), 453-463.
- Flett, G. L., & Hewitt, P. L. (Eds.). (2002). *Perfectionism: Theory, research, and treatment*. Washington, DC: APA.
- Forston, M. T., & Stanton, A. L. (1992). Self-discrepancy theory as a framework for understanding bulimic symptomatology and associated distress. *Journal of Social and Clinical Psychology, 11*(2), 103-118.
- 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*(1), 119-126.
- Frost, R. O., Marten, P. A., Lahart, C. M., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research, 14*(5), 449-468.
- Garner, D. M., Olmstead, 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*(2), 15-34.
- Gonnerman, M. E. J., Parker, C. P., Lavine, H., & Huff, J. (2000). The relationship between self-discrepancies and affective states: The moderating roles of self-monitoring and standpoints on the self. *Personality and Social Psychology Bulletin, 26*(7), 810-819.

- Gorman, B. S., & Allison, D. B. (1995). Measures of restrained eating. In D. B. Allison (Ed.), *Handbook of assessment methods of eating behaviors and weight-related problems* (pp. 149-184).
- Gramzow, R. H., Sedikides, C., Panter, A. T., & Insko, C. A. (2000). Aspects of self-regulation and self-structure as predictors of perceived emotional distress. *Personality and Social Psychology Bulletin*, *26*(2), 188-205.
- Hankin, B. L., Roberts, J., & Gotlib, I. H. (1997). Elevated self-standards and emotional distress during adolescence: Emotional specificity and gender differences. *Cognitive Therapy and Research*, *21*(6), 663-679.
- Harrison, K. (2001). Ourselves, our bodies: Thin-ideal media, self-discrepancies, and eating disorder symptomatology in adolescents. *Journal of Social & Clinical Psychology*, *20*(3), 289-323.
- Hewitt, P. L., & Flett, G. L. (1991a). Dimensions of perfectionism in unipolar depression. *Journal of Abnormal Psychology*, *100*(1), 98-101.
- Hewitt, P. L., & Flett, G. L. (1991b). Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology*, *60*(3), 456-470.
- Hewitt, P. L., & Flett, G. L. (1993). Dimensions of perfectionism, daily stress, and depression: A test of the specific vulnerability hypothesis. *Journal of Abnormal Psychology*, *102*(1), 58-65.

- Hewitt, P. L., Flett, G. L., & Ediger, E. (1995). Perfectionism traits and perfectionistic self presentations in eating disorder attitudes, characteristics, and symptoms. *International Journal of Eating Disorders, 18*(4), 317-326.
- Hewitt, P. L., Flett, G. L., Turnbull-Dovovan, W., & Mikail, S. F. (1991). The Multidimensional Perfectionism Scale: Reliability, validity, and psychometric properties in psychiatric samples. *Psychological Assessment, 3*(3), 464-468.
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review, 94*(3), 319-314.
- Higgins, E. T. (1989). Self-discrepancy theory: What patterns of self-beliefs cause people to suffer? In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 22, pp. 93-136). San Diego, CA: Academic Press, Inc.
- Higgins, E. T. (1999). When do self-discrepancies have specific relations to emotions? The second-generation question of Tangney, Niedenthal, Covert, and Barlow (1998). *Journal of Personality and Social Psychology, 77*(6), 1313-1317.
- Higgins, E. T., Bond, R. N., Klein, R., & Strauman, T. J. (1986). Self-discrepancies and emotional vulnerability: How magnitude, accessibility, and type of discrepancy influence affect. *Journal of Personality and Social Psychology, 51*(1), 5-15.
- Higgins, E. T., Klein, R., & Strauman, T. J. (1985). Self-concept discrepancy theory: A psychological model for distinguishing among different aspects of depression and anxiety. *Social Cognition, 3*(1), 51-76.

