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Self-Concept of Eating-Restrained Women: A Study of Personal Constructs

Adelia Atkinson Furr
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SELF-CONCEPT OF EATING-RESTRAINED WOMEN:
A STUDY OF PERSONAL CONSTRUCTS

by

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B.A. May 1988, University of Virginia

A Dissertation submitted to the Faculties of

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ABSTRACT

SELF-CONCEPT OF EATING-RESTRAINED WOMEN:
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Adelia Atkinson Furr

Virginia Consortium for Professional Psychology, 1997
Chair: Dr. Neill Watson, The College of William and Mary

A modified version of Kelly's Repertory Test was administered to 15 women identified as eating-restrained, 21 women identified as non-eating-restrained and matched on neuroticism, and 15 women identified as non-eating restrained and low on neuroticism in order to elicit personal constructs related to being overweight, average weight, and underweight. The personal constructs were used in measures of components of self-concept: real self, ideal self, social self, and ideal social self. It was hypothesized that in comparison to the other two groups, the eating-restrained women would exhibit a distinct pattern among the components of self-concept: Real and ideal selves would be more disparate; real and social selves would be less disparate; ideal and ideal social selves would be less disparate. Subsequent to gathering the data, a fourth hypothesis predicting that social and ideal social self would be more disparate for

eating-restrained women was added to the study. Profiles on the Eating Disorders Inventory-2 indicated that most of the women identified as eating-restrained were qualitatively distinct from anorexic women: consequently this group was renamed the non-weight-preoccupied eating-restrained group. In analyses that compared the non-weight-preoccupied group with matched neurotic and low neurotic groups, no differences were found on the disparity measures. When a smaller group of women, who more closely resembled an anorexic population was identified (the weight-preoccupied eating-restrained group), results provided weak support for two of the hypotheses: Real self and ideal self, and social self and ideal social self were more disparate for the eating-restrained group. Results from exploratory analyses indicated that all three groups of women endorsed normal weight characteristics more strongly on the four components of self-concept.

This word is dedicated to:

my parents, John and Mary Furr, whose love, faith and encouragement have made almost all things possible for me;

and my siblings and their spouses, Jeanie, Hap, Billy, Lee, Billy, and Kyle, whose love, loyalty and influence have been indispensable to me.

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CHAPTER I

INTRODUCTION

Psychologists from diverse schools of thought identify self-concept as a necessary construct (Epstein, 1973). Formal psychological studies of self-concept date back to the last century. William James (1890) identified the self as "all that [one] is tempted to call by the name of me" (p. 279). James identified four constituents or components of the self including material self (one's body), social self (recognition one gets from others), spiritual self (one's inner or subjective being), and pure ego. James also discussed the existence of potential selves, formulating self-regard as a subjective ratio of a person's successes (real self) over his or her values for the self (ideal self).

C. H. Cooley (1902) introduced the concept of a "looking glass self", the idea that an individual perceives oneself in the way that others perceive him or her. George Mead (1934) expanded this idea, asserting that the self-concept develops and behavior is regulated through social interactions and the need to anticipate others' reactions to the self. According to Mead a distinct version of the self exists for each social role that one plays. Carl Rogers (1959) continued to define self-concept as a product of interactions with the environment and the evaluation of others. Like James, Rogers divided the self into distinct

components. Also like James, Rogers identified versions of the self that individuals seek to achieve. The distinct components of self, according to Rogers, include real self, which is "the organized, consistent, conceptual gestalt composed of perceptions of the characteristics of the 'I' or 'me' and the perceptions of the relationships of the 'I' or 'me' to others and to various aspects of life, together with the values attached to these perceptions" (p. 200). Another distinct component of self is ideal self, which is "the self-concept which the individual would most like to possess, upon which he places the highest value for himself" (p. 200). Rogers was interested in the disparity between real and ideal self, using it as an index of self-regard to measure outcome in therapy (Rogers & Dymond, 1954).

Contemporary theorists have continued James's discussion of social self as a component of self-concept (Cheek & Hogan, 1983; Schlenker, 1980; Wylie, 1979). Cheek and Hogan (1983) focused on the disparity between social self and ideal social self, considering it to measure a person's view of how he or she is esteemed by others.

Numerous researchers have studied the disparities between the four components of self-concept (real self, ideal self, social self, ideal social self) in relation to aspects of personality and psychopathology. For example, real self and ideal self disparities have been related to chronic pain (Large, 1985), anxiety and depression (Scott &

O'Hara, 1993; Ashworth, Blackburn & McPherson, 1985; Hewstone, Hooper & Miller, 1981; Sheehan, 1981), neuroticism (Ryle & Breen, 1972; Fransella & Crisp, 1970), obsessiveness (Makhlouf-Norris & Jones, 1971), agoraphobia (Winter & Gournay, 1987), arson (Fransella & Adams, 1966) and eating disorders (Fransella & Crisp, 1970; Forston & Stanton, 1992). Other studies have looked at real self and ideal self disparities relative to personality (Rosen, 1956 as cited in Wylie, 1961; Tamkin, 1957 as cited in Wylie, 1961; Wahler, 1958 as cited in Wylie, 1961) and intelligence (Rubenstein & Lorr as cited in Wylie, 1961; Webb as cited in Wylie, 1961). Disparities between social self and ideal social self have also been examined in studies of eating disorders (Mottram, 1985) and social competence (Achenbach and Zigler, 1963). Finally, real self and social self discrepancies have been examined in people who meditate (Turnbull & Norris, 1982). The present study was an investigation of the self-concept of eating-restrained women through an examination of the disparities between certain components of self-concept.

In recent years eating disorders have been noted as having a significant impact on the lives of women (Connors & Morse, 1993). The Diagnostic and Statistical Manual of Mental Disorders, 4th ed. (DSM-IV) (American Psychiatric Association, 1994) categorizes eating disorders into binge-eating disorder, bulimia nervosa and anorexia nervosa.

Bulimia is defined as a pattern of binge eating, followed by purging behavior, which can take the form of self-induced vomiting, excessive use of laxatives and/or excessive amounts of exercise. Anorexia nervosa, on the other hand, is marked by a pattern of restrained eating behavior. The DSM-IV indicates that anorexia nervosa has a prevalence rate of 0.5%-1.0% among adolescent females. Its diagnostic criteria are: refusal to maintain a minimally normal body weight; intense fear of gaining weight; disturbance in the way one views one's body weight and shape; and absence of at least three consecutive menstrual cycles.

It is widely thought that eating disorders exist on a continuum (Button & Whitehouse, 1981; Fries, 1977; Kalodner & Scarano, 1992; Nylander, 1971; Rodin, Silberstein & Striegel-Moore, 1985; Thompson & Schwartz, 1982). The idea of a continuum assumes that individuals who restrain their food intake without meeting the criteria for an eating disorder are fundamentally similar to individuals with clinical forms of an eating disorder and are at risk for developing the disorder. For example, anorexia nervosa is the endpoint of the continuum, with chronic and intermittent eating restrainers falling in between anorexics and symptom-free individuals, distinguished by the degree and intensity of the symptoms.

Other clinical theorists maintain that qualitative differences exist between eating disordered and eating-

restrained women (Bruch, 1973; Crisp, 1965; Selvini-Palazzoli, 1978). Bruch (1973) and Selvini-Palazzoli (1978) identified an underlying sense of personal ineffectiveness and interpersonal distrust in anorexic women not seen in non-clinical cases. However, Mallick, Whipple and Huerta (1987) noted problems with studies that have found anorexic women to be distinct and discontinuous from anorexic-like women. They maintained that eating disorders, particularly anorexia nervosa, begin to develop in adolescence and that many authors have examined individuals after they have passed adolescence rather than during adolescence. Consequently these authors expressed dissatisfaction with the few studies that have dealt directly with the question of differences in the psychological functioning of eating disordered women as compared to eating-restrained women.

Some authors have responded to the seemingly conflicting views of whether eating disorders exist on a continuum with the proposal that eating disordered pathology has two components: an intense concern with weight, appearance and body shape, which is shared by normal dieters, and ego deficits and perceptual disturbances, which are confined to a more restricted segment of the population (Garner, Olmsted & Garfinkel, 1983; Garner, Olmsted, Polivy & Garfinkel, 1984; Kalodner & Scarano, 1992; Polivy & Herman, 1987). Garner, et al. (1983) found that weight-preoccupied women (extreme scorers on the Eating Disorders

Inventory (EDI) (Garner, 1991) subscale Drive for Thinness) can be broken down into two clusters, one in which the psychopathology displayed is similar to that of anorexics, and one in which the individuals only superficially resemble anorexic patients. In the first cluster all scales on the Eating Disorders Inventory were elevated. In the second cluster, only Drive for Thinness, Body Dissatisfaction and Perfectionism were elevated. They found that few of the non-clinical, weight-preoccupied women scored within the anorexic range on the subscales of Ineffectiveness, Interpersonal Distrust and lack of Interoceptive Awareness.

Even when authors make qualitative distinctions between anorexia and non-clinical restrainers, some persist in discussing psychological issues of eating disorders as existing on a continuum (Scarano & Kalodner-Martin, 1994). Although individuals with anorexia exhibit a greater degree of pathology than do eating-restrained populations, subclinical eating-disordered women also have been shown to differ significantly from normals on many of the same variables (Button & Whitehouse, 1981; Laessle, Tuschl, Waadt & Pirke, 1989; Mintz & Betz, 1988). Thompson and Schwartz (1982) concluded that there exists a population of women who manifest high levels of anorexic symptomatology while living seemingly normal lives. They found that women with anorexic-like behavior, as indicated by high scores on the EAT, exhibit more distress, as measured by the Weissman

Social Adjustment Scale than did college women without such behavior, but exhibited substantially less distress than anorexic women.

Button and Whitehouse (1981) identified a need to study a subclinical population for which early intervention has been shown to foster better treatment outcome. They argued that such studies provide a means of exploring the underlying development and recovery from anorexia nervosa. Comparing 24 high scorers on the Eating Attitudes Test with 14 subjects who met the strict criteria for anorexia nervosa, Button and Whitehouse found that symptoms of anorexia nervosa were common in the high scoring group, but absent in a comparison group of non-eating disordered students. They concluded that a substantial amount of post-pubertal females are at risk for developing subclinical forms of anorexia nervosa, and would benefit from early intervention to prevent the development of clinical forms of the disorder.

Nassar, Hodges and Ollendick (1992) worked with a non-clinical population in order to find early indicators of anorexia nervosa. Similarities were found between non-clinical high scorers on the EDI and anorexic populations. For example, high scorers were unable to express their own ideas and had problems with interpersonal relationships. They also found low self-concept to be related to pathological eating attitudes for their participants. They

concluded that poor self-image and preoccupation with dieting are predisposing factors for the development of eating problems.

The authors mentioned here contend that research with subclinical populations could be productive in understanding anorexia nervosa (Garner & Garfinkel, 1980; Thompson & Schwartz, 1982). It is assumed here that anorexia nervosa does exist on a continuum and that information pertaining to the self-concept of anorexic women can be used in formulating hypotheses about the self-concept of eating-restrained women, defined as women who don't meet the full diagnostic criteria for anorexia nervosa, but who exist on the anorexic continuum and share the pathology of individuals with anorexia nervosa.

Personality Characteristics of Anorexics and Eating-restrained Individuals

The fact that many women willingly restrict their food intake with such dramatic consequences has generated a considerable amount of concern and research in the psychology community. Studies of the personality characteristics associated with anorexia nervosa have shown that women with anorexia exhibit an inability to express appropriate affect (Bruch, 1985; Button, 1993; Garner, et al. 1983; Krueger, 1989; Mallick, et al. 1987) and have problems with anxiety (Yager, 1988), neuroticism (Strober & Katz, 1988; Swift, Bushnell, Hanson, & Logemann, 1985)

obsessiveness (Garner, et al. 1983; Strober & Katz, 1988), and impulsivity and control (Garner, et al. 1983; Strober & Katz, 1988; Yager, 1988). Anorexic women have shown a poor awareness of their feelings, needs and inner sensations (Garner, et al. 1983; Mallick, et al. 1987; Yager, 1988). According to research, anorexic women tend to be perfectionistic, which is manifest in their drive for achievement (Bruch, 1973; Steinhausen & Vollrath, 1993), and their high moral values (Casper, Offer, & Ostrov, 1981). Authors have also noted a phobic avoidance of sexual maturation (Button, 1993).

Within the interpersonal sphere, anorexics have been shown to be overly submissive (Bruch, 1978; Strober, 1991), passive and helpless (Engel, Fuchs, Meier, & Deneke, 1988) and fearful of separation and loss (Garner, et al. 1983). Social relationships are marked by a basic mistrust of others (Bruch, 1978; Mallick, et al. 1987) and painful social self-consciousness (Rosen, 1970), both of which may lead to the social isolation that has been found among anorexic women (Krueger, 1989; Mallick, et al. 1987).

Leon, Fulkerson, Perry and Cudeck (1993) were interested in examining high risk normal populations as a way to study personality and behavioral processes involved in eating disorders. Based largely on scores from the Eating Disorders Inventory, 61 adolescent females were identified as high risk for an eating disorder. Consistent

with findings in a clinical population, the subjects showed an inability to label their feelings and problems with negative emotionality. Similarly, other studies have found high restrainers, identified with the Restraint Scale (Herman & Polivy, 1980), to be more responsive to intense or negative emotions than low restrainers (Cools, Schotte & McNally, 1992; Davis, Shapiro, Elliott & Dionne, 1993; Schotte, Cools & McNally, 1990;).

Self-Concept of Anorexics and Eating-restrained Individuals

Feminist authors have identified the role that culture plays in the development of eating disorders, and in doing so, have contributed to an understanding of the self-concept of anorexic women. According to these authors, anorexia is a response to society's conflicting dictates for women to adapt to confining gender role stereotypes of conformity and caretaking, while also pursuing independence and autonomy (Orbach, 1986; Roberto, 1993; Steiner-Adair, 1991; Wooley, 1991). Wooley (1991) characterized anorexic women as those individuals who are least able to respond to the conflicts between learned values of meeting the needs of others and the newer demands for autonomy and self-reliance.

Steiner-Adair (1991) asserts that girls have an awareness of nonidealized, realistic relationships. In adolescence, however, girls are confronted with cultural idealizations about women's roles in relationships. According to Steiner-Adair, girls then begin to suppress

their knowledge of the complexity of human relationships in order to meet the idealized and superficial version of relationships that requires nurturance and caretaking by women. The anorexic girl feels she must choose between connectedness with others and loss of self, or sense of self and isolation.

Orbach (1986) conceives of anorexia as the "metaphor of our age", and agrees that anorexics live out the contrariety of our culture's demands. The anorexic woman feels that she must shape her life according to others yet somehow negotiate her own needs, desires, and impulses. She simultaneously conforms to and rejects the feminine ideal: Her thin body is visible proof of her success at controlling her own needs and desires, but is also a repudiation of her role as nurturer and caretaker.

Roberto (1993) perceives the compliance of the anorexic woman, and her dependence on the opinion of others, as evidence of induction into society's expectations that women be self-sacrificing. The anorexic avoids awareness of her own discontent with society's prescription for women in order to preserve important relationships with others. This results in self-deception, a false sense of self, and an inability to assert oneself. Roberto discusses three levels of secrets in anorexic women: internal (the anorexic deceives herself since she, herself, poses a threat to established relationships and social expectations);

relational (the anorexic deceives her family and her partner about her own well-being and the well-being of their relationships); and cultural (the anorexic contributes to the social deception regarding the competence of women).

Feminist authors provide a sociologically informed theory of anorexia nervosa which can account for many of the findings of research into the self-concept of anorexic and eating-restrained women, such as problems with self-concept and self-definition. In studies of the self-concept of anorexic women, researchers have found a pervasive feeling of personal ineffectiveness (Bruch, 1985; Casper, et al. 1981; Mallick, et al. 1987) and a devalued self-concept (Button, 1993). These women are highly self-critical (Swift, et al. 1986), and strongly identify themselves with a stereotypical feminine role (Levitt & Hart, 1991; Weinrich, Doherty, & Harris, 1985). Women with anorexia are masters at self-deception, which creates problems with self-perception and self-awareness (Bruch, 1973; Garner, et al. 1983; Pettinati, Franks, Wade, & Kogan, 1987). Anorexics tend to be preoccupied with what others think, exhibited by their typical standing as the "model child" (Garner, et al. 1983) and by their need for high approval. All of these problems with self-concept appear to culminate in what many authors have found to be a false or weak sense of self in anorexic women (Bruch, 1985; Engel, Fuchs, Meier, & Deneke, 1988; Garner et al., 1983; Strober & Katz, 1988;

Sugarman, Quinlan & Derenis, 1982). Some authors have found evidence that anorexic women depend on others to supply the function of the self (Strober & Katz, 1988). It appears that anorexic women have problems with autonomy, self-efficacy, and in differentiating their own identity from that of others (Strauss & Ryan, 1987; Strober & Humphrey, 1987).

