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BINGEING TENDENCIES: CROSS-GENERATIONAL SIMILARITIES
BETWEEN MOTHERS AND DAUGHTERS

by

Kimberly K. Bushman

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Psychology

Approved:

UTAH STATE UNIVERSITY
Logan, Utah

1993

ACKNOWLEDGMENTS

I would like to thank my major professor, David M. Stein, Ph.D., for his time, assistance, and guidance offered throughout the duration of this study.

I also thank my family, friends, and colleagues for their encouragement and support as I worked to finish this project.

Kimberly K. Bushman

CONTENTS

	Page
ACKNOWLEDGMENTS	ii
LIST OF TABLES	4
LIST OF FIGURES	5
ABSTRACT	6
CHAPTER	
I. PROBLEM STATEMENT	1
II. REVIEW OF RELATED LITERATURE	5
Dietary Restraint and Its Relation to Overeating	5
Food Avoidance Conflicts	7
Family Environment	8
Comparisons Between Mothers' Eating Behavior and Attitudes and Daughters' Eating Behavior and Attitudes	9
III. PURPOSES AND OBJECTIVES	13
Research Hypotheses	14
IV. PROCEDURES	15
Data and Instrumentation	16
Food Avoidance Conflict: Pilot Study #1--Food Avoidance Conflict Scale	19
V. RESULTS OF PRESENT STUDY	21
VI. DISCUSSION	34
Summary of Methodological Issues	40
Implications for Future Studies	41
REFERENCES	43
APPENDICES	46
Appendix A: Consent Form, Mothers' Inventory, Daughter's Inventory	47
Appendix B: Subscales	69

LIST OF TABLES

Table		Page
1	The Relationship Between Mothers' and Daughters' Total Score on the BULIT-R, and Their Binge Control and Critical Binge Subscale Scores	21
2	Correlations and Level of Variance Explained of Mothers' and Daughters' Dietary Restraint-Revised Total Scores and Weight Fluctuation and Concern for Dieting Subscales Scores	22
3	Relationships Between Individual's Scores on the Dietary Restraint-Revised Scale and the Food Avoidance Conflict Scale	23
4	Relationship Between Mothers' and Daughters' Food Conflict Checklist Scores	24
5	Pearson Correlations Between Mothers' BULIT-R Scores and Daughters' Revised Dietary Restraint Scores, and Daughters' BULIT-R Scores and Mothers' Revised Dietary Restraint Scores	25
6	Daughters Who Scored High on the BULIT-R and Their Mothers' BULIT-R Scores	30

LIST OF FIGURES

Figure		Page
1	Comparison of mothers' mean BULIT-R scores: Grouped by hi versus lo daughter BULIT-R scores	26
2	Comparison of mothers' mean restraint scores: Grouped by hi versus lo daughter BULIT-R scores	27
3	Comparison of daughters' mean BULIT-R scores: Grouped by hi versus lo daughter BULIT-R scores	28
4	Comparison of daughters' mean restraint scores: Grouped by hi versus lo daughter BULIT-R scores	28
5	Comparison of mothers' mean BULIT-R scores: Grouped by hi versus lo daughter restraint score	30
6	Comparison of daughters' mean BULIT-R scores: Grouped by hi versus lo daughter restraint scores	31
7	Mothers' and daughters' mean BULIT-R scores: Grouped by hi versus lo daughter binge class	32
8	Mothers' and daughters' mean restraint scores: Grouped by hi versus lo daughter binge class	33

ABSTRACT

Bingeing Tendencies: Cross-Generational Similarities
Between Mothers and Daughters

by

Kimberly K. Bushman, Master of Science

Utah State University, 1993

Major Professor: Dr. David M. Stein
Department: Psychology

This study was an investigation of the relationship between 146 mothers' and daughters' (sixth and seventh grade) eating and dieting behaviors. Subjects completed the Bulimia Test-Revised (BULIT-R), Revised Dietary Scale (Restraint Scale), and Food Avoidance Conflict Inventory. The inventories completed by the daughters were slightly modified for better comprehension. The present researcher created an additional subscale (Critical Binge subscale) from the BULIT-R as a means of assessing actual bingeing behavior.

A significant correlation was found between mothers' and daughters' scores on the BULIT-R, including the Total and Binge Control subscale. There failed to be a significant relationship between mothers' and daughters' scores on the Critical Binge subscale, Restraint Scale, or Food Avoidance Conflict Inventory. In addition, scores on the Restraint Scale and the Food Avoidance Conflict Inventory failed to be significantly correlated.

Three daughters met cut-off criteria for possible bulimia. None of the three acknowledged self-induced vomiting or laxative abuse. All three daughters reported intense displeasure with their weight, body shape, and eating behavior to the point they felt that together food controls their thoughts and behaviors.

Eighteen daughters met cut-off scores for the High Restraint (DHR). As a group, these daughters had mothers with substantially higher mean scores on the Binge Control (BULIT-R), Critical Binge (BULIT-R), and Total BULIT-R than Low Restraint Daughters (DLR). The DHR group also had markedly higher mean scores on the Total BULIT-R, Binge Control, Critical Binge, and Radical Weight Loss subscales of the BULIT-R than the DLR group.

(86 pages)

CHAPTER I

PROBLEM STATEMENT

Bulimia nervosa, a clinical eating disorder, has been associated with many physical and psychological complications (Brownell & Foreyt, 1986). In a review of the literature, Striegel-Moore, Silberstein, and Rodin (1986) indicated that the prevalence of bulimia nervosa has increased in the past few years. Results from numerous studies suggest that females comprise as much as 90% of the bulimic population (for a review of the literature see Striegel-Moore et al., 1986). Thus, being a woman is one key risk factor for developing bulimia nervosa.

One may ask, why are women, in particular, more likely to develop bulimia nervosa? One proposed answer to this question has been that women experience greater sociocultural pressure to be thin than men do (Garner, Rockert, Olmsted, Johnson, & Coscina, 1983; Striegel-Moore et al., 1986). Garner et al. (1983) suggested that the fixation on thinness for women has taken a "fetish-like quality" (p. 515). They proposed that women are flooded from every corner with messages from the media suggesting that being thin is associated with success, beauty, self-worth, and personal happiness.

Garner, Garfinkel, Schwartz, and Thompson (1980) surveyed Playboy centerfolds and Miss America Pageant contestants and reported that both groups of females have become significantly thinner over the past 20 years. Not only have the Playboy centerfolds become thinner, but with smaller bust, larger waist, and smaller hip measurements,

they have also "changed shape" over the years. The drift toward thinner shapes in Playboy centerfolds is in the direct opposite direction of the trend of actual weight changes in the general female population. Garner et al. (1980) reported that as the average weight of the centerfolds has decreased, the expected weight for women under the age of 30 has increased at about the same rate.

The value society places on attractiveness and thinness appears to be internalized at a young age. Feldman, Feldman, and Goodman (1988) reported that girls as young as 5 and 6 years of age are concerned about their body image and have expressed fears about weight gain. Guyot, Fairchild, and Hill (1981) found a correlation between self-esteem and body build for girls in the fourth-, fifth-, and sixth-grade but not for boys in the same grades.

Fourth-, fifth-, and sixth-grade girls have also reported dieting behaviors such as skipping desserts and/or snacks to lose weight. Even more striking are reports that almost 4% of the fifth- and sixth-grade girls surveyed acknowledged using self-induced vomiting as a strategy for weight loss (Stein & Reichert, 1990).

The origin of these extreme weight loss behaviors is uncertain. It has been suggested that some eating behaviors are learned through observation. For instance, it has been documented that some preschool children will change their vegetable preference to their peers' preferred choice after 4 days of eating together (Birch, 1980).

Further evidence that eating behaviors may be learned by observation was offered by Agras, Berkowitz, Hammer, and Kraemer (1988). They reported correlations between children's (18 months old)

caloric intake with both mother's rapid eating style and father's duration of eating. Birch, Marlin, Kramer, and Peyer (1981) reported that compared to overweight children and their mothers, thinner children and their mothers ate slower, ate less food, and talked more to one another about food and nonfood topics. Thinner children's mothers also made more positive comments about food during a lunch situation compared to the mothers of heavier children. This finding suggests a possible relationship between weight and social influences during eating.

Recent research suggests that extreme eating disorders such as anorexia nervosa may run in families. For example, compared to first-degree relatives of control subjects, female relatives of anorexia patients, in one sample, have a significantly higher incidence of both anorexia nervosa and bulimia nervosa (Gershon et al., 1983). Thus, the etiology of extreme food restriction, binge eating, and the motivation to lose an inordinate amount of weight, as reflected in eating disorders, may be related to social modeling factors in families and/or genetic influences.

Mothers are traditionally the primary caregivers and meal providers for their children. For female children in particular, mothers may be the most significant role model of society's expectations of women (e.g., being thin, the norm of "dieting," etc.). It is intuitively reasonable that children, especially girls, might learn both normal and abnormal eating behavior patterns from family members, particularly other female role models (i.e., mothers). As previously mentioned, higher levels of caloric intake in children

(which may relate to abnormal weight gain) has been found to correlate with a rapid eating style in mothers and a longer duration of eating by fathers during mealtime (Agras et al., 1988).

However, the present author could find no published research in which the relationship between mothers' abnormal binge eating tendencies and actual overeating behaviors in their children was examined.

In the literature review that follows, additional topics relevant to understanding possible etiological factors of dysfunctional eating patterns in young women will be outlined. These topics include: (a) the relationship between dietary restraint and binge eating, (b) the family environment, and (c) the relationship between mothers' and daughters' abnormal eating behaviors and attitudes.

CHAPTER II

REVIEW OF RELATED LITERATURE

Throughout the past decade, studies have been published regarding the dieting concerns of girls (Hill, Rogers, & Blundell, 1989; Hill, Weaver, & Blundell, 1990; Johnson-Sabine, Wood, Patton, Mann, & Wakeling, 1988; Pike & Rodin, 1991; Stein & Reichert, 1990; Wardle & Beales, 1986). The research has been stimulated by evidence that the highest incidence of abnormal eating is reported by adolescents and young women (Striegel-Moore et al., 1986). However, as has been noted previously, the etiology of the various clinical and subclinical eating disorder syndromes is uncertain.

Dietary Restraint and Its Relation to Overeating

Chronic dieting (dietary restraint) is one variable that has been associated with clinical eating disorders. Dietary restraint is characterized not only by recurrent restricted food intake, but also by a paradoxical tendency to overeat or binge. Initially, researchers studying dietary restraint focused on distinguishing eating behaviors of overweight from normal weight individuals (Herman & Mack, 1975). However, just as the obese are assumed to be chronic dieters, many women of normal weight also engage in chronic food restriction dieting and paradoxical overeating. Thus, recent researchers have focused on whether high versus low restraint women generally tend to maintain food restriction in the presence of various stimuli that might undermine successful restraint.

One method of research commonly used in this area is to require subjects to consume a food preload (e.g., a milkshake). This preload is followed by the consumption of additional food in the context of a "taste test." Two studies were located in which the authors utilized this procedure and presented subjects with a milkshake identified as being either high or low in caloric content (Polivy, 1976; Spencer & Fremouw, 1979). Results from both studies demonstrated an interaction between level of restraint (i.e., high versus low) and perception of the caloric content of the preload. Relative to all other subjects, high restrainers ate significantly more food during the taste test when they believed they had already consumed a high calorie milkshake preload. However, when they believed they had consumed a low calorie milkshake preload, high restraint subjects maintained their restraint. Subjects reporting a low level of restraint, however, consumed less during the taste test when they thought they had already consumed a high calorie preload (versus a low calorie preload). This suggests that high restrainers may hold very rigid, all-or-nothing cognitions regarding eating versus continued restraint. Thus, high restrainers are prone to relinquish control over food intake when they perceive they have exceeded their calorie allotment for the day. On the other hand, low restrainers' consumption is based on level of satiation.

Depressed mood has likewise been shown to be related to disinhibition. A restraint-by-mood interaction was reported by Ruderman (1985). When a "depressed" mood is induced among restrained eaters, they eat significantly more than peers exposed to a "neutral" mood condition as well as the unrestrained subjects groups.

Unrestrained eaters were found to eat similar amounts of food in both conditions.

Food Avoidance Conflicts

Dietary restraint involves various conflicts about whether to eat or not eat particular foods, at particular times. For example, high restrainers ostensibly rationalize continued consumption when in the midst of such conflict. This may occur when they believe they have already exceeded their calorie allotment for the day (e.g., "I've already blown my diet so I might as well continue eating"; Ruderman, 1986). Conflict resolution may be a more general problem for persons with extreme problems with dietary restraint and formal eating disorders. Johnson and Connors (1987) discuss the personal and social conflicts of patients with eating disorders, particularly difficulties resolving conflicts within the family.

