

"STOP EATING...CLEAN YOUR PLATE!":
THE EFFECTS OF PARENTAL CONTROL OF FOOD CONSUMPTION DURING
CHILDHOOD ON COLLEGE FEMALES' EATING BEHAVIOR

A Dissertation

by

AMANDA JANE PFEFFER

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for
the degree of

DOCTOR OF PHILOSOPHY

May 2009

Major Subject: Counseling Psychology

"STOP EATING...CLEAN YOUR PLATE!":
THE EFFECTS OF PARENTAL CONTROL OF FOOD CONSUMPTION DURING
CHILDHOOD ON COLLEGE FEMALES' EATING BEHAVIOR

A Dissertation

by

AMANDA JANE PFEFFER

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for
the degree of

DOCTOR OF PHILOSOPHY

Approved by:

Chair of Committee,
Committee Members,

Head of Department,

Dan Brossart
Michael Duffy
Arnold LeUnes
William Rae
Victor Willson

May 2009

Major Subject: Counseling Psychology

ABSTRACT

"Stop Eating...Clean Your Plate!":

The Effects of Parental Control of Food Consumption During
Childhood on College Females' Eating Behavior.

(May 2009)

Amanda Jane Pfeffer, B.A., Texas A&M University;

M.S., Texas A&M University

Chair of Advisory Committee: Dr. Dan Brossart

The immediate effect of maternal control of their daughter's eating is well documented. However, the long-term effect of both maternal and paternal control of eating during childhood on adults' current eating attitudes and behaviors has been a relatively unexplored area. Parents play a central role in shaping the family eating environment, which provides a context for the child's relationship with food for years to come (Birch, Fisher, Grimm-Thomas, Markey, Sawyer & Johnson, 2001).

The present study focused on expanding the existing knowledge base concerning parental control over eating. Two hundred sixty-seven female adult participants completed a questionnaire packet designed to measure maternal and

paternal restriction and pressure to eat during childhood, family mealtime stress during childhood, current restriction, binge eating, emotional eating, eating from external cues, and current affect during meals.

Results indicated that parental pressure to eat during childhood are related to restricted eating, emotional eating, and eating from external cues during adulthood. Family mealtime stress during childhood was related to binge eating, restricted eating, emotional eating, eating from external cues, and negative affect while eating during adulthood. Implications for practice and recommendations for future research are presented.

ACKNOWLEDGEMENTS

I would like to thank my committee chair, Dr. Brossart, and my committee members, Dr. Duffy, Dr. Rae, and Dr. LeUnes for their guidance and support throughout this research project.

I would also like to thank my mom and dad for their patience and support throughout my entire educational career. Finally, I would like to thank my husband, Kent for his encouragement and love.

TABLE OF CONTENTS

	Page
ABSTRACT.....	iii
ACKNOWLEDGEMENTS.....	v
TABLE OF CONTENTS.....	vi
LIST OF TABLES.....	viii
CHAPTER	
I INTRODUCTION.....	1
Statement of the Problem.....	5
Purpose of the Study.....	6
Research Questions.....	9
II REVIEW OF THE LITERATURE.....	10
Conceptual Models of Disordered Eating.....	10
Parental Restraint.....	15
Parental Pressure.....	17
Affect and Eating.....	19
Treatment of Eating Disorders.....	22
III METHODOLOGY.....	25
Participants.....	25
Instruments.....	26
Procedure.....	32
IV RESULTS.....	33
V SUMMARY.....	51
REFERENCES.....	62
APPENDIX A.....	72
APPENDIX B1.....	73
APPENDIX B2.....	74

	Page
APPENDIX C.....	75
APPENDIX D.....	76
APPENDIX E.....	77
APPENDIX F.....	79
VITA.....	80

LIST OF TABLES

TABLE	Page
1 Frequency tables.....	34
2 Minimums, maximums, means, and standard deviations.....	39
3 Pearson correlation results for all variables.....	41
4 Linear regression for binge eating, restriction, emotional eating, and eating from external cues predicting maternal restriction.....	42
5 Linear regression for binge eating, restriction, emotional eating, and eating from external cues predicting paternal restriction.....	44
6 Linear regression for binge eating, restriction, emotional eating, and eating from external cues predicting maternal pressure to eat.....	46
7 Linear regression for binge eating, restriction, emotional eating, and eating from external cues predicting paternal pressure to eat.....	48
8 Linear regression for binge eating, negative affect during eating, positive affect during eating, restriction, emotional eating, and eating from external cues predicting family mealtime stress.....	50

CHAPTER I

INTRODUCTION

Food and eating is the focus of some of the earliest and most lasting parent-child interactions, and it continues to be a symbol of mothering, nurturance, and soothing throughout the child's development (Humphrey, 1986). The need for food transcends culture, gender, and socio-economic status. For the newborn human infant, the feeding situation involves little choice. While an infant can thrive on a single food (breast milk or formula), adults need variety in the diet, which implies that dramatic developmental changes occur in human eating behavior during the early years of life (Birch, 1991).

Parents play a central role in shaping the family eating environment, which provides a context for the child's relationship with food for years to come (Birch, Fisher, Grimm-Thomas, Markey, Sawyer & Johnson, 2001). It is thought that parents can influence their children's attitudes and behaviors regarding food either directly or indirectly (McHale, Corneal, Crouter & Birch, 2001;

This dissertation follows the style of *Journal of Counseling Psychology*.

Tiggemann & Lowes, 2002). For example, parents can provide direct verbal commands, comments and instructions regarding food intake or children may learn more indirectly through their parents' modeling or unintentional reinforcement of behaviors. Research continues to support the notion that eating attitudes and behaviors are transmitted within families from generation to generation (Tiggeman & Lowes, 2002). For example, Tiggeman and Lowes (2002) found that mothers who are concerned about their own weight tend to exert more control over their daughters' eating, regardless of the weight/ size of their daughters. However, mothers' concern with their own weight has not been linked to monitoring or exerting control over their sons' dietary intake (Tiggeman & Lowes, 2002). This research helps provide some insight into how food attitudes and behaviors are passed on in families, particularly for females.

Parents' adoption of Western society's thinness ideal can influence their children's early feeding practices, particularly young girls (Benedikt, Wertheim & Love, 1998). Many parents believe that restricting children's access to foods high in sugar and fat is a logical way of reducing one's risk for obesity (Fisher & Birch, 1999). According to Rozin, Ashmore, and Markwith (1996), parents may attempt

to promote healthy eating patterns in children by restricting access to "bad" foods and encouraging intake of "good" foods. Labeling foods as "good" and "bad" can be detrimental to a child's eating attitudes and behaviors for years to come. In addition, Costanzo and Woody (1985) have proposed that such high levels of parental control over children's eating may have the unintended consequence of hindering the development of self-control. As a result, children learn to use external cues rather than internal hunger cues to initiate and terminate eating. This lack of self-control puts these children at risk for binge eating episodes when they are no longer under the control of their parents (Fisher & Birch, 1999).

Another way in which parents often exert control over their children's eating is by pressuring them to finish certain foods or "clean their plate" (Birch, McPhee, Shoba, Steinberg & Krehbiel, 1987). Much like restricting one's food intake, forcing a child to "clean his or her plate" impedes the development of self-control (Costanzo & Woody, 1985). For example, if a child tells his or her parents that he or she is full and the parents tell the child to continue eating until his or her plate is clean, the parents are giving the child the clear message that

external cues, rather than internal satiety cues are relevant in determining meal size.

Research indicates that in the absence of adults' attempts to impose external controls on eating, infants and young children show evidence of responsiveness to caloric density cues and are capable of practicing self-control of food intake, as indicated by sufficient health and growth (Birch et al., 1987). Therefore, it was shown that parents frequently underestimate the adequacy of their children's diets and exert unnecessary control over their children's food choices as well as quantity of food consumed.

Although it has been evidenced that young children have the ability to self-regulate energy intake within a meal as well as over the course of a day, large individual differences in children's ability to self-regulate food intake is apparent by the preschool age (Davison & Birch, 2002; Fisher & Birch, 1999). These differences have been traced back to differences among the amount of control that their parents imposed during child feeding. Johnson and Birch (1994) found that high levels of parental control were negatively related to a child's ability to self-regulate food intake by the preschool age. Evidence from case histories, such as Bruch (1961) has argued that

children must learn to differentiate hunger from other cues, and that disordered eating (including anorexia, bulimia, and binge eating) can result from parents offering and/or forcing food inappropriately.