- Higgins, E. T., Shah, J., & Friedman, R. (1997). Emotional responses to goal attainment: strength of regulatory focus as moderator. *Journal of Personality and Social Psychology, 72*(3), 515-525.
- Higgins, E. T., Vookles, J., & Tykocinski, O. (1992). Self and health: How "patterns" of self-beliefs predict types of emotional and physical problems. *Social Cognition, 10*(1), 125-150.
- Jacobi, C., Hayward, C., de Zwaan, M., Kraemer, H. C., & Agras, W. S. (2004). Coming to terms with risk factors for eating disorders: Application of risk terminology and suggestions for a general taxonomy. *Psychological Bulletin, 130*(1), 19-65.
- Joiner, T. E., Jr., Heatherton, T. F., & Keel, P. K. (1997). Ten-year stability and predictive validity of five bulimia-related indicators. *American Journal of Psychiatry, 154*(8), 1133-1138.
- Joiner, T. E., Jr., Heatherton, T. F., Rudd, M. D., & Schimdt, N. B. (1997). Perfectionism, perceived weight status, and bulimic symptoms: Two studies testing a diathesis-stress model. *Journal of Abnormal Psychology, 106*(1), 145-153.
- Joiner, T. E., Jr., & Schmidt, N. B. (1995). Dimensions of perfectionism, life stress, and depressed and anxious symptoms: Prospective support for diathesis-stress but not specific vulnerability among male undergraduates. *Journal of Social and Clinical Psychology, 14*(2), 165-183.
- Juster, H. R., Heimberg, R. G., Frost, R. O., Holt, C. S., Mattia, J. I., & Faccenda, K. (1996). Social phobia and perfectionism. *Personality and Individual Differences, 21*(3), 403-410.



- Killen, J. D., Taylor, C. B., Hayward, C., Haydel, K. F., Wilson, D. M., Hammer, L., et al. (1996). Weight concerns influence the development of eating disorders: A 4-year prospective study. *Journal of Consulting and Clinical Psychology, 64*(5), 936-940.
- Killen, J. D., Taylor, C. B., Hayward, C., Wilson, D. M., Haydel, K. F., Hammer, L. D., et al. (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.
- Klibert, J. J., Langhinrichsen-Rohling, J., & Saito, M. (2005). Adaptive and maladaptive aspects of self-oriented versus socially prescribed perfectionism. *Journal of College Student Development, 46*(2), 141-156.
- Laessle, R. G., Tuschl, R. J., Kotthaus, B. C., & Pirke, K. M. (1989). A comparison of the validity of three scales for the assessment of dietary restraint. *Journal of Abnormal Psychology, 98*(4), 504-507.
- McGee, B. J., Hewitt, P. L., Sherry, S. B., Parkin, M., & Flett, G. L. (2005). Perfectionistic self-presentation, body image, and eating disorder symptoms. *Body Image, 2*(1), 29-40.
- McLaren, L., Gauvin, L., & White, D. (2001). The role of perfectionism and excessive commitment to exercise in explaining dietary restraint: Replication and extension. *International Journal of Eating Disorders, 29*(3), 307-313.

- McVey, G. L., Pepler, D., Davis, R., Flett, G. L., & Abdolell, M. (2002). Risk and protective factors associated with disordered eating during early adolescence. *Journal of Early Adolescence, 22*(1), 75-95.
- Meng, X. L., Rosenthal, R., & Rubin, D. B. (1992). Comparing correlated correlation coefficients. *Quantitative Methods in Psychology, 111*(1), 172-175.
- Minarik, M. L., & Ahrens, A. H. (1996). Relations of eating behavior and symptoms of depression and anxiety to the dimensions of perfectionism among undergraduate women. *Cognitive Therapy and Research, 20*(2), 155-169.
- Mulholland, A. M., & Mintz, L. B. (2001). Prevalence of eating disorders among African American women. *Journal of Counseling Psychology, 48*(1), 111-116.
- Ozgul, S., Heubeck, B., Ward, J., & Wilkinson, R. (2003). Self-discrepancies: Measurement and relation to various negative affective states. *Australian Journal of Psychology, 55*(1), 56-62.
- Perez, M., & Joiner, T. E. (2003). Body image dissatisfaction and disordered eating in Black and White women. *International Journal of Eating Disorders, 33*, 342-350.
- Petrocelli, J. V., & Smith, E. R. (2005). Who I am, who we are, and why: Links between emotions and causal attributions for self- and group discrepancies. *Personality and Social Psychology Bulletin, 31*(2), 1628-1642.
- Phillips, A. G., & Silvia, P. J. (2005). Self-awareness and the emotional consequences of self-discrepancies. *Personality and Social Psychology Bulletin, 31*(5), 703-713.