Available self-report measures of dietary restraint and eating disorder symptoms include face valid items that allude to food conflicts. For instance, well-known inventories such as the Restraint Scale, Bulimia Test, and Eating Attitudes Test include items reflecting subjects' belief that food controls their life, or the perception that they give too much thought and time to food. As of yet, little research has been conducted on the more specific conflict about whether to eat or not eat particular foods, despite the fact that such conflicts may be inherent in dietary restraint. For example, it is well known that a strong desire to eat among hungry individuals may be accompanied by increased, pre-eating salivation

flow, particularly when the person is in the presence of tempting food stimuli (Wooley & Wooley, 1973). Legoff and Spigelman (1987) found that high dietary restrainers salivated significantly more than nonrestrainers to olfactory food stimuli. Thus, the motive to constrain food intake among high restrainers may often be accompanied by a very high desire to eat. Stein and Kuntz (1989) hypothesized that food avoidance conflicts would be correlated with degree of food restriction dieting (dietary restraint), as well as an independent, physiological measure of desire/temptation to eat (salivation). The results of this study are outlined in the Data and Instrumentation section.

Family Environment

The family system is another target of research in the area of the etiology of overeating and bingeing. In a review of the literature, Rosenfield (1988) indicated that families of bulimic patients are more restrictive, controlling, and conflictual than families of nonbulimics. Families of anoretics were described to be more interdependent and unusually close as compared to families of bulimics and other comparison families. Rosenfield also noted that anoretics reported having at least one other family member who deviates in weight and eating behavior. A higher incidence of clinical disorders (e.g., phobic avoidance, obsessive-compulsive behaviors, and alcoholism) was also noted for families of both bulimics and anoretics.

Comparisons Between Mothers' Eating Behavior
and Attitudes and Daughters' Eating
Behavior and Attitudes

To date two studies have compared mothers' and daughters' eating behaviors and attitudes. The following dependent variables were measured: (a) scores on the Family Adaptability and Cohesion Evaluation Scale III (FACES-III); (b) scores on the Eating Disorder Inventory (EDI) subscales; (c) responses to a self-report questionnaire inquiring about weight, height, diet history, and attractiveness; (d) mean scores on the Eating Attitudes Test (EAT); (e) mean scores on the Restraint Scale; and (f) mean scores on the Eating Patterns Questionnaire (EPQ). The summary of these two studies is organized by the types of measurement used. It should be noted that the present writer has chosen to present group differences in terms of standardized mean differences (SMDs).

Pike and Rodin (1991) compared 39 daughters identified as disordered eaters (DED), their mothers (MEDD), and 38 daughters identified as noneating disordered (NDED) and their mothers (MNEDD) on a variety of measures. All of the daughters were high-school aged with the mean age of the girls at 16 years. One of the measures was the FACES-III. The mean score on the FACES-III of each group (i.e., the DED group, the MEDD group, the NDED group, and the MNEDD group) was compared with the mean score of the other groups. The authors reported that there were no statistically significant differences among the mothers' mean scores (MEDD versus MNEDD) of current family adaptability ($SMD = .03$), current family cohesion ($SMD = -.42$), ideal

family cohesion (SMD = .08), ideal family adaptability (SMD = .59), or satisfaction of family adaptability (SMD = -.43). This same pattern of scoring occurred between DED and NDED (SMD = .31, -.36, .26, .16, -.02, respectively). The authors did report a statistically significant difference between the two groups of mothers in terms of satisfaction with family cohesion (SMD = -.57). Here, mothers with daughters identified as disordered eaters indicated a desire for significantly more family cohesion than they experienced, versus the control mothers. The same pattern was noted at a statistically significant level for the two groups of daughters (SMD = - .52).

The mean EDI scores of the MEDD and MNEDD groups were also compared by Pike and Rodin (1991). The authors reported a statistically significant difference between the two groups of mothers (SMD = .49). As expected the MEDD group indicated more eating disorder symptoms than did the MNEDD group.

Pike and Rodin (1991) also compared responses of the MEDD and MNEDD groups on a self-report questionnaire pertaining to weight, height, diet history, and attractiveness. The authors reported that a high percentage of mothers from both groups had dieted (90% and 79%, respectively). However, the mothers of daughters with disordered eating indicated that they began dieting at a significantly younger age than did mothers of the nondisordered group (SMD = -.66). There were no statistically significant differences between the mean scores for the two groups of mothers for current Body Mass Index, the largest amount of weight ever lost, or the amount of weight they currently wanted to lose. However, statistically significant differences were

found between the MEDD and MNEDD groups with regard to how much weight they thought their daughters should lose (Pike & Rodin, 1991).

Mothers with disordered eating daughters thought their daughters should lose more weight ($M = 12.12$ lb., $SD = 15.75$), than mothers of nondisordered eating daughters ($M = -.13$ lb., $SD = 5.85$; $SMD = 1.13$). Pike and Rodin (1991) also reported that mothers' mean ratings of their daughters' attractiveness were significantly lower among DED than NDED ($SMD = -.53$).

In the second study published to date in this area (Hill et al., 1990), mothers' and daughters' mean scores on the EAT were compared. The daughters in this study were between the ages of 9 and 11 years, with a mean age of 10 years. The authors reported that there was no statistically significant correlation between mothers' and daughters' EAT scores ($r(18) = .35$). However, a statistically significant, positive correlation was found between the daughters' scores and mothers' scores on the Dietary Restraint Scale ($r(18) = .68$, $p < .01$).

Hill et al. (1990) also compared self-reported eating patterns of highly restrained daughters and their mothers with those of low-restrained daughters and their mothers. These authors reported no specific group statistics, however. They cited the finding of statistically significant differences between the two groups on the degree to which they attributed eating in response to a negative mood state. Highly restrained daughters and their mothers both attributed eating to boredom or being upset more frequently than low-restrained daughters and their mothers. No statistically significant differences

were noted between the groups' mean scores on behaviors such as rate of eating and frequency of eating all food on one's plate.

In summary, a number of authors have noted that disordered eating patterns seem to "run in families" and may be learned. The few studies published to date suggest that mothers' and daughters' share similar eating behaviors and attitudes. Similarities were noted in the amount of reported restraint, emotional eating, and the desire for more family cohesion. Furthermore, the research suggested that MEDD are more critical of their daughters' physical appearance than MNEDD. MEDD were also noted to experience more eating disorder symptoms themselves than did MNEDD.

The proposed study will be an attempt to expand on the current knowledge about shared eating behaviors and attitudes of mothers and daughters. Behaviors that have been associated with the development of bulimia nervosa (i.e., dietary restraint, binge eating, and food conflicts) will be assessed intergenerationally.

CHAPTER III
PURPOSES AND OBJECTIVES

The primary purpose of this research was to investigate whether there were intergenerational relationships between mothers' and daughters' binge eating tendencies, food avoidance conflicts, and level of dietary restraint. The study also investigated whether the degree of reported food avoidance conflicts is related to the level of dietary restraint in mothers and daughters alike. Specifically, do mothers' and daughters' scores on the Food Avoidance Conflict Scale (FACS) correlate positively with scores on the Revised Restraint Scale (RRS)? The objectives of this research were

1. To determine if there is a meaningful positive relationship between the severity of binge eating reported by mothers (Bulimia Test-Revised [BULIT-R] scores) and that reported by their daughters (BULIT-R).
2. To determine if a meaningful relationship existed between the levels of dietary restraint reported by mothers and daughters on the Revised Restraint Scale (RRS). This objective has been added because severe food restriction ("dietary restraint") has been shown in past research to be associated with binge eating tendencies.
3. To determine if a positive correlation between level of dietary restraint (scores on the RRS) and food avoidance conflict (scores on the Food Avoidance Conflict Scale, [FACS]) exists for both mothers and daughters. Conflicts about consuming highly desired foods have been suggested to be higher in women who report high levels of

dietary restraint. In addition, mothers' and daughters' level of reported food avoidance conflict (scores on the FACS) was compared.

Research Hypotheses

The following research hypotheses have been formulated to guide this study. These hypotheses involved the convention that, in medical and epidemiological research, a correlation of $r \geq .25$ is often practically meaningful (Guilford, 1965).

1. There will be a meaningful positive correlation between the mothers' and daughters' scores on the BULIT-R (expected $r \geq .25$).

2. There will be a meaningful positive correlation between the mothers' self-restraint and daughters' self-restraint scores on the RRS (expected $r \geq .25$).

3. There will be a meaningful positive correlation between level of dietary restraint (scores on the RRS) and food avoidance conflict (scores on the FACS) of both mothers and daughters (expected $r \geq .40$). There will also be a meaningful positive correlation between the mothers' and daughters' food avoidance conflicts as indicated by scores on the FACS (expected $r = .25$).

CHAPTER IV

PROCEDURES

It has been shown that up to 90% of individuals with eating disorders are females (Striegel-Moore et al., 1986). Thus, only females were included in this study to eliminate the possibility of confounded results due to sex differences. The age criterion (daughters were between the ages of 11 and 13 years) was based on research that has demonstrated that female children begin to report significant concern about body image and weight between the ages of 9 and 12 (Stein & Reichert, 1990).

Subjects were obtained by calling mothers of females listed in the sixth-, and seventh-grade Logan School District Directory. Mothers and their daughters were invited to participate in a study considering the similarities and differences of mothers' and daughters' taste-perception, dieting behavior, and eating behavior. They were informed that they would be answering a series of questionnaires that would take them approximately 20-30 minutes to complete. They were also assured that the researcher would endeavor to maintain confidentiality. If they consented to participate, a female undergraduate research assistant familiar with all of the procedures took the questionnaires to the subject's home and waited while the mother and daughter completed them. The research assistant answered any questions the mother or daughter had about the specific questionnaires and items. Mothers and daughters were told that they were to complete the questionnaires independently and should direct any uncertainties about the task to the assistant.

Forty-four (23%) of 190 mothers contacted declined participation, while 146 (77%) consented to participate. Included in the 146 participants are two sets of twins of which one daughter's questionnaire has been randomly selected to be included in the analysis. The most common reason for declining participation was "no time" and "no reason." Questionnaires of six subjects had to be disregarded due to a sufficient amount of missing information or dual responses, leaving 140 mother/daughter dyads to be included for analysis.

Data and Instrumentation

Mothers and daughters both completed Thelen, Farmer, Wonderlich, and Smith's (1991) Bulimia Test-Revised (BULIT-R), the Revised Restraint Scale (RRS), and the Food Avoidance Conflict Scale (FAC). Discussions about reliability and validity data on these instruments are presented below. During a prior pilot study by the present investigator, these questionnaires were initially administered to three females in the sixth-grade, with varied reading abilities to identify difficult items. A few items were reworded until they were readily understood by the girls. Item content was maintained as much as possible (see Appendix A). Examples of changes made on the BULIT-R included: (a) changing the response choice "neutral" to "do not agree nor disagree," and (b) rewording the question "Would you presently call yourself a "binge eater" to "would you say that you eat lots of food in a short amount of time?" An example of an alteration made on the RRS is changing the word "maximum" to "most." Finally, the

response choices on Food Avoidance Checklist were modified for easier understanding. For example, choice number one, "extreme liking of the taste" was reworded to read "really like the taste."

Bulimia Test-Revised

Mothers and daughters who participated in the study completed the Bulimia Test-Revised (BULIT-R) as a means of assessing severity of binge eating. The BULIT-R is a 28-item, self-report, multiple-choice scale developed to measure bulimia nervosa based on DSM-III-R criteria. It uses a five-point Likert scale format, allowing subjects to obtain scores as high as 140 points. Scores for five subscales can also be calculated (i.e., Binge/Control, Radical Weight-Loss, Diuretics, Vomiting/Laxatives, and Exercise) (see Appendix B). In addition to these subscales, the present investigators devised a subscale from the BULIT-R, The Critical Binge subscale, which highlighted items reflecting actual binge eating. This subscale is similar to the Bingeing/Control subscale, but differed in that it eliminated questions assessing emotional components associated with binge eating. See Appendix B for items contained in this subscale. All of the available descriptive statistics on the BULIT-R are based on college and school populations.

In previous cross-validation studies by the author of the BULIT-R, a cutoff score of 104 was found to designate likely bulimia nervosa cases. The authors of the BULIT-R were able to adequately discriminate bulimic from nonbulimic cases, whether the sample was drawn from a clinical ($p < .0001$) or nonclinical population ($p < .0001$; Thelen et al., 1991). However, it has been shown that a score

of 85 reduces the number of false negatives cases of bulimia nervosa to only 1 in 37 (Thelen et al., 1991).

The test-retest reliability coefficient for the BULIT-R is excellent ($r = .95$; Thelen et al., 1991). There is also excellent correspondence between the revised BULIT-R and both the original BULIT and Gormally's Binge Scale (Hawkins & Clement, 1980). Specifically, a Pearson product-moment correlation of .85 was reported between scores on the BULIT-R and the Gormally's Binge Scale, indicating the two scales are measuring similar constructs (Thelen et al., 1991). Also, a Pearson product-moment correlation coefficient of .99 was found between score on the BULIT-R and the original BULIT, suggesting the measures are almost completely redundant.