Statement of the Problem

The prevalence of eating disorders and disordered eating behaviors has increased drastically in the past 20 years. It is estimated that between 10- 64% of college women engage in some form of disordered eating (Watt, Sharp & Atkins, 2002). Research has indicated that developmental and familial factors may be related to the onset of eating disorders (Wonderlich, 1992). Parents who exert control over their children's eating are hindering their child's own development and sense of control over their own bodies. Research indicates that the negative emotions associated with a lack of control over one's external world result in a greater desire for control (Burger, 1992). This need for control is often met through one's diet and eating behaviors. It has also been found that those who experience a lack of emphasis on autonomy, as is seen in families where parents control their children's diets, report increased dieting behavior (Watt et al., 2002).

It has been found that adult-like disordered eating behaviors begin to emerge in females as young as nine to eleven years of age (Carper, Fisher & Birch, 2000). These disordered eating behaviors include both dietary restraint and dietary disinhibition, or eating in response to external cues such as emotional stressors or the sight and smell of foods. As these young females approach adulthood, these disordered eating styles have been shown to be linked to obesity, body dissatisfaction, binge eating, and depression (Carper et al., 2000).

Purpose of the Study

The present study sought to expand the existing knowledge base concerning the relationship between parental control over children's eating, and disordered eating during adulthood. To this point, current research has not investigated the effect that parental dietary restriction and pressure to eat during childhood has on adult women's eating behaviors.

In particular, this study attempted to expand on past research (Birch et al., 1987; Francis & Birch, 2005; Fisher & Birch, 1999) which has found that parental control over children's eating, including both restraint and pressure to clean their plates, interrupts children's development of

their own self-regulation of food intake. While such past research has demonstrated that parental control affects children's eating behaviors while they are still living with their parents, it does not indicate whether or not this control affects their eating during adulthood when they are out of the home. The current study aimed to gain some insight into the eating behaviors and attitudes of adult women who claim to have experienced parental control over their eating when they were younger.

In addition, the current study not only assessed the degree of maternal control over eating, but also included scales to assess for paternal control over eating. Past research (Birch et al., 1987; Francis & Birch, 2005; Fisher & Birch, 1999) has focused on the mother-daughter relationship, giving little or no attention to the father-daughter relationship. Research (Strober & Humphrey, 1987; Mitchell & Fensome, 1992) suggests that eating disorders often arise as a result of family disturbances, which includes both the mother and the father. This study attempted to understand whether or not daughters' eating behaviors are more influenced by their mother or father, or if the amount of influence by both parents appears to be equal.

The current study also investigated the relationship between parental control over eating during childhood and negative affect associated with mealtimes during adulthood. Research (Lowe & Maycock, 1988) indicates that individuals who restrain their food intake experience more negative affect while eating than those who do not restrain their diet.

This research is significant in that it investigated relatively unexplored areas of parental control over children's eating and the effects that it has on eating behaviors and attitudes during adulthood. The current study is also important because it examined the influence of both maternal and paternal control over dietary intake and the effect that each parent has on their daughter's eating. Ideally, results of such research can be used to help develop guidelines and practices for treating individuals with eating disorders and disordered eating. Such treatment would help individuals gain an understanding for how parental relationships and eating practices during childhood have contributed to the development of their current eating attitudes and behaviors.

Research Questions

The current study attempted to answer the following questions:

1. What relationship exists between maternal restriction of food intake during childhood and disordered eating during adulthood?
2. What relationship exists between paternal restriction of food intake during childhood and disordered eating during adulthood?
3. What relationship exists between maternal pressure to eat during childhood and disordered eating during adulthood?
4. What relationship exists between paternal pressure to eat during childhood and disordered eating during adulthood?
5. What is the relationship between stressful mealtime environment during childhood and negative affect associated with mealtimes during adulthood?

CHAPTER II

REVIEW OF THE LITERATURE

Conceptual Models of Disordered Eating

Researchers have presented several different psychological models of disordered eating. According to Mitchell and Fensome (1992), behavioral models of disordered eating hold that maladaptive patterns are acquired through inappropriate learning and focus on how positive and negative reinforcers maintain the learned problem behavior. Those who support the behavioral model claim that individuals learn the avoidance of food in the case of anorexia, bingeing and vomiting in the case of bulimia, and overeating foods in the case of obesity.

In addition, behavioral models support the idea that there is no underlying cause of psychological problems, but that the problems are learned over time (Davison & Birch, 2004; Mitchell & Fensome, 1992). Behavioral models are often criticized for failing to recognize underlying difficulties of eating disorders such as depression, relationship issues, trauma, and control (Mitchell & McCarthy, 2000). Research has shown that techniques derived from behavioral theories have played a role in the treatment of some eating disorder behaviors (Mitchell &

McCarthy, 2000). For example, the use of negative and positive reinforcers has been helpful in the treatment of anorexia nervosa. In addition, exposure to food and vomiting response prevention has been shown to stop the binge/ purge cycle in some bulimics. Behavioral techniques have also been helpful in the treatment of obesity by minimizing stimuli that can lead to inappropriate eating. Overall, the behavioral model of eating disorders stems from the idea that the disorders result from repeated positive or negative reinforcement in regards to eating behavior. This pattern of reinforcement likely begins during childhood. The mother, father, and/or primary caregivers are likely the individuals who set up the pattern of reinforcement for children. Behavioral treatment includes establishing new patterns of behavior (Mitchell & McCarthy, 2000).

Another model of disorders eating is the psychodynamic model, which focuses on the internal, unconscious thoughts and hidden feelings (Mitchell & Fensome, 1992). The psychodynamic model focuses on the role of early relationships in forming one's internal world. It is thought that the early relationships between mother and baby form the unconscious and can often remain unchanged

and at times adversely affect adult functioning (Mitchell & Fensome, 1992). For example, Bruch (1979) suggested that females who suffer from anorexia were very well cared for as infants, but the care was done according to the mother's decisions and feelings, not the child's demands. The mother may have fed the child every time she cried, rather than trying to figure out what the infant needed. The child will later have a difficult time discerning hunger from other sources of discomfort or needs. Mitchell and Fensome (1992) also note that because the parents are not allowing their children to learn the difference between hunger and other bodily cues, the parents are impeding the child's ability to develop autonomy. Bruch(1979) reported that children who do not gain such autonomy are often praised for being "good" children and students. However, the children are not developing their own thoughts and ideas and often struggle for an identity which is sometimes maladaptively pursued through control over one's body.

Family systems theory focuses on several different family factors which are thought to contribute to the development of eating disorders (Killian, 1994). While studying the development of anorexia nervosa, Yager (1982) found three relevant factors when looking at the family

system: (1) the presence of mood disorders in other family members, (2) sociological factors, and (3) family relationships. Research (Killian, 1994) suggests that there are higher incidents of psychopathology in the families of those suffering from eating disorders. It is uncertain if there is a biological factor linking the families' psychological disorders, or if the eating disorders occur as a result of living in an environment with those suffering from psychopathology. One sociocultural factor that is thought to contribute to eating disorders is both society's and families' message that to be successful, intimate, and secure, one must become and stay thin (Schwartz & Barrett, 1988). This message creates a tension between the body's need for nourishment and the will to be thin.

The final factor that family systems theory presents as a variable in the development of eating disorders is family relationships. Minuchin, Rosman, and Baker (1978) found that families of those suffering from eating disorders are often characterized by: (1) enmeshment, (2) rigidity, (3) lack of conflict resolution, and (4) over protectiveness. Killian (1994) noted that those suffering from anorexia typically report coming from enmeshed

families, while those suffering from bulimia typically rate their families as less involved with one another. Women with eating disorders also reported perceiving their families as more rigid and controlling than others (Killian, 1994). This rigidity could likely be manifested during mealtime by controlling food intake. Another family characteristic found in families of those with eating disorders is triangulation, or blurred generational boundaries (Killian, 1994). It has been found that daughters suffering from eating disorders are often the source of support for their mother and are often parentified (Killian, 1994).

Although very different from one another, the behavioral, psychodynamic, and family systems models help explain how family dynamics may be playing a part in the development of eating disorders. One posits that the development occurs through patterns of positive and negative reinforcement imposed at an early age. Another claims that the relationship between parents and children form one's internal world and sometimes get in the way of gaining awareness of needs as well as autonomy. The last focuses on different family variables that play into the formation of eating disorders.

Parental Restraint

Parental restraint of children's food intake can be defined as limiting children's consumption of certain foods, typically those high in sugar and fat (Fisher & Birch, 1999). Many parents view food restriction as a straightforward and logical way to monitor their children's diets and safeguard against the growing problem of obesity (Fisher & Birch, 1999). However, it has been found that excessive parental control of children's eating may impede the children's development of self-regulation of food intake (Francis & Birch, 2005).