- Pratt, E. M., Telch, C. F., Labouvie, E. W., Wilson, G. T., & Agras, W. S. (2001). Perfectionism in women with binge eating disorder. *International Journal of Eating Disorders, 29*(2), 177-186.
- Scott, L., & O'Hara, M. W. (1993). Self-discrepancies in clinically anxious and depressed university students. *Journal of Abnormal Psychology, 102*(2), 282-287.
- Shaw, H. E., Stice, E., & Springer, D. W. (2004). Perfectionism, body dissatisfaction, and self-esteem in predicting bulimic symptomatology: Lack of replication. *International Journal of Eating Disorders, 36*(1), 41-47.
- Sherry, S. B., Hewitt, P. L., Besser, A., McGee, B. J., & Flett, G. L. (2004). Self-oriented and socially prescribed perfectionism in the Eating Disorder Inventory Perfectionism subscale. *International Journal of Eating Disorders, 35*(1), 69-79.
- Smith, D. E., Marcus, M. D., Lewis, C., Fitzgibbon, M. L., & Schreiner, P. (1998). Prevalence of binge eating disorder, obesity, and depression in a biracial cohort of young adults. *Annals of Behavioral Medicine, 20*, 227-232.
- Snyder, R. (1997). Self-discrepancy theory, standards for body evaluation, and eating disorder symptomatology among college women. *Women and Health, 26*(2), 69-84.
- Stice, E. (2002). Risk and maintenance factors for eating pathology: A meta-analytic review. *Psychology Bulletin, 128*(5), 825-848.
- Strauman, T. J. (1989). Self-discrepancies in clinical depression and social phobia: cognitive structures that underlie emotional disorders? *Journal of Abnormal Psychology, 98*(1), 14-22.

- Strauman, T. J., & Higgins, E. T. (1987). Automatic activation of self-discrepancies and emotional syndromes: when cognitive structures influence affect. *Journal of Personality and Social Psychology*, *53*(6), 1004-1014.
- Strauman, T. J., & Higgins, E. T. (1988). Self-discrepancies as predictors of vulnerability to distinct syndromes of chronic emotional distress. *Journal of Personality*, *56*(4), 685-707.
- Strauman, T. J., Vookles, J., Berenstein, V., Chaiken, S., & Higgins, E. T. (1991). Self-discrepancies and vulnerability to body dissatisfaction and disordered eating. *Journal of Personality and Social Psychology*, *61*(6), 946-956.
- Striegel-Moore, R. H., Dohm, F. A., Kraemer, H. C., Taylor, C. B., Daniels, S., Crawford, P. B., et al. (2003). Eating disorders in White and Black women. *American Journal of Psychiatry*, *160*(7), 1326-1331.
- Striegel-Moore, R. H., Schreiber, G. B., Lo, A., Crawford, P., Obarzanek, E., & Rodin, J. (2000). Eating disorder symptoms in a cohort of 11 to 16-year-old black and white girls: The NHLBI growth and health study. *International Journal of Eating Disorders*, *27*(1), 49-66.
- Striegel-Moore, R. H., Wilfley, D. E., Pike, D. E., Dohm, F., & Fairburn, C. G. (2000). Recurrent binge eating in Black American women. *Archives of Family Medicine*, *9*, 83-87.
- Stunkard, A. J., & Messick, S. (1985). The Three-Factor Eating Questionnaire to measure dietary restraint, disinhibition and hunger. *Journal of Psychosomatic Research*, *29*(1), 71-83.