The Restraint Scale

The Restraint Scale is a 10-item, self-report, multiple-choice scale developed to identify those chronic dieters who tend to paradoxically overeat after a period of food restriction dieting (Polivy, 1976). The paradoxical eating is most likely to occur when high restrainers are placed in situations of stress or dysphoria, or perceive that they have ruined their diet for the day (Polivy, 1976).

Investigators studying the Restraint Scale suggest that it is comprised of two factors: Concern for Dieting (CD) and Weight Fluctuations (WF). The average correlation between the two factors is $r = .48$, $SD = .19$ (Heatherton, Herman, Polivy, King, & McGree, 1988). One criticism of the Restraint Scale is that overweight individuals consistently score higher on the scale than normal-weight individuals (Heatherton et al., 1988). However, Heatherton et al. (1988)

indicated that it is unknown whether this difference is due to the overweight individual's concern for dieting, greater fluctuations in weight, or both. The difference in scores between normal-weight and overweight individuals has been reported to influence other psychometric properties of the Restraint Scale. Ruderman (1986) summarized the studies considering the internal consistency of the Restraint Scale. She reported that in normal-weight samples, it appears to have adequate internal consistency (alpha coefficient ranging from .86 to .79). However, adequate internal consistency was found only for obese individuals who were dieting (alpha coefficient of .83), but not nondieters (alpha coefficient of .50).

Food Avoidance Conflict: Pilot Study #1--

Food Avoidance Conflict Scale

To date, there are no adequate published measures of food avoidance conflict in the literature. Thus, a partial validation study of a Food Avoidance Conflict Scale (developed by the principal investigator, Dr. Stein) was conducted (scale content is found in Appendix A).

In an initial pilot study designed to provide validity data, Stein and Kuntz (1989) hypothesized that food avoidance conflicts should be correlated with degree of food restriction dieting (dietary restraint), as well as an independent, physiological measure of desire/temptation to eat (salivation).

Subjects first tasted and rated ice cream. They then completed salivation flow evaluation before, during, and after eating. The

authors found that several Food Avoidance Conflict scores correlated with dietary restraint: sweets ($r = .30$, $p = .006$); greasy foods ($r = .24$, $p = .022$); starches/carbohydrates ($r = .20$, $p = .04$); rich, tasty foods (i.e., chocolate ice cream, pudding, and pizza) ($r = .39$, $p < .001$), as well as an overall conflict score for these food groups ($r = .32$, $p = .003$).

Also, residual salivation for the posteating trial (i.e., controlling for the pre-eating aroma/appearance salivation trial) was assessed. Analyses revealed significant zero-order correlates of salivation: sweets ($r = -.19$, $p < .05$); greasy foods ($r = -.25$, $p < .02$); and the total desire/avoidance scores ($r = -.21$, $p < .04$).

Finally, grams consumed was inversely correlated with Food Conflict Scores for the entire sample, but not high- and low-restraint subgroups separately. (This is likely due to the restricted range of scores typically found in select subgroups of subjects.) Correlations ranged from $r = -.20$ to $r = -.32$, $p < .04$.

In summary, Stein and Kuntz (1989) concluded that consumption decreased as conflicts over eating desired-but-avoided foods increased. Also, salivation measures showed that dietary restraint is correlated with apparent restriction of salivation. Finally, when desired-but-avoided food conflicts are high (as they are among high restrainers), posteating salivation decreases.

CHAPTER V
RESULTS OF PRESENT STUDY

Is there a meaningful positive correlation between mothers' and daughters' scores on the BULIT-R? To answer this question, Pearson correlations were calculated between mothers' and daughters' scores on the total BULIT-R and the Binge Control and Critical Binge subscale. The results of this analysis is shown in Table 1.

Table 1

The Relationship Between Mothers' and Daughters' Total Score on the BULIT-R, and Their Binge Control and Critical Binge Subscale Scores

	Daughters' Total BULIT-R		Daughters' Binge Control		Daughters' Critical Binge	
	r	r ²	r	r ²	r	r ²
Mothers' Total BULIT-R	.317**	.10	.315**	.10	.248*	.06
Mothers' Binge Control	.329**	.11	.327**	.11	.257*	.07
Mothers' Critical Binge	.272*	.07	.273*	.07	.212	.04

** Statistically significant at the .001 level.

* Statistically significant at the .01 level.

As indicated in Table 1, statistically significant relationships were found between mothers' and daughters' scores on all subscales except the Critical Binge subscale. Thus, mothers' reported severity of bulimic behavior is associated with similar reports from daughters.

Is there a positive relationship between mothers' dietary restraint scores and daughters' dietary restraint scores? Pearson correlations using mothers' and daughters' Dietary Restraint-Revised scores were calculated (see Table 2). No relationship was found.

Table 2

Correlations and Level of Variance Explained of Mothers' and Daughters' Dietary Restraint-Revised Total Scores and Weight Fluctuation and Concern for Dieting Subscales Scores

	Daughters' Total Revised-Restraint		Daughters' Weight Fluctuation		Daughters' Concern for Dieting	
	r	r ²	r	r ²	r	r ²
Mothers' Total Revised-Restraint	.160	.03	.113	.01	.167	.03
Mothers' Weight Fluctuation	.142	.02	.112	.01	.135	.02
Mothers' Concern for Dieting	.154	.02	.093	.01	.189	.04

The relationship between level of dietary restraint and food avoidance conflict was calculated for both mothers and daughters. Pearson correlations were again calculated with the results shown in Table 3.

Table 3

Relationships Between Individual's Scores on the Dietary Restraint-Revised Scale and the Food Avoidance Conflict Scale

	Ital		CRBLO		Bread		Sweet		Veg		G. Meat		OHCRF		OLCF		Total	
	r	r ²	r	r ²	r	r ²	r	r ²	r	r ²	r	r ²	r	r ²	r	r ²	r	r ²
M Rst Total	.32**	.10	.134	.02	.19	.04	.153	.02	.071	.01	.018	.00	.142	.02	.068	.00	.166	.03
M Rst WGT	.193	.04	.032	.00	.116	.01	.106	.01	.004	.00	-.042	.00	.07	.00	.04	.00	.073	.01
M Rst Diet	.38**	.14	.205	.04	.26**	.07	.218	.05	.169	.03	.099	.01	.225*	.05	.129	.02	.259*	.07
D Rst Total	.034	.00	-.051	.00	-.004	.00	.09	.01	.038	.00	-.015	.00	.074	.01	-.068	.00	.056	.00
D Rst WGT	.032	.00	-.035	.00	.034	.00	.086	.01	.039	.00	.028	.00	.09	.01	-.09	.01	.076	.01
D Rst Diet	.047	.00	-.034	.00	-.027	.00	.084	.01	.029	.00	-.037	.00	.048	.00	.004	.00	.04	.00

Note. Rst Total = Restraint Total, Rst WGT = Restraint Weight Fluctuation, Rst Diet = Restraint Concern for Dieting, Ital=Italian, CRBLO=Carbohydrates, Veg= Vegetables, G. Meat= Greasy Meat, OHCRF=Only High Carbohydrates, OLCF=Only Low Carbohydrate Food

** Statistically significant at the .001 level.

* Statistically significant at the .01 level.

No significant relationship was found between Mothers' Total Dietary Restraint score and their Total scores on the Food Avoidance Checklist. However, mothers' scores on the diet subscale correlate significantly with their Total Conflict Score ($r = .2588$, $p > .05$).

Daughters' scores failed to show a significant relationship between dietary restraint and food conflict. As indicated in Table 4, no practical relationship ($r \geq .25$) was found between daughters' dietary restraint and food conflict scores.

Mothers' and daughters' Food Conflict Checklist scores were compared using Pearson correlations. The results of this analysis are shown in Table 4. No significant relationship between mothers' and daughters' reported level of food conflict was found.

Table 4

Relationship Between Mothers' and Daughters' Food Conflict Checklist Scores

	Dght Ital r r ²	Dght CRBL r r ²	Dght Brd r r ²	Dght Swt r r ²	Dght Veg r r ²	Dght GMt r r ²	Dght OHCRF r r ²	Dgh OLCF r r ²	Dght Tot r r ²
M. Ital	.01	-.16	-.07	-.05	-.04	-.11	-.04	-.02	-.10
M. CRBL	-.05	-.21	-.09	-.08	-.08	-.21	-.18	-.14	-.20
M. Brd	.05	-.04	-.02	.06	-.04	-.11	.03	-.02	-.0046
M. Swt	.05	-.13	-.03	.02	.03	-.05	.06	-.01	.02
M. Veg	.05	-.01	-.02	.03	-.09	-.05	.09	.10	.03
M. GMt	-.04	-.12	-.04	.03	.04	-.05	.02	-.03	-.01
M. OHCRF	.04	-.04	.01	-.03	-.04	-.04	.14	.07	.09
M. OLCF	.07	-.07	.11	.01	-.0036	-.07	.09	.05	.06
M. Total	.01	-.12	-.03	.004	-.03	-.11	.05	.0025	.0001

Note. Ital=Italian, Brd=Breads, Swt= Sweet, CRBL=Carbohydrates, Veg= Vegetables, GMt= Greasy Meat, OHCRF=Only High Carbohydrates, OLCF=Only Low Carbohydrate Food, Tot=Total.

Further analyses were completed to determine if there existed correlations between mothers' and daughters' scores on the BULIT-R and the Revised Dietary Restraint scales (see Table 5).

Table 5

Pearson Correlations Between Mothers' BULIT-R Scores and Daughters' Revised Dietary Restraint Scores, and Daughters' BULIT-R Scores and Mothers' Revised Dietary Restraint Scores

	D.Total Restraint r	D. Binge Control r	D. Critical Binge r	D. Restrnt Total r	D. Wght. Fluct. r	D. Diet Concern r
M. Total Bulit-R				.345**	.288**	.324**
M. Binge Control				.342**	.294**	.314**
M. Crit. Binge				.303**	.253*	.281*
M. Restrnt Total	.271*	.275*	.201			
M. Wgt. Fluct.	.265*	.257*	.208			
M. Diet Concern	.233*	.248*	.179			

* Statistically significant at the .01 level.

** Statistically significant at the .001 level.

As indicated in Table 5, all of the mothers' BULIT-R scores correlated significantly with the daughters' Revised Dietary Restraint scores. Likewise, mothers' Revised Dietary Restraint scores correlated significantly with daughters' score on the Total BULIT-R and Binge Control subscale scores.

Daughters scoring above predetermined cut-off scores for "high restraint" (Restraint Total ≥ 14), bulimia (BULIT-R Total ≥ 84), and/or "binge eating" (Critical Binge ≥ 33) were compared to daughters

classified as "low restraint," "non-bulimic," and/or "non-binge" eating (i.e., those scoring below the cut-off score for each of these variables). Separate variance t tests were calculated when significant differences in variances between the DHR and DLR groups existed. Where homogeneity of variance existed in the DHR and DLR groups, pooled variance t test were used. It should be noted that minor sample size differences occurred across tests due to missing data for a few subjects.

Three daughters met the criteria for "probable bulimia nervosa" (DHB). These girls had mothers with mean scores on the Total BULIT-R, Binge Control, Critical Binge, Total Dietary Restraint, Weight Fluctuation, and Concern for Dieting subscales that were substantially higher than the mean scores of mothers with daughters with low bulimia scores ($n = 135$, see Figures 1 and 2).

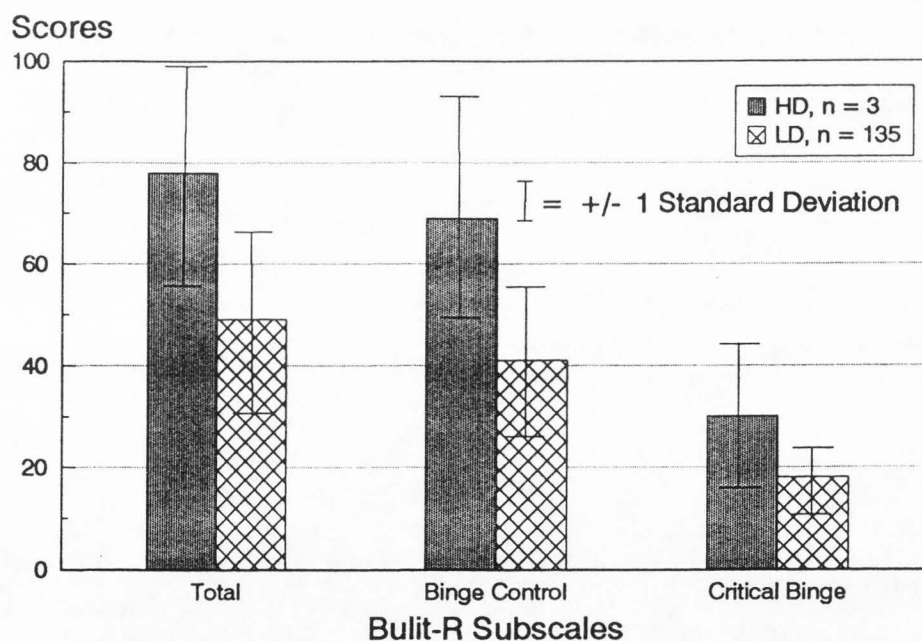


Figure 1. Comparison of mothers' mean BULIT-R scores: Grouped by hi versus lo daughter BULIT-R scores.