According to a study by Carper, Fisher, and Birch (2000), roughly 60% (n = 197) of five-year-old females reported that they perceived high levels of parental pressure to eat the parents' food selections and restriction of certain foods in feeding situations. These results imply that parents are using restrictive and pressuring approaches during feeding and that their daughters are aware of this control from a very early age. The results also indicated that girls' perceptions of control in child feeding were positively correlated with reported eating styles that are characterized by a focus on external and emotional cues in eating, rather than in

response to internal hunger and satiety cues. According to Lowe and Fisher (1983), eating in response to emotional cues rather than internal cues puts one at risk for overeating, which contributes to obesity.

Francis and Birch (2005) found that mothers who restrain their daughters' dietary intake place their daughters at risk for developing problems with weight and eating. These weight problems are likely due to underdeveloped self-control of intake and maintenance of a healthy body weight. The results suggested that mothers' restriction of daughters' intake of energy-dense snack foods did not promote daughters' restrained eating behavior as the mothers had hoped (Francis & Birch, 2005). Similarly, Tiggemann and Lowes (2002) reported that restriction and control over food intake may have precisely the opposite intended effect, with an increased consumption of restricted foods.

Tiggemann and Lowes (2002) also found that mothers tended to put forth more effort to control their daughters' dietary intake than their sons'. According to Hill and Franklin (1998), this finding is consistent with the belief that "parents want the best for their child", with the best being thin for females in western society. It was also

discovered that mothers who were more concerned with their own weight exhibited more restraint with their daughters' eating than those who were not concerned with their own weight. It is thought that perhaps providing for their sons does not activate the mothers' own issues and therefore is not translated into food control behavior, as it seems to be for the daughters.

Parental Pressure

Another form of parental control over eating is pressuring children to "clean their plates". Birch et al. (1987) reported that parents often underestimate the adequacy of their children's diets. Because some parents believe that their children are not eating adequate diets, they employ external control to increase their food consumption (Kram & Owen, 1972). For example, children are often told, "Finish your vegetables and then you can have some dessert" (Birch et al., 1987). When children are forced to eat vegetables in order to receive the "reward" of dessert, they often learn to dislike the vegetables and prefer the dessert because it is seen as a reward (Birch et al., 1987).

When parents exert pressure on their children to finish their food, this highly controlling approach may

have unintended effects on children's eating by diminishing the extent to which children learn to use their own hunger and satiety cues to initiate and terminate eating (Carper et al., 2000). There is significantly less research pertaining specifically to pressuring children to finish meals than there is research pertaining to restricting the diet. One speculation regarding the lack of research is that often restriction and pressure go hand-in-hand. In other words, parents often restrict certain foods (sweets, chips, candy), while pressuring them to eat other foods (fruits and vegetables). According to Dettwyler (1989), cleaning one's plate is an innate reminder that not everyone is as fortunate as we are, and that food has moral value and should not be wasted. Some cultures even have tales of supernatural figures as well as mythologies to demonstrate the idea of cleaning one's plate. For example, one Newfoundland mythology features a supernatural figure referred to as "Crust Man" who comes and steals away children who do not eat the crusts of their bread (Dettwyler, 1989). One individual from China mentioned that she and her brothers were "cautioned to eat all of our rice lest we marry pockmarked persons" (Dettwyler, 1989, pp.689). The European and North American use of high

chairs and booster seats with seat belts gives the parents control over how long the child must sit, confronted with food (Dettwyler, 1989). These cultural examples indicate that pressuring children to clean their plates is a practice that goes back in time and is consistent across varying cultures. Although this pressure to eat is a popular practice across some cultures, research suggests that it may be causing harm to children as they develop into adults. Waller and Hodgson (1996) suggest that eating disorders often develop from a perceived lack of control over oneself. Therefore, they desire a greater sense of control to compensate for their early lack of control, often leading to eating disorders (Watt, Sharp, & Atkins, 2002).

Affect and Eating

Eating and food in general can evoke very strong emotions for some individuals. Research has suggested that overeating and therefore obesity may stem from stress-induced or emotional eating (Faith, Allison & Geliebter, 1997; Lowe & Fisher, 1983). In a study conducted by Hawks, Madanat, Merrill, Goudy, and Miyagawa (2003), it was found that when compared to the Japanese culture, the US cultural concern with weight loss and thinness has led to

restrictive eating, eating disorders, and dysfunctional relationships with food. Even though it was found that Americans seem to do the most to alter their diets in favor of improved health, they are more likely than other cultures to rate themselves as unhealthy eaters (Hawks et al., 2003). It is reported that Americans actually lose touch with the physical, innate motivations for eating (including pleasure). The restrictive dieting and the food "taboos" may lead to an urge to binge that has both physical and emotional components (Hawks et al., 2003; Schotte, Cools & McNally, 1990).

In a study of moderately obese women, emotional eating was found to moderate the relationship between food intake and food deprivation (van Strien & Ouwens, 2003). The women were found to respond to emotional and visceral states related to hunger and satiety instead of physical, internal states (Allison & Heshka, 1993). Geliebter and Aversa (2003) found that when experiencing negative emotions, overweight individuals had a tendency to overeat, while underweight individuals tended to under eat. This provides evidence that perhaps negative emotions could lead to weight gain in overweight individuals and weight loss in underweight individuals. However, the underweight

individuals were found to eat more than usual while experiencing positive emotions (Geliebter & Aversa, 2003; Greeno & Wing, 1994).

There is growing evidence to support the idea that foods affect mood and emotions (Macht, Gerer, & Ellgring, 2003). For example, certain food such as carbohydrates, sweets, and chocolate are associated with improved mood. Certain foods such as these are related to release of endorphins and result in positive affect (Macht et al., 2003). However, emotional reactions to foods are also influenced by individuals' food-related perceptions, cognitions, and attitudes. These perceptions and cognitions can be formed by individual experiences before, during, and after eating the food as well as sociocultural influences such as the "perfect", thin physique (Macht et al., 2003). For example, in Western civilizations, foods high in fats and carbohydrates are often considered a threat to physical attractiveness and are therefore associated with negative attributes. Many women feel the need to be thinner and therefore restrict their diets. These women will then often experience negative emotions when confronted with high fat/ high carbohydrate foods (Macht et al., 2003). Because there are negative

psychosocial consequences for being overweight, one might expect the negative affect associated with eating "taboo" foods to be even more intense in overweight women than in normal-weight women.

Treatment of Eating Disorders

Gaining a more thorough understanding of the etiology of eating disorders will likely aid clinicians in providing better treatment for those suffering from eating disorders. Current trends in the treatment of eating disorders often consist of a combination of different treatment modalities including cognitive behavioral therapy, psychodynamic techniques, group therapy, nutritional counseling, and medication (Zerbe, 1993). Despite the efforts to offer a multitude of treatment interventions to those suffering from eating disorders, at least one-third of those treated for eating disorders remain severely ill at follow-up (Bemporad & Herzog, 1989). For example, a pilot study performed at Massachusetts General Hospital found that there was a 63% probability of relapse for patients treated for bulimia nervosa when followed up at 34 to 42 months post-treatment (Zerbe, 1993). Similarly, a ten-year follow-up study was performed on 76 patients who had been previously treated for anorexia nervosa at the Eating

Disorders Unit at New York Hospital- Cornell Medical Center (Halmi, Eckert, Marchi & Sampugnaro, 1991). The follow-up study found that 56% of the patients suffered from multiple relapses throughout the ten year period. In addition, 35% had problems with binge eating or body disturbance and 20% met criteria for bulimia nervosa. Over the course of a lifetime, 68% had major depressive disorder, 32% had dysthymia, 34% had social phobia, and 26% had obsessive compulsive disorder (Halmi et al., 1991). The previous examples aid in illustrating the need for further research on the causes and interactions that produce eating disorders. Further research on eating disorders will help clinicians in forming more specialized treatment interventions based on the etiology of the disorder. Rather than only treating the diagnoses, Pryor, McGilley and Roach (1990) notes the importance of considering factors such as personality structure, individual age, duration of the disorder, individual weight, family history, and family structure.

The current study sought to contribute to the knowledge of the role of family history and family structure (in the form of mealtime) as they relate to the development of eating disorders. By gaining more

knowledge, the hope is to create more specialized therapeutic interventions which will take into account the client's family history and family structure.