- Sutandar-Pinnock, K., Woodside, D. B., Carter, J. C., Olmsted, M. P., & Kaplan, A. S. (2003). Perfectionism in anorexia nervosa: A 6-24-Month follow-up study. *International Journal of Eating Disorders, 33*(2), 225-229.
- Tangney, J. P., Niedenthal, P. M., Covert, M. V., & Barlow, D. H. (1998). Are shame and guilt related to distinct self-discrepancies? A test of Higgins's (1987) hypotheses. *Journal of Personality and Social Psychology, 75*(1), 256-268.
- Thelen, M. H., Farmer, J., Wonderlich, S., & Smith, M. (1991). A revision of the Bulimia Test: The BULIT-R. *Psychological Assessment, 3*(1), 119-124.
- Thelen, M. H., Mintz, L. B., & Vander Wal, J. S. (1996). The Bulimia Test-Revised: Validation with DSM-IV criteria for bulimia nervosa. *Psychological Assessment, 8*(2), 219-221.
- Thompson, J. K. (2004). *Handbook of eating disorders and obesity*. Hoboken, NJ: John Wiley & Sons, Inc.
- Toner, B. B., Garfinkel, P. E., & Garner, D. M. (1986). Long-term follow-up of anorexia nervosa. *Psychosomatic Medicine, 48*(7), 520-529.
- Tyrka, A. R., Waldron, I., Graber, J. A., & Brooks-Gunn, J. (2002). Prospective predictors of the onset of anorexic and bulimic syndromes. *International Journal of Eating Disorders, 32*(3), 282-290.
- van Strien, T. (1999). Success and failure in the measurement of restraint: notes and data. *International Journal of Eating Disorders, 25*(4), 441-449.
- Vohs, K. D., Bardone, A. M., Joiner, T. E., Jr., Abramson, L. Y., & Heatherton, T. F. (1999). Perfectionism, perceived weight status, and self-esteem interact to predict

- bulimic symptoms: A model of bulimic symptom development. *Journal of Abnormal Psychology, 108*(4), 695-700.
- Vohs, K. D., Voelz, Z. R., Pettit, J. W., Bardone, A. M., Katz, J., Abramson, L. Y., et al. (2001). Perfectionism, body dissatisfaction, and self-esteem: An interactive model of bulimic symptom development. *Journal of Social and Clinical Psychology, 20*(4), 476-497.
- Westen, D., & Harnden-Fischer, J. (2001). Personality profiles in eating disorders: Rethinking the distinction between Axis I and Axis II. *American Journal of Psychiatry, 158*(4), 547-562.
- White, M. A., & Grilo, C. M. (2005). Ethnic differences in the prediction of eating and body image disturbances among female adolescent psychiatric inpatients. *International Journal of Eating Disorders, 38*, 78-84.
- Williamson, D. A., Anderson, D. A., Jackman, L. P., & Jackson, S. R. (1995). Assessment of eating disordered thoughts, feelings, and behaviors. In D. B. Allison (Ed.), *Handbook of assessment of methods of eating behaviors and weight-related problems* (pp. 347-386).
- Wonderlich, S. A., Crosby, R. D., Joiner, T. E., Jr., Peterson, C. B., Bardone-Cone, A. M., Klein, M., et al. (2005). Personality subtyping and bulimia nervosa: psychopathological and genetic correlates. *Psychological Medicine, 35*(5), 649-657.

## VITA

Amanda S. Weishuhn was born on May 16, 1981, in Flint, Michigan. She received her B.A. in Psychology from Kalamazoo College in Kalamazoo, Michigan and is presently a member of the Department of Psychological Sciences at the University of Missouri-Columbia.