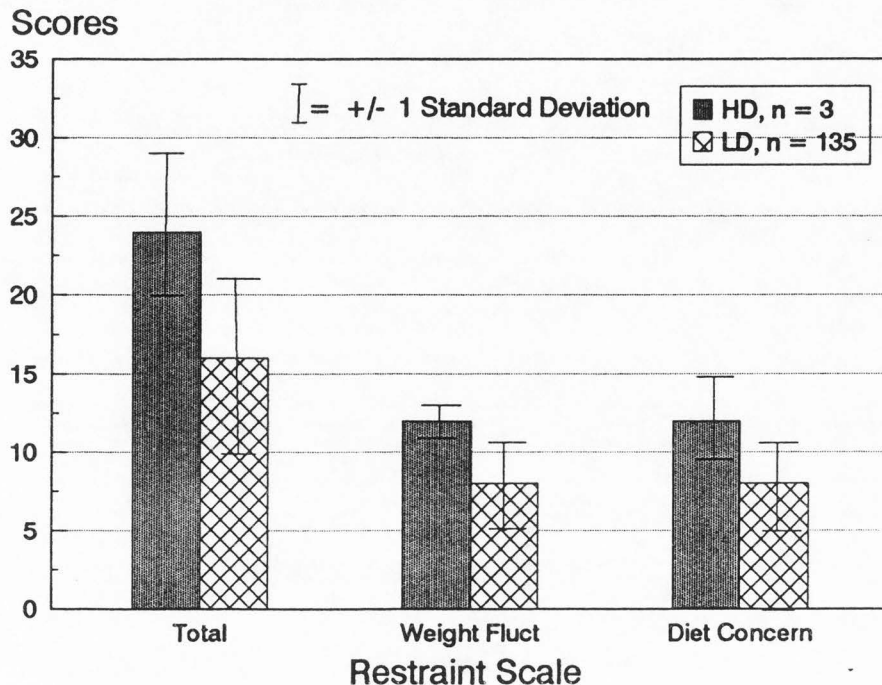


Figure 2. Comparison of mothers' mean restraint scores: Grouped by hi versus lo daughter BULIT-R scores.

In addition, DHB group had a considerably higher mean score on the total BULIT-R, Binge Control, Radical Weight Loss, Critical Binge (see Figure 3), total Revised Dietary Restraint, Weight Fluctuation, and Dieting Concern scales than the DLB group (see Figure 4).

High BULIT-R Daughters

To further understand the "high bulimia" daughters, their individual responses on the BULIT-R were inspected. One daughter, although denying excessive exercise, vomiting, or use of laxatives or suppositories, acknowledged not eating or going on strict diets two to three times in the last year as a means of losing weight. She also endorsed items relating to cognitive and emotional concern over her body and the amount of food she eats. For example, she acknowledged

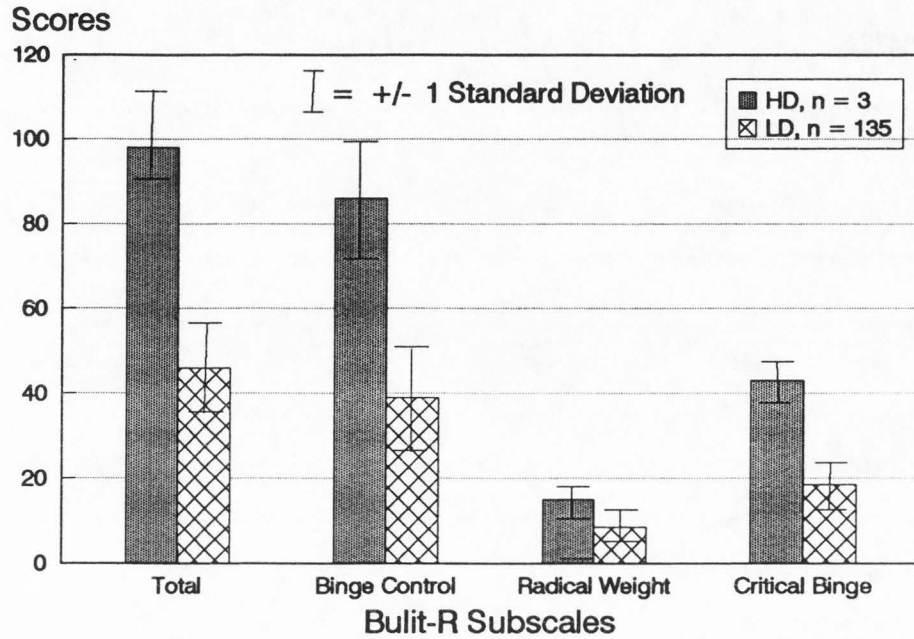


Figure 3. Comparison of daughters' mean BULIT-R scores: Grouped by hi versus lo daughter BULIT-R scores.

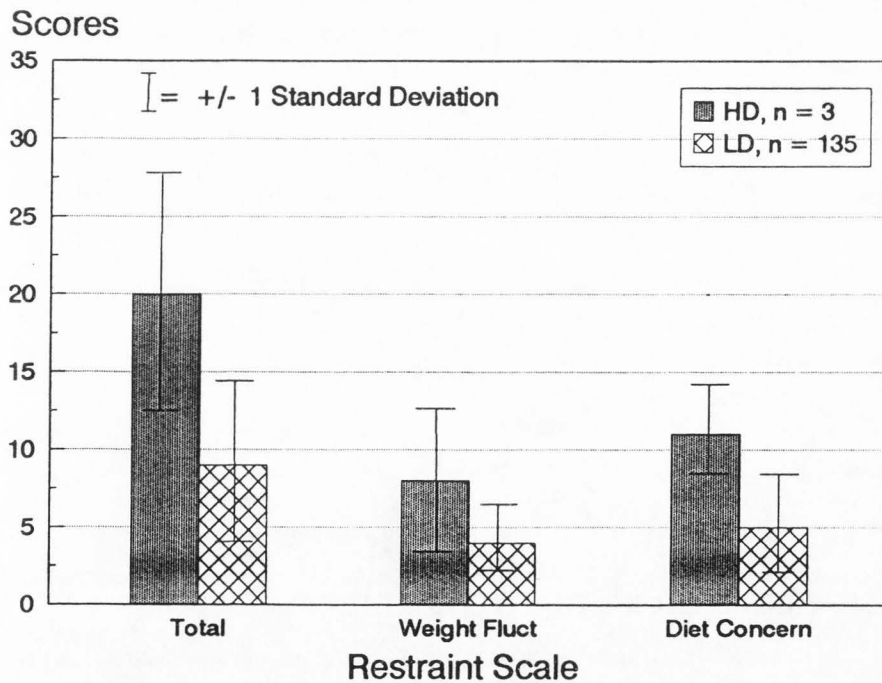


Figure 4. Comparison of daughters' mean restraint scores: Grouped by hi versus lo daughter BULIT-R scores.

being afraid to start eating because she may not be able to stop and she thinks about her body shape and weight much more than other people her age. She also acknowledged feeling that food controls her life.

The second daughter classified as "high bulimic" responded somewhat similarly to the daughter just described. However, she additionally denied any excessive exercise, vomiting, and/or laxative or suppository use. She also disavowed not eating or strictly dieting in the last year as a means of losing weight. However, she admitted significant dissatisfaction with her body, as well as binge eating behaviors.

Finally, the third daughter denied vomiting and the use of laxatives or suppositories as a means of losing weight, but reported the use of water pills as frequently as two to three times a month as a means of controlling her weight. She also acknowledged fasting and/or going on strict diets more than five times in the last year, as well as occasionally exercising "hard" and for long periods of time to burn calories. Finally, similar to the other daughters, she acknowledged dissatisfaction with her body shape and weight, as well as binge eating.

Table 6 shows the top four scores on the daughters' BULIT-R and their mothers' scores. By visual inspection, daughters who report high bulimic behaviors (in general) have mothers who report similar levels of bulimic behaviors. However, mothers' scores on the BULIT-R are consistently lower than the high scoring daughters. This suggests that daughters are demonstrating bulimic behaviors one to two steps higher than their mothers.

Table 6

Daughters Who Scored High on the BULIT-R and Their Mothers' BULIT-R Scores

Daughter	Daughter Total BULIT-R	Mother Total BULIT-R
1	110	102
2	98	73
3	85	59
4	83	70

Eighteen of 137 daughters were classified as high restrainers (DHR). As a group, mothers of the DHR daughters had substantially higher mean scores than the mothers of daughters not meeting the cut-off scores on: (a) Binge Control subscale, $t(133) = -2.07$, $p = .04$; (b) total BULIT-R, $t(132) = -2.05$, $p = .04$; and (c) Critical Binge subscale, $t(135) = -2.17$, $p = .03$, ($n = 109$) (see Figure 5).

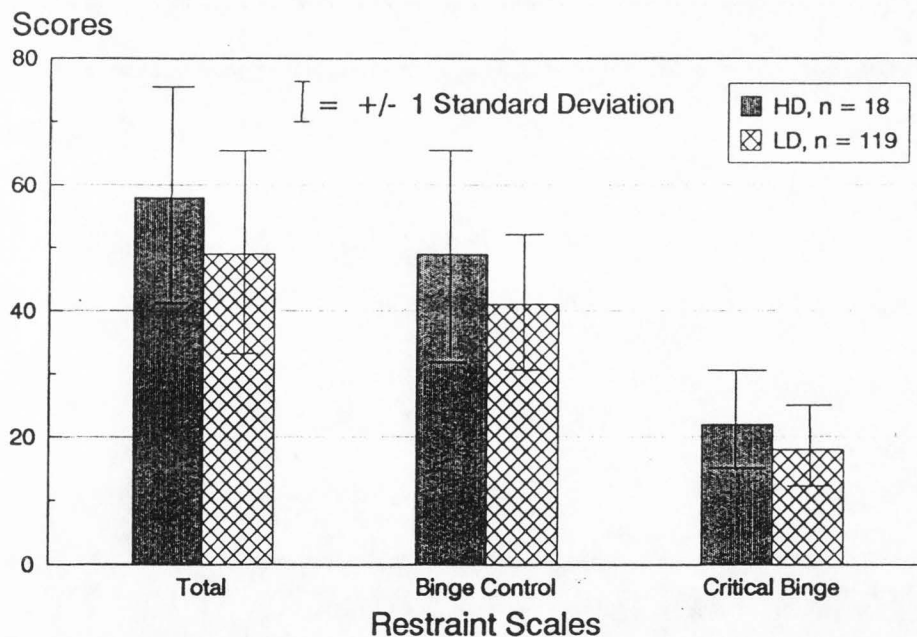


Figure 5. Comparison of mothers' mean BULIT-R scores: Grouped by high versus low daughter restraint score.

Compared to the DLR group, the DHR group also had markedly higher mean scores on (a) the total BULIT-R, $F(1, 124) = 2.31, p = .01$; (b) Binge Control subscale, $F(1, 128) = 2.48, p = .005$; (c) Critical Binge subscale, $F(1, 130) = 2.84, p = .001$; (d) Radical Weight Loss subscale, $F(1, 133) = 2.31, p = .009$; and (e) a substantially lower mean score on the Exercise subscale, $t(137) = 2.13, p = .035$ (see Figure 6).

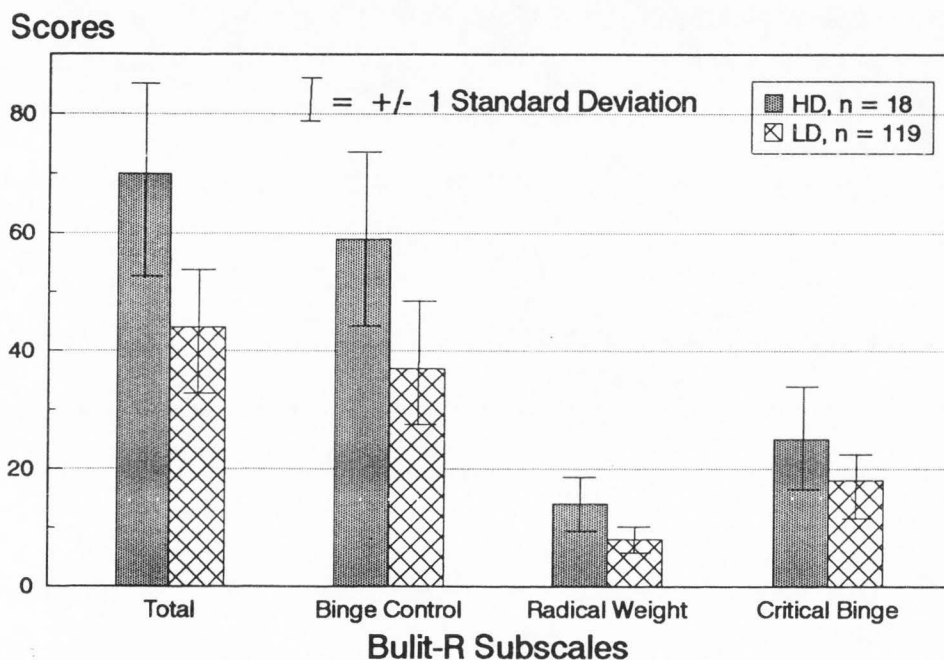


Figure 6. Comparison of daughters' mean BULIT-R scores: Grouped by high versus low daughter restraint scores.