Polivy, Herman, Hackett, and Kuleshnyk (1986) studied the effects of self-attention and public attention on the food intake of 48 restrainers and 48 non-restrainers as identified with Herman and Polivy's Restraint Scale. They found that as compared to non-restrainers, restrainers were less likely to consume as much food when public attention was implied through the availability of a waste basket for disposal of candy wrappers. Heatherton (1993) studied 70 female visitors to a museum by administering the Restraint Scale, Exner Sentence Completion Task, a Body Shape Preference Test, Self-Consciousness Scale, and a Self-Esteem Scale. He found support for previous studies that have linked restraint with public self-consciousness and not with private self-consciousness. He concluded that eating-restrainers are concerned with their public image. These studies indicate that restrainers are more preoccupied with the opinion that others have of them than are non-restrainers. This relates to Mintz and Betz's (1988) finding that degree of eating disturbance is strongly

correlated with endorsement of the sociocultural stereotype that female thinness is desirable. From all of these studies we can conclude that eating-restrained women give more emphasis to the opinion of others than do normal women.

Eating-restrained women have been shown to exhibit poorer self-esteem and higher preoccupation with their weight, their body, and dieting (Davis, Shapiro, Elliott & Dionne, 1993; Dykens & Gerrard, 1986; Mintz & Betz, 1988; Nassar, Hodges & Ollendick, 1992), as do anorexic women.

Personal Constructs of Anorexics and Eating-restrained Individuals

Whereas authors of previous studies have examined the self-concept of anorexic and eating-restrained individuals in terms of normative personality traits, the present study is an investigation of the self-concept of eating-restrained women in terms of the way that they construe their world. One way to investigate this is through the use of personal constructs (George Kelly, 1955). Studies pertaining to personal constructs most commonly employ what is called the "grid method" (Bannister & Mair, 1968) to facilitate collection and analysis of data. Participants are asked to provide the names of various individuals they know who match certain role titles. These individuals' names form the elements that are presented in triads for purposes of comparisons. Participants indicate how two elements are similar to one another, and different from the third. The

adjectives elicited from these comparisons are personal constructs. Participants are then asked to rate certain elements relative to these personal constructs. For example, in studies of self-concept, the elements that are rated include the self, and, at times, the ideal self. Factor analysis of these ratings yields a spatial model showing how personal constructs are organized. In studies of self-concept, self and ideal self are located in the space defined by the factors.

Research studies on personal constructs and eating disorders has not been consistent in their approach to examining the way eating disordered individuals construe their world. For example, in some studies no distinction is made between constructs and elements. For the purposes of the present study, elements refer to people (either self or others) and constructs are concepts that participants use to organize their world. Another inconsistency in the literature arises in that some authors distinguish between personal and supplied constructs, but others do not. The present author makes the distinction in the following way: Personal constructs refer to those concepts that are elicited from the individual; supplied constructs are those concepts that are provided by the experimenter. The distinction between elicited and supplied constructs is essential: Elicited constructs, which are the individual's own terms, are more meaningful to the individual than

supplied constructs, which probably are not the individual's own terms (Cromwell & Caldwell, 1962; Isaacson, 1966; Isaacson & Landfield, 1965; Landfield, 1965).

Studies of Personal Constructs and Patterns of Construing

The bulk of personal construct research with eating-restrained individuals has used clinical populations diagnosed with anorexia nervosa. Many investigators who study the constructs of anorexic women seeking primarily to identify patterns of construing among them, rather than to study self-concept. Several studies of the patterns of construing in anorexic individuals (as well as one study of patterns of construing in eating-restrained individuals) have used elicited constructs, either exclusively, or in combination with supplied constructs. By incorporating the participants' own terms, these studies elicit more unique information about the way eating disordered women construe their world.

Crisp and Fransella (1972) pioneered research in the area of personal constructs and anorexia nervosa when they examined "the weight phobia hypothesis," which holds that anorexic patients construe their past adolescent experiences and problems in terms of their weight. They designed for their two participants two rank order repertory grids: a "people grid," which contained a variety of people, including the subject at different weights, and a "fashion model grid," which contained ten pictures of women from a

fashion magazine. They supplied and elicited constructs from the participants. They found that in their factor analysis, both women had a very major first component related to weight constructs. Over time the first woman was able to expand her repertoire of constructs, enabling her to make important discriminations, which included, according to the authors, her ability to recognize herself as immature. She developed over the course of treatment a sense of individual identity, yet she exhibited a limited capacity to develop new ways to construe events. With treatment, the second anorexic woman ceased to have a high loading on the first component; however, Crisp and Fransella report that she was unable to construe elements in a meaningful way. (That is, she was unable to make connections between people in other ways besides weight.) These authors suggested that clinical change is related to an ability to look beyond weight as the primary way to define oneself.

Mottram (1985) compared 15 primary anorexics with 15 volunteer female students. He supplied four constructs pertaining to independence, maturity, success and sexuality. He elicited eight constructs by asking participants to compare eight triads of elements, (people), including present self, family members, persons that subjects do and do not get along with, mate, personally influential persons and ideal self. In a cluster analysis, he found that the anorexic group demonstrated a prevalence of monolithic (one

primary cluster) and segmented (two or more primary clusters) structures, while the comparison group demonstrated a prevalence of articulated (two or more primary clusters joined by linking constructs) structures. He concluded that the anorexic group had a unidimensional mode of thought in contrast to the comparison group's multidimensional way of viewing their world. Mottram also found a large difference between ideal and present self for anorexics as compared to non-anorexics. Mottram included no elements or constructs related to weight. Given his findings that anorexics are unidimensional in the way they view their world, and given that weight is a primary issue for anorexic women, Mottram may have lost important information without the inclusion of weight-related elements and constructs.

As part of an ongoing, cross-sectional study, Eric Button (1993) is comparing 26 anorexics and 31 bulimics with 26 normal females from another study and with 17 females with non-psychotic psychological disorders. Thus far the data suggest that anorexics show less differentiated, less multidimensional construing as compared to the other groups. Additionally, the anorexic subjects construe "self when younger" much more negatively, whereas bulimic and general psychiatric subjects show a more persistent negative construing of "self nowadays".

In three other studies Button investigated the meaningfulness of constructs for anorexic women. He assisted Fay Fransella (1993) with 20 inpatient anorexic profiles, using both supplied and elicited constructs to form two grids: as she sees herself when thin, and as she sees herself at normal weight. The authors found that first admission patients, as compared to multiple admission patients, had significantly more implications on both grids (i.e., when thin and at normal weight), which they interpreted as more meaningful ways to construe people. Additionally, the more meaningful that normal weight was for the patient upon admission, the more likely it was that normal weight would be maintained after discharge. An increased number of perceived meanings attached to normal weight, and a reduction in the number of meanings attached to thinness, was associated with better weight maintenance. Without a comparison group, no conclusions can be drawn with regard to the distinctive construing of anorexic women. Nevertheless, this study provides potentially useful information about the relationship between patterns of construing and the prognosis of anorexic individuals.

Button (1983) also conducted a follow-up study to explore further the construal pattern of anorexics and its relationship to treatment outcome. Subjects were 20 anorexic inpatients, assessed upon admission, discharge, and on two follow-up occasions within a year of discharge.

Constructs were both elicited and supplied (12 and 9 respectively), with 20 elements (including versions of self and others) rated on a seven point scale. Clients who, upon admission, had a more unidimensional (tighter) construct system and who construed themselves more extremely tended to fare poorly at outcome. A smaller distance between the elements of "self now" and "self a year ago" predicted poorer outcome as well. Clients who fared better began with multidimensional (looser) construing, and cycled through a process of tightening and loosening of construing. Clients resistant to change exhibited tighter construing. After discharge, clients who had a better sense of themselves at normal weight showed better weight maintenance. A decrease in the meaningfulness of the thin-fat construct was associated with good weight maintenance. As with the previous study, this one is limited by the lack of inclusion of a comparison group.

In another study of the construing of anorexic women, Button (1985) assigned 10 anorexics and 10 obese females to behavioral therapy, and 10 anorexics and 10 obese females to personal construct therapy. Constructs were elicited with triads of elements (e.g., me as I imagine I would be at normal weight, me at my thinnest/heaviest, etc.). Button was interested in measuring the meaningfulness of a construct as the number of implications the construct has for an individual, and the saturation of a construct as the

number of implications a construct has, divided by the total number of possible implications. In his conclusions, Button found no evidence that normal weight is less meaningful for any of the groups. The anorexics with more than one hospital visit had less meaningful normal weight constructs (i.e. less implications for normal weight) than those who had only one admission. A higher initial number of implications for normal weight upon admission was associated with better maintenance of weight for anorexics. He also found a trend for an increase in meaningfulness of normal weight to be associated with better outcome. It should be noted that a potential problem of this study is the absence of a group that has no issues with weight.

Heesacker and Neimeyer (1990) implemented the grid technique with a subclinical population of 183 undergraduate women as part of a larger study investigating object relations and social cognitive correlates of eating disorders. In this study elicited constructs were used to examine patterns of construing. Participants were asked to complete an Eating Disorders Inventory (EDI). In order to elicit constructs they were then asked to name twelve important people in their lives, and to compare triads from this group. The authors found support for the idea that high scorers on the EDI construe in more restricted and tightly organized systems of construing that are highly integrated and poorly differentiated. Although the authors

appropriately used the elements and the triadic questioning technique to elicit personal constructs, the study is limited in that it did not include a control group for comparisons.

Studies of Supplied Constructs and Self-concept

In addition to learning about patterns of construing among anorexic individuals, researchers also have employed constructs as a way to learn more about the self-concept of anorexic individuals. Feldman (1975) explored the way that two normal female and two anorexic women felt about certain body parts in terms of a given set of dimensions (e.g. hands are beautiful, teeth are ugly etc.). Nine different body parts were used and related to real self, ideal self, mother, father, and partner. Subjects were asked to rate each of the 50 elements (e.g. dad's hands, mom's face) in terms of 15 different supplied dimensions including very warm, very cold, very ugly, very beautiful. In this early study of real self and ideal self, Feldman did not draw any distinctions between anorexic and normal women, but used his technique as a "means of exploring the individual's inner world".

Hall & Brown (1983) examined the attitudes of 20 anorexic female patients and their mothers as compared to 32 senior secondary school girls and their mothers. They asked participants to make judgements on eight supplied constructs about themselves, as well as about the way their mother

would respond on topics related to eating, sickness, sexuality, growing up, arguing and social isolation. They asked the mothers to make the same judgments for themselves and their daughters. They found that the mothers and daughters in the patient group were more similar than the mothers and daughters in the comparison group. In both groups, mothers and daughters differed on thinness, with daughters finding it more important. Their study does not use elicited constructs, but does draw some important conclusions about the mother-daughter relationship of anorexic women, and its relationship to the self-concept of anorexic women.

Ryle and Evans (1991), in their study of self-concept and eating disorders, examined 24 eating disordered patients (19 anorexics and 10 bulimics) and 20 participants recruited by personal invitation of staff. Elements were five versions of the self (actual, feared, ideal, empty and after a large meal), three versions of the body (normal, 10 kg overweight, 10 kg underweight) and six body parts. They supplied 25 constructs. They found that the eating disordered group had a greater distance between real self and ideal self, less distance between real self and "feared self", a significantly larger difference between "self after a large meal" and ideal self, and a significant difference between ideal self and "self at average weight".

Neimeyer & Khouzan (1985) were interested in patterns of construing of non-clinical groups who exhibited eating-disordered traits. The authors asked 68 female undergraduates to rate themselves in 10 different eating situations on 10 supplied affective constructs. Participants were also administered a restraint questionnaire, so that the 34 highest restrainers could be compared to the 34 lowest restrainers. For this population, the authors concluded that the high restrainers were less cognitively complex-- that is they construe their world in less multidimensional, differentiated ways. They also found that the high restrainers viewed themselves more negatively on the supplied constructs. It is important to note that no elicited constructs were used, resulting in conclusions about the construing of eating disordered individuals that may not reflect their own unique view.

Studies of Personal Constructs and Self-concept

In using elicited or personal constructs to measure self-concept, the following studies are in a good position to draw conclusions about the unique view of anorexic and eating-restrained individuals. Ben-Tovim, Hunter and Crisp (1977) elicited constructs from one anorexic client and her parents with regard to body shapes of family members at different times. Additionally, each parent estimated his/her own body width as well as the daughter's body width. In the final part of this study, parents were asked to rate

both actual and estimated body widths on various constructs. They found that for both parents, decreasing weight meant a more favorable impression of their daughter (e.g. more attractive, more fashionable). The patient recognized her own body size as close to an emaciated person. Since the patient was accurate in her perception of her body size, the authors suggest that the anorexic sense of self is related more to an unwillingness to change than to an inaccurate perception of self.

Weinrich, Doherty & Harris (1985) used personal constructs in their study of self-concept in eating disordered women, which compared 17 bulimics with 9 anorexics and 13 normal controls. They focused on self-constructing within a meta-theoretical framework known as identity structure analysis, and found that while bulimics show a sustained identity problem, anorexics show a current self-evaluation that is lower than past self-evaluation.

Fransella and Crisp (1979) conducted one of the first wide scale personal construct studies of self-concept and anorexia, comparing 20 normal females with 10 neurotic and 10 anorexic women. They supplied eight constructs (four pertained to the self, two pertained to parental figures, two were specified as "ideal weight"; "attractive to the opposite sex") and elicited three constructs through the use of 10 elements (four persons known to the participant and who fit a role, four self-related constructs, two parental

figures). The authors found that for anorexics, to be "fatter" than they are tends to mean being sexually attractive and moving toward their ideal self. Because anorexics construed differently than did neurotics, the authors conclude that the patterns of anorexic thinking are not attributable to being neurotic. Finally, Fransella and Crisp found a correlation of $r = .42$ between anorexics' self at normal weight and self at ideal weight. They attribute this unexpected finding to an "if only syndrome", e.g. "if only I were a normal weight, my life would be better". (A similar finding emerged in Button's (1983) study, in which anorexic women construed "thin" more negatively and more extremely than did the other groups. One of his other findings, seemingly at odds with this one, however, is that when examining other less principle components than weight, ideal self was found to be opposite to treatment team weight. Button explained that anorexics presenting for treatment may want to be normal weight, but there may be certain specific constructs which would lead to negative consequences for the individual if they were to gain weight. For example, gaining weight may mean moving from inconspicuousness to conspicuousness). Fransella and Crisp's study is methodologically flawed in that elements for anorexics were not identical to those used for controls. Additionally, the authors made no clear distinction between

constructs and elements. Moreover, it is unclear as to which elements were used for eliciting the three constructs.

In one of his several studies of personal constructs, self-concept, and anorexia, Button (1980) asked 20 anorexics to rate 23 elements in terms of 12 elicited and 9 supplied constructs on a seven point scale. The elements included "me", "me if I were overweight", "me one year ago", "me one year from now", "me at my preferred weight", "me at normal weight", "me at my treatment team's preferred weight", "me at ideal weight", ideal self, father, mother, and other people who had been important in the participants' lives. Constructs were elicited through five triadic comparisons of the elements, where "me" was always involved in one of the three elements. Button found a tendency to polarize "me at ideal weight" and "me at treatment team's preferred weight". However, thin self was seen as undesirable while normal weight was seen as desirable. Furthermore, present self was seen as thin and not ideal. Button proposes that anorexic women may want to be normal but do not view it as attainable. Other interesting findings were that self at thinnest was significantly more meaningful than self at normal weight, and that self was more undefined after treatment, which Button attributes to a lack of alternative ways of construing. Among his findings, Button relates extremity of construing with poorer outcome and decrease in meaningfulness of fat/thin with better weight maintenance.

Again, no comparison group was included, so there is no evidence that the findings distinguish anorexics from others.