CHAPTER III

METHODOLOGY

Participants

The 267 young adult female participants for the present study were recruited as a sample of convenience from the student population from a large university in the south. The participants in this study were all currently enrolled college students. Advertisement and recruitment for this study was primarily conducted via email correspondence to various departments and a campus student group. The email was sent to an all-female leadership and service organization of approximately 100 members, as well as 4 classes from different departments of about 150 students per class. Therefore, the email was sent to approximately 700 total students, for a response rate of about 38%. The recruitment email is presented in Appendix A.

The group of 267 participants was comprised of 100% women. Racial and ethnic composition of the sample was 85.4% who identified as Euro-American/Caucasian ($N = 228$), 4.17% as Asian-American/Pacific-Islander ($N = 11$), 1.9% as African-American ($N = 5$), 2.2% as Multi-Ethnic ($N = 6$), 5.69% as Latino/Hispanic ($N = 15$), and 0.74% who did not

identify a racial and ethnic background ($N = 2$). The average age for this sample was approximately 20.15 years old ($SD = 2.23$).

The number of years since the participants lived with both of their parents was broken down into nine ranges: still living with both parents (10.1%, $N = 27$), still living with one parent (2.27%, $N=6$), less than one year (10.5%, $N=28$), one year (15.7%, $N=42$), two years (12.4%, $N=33$), three years (23.21%, $N=62$), four years (13.54%, $N=36$), five years (3.43%, $N=9$), more than five years (8.2%, $N=22$). Two participants (0.74%) did not indicate how long it had been since they last lived with both parents.

Instruments

The first two measures were retrospective measures of the participants' experiences during childhood.

Kid's Child Feeding Questionnaire (KCFQ; Carper, Fisher & Birch, 2000). The KCFQ is a measure of perceived restriction and pressure regarding food selection and intake. This measure includes two subscales: Restriction (7 items) and Pressure to Eat (7 items). For this study, two separate versions were constructed: one pertaining to the father and one pertaining to the mother and the verbs were changed to past tense. Participants responded (No),

(*Sometimes*) or (*Yes*) to items such as "If you asked for a snack, did your mother let you have it?" and "Was it okay with your mother if you didn't eat all the food on your plate?" KCFQ items were developed from the adult version of the Child Feeding Questionnaire (CFQ; Costanzo & Woody, 1985). Confirmatory factor analysis of the CFQ revealed seven factors, including those for the Restriction and Pressure to Eat subscales (Costanzo & Woody, 1985). Carper et al. (2000) reported adequate internal consistency for the Restriction ($\alpha = .60$) and Pressure to Eat ($\alpha = .71$) subscales. The KCFQ- Mother and KCFQ- Father is presented in Appendix B1 AND B2.

Perceived Family Attitudes and Behaviors Toward Food and Weight Childhood Family Mealtime Questionnaire (CMFQ; Miller, McClusky-Fawcett & Irving, 1993a). The CMFQ is a measure that asks participants to rate their agreement from 1 (*Never*) to 5 (*Always*) on six different items. Items include statements such as "When I was young, I was encouraged to diet" and "I remember thinking about my weight when I was young".

Miller (1989) reported high inter-item reliability (.91) and Miller et al. (1993a) and Miller, McClusky-Fawcett, and Irving (1993b) noted that items discriminated

among bulimic, non-bulimic, and repeat-dieter college females. Worobey (2002) suggested that these items are strong predictors of dieting and food preoccupation among college females. Coefficient alpha was .88 (Miller, 1989). The CMFQ is presented in Appendix C.

The following two measures were used to assess the participants' current eating attitudes and behaviors. The measures assessed for dimensions such as restrained eating, binge eating, and emotional eating.

Dutch Eating Behavior Questionnaire (DEBQ; Van Strien, Frijters, Bergers, & Defares, 1986). The DEBQ is used to measure the participants' restrained and disinhibited eating. The DEBQ contains 33 items which assess three factors: (1) dietary restraint, or cognitive control of eating, (2) emotional disinhibition, or a lack of control due to emotions such as anger, boredom, and sadness, and (3) external disinhibition, or a lack of control when food is present or other people are eating. Each item is rated on a 5-point Likert scale ranging from 1 (*Never*) to 5 (*Very frequently*). Examples of items include, "Do you have a desire to eat when you are irritated?" and "Can you resist eating delicious foods?" The initial item pool for the DEBQ was 100 items, which were derived from items that were

used in previous research by Van Strien, Frijters, Bergers, and Defares (1986). Other items came from Pudel's Latent Obesity Scale (Gorman & Allison, 1995). A series of factor analyses eliminated factorially complex items and items with unusual content, bringing the item pool down to the current 33 items (Gorman & Allison, 1995). According to Gorman and Allison (1995), the DEBQ's internal consistency is quite high ($\alpha \geq .90$). Allison, Kalinsky and Gorman (1992) also found the test-retest reliability to be .92 over a two-week period. The DEBQ is presented in Appendix D.

Binge Eating Scale (BES; Gormally, Black, Daston & Rardin, 1982). The BES is a 16-item measure of behavioral, emotional, and cognitive factors associated with binge eating disorder. The participants were asked to choose the response most descriptive of her eating behavior out of the three or four statements for each item (e.g., "I don't feel any guilt or self-hate after I overeat", "After I overeat, occasionally I feel guilt or self-hate", and "Almost all the time I experience strong guilt or self-hate after I overeat."). Higher scores on the BES characterize more severely disordered eating than lower scores. According to Gormally et al. (1982), an analysis of variance suggested

good internal consistency and concurrent validity has been demonstrated by comparing BES scores to interview ratings of binge eating severity. Coefficient alpha was .89 for the total scale (Gormally et al., 1982). The BES is presented in Appendix E.

Two measures were used to measure the affect of the participants. One assessed for depressive symptoms unrelated to eating while the other assessed for affect experienced during and immediately after eating.

Beck Depression Inventory-II (BDI-II; Beck, 1967).

The BDI is a 21-item measure assessing depressive symptoms such as mood, guilt feelings, suicidal ideation, tearfulness, irritability, and social withdrawal. The participants are asked to choose a statement for each item that best describes how they have been feeling the past two weeks. The statements range in intensity from 0 to 3. For example, "0- I do not feel sad", "1- I feel sad much of the time", "2- I am sad all the time", and "3- I am so sad or unhappy that I can't stand it". The instrument was scored according to the suggested guidelines by Beck (1967). Depending on the participant's total score, the depressive symptoms were deemed as minimal, mild, moderate, or severe. Factor analysis identified three intercorrelated factors

(negative attitudes or suicide, physiological, and performance difficulty and a second order factor representing one "overall depression" factor (Shaver & Brennan, 1991). Discriminant validity is strong as scores correlate higher with clinical ratings of depression (.59) than anxiety (.14) (Shaver & Brennan, 1991). Internal consistency has been reported as .92 for outpatients and .93 for college students (Beck, 1967).

Brief Positive and Negative Affect Scale (PANAS; Watson, Clark & Tellegen, 1988). The PANAS is a 20-item measure of positive (10 items) and negative (10 items) affect. Participants were asked to rate their intensity of each feelings word from 1 (*very slightly or not at all*) to 5 (*extremely*). For the sake of this study, participants were asked to rate their emotions as they experience them during and after eating. Alpha coefficients ranged from .84 to .87. Additionally, the PANAS has been used and validated as a measurement of affect in binge-eating research (Stice, Akutagawa, Gaggar, & Agras, 2000). For example, Stice et al., (2000) utilized the PANAS to study the relationship between affect and restraint and onset of binge-eating in a community sample. The PANAS is presented in Appendix F.

Procedure

Potential participants were contacted via various academic department or campus organization email listservs to which they belonged. Individuals interested in participating in the study responded by accessing the web link found in the original email. Online surveys were completed by the participants at their own discretion in terms of time and location. Total completion time for the online survey was between 20 and 30 minutes. Completed survey data was automatically transferred to a database upon completion of the online survey.

The results of the survey were anonymous. University counseling referrals were provided in the initial contact email as it was possible that some individuals may experience mild to moderate distress caused by remembering painful events.

CHAPTER IV

RESULTS

The main objective of this current study was to investigate the relationship between parental control over children's eating and eating behavior during adulthood. Specifically, both the mother and father's restriction of food intake and pressure to eat during childhood are examined as factors that affect emotional eating, restrained eating, eating from external cues, and binge eating that occur in adulthood. This study used Pearson product-moment correlations and linear regressions to determine the relationship between parental control over children's eating and later eating behavior experienced in adulthood. Robust regression methods were also used to account for outliers in the data. However, the results did not significantly differ from the ordinary least squares regression results presented here.