In addition, the DHR group had substantially higher mean scores on: (a) the total Revised Dietary Restraint score, $t(126) = -13.64, p = .000$; (b) Weight Fluctuation subscale, $F(1, 127) = 1.97, p = .035$; and (c) Dieting Concern subscale, $t(133) = -10.83, p = .000$. The DHR group was also markedly higher on the Conflict over Sweets subscale,

$t(133) = -3.17, p = .002$, and the total Food Conflict score, $t(125) = .2.59, p = .01$, than the DLR group.

Four daughters met the criteria for the High Critical Binge group (DCB). As noted previously, the criterion for this was a score ≥ 33 on the Critical Binge subscale. These adolescents likely meet criteria for clinically significant binge eating problems but may or may not meet bulimia nervosa. As a group, the mothers of DCB girls scored substantially higher on the Total BULIT-R, Binge Control, Critical Binge (see Figure 7), Total Revised Dietary Restraint, and Weight Fluctuation scales than the mothers of daughters not classified as critical bingers (see Figure 8).

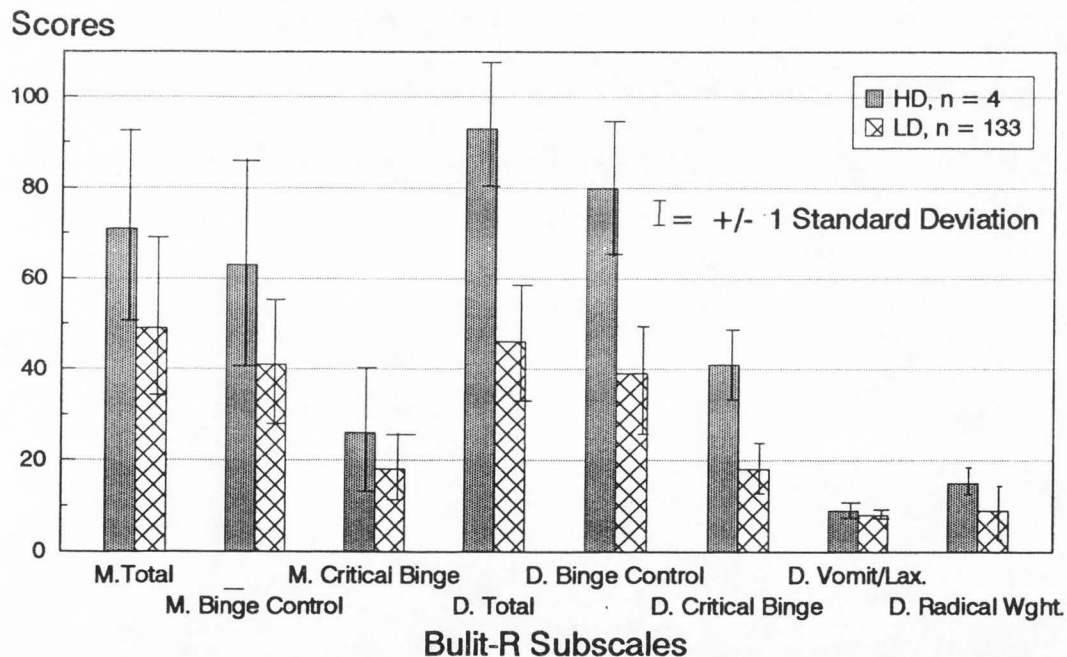


Figure 7. Mothers' and daughters' mean BULIT-R scores: Grouped by hi versus lo daughter binge class.

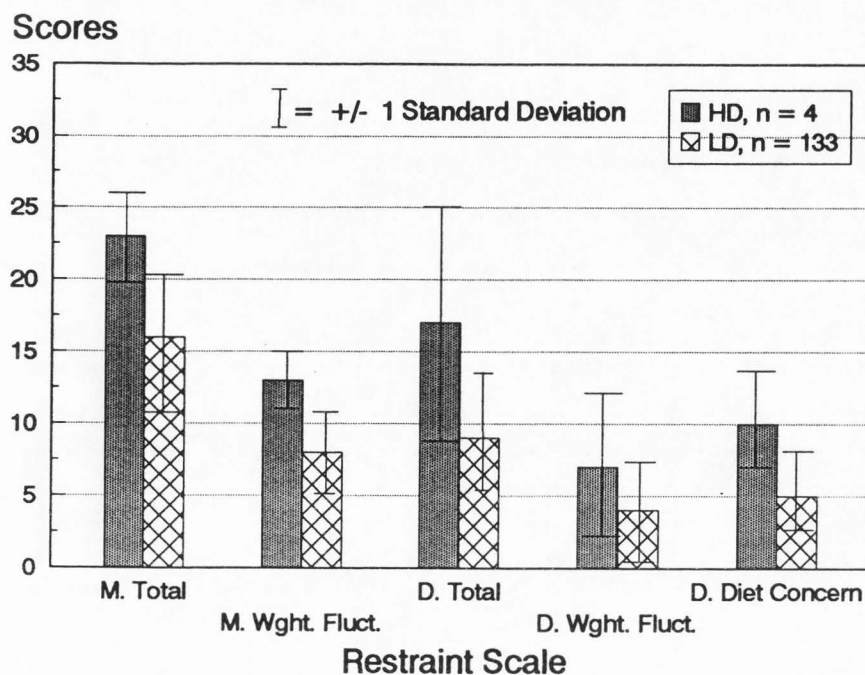


Figure 8. Mothers' and daughters' mean restraint scores: Grouped by hi versus lo daughter binge class.

The DCB group also had markedly higher mean scores on the total BULIT-R, Binge Control, Critical Binge, Vomiting/Laxative, Radical Weight Loss (see Figure 7), total Dietary Restraint, Weight Fluctuation, and Dieting Concern scales than the daughters classified as Non-Bingers (see Figure 8).

A stepwise regression analysis was completed to assess whether a linear combination of maternal variables (i.e., BULIT-R, Food Avoidance Conflict, or Revised Dietary Restraint scores) could predict daughters' scores on the Total BULIT-R. The analysis revealed that no multiple correlation between maternal variables and daughters' BULIT-R scores existed that was significantly larger than the simple zero-order correlation between mothers' Binge Control (BULIT-R) scores and daughters' Total BULIT-R scores.

CHAPTER VI

DISCUSSION

The first hypothesis of the present study was that daughters' severity of binge eating could be predicted by mothers' reports of severity of binge eating. As shown in Table 1, mothers' scores on the Total BULIT-R were significantly correlated with daughters' scores on the Total BULIT-R, explaining 10% of the variance in scores. The same relationship was found between mothers' and daughters' Binge Control scores, with 11% of the variance explained by the relationship. Mothers' scores on the Critical Binge subscale failed to be significantly correlated with daughters' scores on the Critical Binge subscore. This is surprising, in that the Critical Binge subscale consisted of face-valid items that are directly related to the act of binge eating (i.e., Would you presently call yourself a binge eater; there are times when I eat a very large amount of food). The Binge Control subscale not only includes the items in the Critical Binge subscale, but also includes the cognitive aspects associated with binge eating (i.e., obsessed about body size, preoccupation with weight and body shape).

Thus, it appears that although daughters may report engaging in weight loss behaviors and negative cognitions when they "break" their diet, they are not likely engaging in binge eating to the same extent as their mothers. They do not have the chronic history of restraint and have not yet expressed onset of true binge eating. It follows that although daughters report engaging in diet control behaviors to the same extent as their mothers, the degree to which they practice

such behaviors is questionable. This seems to be especially evident when one considers that daughters are reporting similar levels of control as their mothers; however, they are apparently not engaging in the binge eating behaviors that often follow periods of restraint as is often the case with adult women (e.g., mothers).

Hypothesis 2 proposed that mothers' and daughters' reported level of dietary restraint would be significantly related. As shown in Table 2, there was a positive relationship between mothers' and daughters' reports of dietary restraint. However, this relationship did not reach statistical significance, explaining only 3% of the variance. The greatest relationship on the Revised Dietary Restraint scale was on the Concern for Dieting subscale where 4% of the variance was accounted for by the relationship between mothers' and daughters' reports.

This result is not consistent with the finding by Hill et al. (1990), who found a statistically significant, positive correlation between the daughters' scores and mothers' scores on the Dietary Restraint Scale ($r(18) = .68, p < .01$). It should be noted that the girls in the Hill et al. study were similar in age to the girls in this study. One explanation for this discrepancy could be the differences in procedure. In Hill et al. (1990), the daughters completed the Restraint Scale independent of the mothers. In the present study, mothers and daughters often were in the same room when completing the inventories. Although they were instructed not to discuss or view the other's responses, it was reported by the research assistants that this instruction was sometimes difficult to enforce.

One probable explanation is that daughters who were strenuously dieting may have suppressed their true reports of dietary restraint behavior to some extent. However, this hypothesis does not seem viable when daughters' mean Total Restraint scores are compared with that reported by Hill et al. (1990). Daughters in this sample had a mean score of 8.98 ($SD = 5.266$) and ranged from 1 to 28. Hill et al. (1990) found a reported similar median restraint score (for 9- to 11-year-olds) of 9 with a range of 1 to 20.

One could argue that the lack of a significant relation between mothers' and daughters' restraint score is due to the developmental stage of the daughters. That is, girls of this age are not likely experiencing the typical ranges of weight fluctuation experienced by adult women. If this hypothesis were to be true, one would expect to see a discrepancy between the daughters' Concern for Dieting and Weight Fluctuation subscale scores. Mean scores for these subscales were 5.133 ($SD = 2.731$) and 3.853 ($SD = 3.187$), respectively.

As previously reported, mothers' scores on the Concern for Dieting subscale significantly correlated with the Total Food Conflict Avoidance score. Thus, it appears that mothers who report dieting behaviors and concerns are in greater conflict over foods they strongly desire to eat than mothers who acknowledge few or no dieting behaviors.

In addition, significant relationships were found between mothers' Concern for Dieting scores and the Breads, Italian, and High Carbohydrates Food Avoidance Conflict scores. The significant relationship between mothers' conflict over "breads" and dieting

behaviors may be explained by the fact that the "breads" subscale consists of both "safe" (e.g., bread and crackers) and "unsafe" (e.g., sweet rolls and pancakes) diet foods. The same holds true for Italian foods. Although pasta may be considered a "safe" diet food, pizza and lasagna are often high in fat, thus, "unsafe" for dieters. The relationship between mothers' dieting behaviors and conflict over high carbohydrate foods (OHCRF) is intuitively reasonable when one considers the food items that comprise this subscale (e.g., chips, sweet rolls, ice cream, pudding, etc.). These foods are typically high avoidance foods for most dieters.

The findings reported in the present study regarding food avoidance conflict are partially inconsistent with the findings reported by Stein and Kuntz (1989). Stein and Kuntz (1989) found a significant relationship between conflict over four of the food factors (and the total conflict score) and level of dietary restraint. In the present study, the only conflict score that correlated significantly with mothers' total dietary restraint score was the Italian foods (lasagna and pizza). Stein and Kuntz (1989) found no significant relationship between these variables. Although the present study showed only one significant relationship between mothers' Total Dietary Restraint scores and reported level of Food Avoidance Conflict, several significant relationships were found between mothers' Concern for Dieting subscale scores and Food Avoidance Conflicts scores (i.e., Italian foods, breads, high carbohydrate foods, and the overall Conflict score). This suggests that the mothers in this study are reporting conflicts over body

weight, dieting, and eating certain foods, but their food conflicts are not related to weight fluctuations per se.

The reason for the differences between the present study and one conducted by Stein and Kuntz (1989) is unclear. One explanation for the lack of significance here is that the Dietary Restraint Scale has been shown to correlate with other instruments primarily for obese individuals. One cannot rule out the possibility that the sample used by Stein and Kuntz (1989) and that used in the present study differed in mean body mass.

Also, the Food Avoidance Conflict Scale has limited reliability and validity data to support its use. Thus, it is possible that although it appears to measure (at face value) the construct of food conflict, it may in fact not reflect the true food conflicts of mothers and daughters in this study.