In another one of his studies of personal constructs, self-concept, and eating disorders, Button (1987) asked members of an eating disordered group to name people who had been important in their lives (including those whom they may or may not like), "me as I ideally would be", "me as I think others see me", "me as I imagine I would be without an eating disorder". This study is distinctive in that it examines not only ideal self but social self, the way that one thinks others view him or her. Button supplied the following constructs: fat/thin, unattractive/attractive to opposite sex, in/out of control. He elicited other constructs through triadic questioning. He asked subjects to rate the elements on a seven point scale. Button found that "me" was similar to the way that others see me, and that "me" was the opposite of the ideal self. "Self as others see me" was negatively related to ideal self and to "me without an eating disorder". Thus, self and social self were similar, both of which were discrepant from ideal self. Other findings were that weight related constructs loaded highly for one participant, interpersonal concerns were prominent, and other people were more likely to be construed positively. The major flaw of this study is the absence of a comparison group.

There have been a few studies that have examined personal constructs in subclinical forms of anorexia nervosa. Button (1993) describes an unpublished study by A. Munden where 17 female students who construed themselves as having an eating problem were compared with 16 female control students. There was no evidence of structural differences in the way these two groups construed. However, they did find that those with an eating problem had a more negative view of themselves as indicated by a larger discrepancy between real and ideal self. Unlike the comparison group, the group with eating problems also revealed their belief that being slim would bring them closer to their ideal.

Finally, Batty and Hall (1986) used elicited constructs to examine the self-concept of 10 participants from two self-help groups of women with anorexic and bulimic type symptoms. They included among the ten elements: important people in their lives, actual self, and ideal self. Through triadic comparisons of these elements constructs were elicited and categorized by the experimenter. They found a significant difference between actual and ideal self, with most group members setting unrealistic goals for the ideal self. Additionally, they found that only a small number of categories figured highly into several of the grids. The authors discuss this finding by examining the specific categories and why they figured highly into the

participants' grids. Also noteworthy, however, is that this finding is congruent with Mottram's (1985) conclusion about anorexic women: Eating-restrained women, like anorexic women, have less available ways to construe themselves and their world than do non-anorexic populations. Unexpectedly, only one construct related to external appearance. Batty and Hall included no comparison group. Batty and Hall's study is similar to Mottram's (1985) study in that none of the constructs or elements were weight-related, which, as previously noted, may result in the loss of important information about the way anorexic women construe themselves.

Present Study

In the present study I was interested in the use of elicited constructs to examine self-concept. Because elicited constructs are unique to the individual, it follows that such terms or constructs will be more meaningful for her than supplied constructs. Greater meaningfulness of elicited constructs is supported in the research by Cromwell & Caldwell (1962), Isaacson (1966), Isaacson & Landfield (1965), and Landfield (1965). In this study elicited constructs were used to investigate the self-concept of women who restrict their eating. Because elicited constructs are more meaningful, measures of self-concept that use elicited constructs should have greater predictive validity than measures that use supplied constructs.

Moretti & Higgins (1990) support this hypothesis with their finding that measures with elicited constructs provide a more accurate means for investigating real self-ideal self discrepancy than measures using supplied constructs.

The present study was an investigation of the four components of self-concept in women who exhibit restrained patterns of eating. The four components include: real self ("the way I see myself"); ideal self ("the way that I would like to be, in my own eyes"); social self ("the way others see me"); and ideal social self ("the way I would like others to see me"). Several of the studies described above examined the real and ideal selves of anorexic and eating-restrained women, finding a significant discrepancy between these two aspects of self-concept (Batty & Hall, 1986; Button, 1987; Mottram, 1985; Ryle & Evans, 1991). Some of these studies used no comparison groups and therefore cannot conclude that anorexics differ from non-eating disordered populations in the discrepancy between real self and ideal self.

The present study included two comparison groups, one sampled from a non-eating-restrained neurotic population, and the other from a normal population. The first hypothesis of the present study was that eating-restrained women would exhibit a greater disparity between real self and ideal self as compared to both comparison groups. This hypothesis is based on previous research which has found that real self

and ideal self are further apart for anorexic and eating-restrained women (Batty & Hall, 1986; Button, 1985; Ryle & Evans, 1991).

The second hypothesis was that eating-restrained women would exhibit a smaller discrepancy between real and social self than would either comparison group. Button's (1987) study, though it had no comparison group, provides support for this hypothesis with the finding that real self is similar to social self for anorexic women. Additionally, the rationale for this hypothesis came from findings in several other theoretical and empirical studies: Anorexic and eating restrained women tend to find it difficult to consolidate a separate identity (Engel, et al. 1988; Nassar, et al. 1992; Strauss & Ryan, 1987; Strober & Humphrey, 1987; Sugarman, et al. 1982; Yager, 1988); anorexic women exhibit deficits in self-awareness (Bruch, 1985; Garner & Garfinkel, 1980; Roberto, 1993; Pettinati, et al. 1987); eating-restrained and anorexic women are preoccupied with what others think of them (Bruch, 1985; Garfinkel & Garner, 1983; Gordon, 1988; Mintz & Betz, 1988; Polivy, et al. 1986; Strober & Katz, 1988). Anorexic women rely on external cues and look to others to supply the function of the self (Strober & Katz, 1988). Moreover, they have a difficult time shifting between external feedback and internal standards (Bruch, 1985). It follows then that eating-restrained women define how they see themselves by how they

believe others see them, resulting in a closer proximity between real self and social self.

The third hypothesis was related to the second hypothesis and stated that eating-restrained women would exhibit a smaller disparity than comparison groups between ideal self and ideal social self. Authors of empirical and theoretical papers have shown anorexics to have a high need for approval (Garner & Garfinkel, 1980; Strober & Katz, 1988), and to "perform" for others (Strober & Katz, 1988). Typically, anorexics are model children (Gordon, 1988) who possess a painful social self-consciousness (Bruch, 1978, 1985). If it is true that restrainers define themselves by the way that others see them, then it is likely that their ideal for themselves is defined by the ideal that they believe others hold for them.

Prior to analyzing the data, a fourth hypothesis was added to the study that predicted that the eating-restrained women would exhibit a greater disparity between social self and ideal social self than the comparison groups.

Another area of interest of this study was the distinction eating-restrained women make between being overweight, average weight and underweight. If eating-restrained women are attempting to avoid being overweight, then constructs for underweight and average weight would be clearly distinct from overweight constructs. On the other hand, if eating-restrained women are attempting to be thin,

then underweight constructs would be distinct from average weight and overweight constructs. An exploratory analysis was conducted to investigate this issue.

CHAPTER II

METHOD

Instruments

Demographics Questions. These questions were designed for the present study to obtain supplemental information regarding the desired weight, history of being overweight and medical problems related to weight of all participants and potential participants (See Appendix A). Information regarding age, height, weight, and race was obtained from a general questionnaire administered to the entire research pool at the College of William and Mary. Information pertaining to weight was used in conjunction with the Body Mass Index to identify women who fall within the appropriate weight range for the eating-restrained and comparison groups.

Three Factor Eating Questionnaire. The Three Factor Eating Questionnaire (TFEQ) is a 51 item self-report inventory developed to measure three dimensions of human eating behavior: dietary restraint, disinhibition, and perceived hunger (Stunkard & Messick, 1985) (See Appendix B). The Dietary Restraint factor contains 21 items and measures intent to diet and actual restrained patterns of eating. The Disinhibition factor contains 16 items and measures episodic overeating resulting from certain situations and emotional states. These two scales were used to identify the eating-restrained group. The Perceived

Hunger factor consists of 14 items and reflects feelings of physiological discomfort due to hunger. This scale is not pertinent to the current study. One month test-retest reliability for Dietary Restraint ($r=.93$), Disinhibition ($r=.80$), and Perceived Hunger ($r=.83$) and support for criterion validity of the TFEQ have been reported (Stunkard & Messick, 1985).

The TFEQ was designed as a response to perceived problems with Herman and Polivy's (1980) Restraint Scale, including its inability to predict the behavior of obese persons, its confounding of dietary intent both with weight fluctuation and with social desirability, and its inability to measure consistently weight change seen in depressed individuals. The TFEQ was originally constructed by obtaining items from two existing questionnaires that measure the concepts of restrained eating and latent obesity. Items were added and discarded based on the results of several factor analytic studies. Factor analysis of the final version of the TFEQ identified three factors, including Dietary Restraint, the conscious mechanisms for restraining food intake; and Disinhibition, the "disinhibition of control".

Stunkard & Messick (1985) identified the advantage of the TFEQ over the Restraint Scale as the TFEQ's capability of distinguishing between Dietary Restraint and Disinhibition in predicting weight change. Also, a strong

negative correlation has been found between the Dietary Restraint subscale and the Disinhibition subscale for dieters, but no significant correlation between these two factors for non-dieters. The Disinhibition subscale has been found to be highly correlated with Herman and Polivy's Restraint Scale. The Disinhibition subscale has been shown to be strongly correlated with a "binge severity" scale, whereas the Dietary Restraint subscale has been shown not to be strongly correlated with that scale. The Disinhibition subscale has also been shown to be highly correlated with overeating based on a laboratory study of food intake. Stunkard and Messick (1985) indicate that Dietary Restraint subscale has been stable through all of the factor analyses. The Disinhibition subscale changed from an initial focus on behavioral and weight validity to a more general dimension of disinhibited eating. Consequently they recommend continued appraisal of that scale's construct validity.

Whereas other measures of restrained eating (e.g. Herman and Polivy's (1980) Restraint Scale) have been used to identify dieters with weight fluctuations and unsuccessful restraint, high scores on the Dietary Restraint subscale of the TFEQ represent the motivational intent to restrict as well as actual restriction of caloric intake (Laessle, Tuschl, Kotthaus, & Pirke, 1989). The Dietary Restraint subscale is considered one of the best available psychometric measures of restrained eating (Laessle, et al.

1989), and has been used successfully to identify intent to restrict as is seen in anorexia nervosa (Veron-Guidry, Williamson, Lawson, & Cubic, 1995). Veron-Guidry, et al. (1995) note that whereas the Disinhibition subscale of the Three Factor Eating Questionnaire is an adequate measure of restrictive eating habits, it is inappropriate to use this measure to control for other variables associated with anorexia nervosa, such as neuroticism and preoccupation with body size.

Body Mass Index. Quetelet's Body Mass Index (BMI) was used to identify individuals who are within normal weight and low weight ranges. Body Mass Index is defined as weight (in kg) divided by height² in meters, and has been identified by the American Psychiatric Association (1993) as an appropriate way to categorize weight. Body Mass Index ranges have been designated as follows for adults eighteen years old and older (Williamson, 1990):

| | |
|----------|----------------------|
| Below 18 | Severely underweight |
| 18-20 | Low weight |
| 20-25 | Normal weight |
| 25-30 | Overweight |
| 30-40 | Moderately obese |
| 40+ | Grossly obese |

NEO Five Factor Inventory-Short Version. The NEO-FFI-S is the shortened version of the NEO Personality Inventory (Costa & McCrae, 1992) and consists of the best items of the NEO-PI as determined by factor analysis. The NEO-PI and the NEO-FFI are self-report questionnaires that were developed

to assess five personality domains: Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. The NEO-FFI-S consists of 60 questions rated on a five point scale ranging from strongly agree to strongly disagree. All five factors of these inventories were derived from rational and factor analytic strategies, with items selected for the scales based on their factor loadings. The Neuroticism factor has an internal consistency of .87, making it the most reliable of the five factors. Strong evidence of convergent and discriminant, as well as construct and criterion validity has been reported for the five factors. For further information about the reliability and validity of the NEO-FFI-S, please see Costa and McCrae (1992).

Sample items of the Neuroticism scale on the NEO-FFI-S are listed below.

I am not a worrier

I often feel inferior to other

I often feel tense and jittery

When I am under a great deal of stress, sometimes

I feel like going to pieces

Sometimes I feel completely worthless

At times I have felt so ashamed that I just wanted
to hide

Too often when things go wrong, I get discouraged
and feel like giving up

I often get angry at the way people treat me
I often feel helpless and want someone else to
solve my problems

Personal Constructs. A modified version of Kelly's (1955) Role Construct Repertory Test Method was used to elicit the personal constructs related to being overweight, average weight, and underweight (See Appendix C). Using the terms that the participants provided, participants were asked to name three people for each of the three categories. Participants were also instructed to think of themselves as they are when they are overweight, average weight, and underweight.

Triads of two individuals from the same weight category and another individual from one of the other three categories were formed. Participants were asked to describe how the two individuals are similar to each other and how the third individual is different, yielding two terms for each triad. Twelve triads were used to generate 24 terms.

Across the 12 triads, no two triads had more than one element in common. The three weight categories were equally represented in the 12 triads, with four triads in each of three sets of comparisons: underweight with average weight, underweight with overweight, and average weight with overweight. In each set of comparisons, an element pertaining to the self appeared in one triad as one of the pair of elements, and another element pertaining to the self

appeared simultaneously as the single element in that triad. Also, in each set of comparisons an element pertaining to the self appeared in a second triad as one of the pair of elements (See Appendix D).

The adjectives participants provided were categorized into one of the three descriptive groups (underweight, average weight, overweight). For example, if two overweight people were described as "happy" and different from the third average weight person, who is "unhappy", "happy" was assigned to the overweight group, and "unhappy" was assigned to the average weight group.

Self-concept Measures. The present study is part of a larger study that is comparing elicited and supplied constructs and their ability to discriminate eating-restrained from non-eating-restrained women. As such, self-concept was measured with both elicited and supplied constructs. The present study used only elicited constructs. The elicited and supplied constructs were presented together in a randomized list of 48 adjectives, 24 of which participants provided through the "triadic questioning technique" described above and 24 of which have been used in other personal construct studies (Batty & Hall, 1986; Mottram, 1985; Ryle and Evans, 1991).

Four aspects of self-concept were measured with a randomized list of both supplied and elicited constructs (See Appendix E). The four components of self-concept

include: real self, the way one sees oneself; ideal self, the way one would like to be, in one's own eyes; social self, the way that one thinks that others view one; and ideal self, the way that one would like others to view oneself. Disparity scores were computed for real self and ideal self (RS-IS), real self and social self (RS-SS), and ideal self and ideal social self (IS-ISS). Before analyzing the data, a fourth disparity score was included in order to examine the disparity between social self and ideal social self. Therefore, disparity scores were also computed for social self and ideal social self (SS-ISS). Disparities were computed by taking the absolute value of the difference between ratings of an adjective on one aspect of self-concept, and the same adjective on another aspect of self-concept. The absolute values of the differences were summed and divided by the number of adjectives, which provided an average disparity score. Test-retest reliabilities for idiographic measures of the four components of self-concept have been reported between .73 (for social self-ideal social self and real self- social self disparities) and .92 (for real self-ideal self disparities) (Watts, 1995).

Characteristics of Underweight, Average-weight and Overweight Persons. A score was computed for each set of weight related personality characteristics (that is, traits that are assigned to underweight, average weight or overweight categories) by adding ratings on the self-concept

measures and computing an average score for each weight category.

Marlowe-Crowne. The Marlowe-Crowne Social Desirability Scale was administered to each subject to control for response bias (Crowne & Marlowe, 1960) (See Appendix F).

Eating Disorders Inventory-2. The EDI-2 is a 91-item, broad range, self-report questionnaire designed to assess the cognitive and behavioral dimensions characteristic of anorexia nervosa. Responses are in six categories and are scored on a 3-point scale ranging from always to never. It was constructed using only items that discriminate significantly between anorexic and normal female subjects and consists of eight (and three provisional) subscales: Drive for Thinness, Bulimia, Body Dissatisfaction, Ineffectiveness, Perfectionism, Interpersonal Distrust, Interoceptive Awareness, Maturity Fears, Asceticism (provisional), Impulse Regulation (provisional), and Social Insecurity (provisional). Reliability was established for all subscales (Garner, 1991). The respective internal reliability coefficients (standardized Cronbach alphas) of the subscales for anorexic women are as follows: .83, .86, .92, .90, .80, .84, .83, and .83. For the provisional scales they are respectively: .70, .77, .80. While less information is available for the three provisional subscales, content and criterion validity, as well as discriminant and convergent validity has been established

for the eight core subscales.

The EDI was developed by selecting items from an original item pool that successfully discriminated between an anorexic group of women, and a normal female control group. Validity was indicated by, among other things, correlations between anorexic patient's subscale scores and clinician ratings of the patients, and similarities between scores of recovered anorexics and the female control group. Numerous investigations that provide data pertinent to convergent validity of each subscale are reported in the EDI-2 manual (1991).