In this section, the statistics describing the participants will first be presented. Frequency tables will be shown explaining the number and percentage of participants' marital status, race, student status, years since living with their parents, education of the mother, education of the father, and level of depression (Table 1).

Mother and father's pressure to eat, mother and father's restriction of food intake, restrained eating scores, emotional eating scores, eating from external cues scores, levels of mealtime stress, negative affect score, positive affect score, and binge eating score are presented with their respective minimums, maximums, means, and standard deviations. After the descriptive tests, the hypotheses are presented with the relevant results of the statistical tests used in the data analysis.

Table 1.

Frequency Tables

	Frequency	Percent
<i>Marital Status</i>		
Single	244	91.4
Partnered	15	5.6
Married	2	0.7
Divorced	2	0.7
Engaged	2	0.7
Did not answer	2	0.7

Table 1. Continued

	Frequency	Percent
Total	267	100
<i>Race</i>		
African-American	5	1.9
Asian	11	4.1
Bi-Racial	6	2.2
Hispanic	15	5.6
White	228	85.4
Did not answer	2	0.7
Total	267	100
<i>Student Status</i>		
Freshman	47	17.6
Sophomore	58	21.7
Junior	48	18
Senior	106	39.7
Graduate Student	5	1.9

Table 1. Continued

	Frequency	Percent
Did not answer	3	1.1
Total	267	100
<i>Years Since Living with Parents</i>		
Still Living with Parents	27	10.1
Still Living with One Parent	6	2.2
Less than One Year	28	10.5
One Year	42	15.7
Two Years	33	12.4
Three Years	62	23.2
Four Years	36	13.5
Five Years	9	3.4
More than Five Years	22	8.2
Did not answer	2	0.7
Total	267	100

Education of Father

Table 1. Continued

	Frequency	Percent
Did Not Complete High School	7	2.6
High School Graduate or GED	28	10.5
Some College	34	12.7
College Graduate	94	35.2
Graduate or Professional Degree	102	38.2
Did not answer	2	0.7
Total	267	100
<i>Education of Mother</i>		
Did Not Complete High School	4	1.5
High School Graduate or GED	38	14.2
Some College	52	19.5
College Graduate	122	45.7
Graduate or Professional Degree	50	18.7
Did not answer	1	0.37

Table 1. Continued

	Frequency	Percent
Total	267	100
<i>Level of Depression</i>		
Minimal Depression	203	76
Mild Depression	28	10.5
Moderate Depression	8	3
Severe Depression	5	1.9
None	23	8.61
Total	267	100

Each of the variables used in this study were constructed by summing the corresponding item responses for each variable together to give an overall measurement for that variable. Higher scores indicate more of the variable. This was done for all of the variables measured by the survey instruments used in this study. The summary statistics, which include the minimum, maximum, median,

mean and standard deviation of these variables is presented in Table 2.

Table 2.

Minimums, Maximums, Means, and Standard Deviations

	N	M	Median	SD	Skewness	Min	Max
Age	259	20.15	20	2.23	5.89	17	45
Maternal Pressure to Eat	261	5.08	5	3.16	0.52	0	14
Maternal Restriction	257	4.15	3	3.54	0.74	0	14
Paternal pressure to Eat	261	4.35	4	1.93	0.31	0	10
Paternal Restriction	257	3.89	3	2.19	0.83	0	13
Level of Mealtime Stress	257	13.14	12	5.34	0.78	6	30
Binge Eating Score	246	10.70	9	7.61	0.97	0	41
Negative Affect	244	14.15	12	5.94	2.60	10	50
Positive Affect	244	21.43	20	8.71	0.64	10	50
Restrained Eating	256	28.55	29	8.78	-0.08	9	50
Emotional Eating	256	32.79	32	11.82	0.58	13	65
Eating from External Cues	256	31.49	31	5.83	-0.03	11	49

Question #1: What relationship exists between maternal restriction of food intake during childhood and disordered eating during adulthood?

Pearson product-moment correlations were computed between maternal restriction of food intake and current eating attitudes and behaviors. There was not a significant relationship between the maternal restriction score and the Binge Eating Scale, $r = .03$, $p = .68$. There was also not a significant relationship between the maternal restriction score and restrained eating, $r = .10$, $p = .13$, emotional eating, $r = .02$, $p = .73$ and eating from external cues, $r = -.05$, $p = .43$. This indicated that there was a weak or no association between the maternal restriction of food intake during childhood and disordered eating during adulthood. However, there were statistically significant relationships between maternal restriction and maternal pressure to eat, $r = .12$, $p < .05$, maternal restriction and paternal pressure to eat, $r = .17$, $p < .01$, maternal restriction and paternal restriction, $r = .49$, $p < .01$, and maternal restriction and family mealtime stress, $r = .16$, $p < .01$. The complete correlation results are presented in Table 3.

A multiple linear regression was computed to determine if several independent variables (binge eating, restrained eating, emotional eating, and eating from external cues) are significant predictors of maternal restriction of food intake. Based on this analysis, the overall model was

found not to be significant as indicated by the ANOVA for regression analysis, $F(4, 241) = .59, p = .67$. None of the independent variables were statistically significant.

These results are summarized and presented in Table 4.

Overall, this model was only able to explain 1.0% of the variation in the maternal restriction dependent variable.

Table 3.

Pearson Correlation Results for All Variables

	1	2	3	4	5	6	7	8	9	10	11
1. Maternal Pressure	1										
2. Paternal Pressure	.59**	1									
3. Maternal Restriction	.12*	.17**	1								
4. Paternal Restriction	-.02	.16*	.49**	1							
5. Meal Stress	.14*	.05	.16**	.09	1						
6. Binge Eating	.12	.12	.03	.04	.41**	1					
7. Negative Affect	.12	.09	.08	.04	.39**	.60**	1				
8. Positive Affect	.01	.01	-.00	-.05	-.01	-.08	.11	1			
9. Restriction	.14*	.13*	.10	.03	.49**	.52**	.38**	-.06	1		
10. Emot. Eating	.17**	.17**	.02	-.01	.31**	.57**	.40**	.07	.35**	1	
11. External Cues	.15*	.15*	-.05	-.07	.26**	.51**	.36**	.02	.14*	.45**	1

Note. ** $p < .01$ and * $p < .05$

Table 4.

Linear Regression for Binge Eating, Restriction, Emotional Eating, and Eating from External Cues Predicting Maternal Restriction

	Std. Error	t-value	p	R ²
Intercept	.85	5.27	.00	
Binge Eating	.02	.26	.80	
Restriction	.02	1.00	.32	
Emotional Eating	.01	-.06	.95	
External Cues	.03	-.88	.38	
				.01

Question #2: What relationship exists between paternal restriction of food intake during childhood and disordered eating during adulthood?

Pearson correlations were computed between paternal restriction of food intake and current eating attitudes and behaviors. There was not a statistically significant relationship between the paternal restriction score and binge eating, $r = .04$, $p = .52$. There was also not a significant relationship between the paternal restriction score and restriction, $r = .03$, $p = .61$, emotional eating,

$r = -.01$, $p = .83$ and eating from external cues, $r = -.07$, $p = .25$. This indicated that there was a weak or no association between the paternal restriction of food intake during childhood and disordered eating during adulthood. However, there were statistically significant relationships between paternal restriction and paternal pressure to eat, $r = .16$, $p < .05$ and maternal restriction, $r = .49$, $p < .01$.

A multiple linear regression was computed to determine if several independent variables (binge eating, restrained eating, emotional eating, and eating from external cues) are significant predictors of paternal restriction. Based on this analysis, the overall model was not statistically significant, $F(4, 241) = .82$, $p = .51$. When looking at the linear regression results for the second research question, it was found that none of the independent variables were significant. These results are summarized and presented in Table 5. Overall, this model was only able to explain 1.3% of the variation in the paternal restriction dependent variable.

Table 5.

Linear Regression for Binge Eating, Restriction, Emotional Eating, and Eating from External Cues Predicting Paternal Restriction

	Std. Error	t-value	p	R ²
Intercept	.98	5.30	.00	
Binge Eating	.03	1.41	.16	
Restriction	.02	-.28	.78	
Emotional Eating	.02	-.42	.67	
External Cues	.03	-1.49	.14	
				.01

Question #3: What relationship exists between maternal pressure to eat during childhood and disordered eating during adulthood?