The present author was also interested in whether or not there existed significant correlations between mothers' BULIT-R scores and daughters' Revised-Dietary Restraint Scales and vice versa. Table 5 shows several correlations that reached significance level. First, the greater the number of bulimic behaviors reported by mothers, the higher the dietary restraint scores possessed by daughters. Second, the higher the level of dietary restraint reported by mothers, the greater the number of bulimic behaviors reported by daughters. As mothers' reports of bulimic behavior increase, daughters' reports of dietary restraint increase. The same is true for the relationship between mothers' reports of severity of dietary restraint and daughters' reports of bulimic behaviors other than binge eating. As

noted previously, daughters are reporting concern for weight and body shape, and are acknowledging dieting behaviors; however, they may not yet be experiencing the rebound effect (i.e., binge eating) of rigid control and restriction of food.

The final analyses that were completed addressed the characteristics of daughters identified as "high restrainers," "binge eaters," and "high bulimia." As previously stated, there were only three daughters that classified as "high bulimia." These daughters were found to have mothers with mean Total BULIT-R scores, as well as mean Binge Control, Critical Binge, Weight Fluctuation, Concern for Dieting, and Total Dietary Restraint scores, that were substantially higher than mothers of "low bulimia" daughters.

The present study detected a subgroup of preadolescent girls who might meet diagnostic criteria for a subclinical eating disorder (DSM-III-R, Eating Disorder NOS). Of three daughters classified as "high BULIT-R" subjects, none acknowledged maladaptive, health-threatening behaviors such as self-induced vomiting or laxative use. However, they are acknowledging intense displeasure with their weight, body shape, and eating behaviors to the point that they feel food unduly controls their thoughts and behavior.

The idea that these preadolescent daughters are demonstrating some of the probable predisposing behaviors of bulimia nervosa is supported further by the range of daughters' scores on Revised Restraint Scale. Eighteen daughters classified as high restrainers. The fact that these daughters had a substantially higher score on the Critical Binge subscale than did the low restraint daughters is also

of interest. In general, daughters' Critical Binge and total Revised Dietary Restraint scores were significantly correlated ($r=.48$, $p = .001$). Thus, those daughters reporting high degrees of dietary restraint are also reporting, as would be expected, binge eating to a significantly greater extent than low restraint daughters. The present study is consistent with past research that has indicated noteworthy problems with precocious dieting in some preadolescent girls.

Summary of Methodological Issues

One important issue introduced by the present study has to do with the environment in which the subjects completed the questionnaires. As previously discussed, it was difficult to enforce the instruction that the questionnaires were to be completed independently of each other. An example of one such situation involved a mother who viewed the situation as a chance to educate her daughter about the extremity of weight loss methods demonstrated by some individuals.

A possible problem was that mothers rarely completed the inventories out of hearing distance from their daughters. Thus, daughters may have been intimidated and/or embarrassed to admit extreme eating behaviors.

In the present study, subjects volunteered to participate in the study. Thus, it is possible that mothers demonstrating true bulimic behaviors may have declined participation due to embarrassment or unwillingness to acknowledge their own struggles. Indeed, only 5

mothers out 134 (3.7%) scored above the cut-off score of 88 set by Smith and Thelen (1984). This compares to 13% of the 652 college females in the Smith and Thelen (1984) study. However, it must be noted that the accepted figure for noncollege women is about half that of college undergraduate students (Stein, 1991).

It should also be reiterated that the wordings of some items in each of the inventories utilized in the present study were altered slightly for better comprehension by daughters. Even though the alterations were minor, one cannot guarantee the changes did not affect characteristics of the inventory in some manner.

Finally, young girls may understand what it means to fast, diet, self-induce vomiting, and binge eat. However, it has been speculated by several researchers that they may actually over-report bingeing and paradoxical overeating and are really engaging in normal overeating. In the present study, daughters' mean Binge Control score was 39.8 (SD = 12.939, n = 130), compared to mothers' mean score of 41.81 (SD = 15.51, n = 135). Interestingly, daughters' mean score on the Critical Binge subscale was slightly higher than mothers' mean score (\bar{x} = 19.016, SD = 6.28, n = 132, \bar{x} = 18.678, SD = 6.825, n = 137, respectively). No norms for the subscales have been published to date for these particular groups.

Implications for Future Studies

Because correlational data were used in this study, causal inferences cannot be drawn. Previous research has suggested that dietary restraint results in binge eating and counterregulation of

food intake (Woody, Costanzo, & Liefer, 1981). Thus, it would be beneficial to complete a longitudinal study of the daughters who scored high on the BULIT-R to see if they return to a more "normal" eating and dieting pattern or if they become chronic dieters with subsequent binge eating behavior.

In addition, it would be of value to determine if the results of this self-report study carry over into an actual eating situation. That is, do high restraint daughters relinquish their restraint (as has been shown for high restraint adults) when they perceive they have overeaten in the moment? It would also be of interest to verify that mothers and daughters demonstrate similar binge eating behavior, as reported here, by comparing their actual eating behavior in a taste-test situation.

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APPENDICES

APPENDIX A

Consent Form
Mothers' Inventory
Daughters' Inventory

Consent Form

This study examines personal preferences about food appearance, aroma, color, and their relation to taste perception ratings and eating behaviors. We are interested in response patterns of cross-generations. All data collected will be number coded, so that you and your child cannot be identified, except by the principal investigator. Any identifying information about subjects will be kept secure until the data analysis is completed and then disposed of. You can be assured that the investigators are interested in the response patterns of large groups of children and adults, and not the responses of any individual subject.

Completing these inventories will take about 20 minutes. Completing these inventories will make your child eligible for a study being conducted at Utah State University by Kim Bushman. You may choose to not complete this packet or later decide you don't want to participate in this or any other studies. You may withdraw consent at any time.

This packet is expensive to reproduce, since it involves high-quality typesetting. You should not take one home to complete if you don't intend to return it. Please return it, even if you decide not to complete it--we can give the questionnaire to someone else.

You are not to put your name on response forms in this packet.

I have read the above and agree to participate.

Name of Mother: (please print) _____

Name of Daughter: (please print) _____

Date: _____

Signature of Mother: _____

Signature of Daughter: _____

Please check the appropriate answer:

My daughter: is currently taking medication	Yes	_____	No	_____
has diabetes	Yes	_____	No	_____
has allergies to chocolate, strawberry, or vanilla flavors	Yes	_____	No	_____

My phone number is: _____

Food Avoidance Conflict (Mother)

Food Desirability Checklist

Please rate each of the foods below based on your usual personal liking or disliking of the taste.

- 1 = extreme liking of the taste
 2 = moderate liking of the taste
 3 = neutral preferences
 4 = moderate dislike of the taste
 5 = extreme dislike of the taste

- | | | | |
|----------|------------------------|----------|--------------------------|
| 1. ____ | Chocolate Ice Cream | 20. ____ | Fried Chicken |
| 2. ____ | Vanilla Pudding | 21. ____ | Bacon |
| 3. ____ | Candy | 22. ____ | Ham |
| 4. ____ | Pizza | 23. ____ | Apples |
| 5. ____ | Bread | 24. ____ | Oranges |
| 6. ____ | Donuts | 25. ____ | Bananas |
| 7. ____ | Sweet Rolls | 26. ____ | Broiled Fish |
| 8. ____ | Mixed Nuts | 27. ____ | Popcorn |
| 9. ____ | Chips | 28. ____ | Yogurt |
| 10. ____ | Crackers | 29. ____ | Cheddar Cheese |
| 11. ____ | Bologna Luncheon Meat | 30. ____ | Rice |
| 12. ____ | Chocolate Chip Cookies | 31. ____ | Macaroni |
| 13. ____ | Apple or Cherry Pie | 32. ____ | Presweetened Cereal |
| 14. ____ | Hamburgers | 33. ____ | Carrot Sticks |
| 15. ____ | Lasagna | 34. ____ | Peanut Butter Sandwiches |
| 16. ____ | French Fries | 35. ____ | Vanilla Ice Cream |
| 17. ____ | Milk | 36. ____ | Cake |
| 18. ____ | Soda | 37. ____ | Cooked Green Beans |
| 19. ____ | Green Salad | 38. ____ | Pancakes |

Turn Over Page: See Directions

Food Avoidance Rating

Rate each of the foods in the list, using a number from the rating scale below. The number should describe whether or not you purposely avoided eating that food during the past month because you felt it threatened your nutrition, or your attempts to maintain/lose weight. If you never have an occasion to eat a particular food, leave the line next to it blank.

1 = I never consciously controlled the amount I ate, or how often I ate it

2 = I purposely ate only a small amount; or limited how often I ate it

3 = I completely avoided eating the food all month on purpose

blank = I never eat a particular food (since I don't like it, or because I don't have access to it)

- | | | | |
|-----------|------------------------|-----------|--------------------------|
| 39. _____ | Chocolate Ice Cream | 58. _____ | Fried Chicken |
| 40. _____ | Vanilla Pudding | 59. _____ | Bacon |
| 41. _____ | Candy | 60. _____ | Ham |
| 42. _____ | Pizza | 61. _____ | Apples |
| 43. _____ | Bread | 62. _____ | Oranges |
| 44. _____ | Donuts | 63. _____ | Bananas |
| 45. _____ | Sweet Rolls | 64. _____ | Broiled Fish |
| 46. _____ | Mixed Nuts | 65. _____ | Popcorn |
| 47. _____ | Chips | 66. _____ | Yogurt |
| 48. _____ | Crackers | 67. _____ | Cheddar Cheese |
| 49. _____ | Bologna Luncheon Meat | 68. _____ | Rice |
| 50. _____ | Chocolate Chip Cookies | 69. _____ | Macaroni |
| 51. _____ | Apple or Cherry Pie | 70. _____ | Presweetened Cereal |
| 52. _____ | Hamburgers | 71. _____ | Carrot Sticks |
| 53. _____ | Lasagna | 72. _____ | Peanut Butter Sandwiches |
| 54. _____ | French Fries | 73. _____ | Vanilla Ice Cream |
| 55. _____ | Milk | 74. _____ | Cake |
| 56. _____ | Soda | 75. _____ | Cooked Green Beans |
| 57. _____ | Green Salad | 76. _____ | Pancakes |

Restraint Scale--Revised (Mother)

1. How often are you dieting?
a. Never b. Rarely c. Sometimes d. Often e. Always
2. What is the maximum amount of weight (in pounds) that you have ever lost within one month?
a. 0 - 4 lbs. b. 5 - 9 c. 10 - 14 d. 15 - 19 e. 20 lbs. or more
3. What is your maximum weight gain within a week?
a. 0 - 1 lbs. b. 1.1 - 2 c. 2.1 - 3 d. 3.1 - 5 e. 5.1+
4. In a typical week, how much does your weight fluctuate?
a. 0 - 1 lbs. b. 1.1 - 2 c. 2.1 - 3 d. 3.1 - 5 e. 5.1 lbs. +
5. Would a weight fluctuation of 5 pounds (lbs.) affect the way you live your life?
a. Not at all b. Slightly c. Moderately d. Very much
6. Do you eat sensibly in front of others and splurge alone?
a. Never b. Rarely c. Sometimes d. Often e. Always
7. Do you give too much time and thought to food?
a. Never b. Rarely c. Sometimes d. Often e. Always
8. Do you have feelings of guilt after overeating?
a. Never b. Rarely c. Sometimes d. Often e. Always
9. How conscious are you of what you are eating?
a. Not at all b. Slightly c. Moderately d. Very much
10. How many pounds over your desired weight were you at your maximum weight?
a. 0 - 1 lbs. b. 1 - 5 c. 6 - 10 d. 11 - 20 e. 21+ lbs.

The BULIT-R (Mother)

Answer each question by filling in the appropriate circle on the computer answer sheet. Please respond to each item as honestly as possible; remember all of the information you provide will be kept strictly confidential.