The Drive for Thinness subscale was designed to assess excessive concern with dieting, preoccupation with weight, and fear of weight gain. This scale was found to be strongly correlated with the EAT-26 dieting scale and the EAT-26 total score for bulimic patients and nonpatient college females. It was found to be highly correlated with the Restraint scale for nonpatient adolescents. The Drive for Thinness subscale was also found to be highly correlated with the Eating Behavior Rating Scale for nonpatient female college students. Finally, this subscale has been found to be highly correlated with Feelings of Inadequacy, Locus of Control and Lack of Self-Control, Beck Depression Inventory, and with subscales of the Hopkins Symptom Checklist, including Somatization, Obsessionality, Anxiety, Depression and Interpersonal Sensitivity.

Sample items from the EDI-2 Drive for Thinness subscale include are listed below.

- I eat sweets and carbohydrates without feeling nervous
- I think about dieting
- I feel extremely guilty after overeating
- I am terrified of gaining weight
- I exaggerate or magnify the importance of weight
- I am preoccupied with the desire to be thinner
- If I gain a pound, I am worried that I will keep on gaining

Sample items from other scales are listed below.

- I think that my stomach is too big (Body Dissatisfaction)
- I wish that I could return to the security of childhood (Maturity Fears)
- I stuff myself with food (Bulimia)
- I get frightened when my feelings are too strong (Interoceptive Awareness)
- I feel ineffective as a person (Ineffectiveness)
- Only outstanding performance is good enough in my family (Perfectionism)
- I trust others (Interpersonal Distrust)

According to the EDI-2 manual, several factor analytic studies of the EDI-2 have reported that the eight factors of

the eight subscales were clearly identified. For further details of the cross-validation and the establishment of convergent and discriminant validity please see Garner (1991).

Procedure

The Three Factor Eating Questionnaire and the Neuroticism scale of the NEO-FFI-S were administered to undergraduate psychology students at Old Dominion University and the College of William and Mary to identify eating-restrained women, non-eating restrained women matched on neuroticism, and non-eating-restrained, women with low neuroticism scores. The demographics questions were also administered. At another time, subsequent to identifying the three groups of participants, a modified version of Kelly's Repertory Test Method was administered by computer (to no more than five participants at a time) in order to elicit personal constructs pertaining to being overweight, average weight and underweight. Next, the self-concept measures were administered to participants by computer (to no more than five participants at a time). The researcher and a researcher's assistant supervised the computer administration of the modified version of Kelly's Repertory Test and the self-concept measures. The format was similar to that as is outlined in Appendices C, D and G.

The order of presentation of the measures for the four components of self-concept was counterbalanced. That is,

real self and ideal self was counterbalanced with social self and ideal social self so that there were a total of eight possible orders of presentation. Real self was always presented either immediately before or immediately after ideal self, as was social self always presented either immediately before or immediately after ideal social self. Finally, the EDI-2 was administered, as was the Marlowe-Crowne Social Desirability Scale, which was administered last.

Participants

All participants were drawn from The College of William and Mary and Old Dominion University. Students at these schools must participate in research experiments as part of the course requirement for psychology classes. A total of 530 women completed the screening questionnaire comprised of the TFEQ, the Neuroticism scale of the NEO and demographic questions. Respondents whose scores met the criteria described below comprised the eating-restrained and comparison groups for the study. The eating-restrained group was comprised of 15 participants drawn from The College of William and Mary. The eating-restrained group consisted of non-clinical, white females who fell within the normal weight and low weight categories (less than or equal to 25 and greater than or equal to 18) on the Body Mass Index (BMI). These women exhibited elevated scores (greater than or equal to 13) on the Dietary Restraint Subscale of

the Three Factor Eating Questionnaire, and suppressed scores (less than or equal to 4) on the Disinhibition Subscale of the Three Factor Eating Questionnaire. These scores on the Three Factor Eating Questionnaire were based on the 33rd and 67th percentile scores as determined by previous studies (Veron-Guidry & Williamson, 1995; Veron-Guidry, et al. 1995).

There were two comparison groups drawn from the campuses of the College of William and Mary and Old Dominion University. Participants in both comparison groups were matched as closely as possible with the eating-restrained group on weight (BMI scores less than or equal to 25 and greater than or equal to 18), age, race, and education. Participants in both comparison groups scored less than 13 on the Dietary Restraint Subscale of the Three Factor Eating Questionnaire and less than four on the Disinhibition Subscale of the Three Factor Eating Questionnaire. In order to control for neuroticism one comparison group was to be a non-eating-restrained group of women matched with the eating-restrained group on that group's Neuroticism scale scores on the NEO-FFI-S (Costa & McRae, 1992). The other comparison group was to be a non-eating-restrained group of women with low scores on the Neuroticism scale. Based upon the literature review, it was assumed that the eating-restrained group would score highly on the Neuroticism scale. The eating-restrained group's mean score on the

Neuroticism scale, however, was 19.20 and lower than the mean score of 25.83 found in normal college females (Costa & McRae, 1992). Thus, matching the neurotic comparison group with the eating-restrained group on their Neuroticism scores resulted in two comparison groups that had substantially overlapping ranges on the Neuroticism scale. In order to produce two comparison groups distinct in neuroticism, a cut-off score of 12 on the Neuroticism scale was used so that the participants scoring greater than 12 were placed in Group 2, (hereafter referred to as the matched-neuroticism group), and the participants scoring less than or equal to 12 were placed in Group 3, the normal comparison group (hereafter referred to as the low-neuroticism group). Finally, in order to match the lower than expected Neuroticism scores of the eating-restrained group, all participants with scores greater than 34 on the Neuroticism scale ($n=3$) were dropped from the study. This left an n of 21 for the matched-neuroticism group and an n of 15 for the low-neuroticism group.

Table 1 presents the means and standard deviations for all of the demographic variables. There were no significant differences among groups on any of these variables.

Table 1

Means and Standard Deviations of Descriptive Variables for the Non-weight-preoccupied (NWP) and Comparison groups.

| Variable | Group | | | | | |
|-------------------------------|------------------|-----------|--------------------------------------|-----------|----------------------------------|-----------|
| | NWP ^a | | Matched- neuroticism ^b | | Low- neuroticism ^c | |
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> |
| Age (yr.) | 20.07 | 7.19 | 18.81 | 1.86 | 18.60 | 0.63 |
| Weight (lb.) | 129.53 | 9.59 | 121.62 | 12.38 | 123.73 | 15.71 |
| Height (in.) | 65.72 | 2.89 | 64.28 | 2.87 | 65.33 | 2.16 |
| Highest Adult Weight (lb.) | 137.07 | 11.83 | 127.67 | 19.51 | 126.73 | 16.60 |
| Lowest Adult Weight (lb.) | 122.13 | 9.31 | 114.14 | 12.72 | 117.13 | 14.25 |
| Desired Weight (lb.) | 121.47 | 8.91 | 117.76 | 9.80 | 120.93 | 13.36 |
| Most Weight Lost (lb.) | 10.80 | 5.97 | 10.67 | 11.14 | 6.80 | 5.77 |

^a \bar{n} = 15. ^b \bar{n} = 21. ^c \bar{n} = 15.

Table 2 shows the characteristics of each of the three groups. The three groups differed significantly in the expected ways (as outlined above) on Factor 1, $F(2, 48) = 93.76$, $p < .0001$, and Factor 2, $F(2, 48) = 3.28$, $p = .046$, of the Three Factor Eating Questionnaire. There were no significant differences among groups on the BMI, $F(2, 48) = .68$, $p = .514$.

A Levene test for the homogeneity of variance was significant for the Neuroticism scale, $p = .001$, indicating that one of the assumptions for an analysis of variance was not met for this variable. Consequently, a Kruskal-Wallis analysis of variance was used to test for significant differences among groups on the Neuroticism scale, $X^2(2, N = 51) = 27.47$, $p < .0001$. The differences between groups on social desirability were not significant, $F(2, 48) = 2.78$, $p = .072$. Nevertheless, because it approached significance, it was used as a covariate in the analyses presented in the results section.

For the variable concerning whether or not the participants' most significant weight loss was intentional, a Chi Square was performed. A significant difference was found among groups, $X^2(2, N = 51) = 9.18$, $p = .01$, such that the eating-restrained group had an almost even split between those who answered "Yes" and those who answered "No" to the question, while both the matched-neuroticism group and the low-neuroticism group had significantly more participants

Table 2
Means and Standard Deviations of Scores on Factor 1 and Factor 2 of the Three Factor Eating Questionnaire (TFEQ), Neuroticism, Body Mass Index (BMI), and Social Desirability (ScDs) for the Non-weight-preoccupied (NWP) and Comparison Groups

| Variable | Group | | | | | |
|-------------|--------------------|-----------|------------------------------|-----------|--------------------------|-----------|
| | NWP ^a | | Matched-neurot. ^b | | Low-neurot. ^c | |
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> |
| TFEQ 1 | 16.27 ¹ | 1.95 | 3.90 | 3.32 | 3.80 | 3.21 |
| TFEQ 2 | 3.27 | 1.10 | 2.38 | 0.97 | 3.13 | 1.36 |
| Neuroticism | 19.20 | 8.06 | 19.33 | 6.02 | 7.93 ¹ | 2.94 |
| BMI | 21.08 | 1.38 | 20.76 | 2.19 | 20.31 | 1.59 |
| ScDs | 15.13 | 6.85 | 16.95 | 4.61 | 19.60 | 4.01 |

^a $n = 15$. ^b $n = 21$. ^c $n = 15$.

¹Differed significantly from other two groups

answer "No" to the question (18 out of 21 and 12 out of 15 respectively). Thus, as would be expected, the eating-restrained group consisted of women whose greatest weight loss was significantly more likely to have been intentional rather than unintentional when compared to the two comparison groups.

Table 3 presents the means and standard deviations of group scores on the eight subscales of the Eating Disorders Inventory-2 (EDI-2). Elevated scores on Subscale 3, Body Dissatisfaction, of the EDI-2 for the eating-restrained group confirmed the presence of body image distortions for these women, all who fell within the Low to Normal weight ranges of the BMI.

A univariate analysis of variance found a significant difference between groups for Subscale 8, Maturity Fears, $F(2, 48), = 3.91, p = .027$. A Tukey HSD test found the significance to be between Group 1 and the other two groups. Because Levene tests indicated ($ps < .05$) that the data for the following scales violated the assumption of homogeneity of variance, these data were analyzed with non-parametric tests: Subscale 1, Drive for Thinness; Subscale 3, Body Dissatisfaction; Subscale 4, Ineffectiveness; Subscale 6, Interpersonal Distrust; Subscale 7, Interoceptive Awareness; Subscale 10, Impulse Regulation; and Subscale 11, Social Insecurity. Kruskal-Wallis tests found that the groups differed significantly on Subscale 1, Drive for Thinness,

Table 3

Means and Standard Deviations of scores on EDI-2
Subscales for the Non-weight-preoccupied (NWP) and
Comparison Groups

| Subscale | Group | | | | | |
|----------------------------|--------------------|-----------|--------------------------------------|-----------|----------------------------------|-----------|
| | NWP ^a | | Matched- neuroticism ^b | | Low- neuroticism ^c | |
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> |
| Drive for Thinness | 5.47 ¹ | 5.60 | 0.57 | 1.12 | 0.87 | 2.10 |
| Bulimia | 0.20 | 0.56 | 0.33 | 1.11 | 0.60 | 1.35 |
| Body Dissatis. | 10.93 ¹ | 7.39 | 4.71 | 3.44 | 3.60 | 5.77 |
| Ineffectiveness | 1.27 | 2.43 | 0.62 | 1.28 | 0.07 | 0.26 |
| Perfectionism | 5.67 | 3.79 | 7.52 | 4.08 | 5.87 | 3.16 |
| Interpers. Distrust | 2.89 | 4.39 | 1.38 | 1.60 | 0.40 ¹ | 1.06 |
| Interoceptive Awareness | 2.80 ² | 5.03 | 1.14 | 2.31 | 0.20 | 0.56 |

(table continues)

Table 3 (continued)

| Subscale | Group | | | | | |
|--------------------|-------------------|-----------|--------------------------------------|-----------|----------------------------------|-----------|
| | NWP ^a | | Matched- neuroticism ^b | | Low- neuroticism ^c | |
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> |
| Maturity Fears | 2.67 ¹ | 2.19 | 1.43 | 1.63 | 1.00 | 1.20 |
| Asceticism | 3.40 | 1.84 | 3.24 | 1.95 | 2.73 | 1.62 |
| Impulse Regulation | 0.93 | 1.67 | 1.52 | 3.16 | 0.27 | 0.80 |
| Social Insecurity | 3.40 | 4.22 | 1.57 | 1.89 | 0.53 | 0.99 |

^a $n = 15$. ^b $n = 21$. ^c $n = 15$.

¹ Differed significantly from other two groups

² Differed significantly from low-neuroticism group

$X^2(2, N = 51) = 21.10, p < .0001$; Subscale 3, Body Dissatisfaction, $X^2(2, N = 51) = 12.00, p < .0001$; Subscale 6, Interpersonal Distrust, $X^2(2, N = 51) = 6.68, p = .035$; Subscale 7, Interoceptive Awareness $X^2(2, N = 51) = 6.13, p = .046$; and Subscale 11, Social Insecurity, $X^2(2, N = 51) = 8.78, p = .012$. Mann-Whitney U tests found that for the Drive for Thinness and Body Dissatisfaction subscales the eating-restrained group scored significantly higher than the matched-neuroticism group ($U = 39, p = .0001, U = 74, p = .007$, for Drive for Thinness and Body Dissatisfaction respectively) and the low-neuroticism group ($U = 28.5, p = .0003; U = 42, p = .003$, for Drive for Thinness and Body Dissatisfaction respectively). For the Interpersonal Distrust and Social Insecurity subscales the low-neuroticism group scored significantly lower than the eating-restrained group ($U = 61, p = .013; U = 47.5, p = .004$, for Interpersonal Distrust and Social Insecurity, respectively) and the matched-neuroticism group ($U = 98, p = .026; U = 100.5, p = .047$, for Interpersonal Distrust and Social Insecurity, respectively). For the Interoceptive Awareness subscale the eating-restrained group scored significantly higher than the low-neuroticism group ($U = 63.5, p = .015$).

In looking at the characteristics of the three groups it appears that the eating-restrained group consists of women who are qualitatively different from a subclinical population of women with psychological issues similar to

those of anorexic women. Evidence for this conclusion is that the Neuroticism scores for the eating-restrained group are lower than what is typically found in a college population. As reported in the introduction, research regarding anorexic women indicates that individuals with anorexia nervosa tend to be more highly neurotic than a normal population (Strober & Katz, 1988; Swift, et al. 1985).

There is additional evidence that the eating-restrained group is comprised of women who only superficially resemble anorexic women. EDI-2 subscales tap into the psychological traits typically associated with eating disorders. As such, scores on the EDI-2 subscales can provide a more in-depth look at the eating-restrained group of this study. In Garner, et al.'s (1983) study, individuals who exhibited a subclinical form of anorexia nervosa displayed extreme scores on all eight of the EDI subscales, whereas individuals who were identified as a group qualitatively different from individuals with anorexia nervosa displayed high scores on only three of the subscales. The eating-restrained group of this study did not score as highly as the subclinical group of individuals from Garner, et al.'s (1983) study on any of the EDI-2 scales. (The eight subscales of the EDI remained unchanged for the EDI-2). Table 4 presents the means and standard deviations of the EDI scores of the subclinical group from Garner, et al.'s

study, as compared to the EDI-2 scores of the eating-restrained group of this study. (Table 4 also presents information on a subsample of the eating-restrained group of this study which will be discussed later.)

Of particular interest is the mean score of 5.47 for the eating-restrained group of the present study on the Drive for Thinness subscale of the EDI-2. Although this score was significantly higher than the scores of the two comparison groups of this study, it does not approach the subclinical group's mean score of 18.1 on the EDI Drive for Thinness Subscale from Garner, et al.'s study. Out of the fifteen participants in the eating-restrained group of this study, only four individuals approached those means with scores of 10, 13, 14, and 18. The rest of the scores were 6 or below. The eating-restrained group of this study appears to be women without the perceptual inaccuracies, distortions, and preoccupation with weight seen in a subclinical group. In order to clarify this distinction, the eating-restrained group of this study will be renamed the non-weight preoccupied eating-restrained group.