Pearson product-moment correlations were computed between maternal pressure to eat and current eating attitudes and behaviors. There was not a significant relationship between the maternal pressure to eat score and binge eating, $r = .12$, $p = .07$. However, there was a statistically significant relationship between the maternal pressure to eat score and restrained eating, $r = .14$, p

<.05, emotional eating, $r = .17$, $p < .01$ and eating from external cues, $r = .15$, $p < .05$. These results suggest that maternal pressure to eat during childhood is related to certain kinds of disordered eating behaviors and attitudes in adulthood. There were also statistically significant relationships between maternal pressure to eat and paternal pressure to eat, $r = .59$, $p < .01$ and maternal restriction, $r = .12$, $p < .05$.

A multiple linear regression was computed to determine if several independent variables (binge eating, restrained eating, emotional eating, and eating from external cues) are significant predictors of maternal pressure to eat. Based on this analysis, the overall model was found not to be statistically significant as indicated by the ANOVA for regression analysis, $F(4, 241) = 2.09$, $p = .08$. In fact, when looking at the linear regression results for the third research question, it was found that none of the independent variables were statistically significant. These results are summarized and presented in Table 6. Overall, this model was only able to explain 3.4% of the variation in the maternal pressure to eat dependent variable.

Table 6.

Linear Regression for Binge Eating, Restriction, Emotional Eating, and Eating from External Cues Predicting Maternal Pressure to Eat

	Std. Error	t-value	p	R ²
Intercept	1.39	1.22	.22	
Binge Eating	.04	-.34	.74	
Restriction	.03	1.23	.22	
Emotional Eating	.02	.97	.34	
External Cues	.04	1.41	.16	
				.03

Question #4: What relationship exists between paternal pressure to eat during childhood and disordered eating during adulthood?

Pearson product-moment correlations were computed between paternal pressure to eat during childhood and current eating attitudes and behaviors. Statistically significant results were found between paternal pressure to eat and restrained eating, $r = .13$, $p < .05$, emotional eating, $r = .17$, $p < .01$, and eating from external cues, $r = .15$, $p < .05$. Statistically significant results were also

found between paternal pressure to eat and maternal pressure to eat, $r = .59$, $p < .01$, maternal restriction, $r = .17$, $p < .01$, and paternal restriction, $r = .16$, $p < .05$. There was no significant relationship between paternal pressure to eat and binge eating, $r = .12$, $p = .06$.

A multiple linear regression was computed to determine if the independent variables binge eating, restrained eating, emotional eating, and eating from external cues were significant predictors of paternal pressure to eat. Based on this analysis, the overall model was found not to be statistically significant, $F(4, 241) = 1.66$, $p = .16$. When looking at the linear regression results for the fourth research question, it was found that none of the independent variables were significant. These results are summarized and presented in Table 7. Overall, this model was only able to explain 2.7% of the variation in the paternal pressure to eat dependent variable.

Table 7.

Linear Regression for Binge Eating, Restriction, Emotional Eating, and Eating from External Cues Predicting Paternal Pressure to Eat

	Std. Error	t-value	p	R ²
Intercept	1.52	.65	.52	
Binge Eating	.04	.16	.88	
Restriction	.03	.68	.50	
Emotional Eating	.02	.63	.53	
External Cues	.05	1.33	.19	
				.03

Question #5: What is the relationship between stressful mealtime environment during childhood and negative affect associated with mealtimes during adulthood?

Pearson product-moment correlations were computed between family mealtime stress during childhood and current eating attitudes and behaviors. Statistically significant results were found between family mealtime stress and (a) binge eating, $r = .41$, $p < .01$, (b) restriction, $r = .49$, $p < .01$, (c) emotional eating, $r = .31$, $p < .01$, and (d) eating from external cues, $r = .26$, $p < .01$. Statistically

significant results were also found between family mealtime stress and (a)maternal restriction during childhood, $r = .16$, $p < .01$, (b)maternal pressure to eat, $r = .14$, $p < .05$, and (c)negative affect during meals, $r = .39$, $p < .01$. These results imply that a higher level of mealtime stress during childhood is related to some disordered eating behaviors during adulthood as well as negative emotions during meals.

A multiple linear regression was computed to determine if the independent variables binge eating, restrained eating, emotional eating, and eating from external cues, positive affect during eating, negative affect during eating were significant predictors of family mealtime stress. The overall model was found to be significant, $F(6, 237) = 17.65$, $p < .001$. When looking at the linear regression results for the fifth research question, it was found that negative affect, $t(237) = 2.44$, $p = .02$, and the restrained eating scores, $t(237) = 5.90$, $p < .001$ were statistically significant.

In fact, the regression model predicted that for every unit increase in the negative affect during eating scores, the level of mealtime stress increased by .153 units. Similarly, the model predicted that for every unit increase in the restrained eating scores, the level of mealtime

stress increased by .234 units. These results are summarized and presented in Table 8. Overall, this model was able to explain 30.9% of the variation in the level of mealtime stress dependent variable.

Table 8.

Linear Regression for Binge Eating, Negative Affect During Eating, Positive Affect During Eating, Restriction, Emotional Eating, and Eating from External Cues Predicting Family Mealtime Stress

	Std. Error	t-value	p	R ²
Intercept	2.11	.19	.85	
Binge Eating	.06	.20	.85	
Negative Affect	.06	2.44	.02	
Positive Affect	.04	-.13	.90	
Restriction	.04	5.90	.00	
Emotional Eating	.03	.93	.35	
External Cues	.06	1.55	.12	
				.31

CHAPTER V

SUMMARY

The present study had two primary goals. The first was to examine the relationship between maternal and paternal restriction of food intake and pressure to eat during childhood and the effects that such control have on adult females' eating attitudes and behavior. The second goal was to examine the relationship between family mealtime stress during childhood and current negative affect associated with mealtime and disordered eating attitudes and behaviors. The reason for the study was to gain more knowledge about the development of eating disorders, so more specialized treatment plans can be established for those suffering from eating disorders.

The first research question examined what kind of relationship exists between maternal restriction of food intake during childhood and disordered eating during adulthood. Results from the current study found no relationship between maternal restriction of food intake during childhood and adult females' current binge eating, restrained eating, emotional eating, or eating from external cues. These results are surprising in light of the existing literature (Birch et al., 1987; Francis &

Birch, 2005; Fisher & Birch, 1999) which has found that parental control over children's eating, including both restraint and pressure to clean their plates, interrupts children's development of their own self-regulation of food intake. The results of the current study suggest that while the children's development of self-regulation of food intake may be interrupted during childhood parental control, the ability to self-regulate food intake is still developed prior to adulthood. While past research (Birch et al., 1987; Francis & Birch, 2005; Fisher & Birch, 1999) has demonstrated that parental control affects children's eating behaviors while they are still living with their parents, it does not indicate whether or not this control affects their eating during adulthood when they are out of the home. The current study suggests that this parental control during childhood does not in fact affect their eating during adulthood.

However, one must also take into account that the participants in the study were recalling memories from childhood in order to answer the questions. There is the possibility that the participants were unable to accurately recall childhood mealtime memories. For example, some research (Deffenbacher, Bornstein, Penrod & McGorty, 2004)

suggests that when memories are associated with some emotion such as stress or sadness, the memories are more susceptible to error.

The second research question examined what kind of relationship exists between paternal restriction of food intake during childhood and disordered eating during adulthood. Results from the current study found no relationship between paternal restriction of food intake during childhood and adult females' current binge eating, restrained eating, emotional eating, or eating from external cues. Most of the previous research has focused on the mother-daughter relationship or the parents as one unit. Therefore, while the current study did not find a relationship between paternal restriction of food intake during childhood and disordered eating during adulthood, the findings will add to the minimal research on father-daughter relationships and eating. It would be curious to see if the father's restriction of food intake during childhood has any impact on their daughter's eating behaviors and attitudes during childhood. Francis and Birch (2005) found that mothers who were more concerned with their own weight exhibited more restraint with their daughters' eating than those who were not concerned with

their own weight. Therefore, perhaps it is the case that fathers do not exhibit as much restraint on their daughters as mothers do, as their daughters may not be triggering the father's issues with their own weight.

The third research question examined what kind of relationship exists between maternal pressure to eat during childhood and disordered eating during adulthood. Results from the current study found a significant relationship between maternal pressure to eat during childhood and restrained eating, emotional eating, and eating from external cues during adulthood. Again, these results are consistent with the previous findings (Carper et al., 2000) pertaining to parental pressure to eat. For example, Waller and Hodgson (1996) suggest that eating disorders often develop from a perceived lack of control over oneself. Pressuring a child to clean his or her plate before leaving the dinner table certainly takes the control away from the child in terms of deciding when he or she is full. Therefore, they desire a greater sense of control to compensate for their early lack of control, often leading to eating disorders (Watt, Sharp, & Atkins, 2002). This would also explain why maternal pressure to eat was not

significantly related to binge eating, as binge eating suggests more of a lack of control over ones eating.