1. I am satisfied with my eating patterns.
 1. agree
 2. neutral
 3. disagree a little
 4. disagree
 5. disagree strongly

2. Would you presently call yourself a "binge eater?"
 1. yes, absolutely
 2. yes
 3. yes, probably
 4. yes, possibly
 5. no, probably not

3. Do you feel you have control over the amount of food you consume?
 1. most or all of the time
 2. a lot of the time
 3. occasionally
 4. rarely
 5. never

4. I am satisfied with the shape and size of my body.
 1. frequently or always
 2. sometimes
 3. occasionally
 4. rarely
 5. seldom or never

5. When I feel that my eating behavior is out of control, I try to take rather extreme measures to get back on course (strict dieting, fasting, laxatives, diuretics, self-induced vomiting, or vigorous exercise).
 1. always
 2. almost always
 3. frequently
 4. sometimes
 5. never or my eating behavior is never out of control

6. I use laxatives or suppositories to help control my weight.
 1. once a day or more
 2. 3-6 times a week
 3. once or twice a week
 4. 2-3 times a month
 5. once a month or less (or never)
7. I am obsessed about the size and shape of my body.
 1. always
 2. almost always
 3. frequently
 4. sometimes
 5. seldom or never
8. There are times when I rapidly eat a very large amount of food.
 1. more than twice a week
 2. twice a week
 3. once a week
 4. 2-3 times a month
 5. once a month or less (or never)
9. How long have you been binge eating (eating uncontrollably to the point of stuffing yourself)?
 1. not applicable; I don't binge eat
 2. less than 3 months
 3. 3 months-1 year
 4. 1-3 years
 5. 3 or more years
10. Most people I know would be amazed if they knew how much food I can consume at one sitting.
 1. without a doubt
 2. very probably
 3. probably
 4. possibly
 5. no
11. I exercise in order to burn calories.
 1. more than 2 hours per day
 2. about 2 hours per day
 3. more than 1 but less than 2 hours per day
 4. one hour or less per day
 5. I exercise but not to burn calories or I don't exercise

12. Compared with women your age, how preoccupied are you about your weight and body shape?
1. a great deal more than average
 2. much more than average
 3. more than average
 4. a little more than average
 5. average or less than average
13. I am afraid to eat anything for fear that I won't be able to stop.
1. always
 2. almost always
 3. frequently
 4. sometimes
 5. seldom or never
14. I feel tormented by the idea that I am fat or might gain weight.
1. always
 2. almost always
 3. frequently
 4. sometimes
 5. seldom or never
15. How often do you intentionally vomit after eating?
1. 2 or more times a week
 2. once a week
 3. 2-3 times a month
 4. once a month
 5. less than once a month or never
16. I eat a lot of food when I'm not even hungry.
1. very frequently
 2. frequently
 3. occasionally
 4. sometimes
 5. seldom or never
17. My eating patterns are different from the eating patterns of most people.
1. always
 2. almost always
 3. frequently
 4. sometimes
 5. seldom or never

18. After I binge eat I turn to one of several strict methods to try to keep from gaining weight (vigorous exercise, strict dieting, fasting, self-induced vomiting, laxatives, or diuretics).
1. never or I don't binge eat
 2. rarely
 3. occasionally
 4. a lot of the time
 5. most or all of the time
19. I have tried to lose weight by fasting or going on strict diets.
1. not in the past year
 2. once in the past year
 3. 2-3 times in the past year
 4. 4-5 times in the past year
 5. more than 5 times in the past year
20. I exercise vigorously and for long periods of time in order to burn calories.
1. average or less than average
 2. a little more than average
 3. more than average
 4. much more than average
 5. a great deal more than average
21. When engaged in an eating binge, I tend to eat foods that are high in carbohydrates (sweets and starches).
1. always
 2. almost always
 3. frequently
 4. sometimes
 5. seldom, or I don't binge
22. Compared to most people, my ability to control my eating behavior seems to be
1. greater than others' ability
 2. about the same
 3. less
 4. much less
 5. I have absolutely no control

23. I would presently label myself a 'compulsive eater" (one who engages in episodes of uncontrolled eating).
1. absolutely
 2. yes
 3. yes, probably
 4. yes, possibly
 5. no, probably not
24. I hate the way my body looks after I eat too much.
1. seldom or never
 2. sometimes
 3. frequently
 4. almost always
 5. always
25. When I am trying to keep from gaining weight, I feel that I have to resort to vigorous exercise, strict dieting, fasting, self-induced vomiting, laxatives, or diuretics.
1. never
 2. rarely
 3. occasionally
 4. a lot of the time
 5. most or all of the time
26. Do you believe that it is easier for you to vomit than it is for most people?
1. yes, it's no problem at all for me
 2. yes, it's easier
 3. yes, it's a little easier
 4. about the same
 5. no, it's less easy
27. I use diuretics (water pills) to help control my weight.
1. never
 2. seldom
 3. sometimes
 4. frequently
 5. very frequently
28. I feel that food controls my life.
1. always
 2. almost always
 3. frequently
 4. sometimes
 5. seldom or never

29. I try to control my weight by eating little or no food for a day or longer.
1. never
 2. seldom
 3. sometimes
 4. frequently
 5. very frequently
30. When consuming a large quantity of food, at what rate of speed do you usually eat?
1. more rapidly than most people have ever eaten in their lives
 2. a lot more rapidly than most people
 3. a little more rapidly than most people
 4. about the same rate as most people
 5. more slowly than most people (or not applicable)
31. I use laxatives or suppositories to help control my weight.
1. never
 2. seldom
 3. sometimes
 4. frequently
 5. very frequently
32. Right after I binge eat I feel:
1. so fat and bloated I can't stand it.
 2. extremely fat.
 3. fat.
 4. a little fat.
 5. OK about how my body looks or I never binge eat.
33. Compared to other people of my sex, my ability to always feel in control of how much I eat is:
1. about the same or greater.
 2. a little less.
 3. less.
 4. much less.
 5. a great deal less.
34. In the last 3 months, on the average how often did you binge eat (eat uncontrollably to the point of stuffing yourself)?
1. once a month or less (or never)
 2. 2-3 times a month.
 3. once a week.
 4. twice a week.
 5. more than twice a week.

35. Most people I know would be surprised at how fat I look after I eat a lot of food.

1. yes, definitely
2. yes
3. yes, probably
4. yes, possibly
5. no, probably not or I never eat a lot of food

36. I use diuretics (water pills) to help control my weight.

1. 3 times a week or more
2. once or twice a week
3. 2-3 times a month
4. once a month
5. never

Food Avoidance Conflict (Daughter)

Food Desirability Checklist

You are to put by each food listed below the number of the answer from the rating scale that matches how much you like or dislike the taste of each of the foods listed.

- 1 = really like the taste
 2 = kind of like the taste
 3 = no like or dislike for the taste
 4 = kind of dislike the taste
 5 = greatly dislike the taste

- | | | | |
|----------|------------------------|----------|--------------------------|
| 1. ____ | Chocolate Ice Cream | 20. ____ | Fried Chicken |
| 2. ____ | Vanilla Pudding | 21. ____ | Bacon |
| 3. ____ | Candy | 22. ____ | Ham |
| 4. ____ | Pizza | 23. ____ | Apples |
| 5. ____ | Bread | 24. ____ | Oranges |
| 6. ____ | Donuts | 25. ____ | Bananas |
| 7. ____ | Sweet Rolls | 26. ____ | Broiled Fish |
| 8. ____ | Mixed Nuts | 27. ____ | Popcorn |
| 9. ____ | Chips | 28. ____ | Yogurt |
| 10. ____ | Crackers | 29. ____ | Cheddar Cheese |
| 11. ____ | Bologna Luncheon Meat | 30. ____ | Rice |
| 12. ____ | Chocolate Chip Cookies | 31. ____ | Macaroni |
| 13. ____ | Apple or Cherry Pie | 32. ____ | Presweetened Cereal |
| 14. ____ | Hamburgers | 33. ____ | Carrot Sticks |
| 15. ____ | Lasagna | 34. ____ | Peanut Butter Sandwiches |
| 16. ____ | French Fries | 35. ____ | Vanilla Ice Cream |
| 17. ____ | Milk | 36. ____ | Cake |
| 18. ____ | Soda | 37. ____ | Cooked Green Beans |
| 19. ____ | Green Salad | 38. ____ | Pancakes |

Food Avoidance Rating (Daughter)

You are to put by each food listed below the number of the answer from the rating scale that matches how often, in the last month, you did not eat each of the foods listed because it was not healthy or because you were trying to lose weight.

1 = I ate as much as I wanted whenever I wanted it

2 = I purposely ate only a small amount; or limited how often I ate it

3 = I avoided eating the food all month on purpose

blank = I have not eaten this food in the last month (since I don't like it, or because it has not been available)

- | | | | |
|-----------|------------------------|-----------|--------------------------|
| 39. _____ | Chocolate Ice Cream | 58. _____ | Fried Chicken |
| 40. _____ | Vanilla Pudding | 59. _____ | Bacon |
| 41. _____ | Candy | 60. _____ | Ham |
| 42. _____ | Pizza | 61. _____ | Apples |
| 43. _____ | Bread | 62. _____ | Oranges |
| 44. _____ | Donuts | 63. _____ | Bananas |
| 45. _____ | Sweet Rolls | 64. _____ | Broiled Fish |
| 46. _____ | Mixed Nuts | 65. _____ | Popcorn |
| 47. _____ | Chips | 66. _____ | Yogurt |
| 48. _____ | Crackers | 67. _____ | Cheddar Cheese |
| 49. _____ | Bologna Luncheon Meat | 68. _____ | Rice |
| 50. _____ | Chocolate Chip Cookies | 69. _____ | Macaroni |
| 51. _____ | Apple or Cherry Pie | 70. _____ | Presweetened Cereal |
| 52. _____ | Hamburgers | 71. _____ | Carrot Sticks |
| 53. _____ | Lasagna | 72. _____ | Peanut Butter Sandwiches |
| 54. _____ | French Fries | 73. _____ | Vanilla Ice Cream |
| 55. _____ | Milk | 74. _____ | Cake |
| 56. _____ | Soda | 75. _____ | Cooked Green Beans |
| 57. _____ | Green Salad | 76. _____ | Pancakes |

The BULIT-R (Daughter)

Circle the answer that best describes you. Please answer each item as honestly as possible.

1. I am satisfied with my eating patterns.
 1. agree
 2. do not agree nor disagree
 3. disagree a little
 4. disagree
 5. disagree a lot

2. Would you say that you eat lots of food in short amount of time?
 1. yes, definitely
 2. yes
 3. yes, likely
 4. yes, maybe
 5. no, likely not

3. Do you feel that you have control over the amount of food you eat?
 1. most or all of the time
 2. a lot of the time
 3. sometimes
 4. hardly ever
 5. seldom or never

4. I am satisfied with the shape and size of my body.
 1. most of the time or always
 2. sometimes
 3. once in a while
 4. hardly ever
 5. seldom or never

5. When I feel that I have eaten too much, too often, I strictly diet, do not eat, use laxatives or water pills, make myself throw-up, or exercise for a long period of time.
 1. always
 2. almost always
 3. often
 4. sometimes
 5. never or I never eat too much, too often

6. I use laxatives or suppositories to help control my weight.
 1. once a day or more
 2. 3-6 times a week
 3. once or twice a week
 4. 2-3 times a month
 5. once a month or less or never
7. I am obsessed about the size and shape of my body.
 1. always
 2. almost always
 3. often
 4. sometimes
 5. seldom or never
8. There are times when I quickly eat a very large amount of food.
 1. more than twice a week
 2. twice a week
 3. once a week
 4. 2-3 times a month
 5. once a month or less or never
9. How long have you been eating to the point of stuffing yourself?
 1. I don't do this
 2. less than 3 months
 3. 3 months to 1 year
 4. 1 to 3 years
 5. 3 or more years
10. Most people I know would be amazed if they knew how much food I can eat at one setting.
 1. for sure they would be amazed
 2. very likely they would be amazed
 3. likely they would be amazed
 4. maybe they would be amazed
 5. no, they would not be amazed
11. I exercise to burn calories
 1. more than 2 hours per day
 2. about 2 hours per day
 3. more than 1 but less than 2 hours per day
 4. one hour or less per day
 5. I exercise but not to burn calories or I do not exercise

12. Do you think about your weight and body shape...
 1. a great deal more than other girls your age
 2. much more than other girls your age
 3. more than other girls your age
 4. a little more than girls your age
 5. the same as or less than girls your age

13. I am scared to eat anything because I am scared that I won't be able to stop eating.
 1. always
 2. almost always
 3. often
 4. sometimes
 5. seldom or never

14. I get upset because I can't quit thinking that I am fat or might gain weight.
 1. always
 2. almost always
 3. often
 4. sometimes
 5. seldom or never

15. How often do you make yourself vomit after eating?
 1. 2 or more times a week
 2. once a week
 3. 2-3 times a month
 4. once a month
 5. less than once a month or never

16. I eat a lot of food when I'm not even hungry.
 1. very often
 2. often
 3. once in a while
 4. sometimes
 5. seldom or never

17. My eating patterns are different from the eating patterns of most people.
 1. always
 2. almost always
 3. often
 4. sometimes
 5. seldom or never

18. After I eat a large amount of food I try to keep from gaining weight by getting lots of exercise, strict dieting, not eating, making myself throw-up, or taking water pills or laxatives.
1. never or I don't eat large amounts of food
 2. rarely
 3. sometimes
 4. a lot of the time
 5. most or all of the time
19. I have tried to lose weight by not eating or going on strict diets.
1. not in the past year
 2. once in the past year
 3. 2-3 times in the past year
 4. 4-5 times in the past year
 5. more than 5 times in the past year
20. I exercise hard and for long amount of time so that I burn calories.
1. average or less than average
 2. a little more than average
 3. more than average
 4. much more than average
 5. a great deal more than average
21. When eating a large amount of food, I usually eat foods that are high in carbohydrates like candy, doughnuts, bread, cookies, chips.
1. always
 2. almost always
 3. often
 4. sometimes
 5. seldom or never
22. Compared to most people, I can control my eating behavior
1. greater than others can
 2. about the same as others
 3. less than others
 4. much less than others
 5. I have no control over my eating behavior