Table 4

Means and Standard Deviations of scores on
EDI/EDI-2 Subscales for the Non-weight-preoccupied
(NWP), Weight-preoccupied (WP), and Garner, et
al.'s (1983) Subclinical anorexic (SA) Groups

| Subscale | Group | | | | | |
|-------------------------|------------------|-----------|-----------------|-----------|---------------------------------|-----------|
| | NWP ^a | | WP ^b | | Garner et al.'s SA ^c | |
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> |
| Drive for Thinness | 5.47 | 5.60 | 12.20 | 4.50 | 18.1 | 1.6 |
| Bulimia | 0.20 | 0.56 | .60 | .89 | 10.8 | 4.1 |
| Body Dissatis. | 10.93 | 7.39 | 19.40 | 4.16 | 23.9 | 3.9 |
| Ineffectiveness | 1.27 | 2.43 | 3.00 | 3.74 | 9.3 | 8.0 |
| Perfectionism | 5.67 | 3.79 | 7.80 | 4.09 | 10.6 | 2.8 |
| Interpers. Distrust | 2.89 | 4.39 | 2.80 | 3.63 | 4.8 | 4.3 |
| Interoceptive Awareness | 2.80 | 5.03 | 5.60 | 7.83 | 9.8 | 4.8 |

(table continues)

Table 4 (continued)

| Subscale | Group | | | | | |
|----------------|------------------|-----------|-----------------|-----------|---------------------------------|-----------|
| | NWP ^a | | WP ^b | | Garner et al.'s SA ^c | |
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> |
| Maturity Fears | 2.80 | 5.03 | 4.20 | 2.86 | 6.00 | 6.40 |

^an = 15. ^bn = 5. ^cn = 16.

CHAPTER III

RESULTS

A 3 (Group: non-weight-preoccupied eating-restrained/matched neurotic/low neurotic) X 3 (Type of Disparity: real self-ideal self/real self-social self/ideal self-ideal social self) repeated measures multivariate analysis of variance had been planned. However, the Box's M test for homogeneity of dispersion matrices was found to be significant, Box's $M = 65.49$, $X^2(20, N = 6861) = 57.42$, $p < .001$, indicating that one of the assumptions for a multivariate analysis of variance, homogeneity of variance, was not met. A Levene test for the homogeneity of variance was not found to be significant for any of the dependent variables, (including the social self-ideal social self variable that was added to the study), $ps > .05$, indicating that univariate analyses of variance would be appropriate. Because the Bartlett test of sphericity showed intercorrelations among dependent variables ($p < .0001$), an alpha level of $p = .01$ was used to control for a Type I error in univariate analyses of variance.

All analyses were run both with and without social desirability as a covariate.

To test for an effect of order of presentation of the questionnaires, an Order x Disparity analysis of variance was performed. The group variable could not be included as

a factor in the analysis because some of the orders were represented only once in some groups. The Order x Disparity interaction for RS-IS, RS-SS, SS-ISS, and IS-ISS disparities with social desirability as a covariate was nonsignificant, $F(15, 34) = 0.67, p = .80$; $F(15, 34) = 0.53, p = .90$; $F(15, 34) = 0.93, p = .55$; $F(15, 34) = 1.66, p = .11$, respectively. Similarly, the Order x Disparity interaction for RS-IS, RS-SS, SS-ISS, IS-ISS disparities without social desirability as a covariate was nonsignificant, $F(15, 35) = 0.70, p = .76$; $F(15, 35) = 0.55, p = .89$; $F(15, 35) = 0.91, p = .56$; $F(15, 35) = 1.70, p = .10$, respectively. These results indicated that order of presentation of the EDI-2 and the four components of self-concept had no effect on responses.

Table 5 presents the means and standard deviations for all four of the disparity measures for the non-weight preoccupied eating-restrained and comparison groups.

In testing the hypothesis that the non-weight-preoccupied eating-restrained group exhibits a larger disparity between ratings on real self and ideal self (RS-IS disparity) than does either comparison group, a univariate analysis of covariance with social desirability as a covariate and a univariate analysis of variance without social desirability as a covariate both yielded nonsignificant effects for group, $F(2, 47) = 1.87$,

Table 5

Means and Standard Deviations of RS-IS Disparity,
RS-SS Disparity, SS-ISS Disparity, IS-ISS
Disparity for Non-weight-preoccupied (NWP) and
Comparison Groups

| Disparity | Group | | | | | |
|------------------|------------------|-----------|--------------------------------------|-----------|----------------------------------|-----------|
| | NWP ^a | | Matched- neuroticism ^b | | Low- neuroticism ^c | |
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> |
| RS-IS Disparity | 1.45 | 0.92 | 1.00 | 0.49 | 1.04 | 0.41 |
| RS-SS Disparity | 0.64 | 0.24 | 0.62 | 0.26 | 0.70 | 0.26 |
| SS-ISS Disparity | 1.41 | 0.70 | 1.06 | 0.49 | 1.00 | 0.41 |
| IS-ISS Disparity | 0.74 | 0.72 | 0.53 | 0.39 | 0.46 | 0.19 |

^an = 15. ^bn = 21. ^cn = 15.

$p = .17$, and $F(2, 48) = 2.52$, $p = .09$, respectively.

In testing the hypothesis that the non-weight-preoccupied eating-restrained group exhibits a smaller disparity between ratings on real self and social self (RS-SS disparity) than does either comparison group, a univariate analysis of covariance with social desirability as a covariate and a univariate analysis of variance without social desirability as a covariate both yielded nonsignificant effects for group, $F(2, 47) = .70$, $p = .50$, and $F(2, 48) = .49$, $p = .61$, respectively.

In testing the hypothesis that the non-weight-preoccupied eating-restrained group exhibits a smaller disparity between ratings on ideal self and ideal social self (IS-ISS disparity) than does either comparison group, a univariate analysis of covariance with social desirability as a covariate and a univariate analysis of variance without social desirability as a covariate both yielded a nonsignificant effect for group, $F(2, 47) = 1.09$, $p = .35$ and $F(2, 48) = 1.38$, $p = .26$, respectively.

Before analyzing the data, a fourth hypothesis was added to the study: The non-weight-preoccupied eating-restrained group was predicted to have a greater disparity between social self and ideal social self (SS-ISS disparity). A univariate analysis of covariance with social desirability as a covariate and a univariate analysis of variance without social desirability as a covariate both

yielded nonsignificant effects for the SS-ISS disparity, $F(2, 47) = 2.02, p = .14$ and $F(2, 48) = 2.59, p = .09$, respectively.

Descriptive data on the participants presented in the method section suggests that the non-weight-preoccupied eating-restrained group was comprised of many participants who only superficially resemble anorexic individuals. In order to study the participants who more closely resemble a clinical population of anorexic women, the five women with scores above the mean in norms for college women on the Drive for Thinness subscale on the EDI-2 (Garner, 1991) were compared with five women from the comparison group matched on their Neuroticism scale scores. The weighted mean of scores on the Drive for Thinness subscale across non-patient college female samples reported in the EDI-2 manual was computed to be 5.26. Thus, the five women who scored six or higher on the Drive for Thinness subscale more closely resemble a subclinical population. Table 4 includes a comparison of the EDI-2 subscale means and standard deviations of this smaller sample from the non-weight preoccupied eating-restrained group (high Drive for Thinness group) with the EDI subscale means and standard deviations of the subclinical group of anorexic women from Garner, Olmstead and Garfinkel's (1983) study. The high Drive for Thinness group's mean scores on almost all of the EDI-2 subscales are closer to the mean scores of the subclinical

group from Garner, et al.'s study (1983) than are the mean scores of the entire non-weight preoccupied eating-restrained group. This is not the case, however, for the subscales of Bulimia and Interpersonal Distrust. (It is important to note that the women of this study were screened for the absence of bulimic symptoms). Nonetheless, it appears that the high Drive for Thinness group more closely resembles a subclinical population than does the non-weight preoccupied eating-restrained group. Therefore, this group will be identified as the weight-preoccupied eating-restrained group.

Table 6 presents the means and standard deviations of the four disparity variables for the weight-preoccupied eating-restrained and a matched-neuroticism group.

T-tests were used to compare the weight-preoccupied eating-restrained group with a matched neuroticism group on each of the disparity measures. A Levene test indicated that group variances were not equal for the RS-IS disparity. Therefore, a Mann-Whitney U-test, corrected for ties, was performed on the RS-IS disparity. Results showed a very strong tendency toward significance on the RS-IS disparity, $U = 3.5$, $p = .059$ (Mean Ranks = 7.3 and 3.7, weight-preoccupied and matched-neuroticism, respectively), and significance for the SS-ISS disparity, $t(8) = 2.66$, $p = .03$. No significant difference between groups was found for

Table 6

Means and Standard Deviations of RS-IS Disparity, RS-SS Disparity, SS-ISS Disparity, and IS-ISS Disparity for Weight-preoccupied (WP) and Matched-neuroticism Groups

| Disparity | Group | | | |
|------------------|-----------------|-----------|----------------------------------|-----------|
| | WP ^a | | Matched-neuroticism ^b | |
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> |
| RS-IS Disparity | 2.19 | 1.15 | 1.04 | 0.46 |
| RS-SS Disparity | 0.76 | 0.12 | 0.75 | 0.24 |
| SS-ISS Disparity | 1.94 | 0.79 | 0.91 | 0.37 |
| IS-ISS Disparity | 0.81 | 0.88 | 0.68 | 0.12 |

^{a, b}n = 5.

either RS-SS disparity, $t(8) = 2.08$, $p = .55$, or for IS-ISS disparity, $t(8) = .31$, $p = .76$.

For the exploratory analysis, to determine whether or not non-weight-preoccupied eating-restrained group differed from comparison groups in the type of characteristics (underweight, average weight, overweight) they endorsed on the four components of self-concept, a 3(Group: non-weight preoccupied eating-restrained, matched-neurotic, low-neurotic) x 3(Type of Characteristic: underweight, average weight, overweight) repeated measures multivariate analysis of variance, as well as a repeated measures multivariate analysis of covariance, with repeated measures on the characteristic variable and with social desirability as the covariate, had been planned on the four self-concept measures (real self, ideal self, social self and ideal social self). However, as with the other analyses, a significant Box's M test for homogeneity of dispersion matrices, Box's $M = 367.04$, $X^2(156, N = 5162) = 236.31$, $p < .0001$, precluded using a multivariate analysis of variance. A Levene test for the homogeneity of variance was not found to be significant on any of the dependent variables, $ps > .05$, indicating that univariate analyses of variance and covariance would be appropriate. Again, a Bartlett test of sphericity showed an intercorrelation between dependent variables ($p < .001$), necessitating an alpha level of $p = .01$ to control for Type I error in the univariate analyses.

Table 7 contains the means and standard deviations of the weight characteristics for each component of self-concept.

In the analyses of variance, results showed no main effect for group on real self, $F(4, 96) = .38, p = .82$; ideal self, $F(4, 96) = .61, p = .66$; social self, $F(4, 96) = .55, p = .70$; and ideal social self, $F(4, 96) = .66, p = .62$. A significant main effect was found for type of weight characteristic on real self, $F(2, 96) = 21.77, p < .0001$; ideal self, $F(2, 96) = 44.63, p < .0001$; social self, $F(2, 96) = 19.16, p < .0001$; and ideal social self, $F(2, 96) = 43.28, p < .0001$. Tukey HSD tests found normal weight characteristics were endorsed more strongly than the other two weight characteristics on all of the components of self-concept.

When analyses of covariance were performed with the social desirability scale score as a covariate, results showed no main effect for group on real self, $F(4, 96) = .38, p = .82$; ideal self, $F(4, 96) = .61, p = .66$; social self, $F(4, 96) = .55, p = .70$; and ideal social self, $F(4, 96) = .66, p = .62$. A significant main effect was found for type of weight characteristic for real self, $F(2, 96) = 21.77, p < .0001$; ideal self, $F(2, 96) = 44.63, p < .0001$; social self, $F(2, 96) = 19.16, p < .0001$; and ideal social self, $F(2, 96) = 43.28, p < .0001$. Tukey HSD tests found normal weight characteristics were endorsed more strongly

Table 7

Means and Standard Deviations of Ratings of Weight Characteristics on Each Component of Self-Concept by Non-weight-preoccupied (NWP) and Comparison Groups

| Self-Concept Component and Type of Weight Characteristic | Group | | | | | |
|---|------------------|-----------|--------------------------------------|-----------|----------------------------------|-----------|
| | NWP ^a | | Matched- neuroticism ^b | | Low- neuroticism ^c | |
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> |
| <u>Real Self</u> | | | | | | |
| Underweight | 3.93 | 0.85 | 3.90 | 1.05 | 4.10 | 1.03 |
| Normal Weight | 5.05 | 0.83 | 5.00 | 0.70 | 4.95 | 0.66 |
| Overweight | 4.21 | 0.69 | 3.89 | 0.78 | 3.85 | 0.92 |
| <u>Ideal Self</u> | | | | | | |
| Underweight | 3.90 | 1.14 | 3.94 | 1.35 | 3.96 | 1.06 |
| Normal Weight | 5.92 | 0.63 | 5.43 | 0.74 | 5.24 | 0.95 |
| Overweight | 3.57 | 0.88 | 3.70 | 1.03 | 3.37 | 1.04 |

(table continues)

Table 7 (continued)

| Self-Concept Component and Type of Weight Characteristic | Group | | | | | |
|---|------------------|-----------|--------------------------------------|-----------|----------------------------------|-----------|
| | NWP ^a | | Matched- neuroticism ^b | | Low- neuroticism ^c | |
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> |
| <u>Social Self</u> | | | | | | |
| Underweight | 4.03 | 0.88 | 4.15 | 1.06 | 4.25 | 0.90 |
| Normal Weight | 5.12 | 0.84 | 4.97 | 0.67 | 4.91 | 0.64 |
| Overweight | 4.22 | 0.68 | 3.80 | 0.96 | 3.83 | 0.91 |
| <u>Ideal Social Self</u> | | | | | | |
| Underweight | 3.74 | 1.03 | 3.85 | 1.26 | 4.12 | 0.99 |
| Normal Weight | 5.69 | 0.68 | 5.38 | 0.80 | 5.18 | 0.90 |
| Overweight | 3.61 | 1.06 | 3.51 | 0.90 | 3.43 | 1.14 |

^a \bar{n} = 15. ^b \bar{n} = 21. ^c \bar{n} = 15.

than the other two weight characteristics on all of the components of self-concept.

Table 8 presents intercorrelations among the descriptive variables. It is noteworthy that the Drive for Thinness subscale of the EDI-2 is correlated with Neuroticism scale scores, whereas the Dietary Restraint subscale of the Three Factor Eating Questionnaire is not significantly correlated with Neuroticism scale scores. Also, there is a strong correlation between the Drive for Thinness subscale of the EDI-2 and Factor 1 of the Three Factor Eating Questionnaire. Nonetheless, the correlation between these two variables accounts for only 40% of the shared variance.

Table 9 presents intercorrelations among the four disparity variables (RS-IS, RS-SS, SS-ISS, IS-ISS), Social Desirability scores and the Neuroticism scale scores for the entire sample.