The fourth research question examined what kind of relationship exists between paternal pressure to eat during childhood and disordered eating during adulthood. Results from the current study found a significant relationship between paternal pressure to eat during childhood and adult females' current restricted eating, emotional eating, and eating from external cues. These results are beneficial in that they suggest that more paternal pressure to eat during childhood is related to more disordered eating later in life.

The final research question examined what kind of relationship exists between stressful mealtime environment during childhood and negative affect associated with mealtimes during adulthood. The results of the current study found that the level of mealtime stress was positively correlated with the binge eating, restrained eating, emotional eating and eating from external cues scales. Stressful mealtime environment refers to a family mealtime where much emphasis was put on weight, dieting, and physical appearance. These results are consistent with Geliebter and Aversa's (2003) findings that when

experiencing negative emotions, overweight individuals had a tendency to overeat, while underweight individuals tended to under eat. The instrument used to measure mealtime stress focused more on feelings than on behaviors. It is interesting to note that in this study, individual's feelings and perceptions of stress and pressure surrounding family mealtime seemed to have more impact on their current eating behaviors than specific behaviors from childhood (pressuring to eat and restricting food).

One limitation of this study is the fact that participants were asked to remember events from their childhood. The participants may not remember events just as they occurred. Therefore, the results may not be an accurate depiction of the participants' childhood mealtimes. One speculation of the current results could be that the participants were not able to remember specific episodes of being pressured to clean their plates or being denied certain kinds of foods. However, the feelings associated with such episodes may be easier for them to remember, and therefore appear to have stronger effects on their current eating attitudes and behaviors. In addition, the term "mealtime" was never defined. Mealtime may mean very different things for different participants,

so it is uncertain what the participants were referring to as they were responding to the instruments. Similarly, it is uncertain what the participants' time frame was as they were responding to the questions. In other words, were they thinking about mealtime when they were 5 years old or 15 years old? The experiences during mealtime are likely quite different depending on the child's stage of development.

Another potential reason for these results could be a product of the instrument used to assess parental restriction and pressure to eat. In the context of this study, the KCFQ may not be sensitive to the range of what participants may have experienced in terms of parental restriction and pressure to eat. In addition, the instrument was originally developed to be used on children assessing their current experiences with the parents as one unit. Perhaps it is more difficult for adults to remember some of the specific scenarios that the KCFQ refers to with each individual parent. Additionally, separate instruments for measuring pressure to eat and restriction could better differentiate between the two early childhood parental feeding practices. As eating experiences with parents is a memory that can be quite subjective, studying childhood

eating behaviors may not easily be researched through a Likert-style questionnaire. Perhaps qualitative methods can better explore the nuances of childhood eating experiences that traditional quantitative methods may miss.

Another limitation of this study is related to the sample. A larger sample would have likely provided a broader spectrum of information regarding childhood eating behaviors. Because the participants were drawn from a university population, the sample was rather homogenous in terms of age, ethnicity, and educational status. The location of the university also contributed to the lack of ethnic diversity in the sample. Interesting patterns may have emerged had the sample been larger and more heterogeneous.

Future research in this area could explore further what specific kinds of stressful mealtime experiences during childhood affect current eating behaviors. This could be achieved by doing a qualitative study in which all participants meet the DSM-IV criteria for an eating disorder. Participants could then be interviewed and asked to recall childhood mealtime memories.

Future research might also consider using longitudinal studies beginning in childhood. Because previous research

(Birch et al., 1987; Francis & Birch, 2005; Fisher & Birch, 1999) has demonstrated that parental control affects children's eating behaviors while they are still living with their parents, it could be beneficial to examine at what point individuals are able to develop their ability to self-regulate food intake and what is different about those who do not develop the ability to self-regulate and go on to develop eating disorders.

Research should also continue developing new treatment interventions for those suffering from eating disorders. The current study confirmed that stressful childhood mealtimes contributes to the development of disordered eating behaviors. Therefore, future research should use this knowledge when developing specialized treatment.

In conclusion, this study has served to expand the existing knowledge base of parental control over childhood eating and its impact on adult females' current eating attitudes and behaviors. Research (Strober & Humphrey, 1987; Mitchell & Fensome, 1992) suggests that eating disorders often arise as a result of family disturbances, which includes both the mother and the father. This study attempted to examine whether or not adult daughters' eating behaviors are influenced by their mother or father's past

pressure to eat and/or dietary restraint as well as the perception of having experienced a stressful family mealtime. This research is significant in that it investigated relatively unexplored areas of parental control over children's eating and the effects that it has on eating behaviors and attitudes during adulthood. The current study is also important because it examined the influence of both maternal and paternal control over dietary intake and the effect that each parent has on their daughter's eating.

While past research has demonstrated that parental control affects children's eating behaviors while they are still living with their parents, it does not indicate whether or not this control affects their eating during adulthood when they are out of the home. The current study aimed to gain some insight into the eating behaviors and attitudes of adult women who claim to have experienced parental control over their eating when they were younger.

This study achieved its primary goals with varying degrees of success. The first goal was to examine the relationship between maternal and paternal restriction of food intake and pressure to eat during childhood and the effects that such control have on adult females' eating

attitudes and behavior. This goal was somewhat successfully achieved in that parental pressure to eat was found to be related to restriction, emotional eating, and eating from external cues. The second goal was to examine the relationship between family mealtime stress during childhood and current negative affect associated with mealtime. This goal was successfully achieved as childhood family mealtime stress was found to be related to binge eating, restrained eating, emotional eating, eating from external cues, and negative affect during eating in adulthood.

Important to note is that the negative effects of a stressful family mealtime during childhood are not only immediate, but can be pervasive into adulthood. Hopefully these findings serve to garner more attention for childhood feeding practices and the development of effective interventions for children, adolescents, and adults. Knowledge and practice can foster confidence in negotiating more positive, healthy mealtime practices throughout the lifespan, which can help to avoid unnecessary distress and possible eating disorders.

REFERENCES

- Allison, D.B., & Heshka, S. (1993). Emotion and eating in obesity: A critical analysis. *International Journal of Eating Disorders*, 13, 289-295.
- Allison, D.B., Kalinsky, L.B., & Gorman, B.S. (1992). The comparative psychometric properties of three measures of dietary restraint. *Psychological Assessment*, 4, 391-398.
- Beck, A.T. (1967). *Depression: Causes and treatment*. Philadelphia: University of Pennsylvania Press.
- Bemporad, J.R. & Herzog, D.B. (1989). Introduction. In J.R. Bemporad & D.B. Herzog (Eds.) *Psychoanalysis and Eating Disorders*. New York: Guilford.
- Benedikt, R., Wertheim, & Love, A. (1998). Eating attitudes and weight-loss attempts in female adolescents and their mothers. *Journal of Youth and Adolescence*, 27, 43-57.
- Birch, L.L. (1991). Obesity and eating disorders: A developmental perspective. *Bulletin of the Psychonomic Society*, 29, 265-272.
- Birch, L.L., Fisher, J.O., Grimm-Thomas, K., Markey, C.N., Sawyer, R., & Johnson, S.L. (2001). Confirmatory factor analysis of the child feeding questionnaire: A

measure of parental attitudes, beliefs, and practices about child feeding and obesity proneness. *Appetite*, 36, 201-210.

Birch, L.L., McPhee, L., Shoba, B.C., Steinberg, L., & Krehbiel, R. (1987). "Clean up your plate": Effects of child feeding practices on the conditioning of meal size. *Learning and Motivation*, 18, 301-317.

Bruch, H. (1961). Transformation of oral impulses in eating disorders: A conceptual approach. *Psychiatric Quarterly*, 35, 458-480.

Bruch, H. (1979). Island in the river: The anorexic adolescent in treatment. *Adolescent Psychiatry*, 7, 26-40.

Burger, J.M. (1992). *Desire for Control: Personality, Social, and Clinical Perspectives*. New York: Plenum.

Carper, J.L., Fisher, J.O., & Birch L.L. (2000). Young girls' emerging dietary restraint and disinhibition are related to parental control in child feeding. *Appetite*, 35, 121-129.