23. I would say that I have times when I eat and feel out of control.
1. absolutely
 2. yes
 3. yes, likely
 4. yes, maybe
 5. no, likely not
24. I hate the way my body looks after I eat too much.
1. seldom or never
 2. sometimes
 3. often
 4. almost always
 5. always
25. When I am trying to lose weight, I feel that I have to use hard exercise, strict dieting, not eating, make myself throw-up, use water pills or laxatives.
1. never
 2. hardly ever
 3. sometimes
 4. a lot of the time
 5. most or all of the time
26. Do you believe it is easier for you to throw-up than it is for most people?
1. yes, it's no problem at all for me
 2. yes, it's easier
 3. yes, it's a little easier
 4. about the same
 5. no, it's less easy
27. I use water pills to help control my weight.
1. never
 2. seldom
 3. sometimes
 4. often
 5. very often
28. I feel that food controls my life.
1. always
 2. almost always
 3. often
 4. sometimes
 5. seldom or never

29. I try to control my weight by eating little or no food for a day or longer.
1. never
 2. seldom
 3. sometimes
 4. often
 5. very often
30. When eating a large amount of food, how fast do you usually eat?
1. faster than most people have eaten in their lives
 2. a lot more faster than most people
 3. a little more fast than most people
 4. about the same rate as most people
 5. more slowly than most people (or I do not eat large amounts of food)
31. I use laxatives or suppositories to help control my weight.
1. never
 2. seldom
 3. sometimes
 4. often
 5. very often
32. Right after I eat a large amount of food I feel:
1. so fat and bloated I can't stand it
 2. extremely fat
 3. fat
 4. a little fat
 5. OK about how my body looks or I never eat large amounts of food.
33. Compared to other girls, I am able to always feel in control of how much I eat:
1. about the same or greater than them
 2. a little less than them
 3. less than them
 4. much less than them
 5. a great deal less than them

34. In the last 3 months, on the average how often did you eat uncontrollably to the point of stuffing yourself?
1. once a month or less or never
 2. 2-3 times a month
 3. once a week
 4. twice a week
 5. more than twice a week
35. Most people I know would be surprised at how fat I look after I eat a lot of food.
1. yes, for sure
 2. yes
 3. yes, likely
 4. yes, maybe
 5. no, likely not or I never eat a lot of food
36. I use water pills to help control my weight.
1. 3 times a week or more
 2. once or twice a week
 3. 2-3 times a month
 4. once a month
 5. never

Restraint Scale--Revised (Daughter)

1. How often are you dieting?
a. Never b. Rarely c. Sometimes d. Often e. Always
2. What is the most amount of weight that you have ever lost in one month?
a. 0 - 4 lbs. b. 5 - 9 c. 10 - 14 d. 15 - 19 e. 20 lbs. or more
3. What is the most weight you have gained within a week?
a. 0 - 1 lbs. b. 1.1 - 2 c. 2.1 - 3 d. 3.1 - 5 e. 5.1+
4. In a normal week, how much does your weight change?
a. 0 - 1 lbs. b. 1.1 - 2 c. 2.1 - 3 d. 3.1 - 5 e. 5.1 lbs. +
5. Would a weight loss or weight gain of 5 pounds affect the way you live your life?
a. Not at all b. Slightly c. Moderately d. Very much
6. Do you eat normally in front of others and eat a lot more when alone?
a. Never b. Rarely c. Sometimes d. Often e. Always
7. Do you think too much about food?
a. Never b. Rarely c. Sometimes d. Often e. Always
8. Do you have feelings of guilt after eating too much?
a. Never b. Rarely c. Sometimes d. Often e. Always
9. How aware are you of what you are eating?
a. Not at all b. Slightly c. Moderately d. Very much
10. How many pounds over the weight that you want to weigh were you when you weighed the most?
a. 0 - 1 lbs. b. 1 - 5 c. 6 - 10 d. 11 - 20 e. 21+ lbs.

APPENDIX B

Subscales

Critical Binge Subscale

1. Would you say that you eat lots of food in short amount of time?
 1. yes, definitely
 2. yes
 3. yes, likely
 4. yes, maybe
 5. no, likely not

2. Do you feel that you have control over the amount of food you eat?
 1. most or all of the time
 2. a lot of the time
 3. sometimes
 4. hardly ever
 5. seldom or never

3. There are times when I quickly eat a very large amount of food.
 1. more than twice a week
 2. twice a week
 3. once a week
 4. 2-3 times a month
 5. once a month or less or never

4. How long have you been eating to the point of stuffing yourself?
 1. I don't do this
 2. less than 3 months
 3. 3 months to 1 year
 4. 1 to 3 years
 5. 3 or more years

5. Most people I know would be amazed if they knew how much food I can eat at one setting.
 1. for sure they would be amazed
 2. very likely they would be amazed
 3. likely they would be amazed
 4. maybe they would be amazed
 5. no, they would not be amazed

6. I am scared to eat anything because I am scared that I won't be able to stop eating.
 1. always
 2. almost always
 3. often
 4. sometimes
 5. seldom or never

7. I eat a lot of food when I'm not even hungry.
 1. very often
 2. often
 3. once in a while
 4. sometimes
 5. seldom or never

8. Compared to most people, I can control my eating behavior
 1. greater than others can
 2. about the same as others
 3. less than others
 4. much less than others
 5. I have no control over my eating behavior

9. I would say that I have times when I eat and feel out of control.
 1. absolutely
 2. yes
 3. yes, likely
 4. yes, maybe
 5. no, likely not

10. When eating a large amount of food, how fast do you usually eat?
 1. faster than most people have eaten in their lives
 2. a lot more faster than most people
 3. a little more fast than most people
 4. about the same rate as most people
 5. more slowly than most people (or I do not eat large amounts of food)

11. In the last 3 months, on the average how often did you eat uncontrollably to the point of stuffing yourself?
 1. once a month or less or never
 2. 2-3 times a month
 3. once a week
 4. twice a week
 5. more than twice a week

Binge Control Subscale

1. I am satisfied with my eating patterns.
 1. agree
 2. do not agree nor disagree
 3. disagree a little
 4. disagree
 5. disagree a lot
2. Would you say that you eat lots of food in short amount of time?
 1. yes, definitely
 2. yes
 3. yes, likely
 4. yes, maybe
 5. no, likely not
3. Do you feel that you have control over the amount of food you eat?
 1. most or all of the time
 2. a lot of the time
 3. sometimes
 4. hardly ever
 5. seldom or never
4. I am satisfied with the shape and size of my body.
 1. most of the time or always
 2. sometimes
 3. once in a while
 4. hardly ever
 5. seldom or never
5. I am obsessed about the size and shape of my body.
 1. always
 2. almost always
 3. often
 4. sometimes
 5. seldom or never
6. There are times when I quickly eat a very large amount of food.
 1. more than twice a week
 2. twice a week
 3. once a week
 4. 2-3 times a month
 5. once a month or less or never

7. How long have you been eating to the point of stuffing yourself?
 1. I don't do this
 2. less than 3 months
 3. 3 months to 1 year
 4. 1 to 3 years
 5. 3 or more years

8. Most people I know would be amazed if they knew how much food I can eat at one setting.
 1. for sure they would be amazed
 2. very likely they would be amazed
 3. likely they would be amazed
 4. maybe they would be amazed
 5. no, they would not be amazed

9. Do you think about your weight and body shape...
 1. a great deal more than other girls your age
 2. much more than other girls your age
 3. more than other girls your age
 4. a little more than girls your age
 5. the same as or less than girls your age

10. I am scared to eat anything because I am scared that I won't be able to stop eating.
 1. always
 2. almost always
 3. often
 4. sometimes
 5. seldom or never

11. I get upset because I can't quit thinking that I am fat or might gain weight.
 1. always
 2. almost always
 3. often
 4. sometimes
 5. seldom or never

12. I eat a lot of food when I'm not even hungry.
 1. very often
 2. often
 3. once in a while
 4. sometimes
 5. seldom or never

13. My eating patterns are different from the eating patterns of most people.
 1. always
 2. almost always
 3. often
 4. sometimes
 5. seldom or never

14. When eating a large amount of food, I usually eat foods that are high in carbohydrates like candy, doughnuts, bread, cookies, chips.
 1. always
 2. almost always
 3. often
 4. sometimes
 5. seldom or never

15. Compared to most people, I can control my eating behavior
 1. greater than others can
 2. about the same as others
 3. less than others
 4. much less than others
 5. I have no control over my eating behavior

16. I would say that I have times when I eat and feel out of control.
 1. absolutely
 2. yes
 3. yes, likely
 4. yes, maybe
 5. no, likely not

17. I hate the way my body looks after I eat too much.
 1. seldom or never
 2. sometimes
 3. often
 4. almost always
 5. always

18. I feel that food controls my life.
 1. always
 2. almost always
 3. often
 4. sometimes
 5. seldom or never

19. When eating a large amount of food, how fast do you usually eat?
1. faster than most people have eaten in their lives
 2. a lot more faster than most people
 3. a little more fast than most people
 4. about the same rate as most people
 5. more slowly than most people (or I do not eat large amounts of food)
20. Right after I eat a large amount of food I feel:
1. so fat and bloated I can't stand it
 2. extremely fat
 3. fat
 4. a little fat
 5. OK about how my body looks or I never eat large amounts of food.
21. Compared to other girls, I am able to always feel in control of how much I eat:
1. about the same or greater than them
 2. a little less than them
 3. less than them
 4. much less than them
 5. a great deal less than them
22. In the last 3 months, on the average how often did you eat uncontrollably to the point of stuffing yourself?
1. once a month or less or never
 2. 2-3 times a month
 3. once a week
 4. twice a week
 5. more than twice a week

Binge Control Radical Subscale

1. When I feel that my eating behavior is out of control, I try to take rather extreme measures to get back on course (strict dieting, fasting, laxatives, diuretics, self-induced vomiting, or vigorous exercise).
 1. always
 2. almost always
 3. frequently
 4. sometimes
 5. never or my eating behavior is never out of control
2. After I binge eat I turn to one of several strict methods to try to keep from gaining weight (vigorous exercise, strict dieting, fasting, self-induced vomiting, laxatives, or diuretics).
 1. never or I don't binge eat
 2. rarely
 3. occasionally
 4. a lot of the time
 5. most or all of the time
3. I have tried to lose weight by fasting or going on strict diets.
 1. not in the past year
 2. once in the past year
 3. 2-3 times in the past year
 4. 4-5 times in the past year
 5. more than 5 times in the past year
4. When I am trying to keep from gaining weight, I feel that I have to resort to vigorous exercise, strict dieting, fasting, self-induced vomiting, laxatives, or diuretics.
 1. never
 2. rarely
 3. occasionally
 4. a lot of the time
 5. most or all of the time
5. I try to control my weight by eating little or no food for a day or longer.
 1. never
 2. seldom
 3. sometimes
 4. frequently
 5. very frequently

6. Most people I know would be surprised at how fat I look after I eat a lot of food.
1. yes, definitely
 2. yes
 3. yes, probably
 4. yes, possibly
 5. no, probably not or I never eat a lot of food

Exercise Subscale

1. I exercise in order to burn calories.
 1. more than 2 hours per day
 2. about 2 hours per day
 3. more than 1 but less than 2 hours per day
 4. one hour or less per day
 5. I exercise but not to burn calories or I don't exercise
2. I exercise vigorously and for long periods of time in order to burn calories.
 1. average or less than average
 2. a little more than average
 3. more than average
 4. much more than average
 5. a great deal more than average

Vomiting/Laxatives Subscale

1. I use laxatives or suppositories to help control my weight.
 1. once a day or more
 2. 3-6 times a week
 3. once or twice a week
 4. 2-3 times a month
 5. once a month or less (or never)
2. How often do you intentionally vomit after eating?
 1. 2 or more times a week
 2. once a week
 3. 2-3 times a month
 4. once a month
 5. less than once a month or never

3. Do you believe that it is easier for you to vomit than it is for most people?
1. yes, it's no problem at all for me
 2. yes, it's easier
 3. yes, it's a little easier
 4. about the same
 5. no, it's less easy
4. I use laxatives or suppositories to help control my weight.
1. never
 2. seldom
 3. sometimes
 4. frequently
 5. very frequently

Diuretics Subscale

1. I use diuretics (water pills) to help control my weight.
1. never
 2. seldom
 3. sometimes
 4. frequently
 5. very frequently
2. I use diuretics (water pills) to help control my weight.
1. 3 times a week or more
 2. once or twice a week
 3. 2-3 times a month
 4. once a month
 5. never