Table 8

Intercorrelations among Subscales on Three Factor Eating Questionnaire (TFEQ), Neuroticism (Neurot.), Subscales on EDI-2 (EDI), Social Desirability (ScDs), Weight, Body Mass Index (BMI), and Most Weight Ever Lost (MLSWT) for Entire Sample

| Variable | TFEQ1 | TFEQ2 | Neurot. |
|---------------------------|--------|-------|---------|
| Dietary Restraint (TFEQ1) | -- | | |
| Disinhibition (TFEQ2) | 0.21 | -- | |
| Neurot. | 0.26 | 0.01 | -- |
| Drive for Thin. (EDI1) | 0.63** | 0.18 | 0.38** |
| Bulimia (EDI2) | 0.00 | 0.11 | 0.04 |
| Body Dissatis. (EDI3) | 0.57** | 0.04 | 0.22 |
| Inneffectivess (EDI4) | 0.25 | 0.07 | 0.51** |
| Perfectionism (EDI5) | -0.07 | -0.23 | 0.19 |
| Intrprs. Distrust (EDI6) | 0.31* | -0.03 | 0.33* |
| Intrcptv. Awarens. (EDI7) | 0.28* | 0.04 | 0.44** |
| Maturity Fears (EDI8) | 0.40** | 0.06 | 0.36** |
| ScDs | -0.28* | -0.05 | -0.45** |
| Weight | 0.39** | 0.16 | -0.05 |
| BMI | 0.30* | 0.01 | -0.06 |
| MLSWT | 0.28* | -0.17 | 0.24 |

(table continues)

Table 8 (continued)

| Variable | EDI1 | EDI2 | EDI3 |
|---------------------------|--------|--------|---------|
| Drive for Thin.(EDI1) | -- | | |
| Bulimia(EDI2) | 0.17 | -- | |
| Body Dissatis.(EDI3) | 0.75** | 0.30* | -- |
| Perfectionism(EDI5) | 0.16 | 0.35** | 0.17 |
| Intrprs. Distrust(EDI6) | 0.24 | -0.02 | 0.25 |
| Intrcptv. Awarenss.(EDI7) | 0.46** | 0.17 | 0.41** |
| Maturity Fears(EDI8) | 0.50** | 0.23 | 0.40** |
| ScDs | -0.33* | -0.08 | -0.34** |
| Weight | 0.24 | 0.00 | 0.38** |
| BMI | 0.18 | 0.06 | 0.49** |
| MLSWT | 0.13 | -0.09 | 0.26 |

(table continues)

Table 8 (continued)

| Variable | EDI4 | EDI5 | EDI6 |
|---------------------------|--------|-------|--------|
| Inneffectivess(EDI4) | -- | | |
| Perfectionism(EDI5) | 0.24 | -- | |
| Intrprsr. Distrust(EDI6) | 0.38** | 0.06 | -- |
| Intrcptv. Awarencs.(EDI7) | 0.77** | 0.02 | 0.63** |
| Maturity Fears(EDI8) | 0.64** | 0.12 | 0.41** |
| ScDs | -0.18 | -0.10 | -0.19 |
| Weight | -0.20 | -0.04 | 0.06 |
| BMI | -0.02 | -0.02 | 0.00 |
| MLSWT | -0.01 | 0.13 | 0.24 |

(table continues)

Table 8 (continued)

| Variable | EDI7 | EDI8 | ScDs |
|----------------------------|--------|--------|-------|
| Intrcptv. Awarenss. (EDI7) | -- | | |
| Maturity Fears (EDI8) | 0.66** | -- | |
| ScDs | -0.25 | -0.34* | -- |
| Weight | -0.19 | 0.00 | -0.12 |
| BMI | -0.04 | 0.08 | -0.12 |
| MLSWT | 0.01 | 0.12 | -0.27 |

(table continues)

Table 8 (continued)

| Variable | WT | BMI |
|----------|--------|--------|
| Weight | -- | |
| BMI | 0.60** | -- |
| MLSWT | 0.44** | 0.49** |

Note. $N = 51$.

* $p \leq .05$. ** $p \leq .01$.

Table 9

Intercorrelations among the RS-IS Disparity, RS-SS Disparity, SS-ISS Disparity, IS-ISS Disparity, Social Desirability(ScDs), and Neuroticism (Neurot.) for Entire Sample

| Variable | RS-IS | RS-SS | SS-ISS | IS-ISS | ScDs | Neurot. |
|----------|--------------------|--------------------|--------------------|--------|---------------------|---------|
| RS-IS | -- | | | | | |
| RS-SS | 0.34 [*] | -- | | | | |
| SS-ISS | 0.71 ^{**} | 0.46 ^{**} | -- | | | |
| IS-ISS | -0.05 | 0.23 | 0.45 ^{**} | -- | | |
| ScDs | -0.24 | -0.08 | -0.17 | -0.12 | -- | |
| Neurot. | 0.44 ^{**} | 0.09 | 0.34 [*] | 0.02 | -0.45 ^{**} | -- |

Note. $N = 51$

^{*} $p \leq .05$. ^{**} $p \leq .01$.

Tables 8 - 19 present the adjectives used by group members to describe underweight, average-weight and overweight individuals they know.

Table 10

Adjectives Used by Non-weight-preoccupied Group to Describe Underweight Individuals They Know

| | | |
|------------------|------------------|----------------|
| Understanding | Never Worried | Worried |
| Supportive | Concerned | Overconcerned |
| Funny | Less Energetic | Compulsive |
| Fun* | Joking | Selfish |
| Outgoing* | Noticed | Thoughtless |
| Friendly | Bold | Egocentric |
| Social | Naive | Sick |
| At Ease Socially | Loud | Self-absorbed* |
| Energetic | Flirtatious | Unrealistic |
| Dynamic | Determined | Self-concerned |
| Optimistic | Calm | Stubborn |
| Upbeat | Needs attention | Depressed* |
| Confident* | Attention-getter | Unhappy** |
| Happy | Aware* | Resistant |
| Athletic* | Quiet** | High Strung |
| Well-Liked | Careful | Fanatic |
| Easy to Talk to | Inconsistent | Jealous |
| Inventive | Eager | Hypocrite |

(table continues)

Table 10 (continued)

| | | |
|--------------|-------------------------|------------------|
| Caring | Motherly | Unsure of Self |
| Well-rounded | Shy | Self-conscious |
| Laid back | Introverted* | No self-respect |
| Interesting | Reserved* | Tired |
| Content | Conservative | Uncomfortable |
| Mature* | Escapist | Standoffish |
| Generous | Not Directed | Cold |
| Intelligent | Intellectual | Obsessive |
| Thoughtful | Hectic | Aggressive |
| Cautious | Serious* | Settles for Less |
| Fake | Hard to Make Friends | |

Note. $n = 15$.

*Used by more than 1 participant

**Used by more than 5 participants

Table 11

Adjectives Used by Non-weight preoccupied Group to Describe
Average-weight Individuals They Know

| | | |
|---------------------|----------------|------------------|
| Happy* | Calm | Cocky |
| Friendly* | Jokester | Vain |
| Outgoing** | Silly | Overly-friendly |
| Social | Introverted* | Selfish |
| Mindful | Reserved* | Careless |
| Less Stressed | Quiet* | Dominant in |
| Satisfied with Self | Shy | Conversation* |
| Secure With Self | Ambitious | Inspires |
| Self-assured | Strong-willed | Stable* |
| Confident** | Determined | Willing to help |
| Go-getter | Definite Goals | others |
| Motivated | Goal Oriented | Extravert* |
| Active | Driven | Excitable |
| Dynamic | Moderate | Involved |
| Popular | Natural | Liberal |
| Easygoing* | Accepts Flaws | Positive Outlook |
| Carefree* | Unconcerned | Adult-like |
| Laid-back | Wild | Intelligent* |

(table continues)

Table 11 (continued)

| | | |
|----------------------|-----------------------------|-------------|
| Independent | Content* | Healthy* |
| Fun | Strong Opinions | Health- |
| Good Sense of Humor* | Spiritual | conscious |
| Sincere | Enclosed | Reliable |
| Caring | Casual | Beautiful |
| Kind* | Concerned with Appearance | Comfortable |
| Considerate* | Not Overconcerned with Body | Joyous |
| Accommodating | Loud | Open |
| Athletic | Trustworthy | Energetic |
| Fun-loving | Patient | Stands up |
| Generous | Mature | self |

Note. $n = 15$.

*Used by more than 1 participant

**Used by more than 5 participants

Table 12

Adjectives Used by Non-weight-preoccupied Group to Describe
Overweight Individuals They Know

| | | |
|---------------|----------------|-----------------|
| Relaxed | Quiet* | Worried |
| Self-Aware | Shy* | Self-conscious* |
| Studious | Keeps to Self* | Sluggish |
| Hard-working | Less Social | Lazy* |
| Entertaining | Lonely* | Slow |
| Funny* | Isolated | Overindulgent* |
| Jovial | Introvert* | Slothful |
| Fun-loving | Timid | Lethargic |
| Always Joking | Loud | Superficial |
| Confident* | Unconcerned | Sick |
| Happy* | Reluctant | Self-centered |
| Outgoing* | Unrestrained | Selfish |
| Friendly* | Talkative | Disliked |
| Nice | Unathletic | Unhappy |
| Exotic | Concerned | Cocky |
| Athletic | Extroverted | Obnoxious |
| Interactive | Ambitious | Bossy |
| Truthful | Determined | Dominating |
| Loving | Spontaneous | Cynical |

(table continues)

Table 12 (continued)

| | | |
|------------------|---------------------|------------------|
| Content | Moderate | Weak-willed |
| Focused | Business Oriented | Obsessed* |
| Intelligent | Risky | Unmotivated |
| Carefree | Intellectual | Self-critical |
| Mature | Indulgent* | Low Self-esteem* |
| Cosmopolitan | Outspoken | Unsure of Self |
| Thinks of Others | Loud | Troubled |
| Open* | Center of attention | Unfriendly |
| Open-minded* | Flighty | Slow |
| Not intelligent | Stubborn | Whiny |
| Immoral | Unattractive | Critical |
| Gluttonous* | Pessimistic | |

Note. n = 15.

*Used by more than 1 participant

**Used by more than 5 participants

Table 13

Adjectives Used by Matched-neuroticism Group to Describe Underweight Individuals They Know

| | | |
|----------------|---------------|---------------|
| Carefree* | Modest | Hyperactive |
| Happy go Lucky | Shy | Irresponsible |
| Fun Loving | Withdrawn* | Weak* |
| Fun* | Quiet* | Fragile |
| Happy* | Meek | Stressed* |
| Caring | Introverted* | Worried* |
| Nurturing | Serious | Unhappy* |
| Outgoing* | Solemn | Less Self- |
| Personable | Talkative | confident |
| Friendly* | Uninhibited | Bitchy |
| Generous* | Bookish | Irritable* |
| Energetic* | Silent | Cold |
| Active | Flirtatious | Distant |
| Witty | Preoccupied | Jittery |
| Funny | Not Loud | Uptight |
| Popular* | Mischievous | Not popular |
| Athletic | Non-religious | Mean |
| Relaxed | Self-oriented | Know-it-all |
| Healthy | Sensitive | Nasty |

(table continues)

Table 13 (continued)

| | | |
|---------------------|------------------|---------------|
| Good Decision Maker | Religious | Elitist |
| Smart | Sarcastic | Snobby |
| Content* | Forward | Conceited |
| Satisfied | Child-like | Inactive |
| Hopeful | Flashy | Prissy |
| Chipper | Reserved* | Pessimistic |
| Confident* | Driven | Childish |
| Cheerful | Persistent | Annoying |
| Thoughtful | Innocent | Self-centered |
| Considerate | Unaware | Thoughtless |
| Intelligent* | Lives day to day | Shallow |
| Laid-back | Absent-minded | Superficial |
| Good with | Uncertain | Needy |
| relationships | Not Loud | "Inconfident" |
| Positive | Conservative | Bad Judgment |
| Personality | Dependent | Uncomfortable |
| Nice | Not Controlling | Depressed |
| Likable | Not as Worldly | Sad |
| Enjoys Business | Strong-minded | Vicious |

(table continues)

Table 13 (continued)

| Self-interested | Flustered | Intimidated |
|-----------------|-----------|-------------|
| Stingy* | | |

Note. $n = 21$.

*Used by more than one participant

**Used by more than five participants

Table 14

Adjectives Used by Matched-neuroticism Group to Describe
Average-weight Individuals They Know

| | | |
|-----------------|----------------------|------------------|
| Perceptive | Concerned | Aloof |
| Disciplined | Sophisticated | Worried |
| Organized | Lighthearted | Gossip |
| Unafraid | Careful | Annoying |
| Responsible | Wants to be Loved | Easily offended |
| Polite | Strong-willed | Arrogant |
| Others Oriented | Determined | Scatterbrained |
| Confident** | Quiet | Empty |
| Optimistic* | Calm* | Acts Like a Baby |
| Cheerful | Reserved* | Compulsive |
| Upbeat | Subdued | Lacks Self- |
| Patient | Shy | Confidence |
| Outgoing** | Sarcastic* | Difficulty with |
| Friendly* | "Outdoorsey" | Feelings |
| Fun Loving | Wild* | Naive |
| Considerate | Slow to React | Opinionated |
| Helpful | Academically Serious | Sweet |
| Caring* | Assuming | Nice |
| Thoughtful | Daring | Self-reliant |

(table continues)

Table 14 (continued)

| | | |
|---------------|-----------------------|--------------------|
| Sweet | Blunt | Intelligent |
| Nice | Conservative* | Silly |
| Self-reliant | Curious | Giggly |
| Popular* | Loud | Funny* |
| Happy* | Particular | Jokes |
| Generous* | Agnostic | Not Insecure |
| Athletic* | Talkative* | Not as cheerful |
| Honest | Doubter | Hard working* |
| Energized | Logical | Not stressed |
| Reasonable | Straight Forward | Relaxed |
| Well-rounded | Perfectionist | Strong personality |
| Down to Earth | Steady | Comfortable |
| Mature* | Conscious | Goal setter |
| Laughs A lot | Average | Smart |
| Satisfied* | Scientifically-minded | Carefree |
| Carefree | "Party Girl" | Kind* |
| Sociable | Artistic | Giving |
| Gentle* | Appearance Conscious | Active* |
| Loyal | Dreams About Life | |

Note. $n = 21$.

*Used by more than 1 participant

**Used by more than 5 participants

Table 15

Adjectives Used by Matched-neuroticism Group to Describe
Overweight Individuals They Know

| | | |
|----------------|--------------------|-----------------|
| Satisfied | Not Self-Aware | Worried |
| Open* | Blunt | Crazy |
| Carefree | Loner | Scared |
| Happy Go Lucky | Loud* | Rude |
| Kind* | Picky | Complains |
| Jolly | Outspoken | Boring |
| Magnanimous | Talkative* | Inactive |
| Generous | Loquacious | Bellicose |
| Hospitable | Who Cares Attitude | Disappointed |
| Comforting | Motherly | Self-conscious* |
| Friendly* | Reserved* | Unhappy |
| Laughs A lot | Quiet** | Low Self-esteem |
| Humorous | Shy* | Less Secure |
| Funny | Bashful | Not Confident |
| Knowledgeable | Reclusive | Ignorant |
| Thoughtful | Funky | Regressed |

(table continues)

Table 15 (continued)

| | | |
|--------------|--------------------|---------------|
| Adventurous | Nonchalant | Cold/Distant |
| Sincere | Questioning* | Selfish |
| Satisfied | Inhibited | Sarcastic |
| Content | Contemplative | Lonely |
| Relaxed | Plain | Sad* |
| Secure | Passive | Unhappy* |
| Giving | Jewish | Snobbish |
| Sweet | Christian | Slow |
| Dynamic | Emotional | Untrustworthy |
| Full of Life | Silly | Moody |
| Fashionable | Embarrassed | Grumpy |
| Mature | Determined | Goofy |
| Clear-minded | Spur of the Moment | Lazy** |
| Intelligent | Spirited | Couch Potato |
| Ambitious | Little Direction | Obnoxious |
| Unique | Sedate | Immature |
| Cheerful | Hyper | Superficial* |
| Devoted | Spiritual | Stingy |
| Generous* | Independent | Rude |
| Adaptive | Secretive | Overbearing |

(table continues)

Table 15 (continued)

| | | |
|------------|--------------------|---------------|
| Energetic | Strong Personality | Angry |
| Lovable | Feisty | Antagonistic |
| Dominating | Flirtatious | Obnoxious |
| Bitter | Depressed | Condescending |
| Cynical | Shallow | |

Note. $n = 21$.

*Used by more than 1 participant

**Used by more than 5 participants

Table 16

Adjectives Used by Low-neuroticism Group to Describe
Underweight Individuals They Know

| | | |
|----------------|-------------------|--------------|
| Organized | Withdrawn* | Complains |
| Determination | Quiet | Touchy |
| Comfortable | Reserved* | Irritable |
| Outgoing* | Intellectual | Annoyed |
| Friendly* | Independent | Agitated |
| Bubbly | Naïve | Worried* |
| Likes to Meet | Hurried | Stressed |
| People | Busy | Obsessive |
| Happy | Social | Sadistically |
| Polite* | Headstrong | Humorous |
| Non-judgmental | Loud | Moody* |
| Open | Stubborn | Mood Swings |
| Concerned for | Conservative | Lazy |
| Others | Skeptical | Insecure |
| Humble | Independent | Unhappy |
| Successful | Outspoken | Left-out |
| Driven | Vulnerable | Senseless |
| Relaxed | Dismissing Others | Restless |
| Funny* | Not "Huggable" | Bored Easily |

(table continues)

Table 16 (continued)

| | | |
|---------------|--------------------------|-----------------|
| Good Sense of | Strive to Impress Others | Superficial |
| Humor | Competitive | Frustrated |
| Sincere | Strives Socially | Rude |
| Intelligent* | Indifferent | Self-absorbed |
| Smart | Health Conscious | Egocentric |
| Appreciative | Sensitive | Not as Happy |
| Sweet | Talkative | Demands |
| Empathetic | Not Open | Attention |
| Popular | Achieves Highly | Too Adventurous |
| Attractive | Absorbed | Nuisance |
| Upbeat | Fragile | Annoying |
| Optimistic | Athletic | Never Satisfied |
| Bold | Carefree | Low Self-esteem |
| Generous | Laughs at | Overachiever |
| | Others | |

Note. $n = 15$.

*Used by more than 1 participant

**Used by more than 5 participants

Table 17

Adjectives Used by Low-neuroticism Group to Describe
Average-weight Individuals They Know

| | | |
|------------------|-----------------|-----------------|
| Confident | Extroverted* | Hyper |
| Happy | Indulgent | Flighty |
| Satisfied | Silly | Uptight |
| Accepting | Philosophical | Critical |
| Healthy | Down to Earth | Insecure |
| Competitiveness | Sexually Driven | Self-conscious |
| Academically | Ambitious | Lazier |
| Successful | Fanciful | Conceited |
| Athletic* | Self-Motivated | Less Confident |
| Laid-back* | Musical | Mocking |
| Friendly* | Sensitive | Devious |
| Outgoing* | Serious | More Abrasive |
| Happier | Practical | Not as Friendly |
| Vivacious | Quiet | Insensitive |
| Lively | Low-key | Wise |
| Active | Reserved | Kind |
| Positive Outlook | Studious | Athletic |
| Focused | Dramatic | Comical |
| Content | Organizer | Disciplined |
| Secure | Sarcastic | Open |

(table continues)

Table 17 (continued)

| | | |
|----------------|---------------------|-------------------|
| Motherly | Feel good | Plenty of friends |
| Compassionate | Excited | Adventurous |
| Amusing | More touchable | Pleasant |
| Understanding | Neat | Caring* |
| Satisfied | Satisfiable | Likeable |
| Funny* | Less Selective with | Positive |
| Sense of Humor | Friends | Always smiling |
| Carefree | Religious | Doesn't care as |
| Cheery | Busy | much |
| Motivated | Self-gratifying | Shows vulnerable |
| Understanding | Shy | side |
| Open-minded | Quiet | Creative |
| Trustworthy | Weight-conscious | Enjoys talking |
| Thoughtful | | about self |

Note. n = 15.

*Used by more than 1 participant

**Used by more than 5 participants

Table 18
 Adjectives Used by Low-neuroticism Group to Describe
 Overweight Individuals They Know

| | | |
|--------------|-----------------|------------------|
| Carefree | Joking | Less Confident |
| Laid back | Concerned | Not Confident |
| Funny | Unconcerned | Lack of Self- |
| Comical | Fake Happiness | Confidence |
| Nice* | Reserved* | Low Self-Esteem* |
| Easygoing | Shy** | Disorganized |
| Content | Quiet* | Depressed* |
| Intelligent | Introvert* | Unhappy |
| Confident* | Practical | Materialistic |
| Fun Loving | Unusual | Self-conscious* |
| Happy | Loud | Selfish |
| Boisterous* | Needs Attention | Egocentric |
| Creative | Emotional | Self-absorbed |
| Outgoing* | Cynical | Arrogant* |
| Thoughtful | Unfocused | Self-centered |
| Cheery | Talkative | Dissatisfied |
| Active | Calm | Not Genuinely |
| Gives Others | Serious* | Friendly |
| a Chance | Opinionated | Nervous |

(table continues)

Table 18 (continued)

| | | |
|-----------------------------|--------------------------|------------------------|
| Jolly | Silly | Aloof |
| Strong | Studious | Bitter |
| Friendly | Unstudious | Weird |
| Socially Successful | Overzealous | Inconsiderate |
| More Accepting of Others | Flirtatious* | Immature |
| Usually in Good Mood | Not as Outgoing | Not as Nice |
| Down to Earth | Not Selective of Friends | Feel Sorry for Self |
| High Stamina | Less Spontaneous | Snotty |
| Worry-free | Interested in religion | Unattractive |
| Obsessive | Put up False Front | Flaunts Body |
| Negative | Doesn't Show | Pushy |
| Reckless | Vulnerability | Pessimistic* |
| Sloppy | Non-active | Bad Attitude |
| | Unfriendly | |

Note. $n = 15$.

*Used by more than 1 participant

**Used by more than 5 participants

Table 19

Adjectives Used by Weight-preoccupied Group to Describe
Underweight Individuals They Know

| | | |
|------------------|--------------------------|---------------|
| Mature* | Keeps to herself | Fanatic |
| Easy to Talk To | Serious | Jealous |
| Well-Liked | Introverted* | Self-absorbed |
| Generous | Quiet | Hypocrite |
| Confident | Less Energetic | Cold |
| Athletic | Social | Obsessive |
| Optimistic | Aware | High Strung |
| More Friends | Likes to Meet New People | Overconcerned |
| Upbeat | Energetic | Worried |
| Confident | More Determined | Depressed |
| Happy | More Concerned | Joking |
| At Ease Socially | Never Worried | Understanding |
| Conscientious | | |

Note. n = 5.

*Used by more than 1 participant

Table 20

Adjectives Used by Weight-preoccupied Group to Describe
Average-weight Individuals They Know

| | | |
|------------------|------------------------|------------|
| Stable | Spiritual | Selfish |
| Generous | Extroverted | Careless |
| Easygoing | Very Social | Vain |
| Intelligent Wild | Shy | Cocky |
| Mature | Concerned About Health | Calm |
| Outgoing* | Strong-willed | Popular |
| Healthy | Introverted | Better |
| Ambitious | Reserved | Content |
| Joyous | Quiet | Natural |
| Carefree | Beautiful | Easy-going |
| More Laid Back | Happy | Friendly |
| Less stressed | Confident | |

Note. $n = 5$.

*Used by more than 1 participant

Table 21

Adjectives Used by Weight-preoccupied Group to Describe
Overweight Individuals They Know

| | | |
|---------------|--------------|-----------------|
| Mature | Quieter | Gluttonous |
| Confident | Open | Self-conscious* |
| Friendly* | Exotic | Unattractive |
| Loving | Less Social | Immoral |
| Content | Quieter | Stubborn |
| Happy | Obnoxious | Lazy |
| Outgoing | More Worried | Sick |
| Relaxed | Cynical | Weak-willed |
| Self-aware | Loud/Louder | Obsessed |
| More Studious | Unhappy | Indulgent |
| Hard Working | Lethargic | Unrestrained |
| Disliked | Unmotivated | Overindulgent |

Note. $n = 5$.

*Used by more than 1 participant

CHAPTER IV

DISCUSSION

None of the hypotheses of the present study could be tested with an adequate sample of eating-restrained women who possess the pathology and perceptual distortions similar to anorexia nervosa. It appears that the methods employed to identify a subclinical population of anorexics in fact identified a broader group of women who do restrain their food intake but who may or may not contend with the perceptual distortions and inaccuracies seen in anorexia nervosa. The women originally identified as eating-restrained using the Dietary Restraint subscale of the TFEQ were assumed to exist on a continuum with anorexia nervosa, and to be distinguishable from anorexics only by degree and intensity of symptoms. However, on the basis of their profiles on the EDI-2, the women identified in this study appear to be qualitatively different from anorexic women. In other words, there is no evidence on the EDI-2 that this sample of eating-restrained women, renamed the non-weight-preoccupied eating-restrained group, are at risk for developing anorexia nervosa.

The TFEQ was used as a screening questionnaire on the assumption that the Dietary Restraint subscale would identify a weight-preoccupied sample of eating-restrained women as measured by the Drive for Thinness subscale of the EDI-2. Although the Dietary Restraint subscale of the TFEQ

and the Drive for Thinness subscale of the EDI-2 are strongly positively correlated, their correlation accounts for only 40% of their shared variance. Furthermore, the Neuroticism scale scores, though strongly correlated with scores on the Drive for Thinness EDI-2 subscale, are not as significantly correlated with Dietary Restraint subscale scores of the TFEQ. It appears that these two subscales identify different populations of women who substantially restrict their food intake. Whereas the EDI-2 was designed to measure symptoms associated with the clinical presentation of anorexia nervosa, the TFEQ was not designed to measure clinical symptoms, but eating behavior in general. Thus the Dietary Restraint subscale on the TFEQ identifies a broader group of women who restrain their food intake, whereas the Drive for Thinness subscale of the EDI-2 identifies women who restrain their food intake and who also possess the psychological manifestations of an eating-disordered population.

It should be noted that Neuroticism scores and Dietary Restraint scores of the TFEQ may be correlated in the larger population from which the non-weight-preoccupied group was selected. Furthermore, the lack of a correlation between Neuroticism and the Dietary Restraint subscale of the TFEQ may have resulted from use of the Disinhibition subscale of the TFEQ to exclude women with bulimic symptoms. Bulimic women have been shown to be more highly neurotic than normal

populations (Leon, Fulkerson, Perry & Cudeck, 1993). Thus excluding these women from the present study may have inadvertently resulted in excluding the more highly neurotic members of that population.

It should be noted that other methods may have been better in identifying a weight-preoccupied group of eating-restrained women. For example, higher cut-off scores on the Dietary Restraint subscale of the TFEQ could have been used in order to identify those women who are more extreme in their restriction of food intake. Additionally, high Dietary Restraint scores in conjunction with other variables, such as lower Body Mass Index, or extensive history of restriction of food intake might have been a better way to identify a group that more closely resembles that of an anorexic population.

Non-weight-preoccupied Eating-restrained Group

The non-weight preoccupied eating-restrained group of the present study appear to belong to the population, identified by Garner, et al. (1983), who resemble anorexic individuals only superficially. According to Garner, et al. (1983), eating disordered pathology consists of two components: an intense concern with weight and body shared by normal dieters, and ego deficits and perceptual disturbances confined to a more restricted population. In the Garner, et al. (1983) study, the individuals who superficially resembled those with anorexia nervosa

evidenced elevated scores on only three of the EDI subscales. Women who displayed a subclinical version of the same psychopathology seen in anorexia nervosa exhibited elevated scores on all of the EDI subscales. The non-weight preoccupied eating-restrained group of this study did not exhibit the elevated scores on the EDI-2 subscales that the subclinical group in Garner, et al.'s study (1983) did. Furthermore, the non-weight-preoccupied eating-restrained group did not differ from the comparison groups on disparity measures of real self and ideal self as anorexic groups have been shown to do in the literature (women (Batty & Hall, 1986; Button, 1985; Ryle & Evans, 1991). This provides additional evidence that these women are not similar to anorexic women.

Weight-preoccupied Eating-restrained Group

In an effort to study a smaller sample that more closely resembled an anorexic population, the five highest scorers on the EDI-2 Drive for Thinness subscale were identified. This group, renamed the weight-preoccupied eating-restrained group, exhibited higher scores on most of the EDI-2 subscales than did the non-weight-preoccupied eating-restrained group. Thus, it appears that this smaller group: lies closer on the continuum to anorexia nervosa and shares some of the pathology seen in anorexia nervosa.

When the four hypotheses of the study were tested with the weigh-preoccupied eating-restrained group, results

provided weak support for one of the original hypotheses, as well as support for the hypothesis that was added to the study. When the five highest scorers on the Drive for Thinness subscale on the EDI-2 were compared to a group of five participants matched on neuroticism, results of the tests of one of the original hypotheses of the study and the additional hypothesis approached significance. Individuals who scored high on the Drive for Thinness subscale showed a tendency to exhibit greater discrepancies between real self and ideal self and between social self and ideal social self than did the matched-neuroticism group.

Exploratory Analysis

The exploratory analysis found no differences among groups (non-weight preoccupied eating-restrained, matched-neuroticism, low-neuroticism) on the weight characteristics (underweight, average weight, overweight) that group members endorsed most strongly in describing real self, ideal self, social self, ideal social self. Unexpectedly, however, there was a significant difference among the type of weight characteristics that participants endorsed most strongly for the four components of self-concept. On all four components, all participants endorsed more strongly the characteristics that they attributed to average weight individuals than they did the characteristics they attributed to underweight or overweight individuals. For the ideal self and the ideal social self, stronger

endorsement of characteristics attributed to average weight persons indicates the higher value placed on being average weight rather than over- or underweight.

It had been thought that non-weight preoccupied eating-restrained women might endorse more strongly the underweight constructs or less strongly the overweight constructs, especially for ideal self and ideal social self. However, because it appears that the sample included women without the perceptual inaccuracies seen in anorexia nervosa, it makes sense that these women, who most likely do not possess the extreme and intense fear of being fat and the perceptual disturbances which accompany anorexia nervosa, endorsed more strongly the average weight constructs on self-concept measures.

Summary and Limitations

The sample of eating-restrained women identified for the current study were not weight-preoccupied eating-restrained women and only superficially resembled women with anorexia nervosa. Consequently, none of the hypotheses of the present study could be tested. When the hypotheses were tested using a subsample that more closely resembled a clinical population of anorexia nervosa, results of the tests of two of the hypotheses approached significance.

The theoretical implications of this study pertain to our understanding of eating disorders and its relation to the restriction of food intake. It appears that substantial

restriction of food intake, as measured by the Dietary Restraint subscale of the TFEQ, does not necessarily include the clinical characteristics of anorexia nervosa. As measured by the subscales on the EDI-2, the non-weight-preoccupied eating-restrained women of this study appear not to contend with the perceptual disturbances and psychological issues associated with anorexia nervosa.

Furthermore, it is important to refine methods used to identify individuals with different types and degrees of restrained eating, and to distinguish anorexic and weight-preoccupied eating-restrained women from those who substantially restrict their food intake without being at risk for developing an eating disorder. Without a consensus on how to identify individuals with a specific pattern of restrained-eating, it is difficult to be sure that various studies in this area are working with the same population.

Clinically, this study carries implications for clinicians interested in preventative measures and early interventions with eating disorders. Though early intervention is always preferable, it is important to avoid the premature and erroneous identification of individuals as subclinical or "pre-anorexic" based solely on their food intake. Women who chronically and substantially restrict their food intake do not necessarily struggle with all of the issues associated with anorexia nervosa.

The primary limitation of this study is that the hypotheses could not be tested with a group who were qualitatively similar to anorexic women. Nonetheless, important information was obtained with regard to the heterogeneity of an eating-restrained population and the difficulty entailed in identifying a weight-preoccupied eating-restrained group.

Directions for Future Research

Ideally, to test the hypotheses of the present study, the population sampled would be women diagnosed with anorexia nervosa. However, the constraints of finding women who meet the criteria for anorexia nervosa and who are willing to participate in a research study make this task a difficult one. Moreover, there is much to learn about subclinical populations as well. What are the best methods of determining whether or not eating-restrained women are at risk for developing an eating disorder? Are non-weight-preoccupied eating-restrained women at no more risk of developing an eating disorder than a non-eating-restrained group? What are the factors that push a weight-preoccupied-eating-restrained individual into the realm of a clinical disorder? These are some of the questions to be addressed in investigating the theory of a continuum of eating-restrained behavior with anorexia nervosa as the extreme clinical manifestation.

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APPENDIX A
Demographics Questions

How much would you like to weigh?

Were you overweight as a child?

If yes, slightly, moderately or extremely so?

Have you ever had any medical problems resulting from your weight? (If yes, explain).

APPENDIX B

Three Factor Eating Questionnaire

1. T F When I smell a sizzling steak or see a juicy piece of meat, I find it very difficult to keep from eating, even if I have just finished a meal.
2. T F I usually eat too much at social occasions, like parties and picnics.
3. T F When I have eaten my quota of calories, I am usually good about not eating more.
4. T F I deliberately take small helpings as a means of controlling my weight.
5. T F Sometimes things just taste so good that I keep on eating even when I am no longer hungry.
6. T F When I feel anxious, I find myself eating.
7. T F Life is too short to worry about dieting.
8. T F Since my weight goes up and down, I have gone on reducing diets more than once.
9. T F When I am with someone who is overeating, I usually overeat too.
10. T F I have a pretty good idea of the number of calories in a common food.
11. T F Sometimes when I start eating, I just can't seem to stop.
12. T F It is not difficult for me to leave something on my plate.
13. T F While on a diet, if I eat a food that is not allowed, I consciously eat less for a period to make up for it.
14. T F When I feel blue, I often overeat.
15. T F I enjoy eating too much to spoil it by counting calories or watching my weight.
16. T F I often stop eating when I am not really full as a conscious means of limiting the amount that I eat.
17. T F My weight has hardly changed at all in the last ten years.
18. T F When I feel lonely, I console myself by eating.
19. T F I consciously hold back at meals in order not to gain weight.
20. T F I eat anything I want, any time I want.
21. T F Without ever thinking about it, I take a long time to eat.
22. T F I count calories as a conscious means of controlling my weight.
23. T F I do not eat some foods because they make me feel fat.
24. T F I pay a great deal of attention to changes in my figure.
25. T F While on a diet, if I eat a food that is not allowed, I often splurge and eat other high calorie foods.

26. How often are you dieting in a conscious effort to control your weight?
 1 2 3 4
 rarely sometimes usually always
27. Would a weight fluctuation of 5 lbs. Affect the way you live your life?
 1 2 3 4
 rarely sometimes usually always
28. Do your feelings of guilt about overeating help you to control your food intake?
 1 2 3 4
 rarely sometimes usually always
29. How conscious are you of what you are eating?
 1 2 3 4
 not at all slightly moderately extremely
30. How frequently do you avoid "stocking up" on tempting foods.
 1 2 3 4
 almost never seldom usually almost always
31. How likely are you to shop for low calorie foods?
 1 2 3 4
 unlikely slightly moderately very
 unlikely likely likely
32. Do you eat sensibly in front of others and splurge alone?
 1 2 3 4
 unlikely slightly moderately very
 unlikely likely likely

33. How likely are you to consciously eat slowly in order to cut down on what you eat?
- | | | | |
|----------|-------------------|-------------------|-------------|
| 1 | 2 | 3 | 4 |
| unlikely | slightly unlikely | moderately likely | very likely |
34. How likely are you to consciously eat less than you want?
- | | | | |
|----------|-------------------|-------------------|-------------|
| 1 | 2 | 3 | 4 |
| unlikely | slightly unlikely | moderately likely | very likely |
35. Do you go on eating binges though you are not hungry?
- | | | | |
|-------|--------|----------|----------------------|
| 1 | 2 | 3 | 4 |
| never | rarely | sometime | at least once a week |
36. To what extent does the following statement describe your eating behavior? "I start dieting in the morning, but because of any number of things that happen during the day, by evening I have given up and eat what I want, promising myself to start dieting again tomorrow."
- | | | | |
|-------------|----------------|-------------------------------|------------------------|
| 1 | 2 | 3 | 4 |
| not like me | little like me | pretty good description of me | describes me perfectly |
37. On a scale of 0 to 5 where 0 means no restraint in eating and 5 means total restraint, what number would you give yourself?
- | | |
|---|---|
| 0 | eating whatever you want, whenever you want it |
| 1 | usually eat whatever you want, whenever you want it |
| 2 | often eat whatever you want, whenever you want it |
| 3 | often limit food intake, but often "give in" |
| 4 | usually limit food intake, rarely "give in" |
| 5 | constantly limiting food intake, never "giving in" |

APPENDIX C

Instructions for Part I

The first thing that you are asked to do for this study is to describe similarities and differences among several people that you know, including yourself, at different weights. All of the first names or initials that you write down will be put into groups of three individuals, consisting of people in at least two of the three different categories that you are asked about (*underweight, average weight, overweight*). Please explain how, in an important way that is meaningful to you, the two individuals, (whose first names or initials are grouped together) are alike, and how the third individual (whose first name or initials are to the right of the other two sets of initials) is different from the other two people. Please think of similarities and differences in terms of personality characteristics rather than physical appearance. Write a short descriptive adjective phrase that describes how the two individuals are similar in the "similar" blank. Please write a short descriptive adjective phrase that describes the difference of the two individuals from the third in the "different" blank. Although you will be asked to compare the same people more than once, use new adjectives each time. All 24 adjectives that you generate should be different.

Please complete the following practice item.

Practice Item

In the blanks provided below, please write the first names or the initials of four people who, in your view, fit the following descriptions:

- A. pitied person _____
- B. happy person _____
- C. attractive person _____
- D. successful person _____

Describe in some important way that is meaningful to you, how the first two people presented in the following triads are similar to each other and how the third person is different from the other two. Use personality characteristics in your description.

| <u>Triad</u> | <u>Similar</u> | <u>Different</u> |
|--------------|----------------|------------------|
| AB/C | ----- | ----- |
| BC/D | ----- | ----- |
| CD/A | ----- | ----- |
| DA/B | ----- | ----- |

Part I

Please write the first names or initials of three *underweight**, three *average weight** and three *overweight** people that you know fairly well. Please also record the first names or initials that represent you as you would be if you were *underweight*, *average weight*, or *overweight*. Do not use the same first names or initials more than once.

| | <u>Person #1</u> | <u>Person #2</u> | <u>Person #3</u> | <u>Yourself</u> |
|-----------------------|------------------|------------------|------------------|-----------------|
| <u>Underweight</u> | ----- | ----- | ----- | ----- |
| <u>Average Weight</u> | ----- | ----- | ----- | ----- |
| <u>Overweight</u> | ----- | ----- | ----- | ----- |

Describe in an important way that is meaningful to you, how the first two people presented in the triad are similar to each other and how the third person is different from the other two. Use personality characteristics in your description.

| <u>Triad</u> | <u>Similar</u> | <u>Different</u> |
|----------------|----------------|------------------|
| 1. -----/----- | ----- | ----- |
| 2. -----/----- | ----- | ----- |
| 3. -----/----- | ----- | ----- |
| 4. -----/----- | ----- | ----- |
| 5. -----/----- | ----- | ----- |
| 6. -----/----- | ----- | ----- |
| 7. -----/----- | ----- | ----- |
| 8. -----/----- | ----- | ----- |
| 9. -----/----- | ----- | ----- |
| 10.-----/----- | ----- | ----- |
| 11.-----/----- | ----- | ----- |
| 12.-----/----- | ----- | ----- |

* In the instructions, these terms will be replaced by each participant's own terms.

APPENDIX D

Presentation of Triads

Part I

Please write the first names or initials of three *underweight**, three *average weight** and three *overweight** people that you know fairly well. Please also record the first names or initials that represent you as you would be if you were *underweight*, *average weight*, or *overweight*. Do not use the same first names or initials more than once.

| | <u>Person #1</u> | <u>Person #2</u> | <u>Person #3</u> | <u>Yourself</u> |
|-----------------------|------------------|------------------|------------------|-----------------|
| <u>Underweight</u> | A | B | C | D |
| <u>Average Weight</u> | E | F | G | H |
| <u>Overweight</u> | I | J | K | L |

Describe in an important way that is meaningful to you, how the first two people presented in the triad are similar to each other and how the third person is different from the other two. Use personality characteristics in your description.

| <u>Triad</u> | <u>Similar</u> | <u>Different</u> |
|--------------|----------------|------------------|
| 1. H, F / D | ----- | ----- |
| 2. E, G / A | ----- | ----- |
| 3. B, A / E | ----- | ----- |
| 4. C, D / F | ----- | ----- |
| 5. D, B / L | ----- | ----- |
| 6. A, C / I | ----- | ----- |
| 7. I, J / B | ----- | ----- |
| 8. K, L / C | ----- | ----- |
| 9. L, J / H | ----- | ----- |
| 10. I, K / G | ----- | ----- |
| 11. E, H / J | ----- | ----- |
| 12. F, G / K | ----- | ----- |

APPENDIX E

Supplied Constructs

Independent/Dependent

Mature/Immature

Dull/Exciting

Guilty/Not Guilty

Sexual/Not Sexual

Feminine/Masculine

Sociable/Withdrawn

Forceful/Submissive

Moral/Immoral

Tender/Hard

In Control/Out of Control

Attractive/Unattractive

APPENDIX F

The Marlowe-Crowne Social Desirability Scale

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide if the statement is true or false as it pertains to you personally.

1. T F Before voting, I thoroughly check out all of the qualifications of all the candidates.
2. T F I never hesitate to go out of my way to help someone in trouble.
3. T F It is sometimes hard for me to go on with my work if I am not encouraged.
4. T F I have never intensely disliked anyone.
5. T F On occasion I have had doubts about my ability to succeed in life.
6. T F I sometimes feel resentful when I don't get my way.
7. T F I am always careful about my manner of dress.
8. T F My table manners at home are as good as when I eat out in a restaurant.
9. T F If I could get into a movie without paying and be sure I was not seen I would probably do it.
10. T F On a few occasions, I have given up doing something because I thought too little of my ability.
11. T F I like to gossip at times.
12. T F There have been times when I felt like rebelling against people in authority even though I knew they were right.
13. T F No matter who I am talking to, I am always a good listener.
14. T F I can remember "playing sick" to get out of something.
15. T F There have been occasions when I took advantage of someone.
16. T F I'm always willing to admit it when I make a mistake.
17. T F I always try to practice what I preach.
18. T F I don't find it particularly difficult to get along with loud mouthed, obnoxious people.
19. T F I sometimes try to get even rather than forgive and forget.
20. T F When I don't know something I don't at all mind admitting it.
21. T F I am always courteous, even to people who are disagreeable.
22. T F At times I have really insisted on getting my way.

23. T F There have been occasions when I have felt like smashing things.
24. T F I would never think of letting someone else be punished for my wrong-doings.
25. T F I never resent being asked to return a favor.
26. T F I have never been irked when people have expressed ideas very different from mine.
27. T F I never make a long trip without checking the safety of my car.
28. T F There have been times when I have been quite jealous of the good fortune of others.
29. T F I have almost never felt the urge to tell someone off.
30. T F I am sometimes irritated by people who ask favors of me.
31. T F I have never felt that I was punished without cause.
32. T F I sometimes think that when people have misfortune they only got what they deserve.
33. T F I have never deliberately said something that hurt someone's feelings.

APPENDIX G

Instructions for Part II

There are four separate questionnaires in this packet. Please use the provided list of adjectives to respond to the questionnaire. Follow the instructions at the top of each page. You will be asked about the way that you see yourself, the way that you would like to be, the way that others see you, and the way that you would like others to see you. When responding to the questionnaires, be sure to think of each adjective as it applies to yourself in these different ways. Remember that there are no right or wrong answers to any of the items on these questionnaires. Please complete the questionnaires in the order which the questionnaires are presented.

Describe yourself AS YOU SEE YOURSELF in terms of the characteristics listed below. For each adjective decide to what extent it describes you, as you are now, and circle the appropriate rating on a scale from 1 (Never true) to 7 (almost always true).

| Never or Almost Never True | | | | | | | | Always or Almost Always True |
|--|-------|---|---|---|---|---|---|--|
| 1. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| Never or Almost Never True | | | | | | | Always or Almost Always True | |
|--|-------|---|---|---|---|---|--|---|
| 18. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Describe yourself AS YOU WOULD LIKE TO BE, IN YOUR OWN EYES, in terms of the characteristics listed below. For each adjective decide to what extent it describes you, as you would like to be, and circle the appropriate rating on a scale from 1 (Never true) to 7 (almost always true).

| Never or Almost Never True | | | | | | | | Always or Almost Always True |
|--|-------|---|---|---|---|---|---|--|
| 1. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | Never or Almost Never True | | | | | | | Always or Almost Always True | |
|-----|--|---|---|---|---|---|---|--|--|
| 18. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 19. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 20. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 21. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 22. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 23. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 24. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |

Describe yourself AS OTHERS SEE YOU in terms of the characteristics listed below. For each adjective decide to what extent it describes you, as other people see you, and circle the appropriate rating on a scale from 1 (Never true) to 7 (almost always true).

| Never or Almost Never True | | | | | | | Always or Almost Always True | |
|--|-------|---|---|---|---|---|--|---|
| 1. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | Never or Almost Never True | | | | | | | Always or Almost Always True | |
|-----|--|---|---|---|---|---|---|--|--|
| 18. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 19. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 20. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 21. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 22. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 23. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 24. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |

Describe yourself AS YOU WOULD LIKE OTHERS TO SEE YOU in terms of the characteristics listed below. For each adjective decide to what extent it describes you, as you would like other people to see you, and circle the appropriate rating on a scale from 1 (Never true) to 7 (almost always true).

| Never or Almost Never True | | | | | | | | Always or Almost Always True |
|--|-------|---|---|---|---|---|---|--|
| 1. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | Never or Almost Never True | | | | | | | Always or Almost Always True |
|-----|--|---|---|---|---|---|---|--|
| 17. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24. | _____ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

APPENDIX H

Verbatim Script

For All Potential Participants

"Hi. My name is _____. I am doing some research in psychology and looking for people who are interested in participating. If you think that you would like to participate, I'll ask you to fill out the following three questionnaires, one which is a demographics questionnaire, and the other two which ask questions about various attitudes, feelings and behaviors that may or may not be relevant for you. I am looking for women who fit specific profiles as indicated by your answers on the questionnaires. For those women who fit the profiles, I will be contacting you in the future and asking you to participate in the study. As participants in the study you will be asked to fill out four other sets of questionnaires. For everyone, all responses are confidential and your names will not be associated with any results of this study. You may refuse to answer any questions asked and to discontinue in this study at any time without consequence. Are there any questions? Thanks so much for your help.

For All Participants

"I'd like to thank-you for participating in this study. You will be asked to describe similarities and differences among people you know at different weights. You will also be asked to answer some questionnaires about yourself. All

of your responses will be confidential and anonymous. Your anonymity will be maintained by assigning you a number, and never linking, in any way, the number assigned to you with your name. Also, if you need to, you may discontinue participation in this study at any point. You do not have to answer any questions you find offensive. If you find any aspect of this study disturbing, please let me know. At the end of the study, if you feel like it, I will discuss any issues you might have, or I will arrange an appointment for you with Professor Watson, a licensed clinical psychologist. This study should take about an hour. Afterwards I'll explain the study more fully. Please read and sign this consent form. Do you have any questions? (*Participants are administered the computerized, modified version of Kelly's Repertory Test*).

"Here are two standardized questionnaires for you to fill out. Please read this set of instructions that explains this part of the study. (*After participant reads instructions..*) Do you have any questions? Please fill out these questionnaires. (*The experimenter leaves the room while the participant fills out the questionnaires*).

"Thank-you for participating in this study. This study is examining the self-concept of women who restrain their food intake as compared to women who don't. I'm comparing the different aspects of self-concept which are real self, ideal self, social self and ideal social self. I want to

find out if women who restrain their eating, as compared to others, have a larger disparity between their real self and ideal self, and smaller disparities between their real self and social self and between their social self and their ideal social self. In other words, I want to find out if eating-restrained women are more dissatisfied with the way that they see themselves, and if they are more likely to view themselves as they think others view them than are other women.

The last two sets of questions that you filled out are called the Eating Disorders Inventory-2 and the Marlowe-Crowne Social Desirability Scale. The Eating Disorders Inventory-2 is used to obtain information about the personality and eating patterns of individuals. The Marlowe-Crowne Social Desirability Scale is used to determine whether or not subjects are responding in ways that they consider to be socially expected, and if they are, to control for it. Do you have any questions? Please do not discuss this with anyone else who is participating in this study. Don't forget to leave your address if you would like to receive the results of this study. Thanks again for your help.

APPENDIX I

Informed Consent Form

The general nature of this study, "Self-Concept in Eating-Restrained Women: A Study of Personal Constructs", conducted by Adelia Furr, has been explained to me. I understand that I will be asked to describe similarities and differences of people that I know at different weights, as well as to complete some questionnaires about myself. I further understand that my responses will be confidential and that my name will not be associated with any results of this study. I know that I may refuse to answer any questions asked and that I may discontinue participation at any time. I also understand that any grade, payment, or credit for participation will not be affected by my responses or by my exercising any of my rights. I am aware that I may report dissatisfactions with any aspect of this experiment to the Psychology Department Chair, Dr. Robert A. Johnson, who can be reached at 221-3870. I am aware that I must be at least 18 years of age to participate. My signature signifies my voluntary participation.

Date

Signature

If you are interested in receiving the results of this study, please write in the space below the address where you would like to receive them.

VITA

Adelia A. Furr

Adelia Furr was born June 29, 1966 in Norfolk, Virginia. She received a Bachelor of Arts degree in English with a Foreign Affairs minor in May of 1988 from the University of Virginia. After working in the publishing field, Adelia returned to school to complete core undergraduate psychology courses at George Mason University, where she was asked to join the Alpha Chi Omega National Honor Society. In 1992, Adelia entered the Virginia Consortium for Professional Psychology. Her area of concentration during her third year of training was in Family Systems. As part of her doctoral training, Adelia completed her internship at the Cumberland Consortium in Nashville, Tennessee. Currently, she is completing her postdoctoral year at The Child Abuse Center of Hampton Roads in Norfolk, Virginia.