Costanzo, P.R., & Woody, E.Z. (1985). Domain-specific parenting styles and their impact on the child's development of particular deviance: The example of

- obesity proneness. *Journal of Social and Clinical Psychology, 8*, 425-445.
- Davison, K.K., & Birch, L.L. (2002). Processes linking weight status and self-concept among girls from ages 5 to 7 years. *Developmental Psychology, 38*, 735-748.
- Davison, K.K., & Birch, L.L. (2004). Lean and weight stable: Behavioral predictors and psychological correlates. *Obesity Research, 12*, 1085-1093.
- Deffenbacher, K.A., Bornstein, B.H., Penrod, S.D., & McGorty, E.K. (2004). A meta-analytic review of the effects of high stress on eyewitness memory. *Law and Human Behavior, 28*, 687-706.
- Dettwyler, K.A. (1989). Styles of infant feeding: Parental/caretaker control of food consumption in young children. *American Anthropologist, 91*, 696-703.
- Faith, M.S., Allison, D.B., & Geliebter, A. (1997). Emotional eating and obesity: Theoretical considerations and practical recommendations. In S. Dalton (Ed). *Overweight and Weight Management: The Health Professional's Guide to Understanding and Practice*. Gaithersburg, MD: Aspen Publishers.
- Fisher, J.O., & Birch, L.L. (1999). Restricting access to foods and children's eating. *Appetite, 32*, 405-419.

- Francis, L.A., & Birch, L.L. (2005). Maternal influences on daughters' restrained eating behavior. *Health Psychology, 24*, 548-554.
- Geliebter, A., & Aversa, A. (2003). Emotional eating in overweight, normal weight, and underweight individuals. *Eating Behaviors, 3*, 341-347.
- Gormally, J., Black, S., Daston, S., & Rardin, D. (1982). The assessment of binge eating severity among obese persons. *Addictive Behavior, 7*, 47-55.
- Gorman, B.S., & Allison, D.B. (1995). Measures of restrained eating. In D.A. Allison (Ed). *Handbook of Assessment Methods of Eating Behaviors and Weight-Related Problems: Measures, Theory, Research*. Thousand Oaks, CA: Sage Publications.
- Greeno, C.G., & Wing, R.R. (1994). Stress-induced eating. *Psychological Bulletin, 115*, 444-464.
- Halmi, K.A., Eckert, E.D., Marchi, P., & Sampugnaro, V. (1991). Comorbidity of psychiatric diagnoses in anorexia nervosa. *Archives of General Psychiatry, 48*, 712-718.
- Hawks, S.R., Madanat, H.N., Merrill, R.M., Goudy, M.B., & Miyagawa, T. (2003). A cross-cultural analysis of 'motivation for eating' as a potential factor in the

- emergence of global obesity: Japan and the United States. *Health Promotion International*, 18, 153-162.
- Hill, A.J., & Franklin, J.A. (1998). Mothers, daughters and dieting: Investigating the transmission of weight control. *British Journal of Clinical Psychology*, 37, 3-13.
- Humphrey, L.L. (1986). Structural analysis of parent-child relationships in eating disorders. *Journal of Abnormal Psychology*, 95, 395-402.
- Johnson, S.L. & Birch, L.L. (1994). Parents' and children's adiposity and eating style. *Pediatrics*, 94, 653-661.
- Killian, K.D. (1994). Fearing fat: A literature review of family systems understandings and treatments of anorexia and bulimia. *Family Relations*, 43, 311-318.
- Kram, F.M., & Owen, G.M. (1972). Nutritional studies on United States preschool children: Dietary intakes and practices of food procurement, preparation, and consumption. In S.J. Fomon & T.A. Anderson (Eds.). *Practices of Low-Income Families in Feeding Infants and Small Children with Particular Attention to Cultural Subgroups*. Washington, DC: Department of HEW publication No. 72-5605. U.S. Govt. Printing Office.

- Lowe, M.R., & Fisher, E.B. (1983). Emotional reactivity, emotional eating, and obesity: A naturalistic study. *Journal of Behavioral Medicine, 6*, 135-149.
- Lowe, M.R., & Maycock, B. (1988). Restraint, disinhibition, hunger, and negative affect Eating. *Addictive Behaviors, 13*, 369-377.
- Macht, M., Gerer, J., & Ellgring, H. (2003). Emotions in overweight and normal-weight women immediately after eating foods differing in energy. *Physiology & Behavior, 80*, 367-374.
- McHale, S.M., Corneal, D.A., Crouter, A.C., & Birch, L.L. (2001). Gender and weight concerns in early and middle adolescence: Links with well-being and family characteristics. *Journal of Clinical Child Psychology, 30*, 338-348.
- Miller, D., McCluskey-Fawcett, K., & Irving, L. (1993a). Correlates of bulimia nervosa: Early family mealtime experiences. *Adolescence, 28*, 621-635.
- Miller, D., MCluskey-Fawcett, K., & Irving, L. (1993b). The relationship between abuse and subsequent onset of bulimia nervosa. *Child Abuse and Neglect, 17*, 305-314.
- Miller, D.A.F. (1989). Subcategories within bulimia:

Differentiation between fad and clinical bulimia.

Unpublished dissertation, University of Kansas.

Minuchin, S., Rosman, B.L., & Baker, L. (1978).

Psychosomatic Families: Anorexia Nervosa in Context.

Cambridge, MA: Harvard University Press.

Mitchell, J. & Fensome, H. (1992). Eating disorders. In

J. Mitchell (Ed.). *Adult Psychological Problems: An*

Introduction. Washington, DC: Falmer Press.

Mitchell, J. & McCarthy, H. (2000). Eating disorders. In

L. Champion & M. Power (Eds.). *Adult Psychological*

Problems: An Introduction (2nd ed.). Hove, England:

Psychology Press.

Pryor, T., McGilley, B., & Roach, N.E. (1990).

Psychopharmacology and eating disorders: Dawning of a new age. *Psychiatric Annals*, 20, 711-722.

Rozin, P., Ashmore, M., & Markwith, M. (1996). Lay

American conceptions of nutrition: Dose insensitivity, categorical thinking, contagion, and the monotonic mind. *Health Psychology*, 15, 438-447.

Schotte, D.E., Cools, J., & McNally, R.J. (1990). Film-

induced negative affect triggers overeating in

restrained eaters. *Journal of Abnormal Psychology*, 99, 317-320.

- Schwartz, R.C., & Barrett, M.J. (1988). Women and eating disorders. *Journal of Psychotherapy and the Family*, 3, 131-144.
- Shaver, P.R., & Brennan, K.A. (1991). Measures of depression and loneliness. In J.P. Robinson, P.R. Shaver, & L.S. Wrightsman (Eds.), *Measures of Personality and Social Psychological Attitudes* (pp. 161-289). San Diego: Academic Press.
- Stice, E., Akutagawa, D., Gaggar, A., & Agras. (2000). Negative affect moderates the relation between dieting and binge eating. *International Journal of Eating Disorders*, 27, 218-229.
- Strober, M. & Humphrey, L.L. (1987). Familial contributions to the etiology and course of anorexia nervosa and bulimia. *Journal of Consulting and Clinical Psychology*, 55, 654- 659.
- Tiggemann, M., & Lowes, J. (2002). Predictors of maternal control over children's eating behavior. *Appetite*, 39, 1-7.
- Van Strien, T., & Ouwens, M.A. (2003). Counterregulation in female obese emotional eaters: Schachter, Goldman, and Gordon's (1968) test of psychosomatic theory revisited. *Eating Behaviors*, 3, 329-340.

- Van Strien, T., Frijters, J.E.R., Bergers, G.P.A., & Defares, P.B. (1986). The Dutch eating behavior questionnaire (DEBQ) for assessment of restrained, emotional, and external eating behavior. *International Journal of Eating Disorders, 5*, 295-315.
- Waller, G. & Hodgson, S. (1996). Body image distortion in anorexia and bulimia nervosa: The role of perceived and actual control. *Journal of Nervous and Mental Disease, 184*, 213-219.
- Watson, D., Clark, L.A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063-1070.
- Watt, T.T., Sharp, S.F., & Atkins, L. (2002). Personal control and disordered eating patterns among college females. *Journal of Applied Social Psychology, 32*, 2502-2512.
- Wonderlich, S. (1992). Relationship of family and personality factors in bulimia. In J. Crowther, D. Tennenbaum, S. Hobfoll & M. Stephens (Eds.) *The Etiology of Bulimia Nervosa: The Individual and*

Familial Context. Washington, DC: Hemisphere PublishingCorp.

Worobey, J. (2002). Early family mealtime experiences and eating attitudes in normal weight, underweight and overweight females. *Eating and Weight Disorders*, 7, 39-44.

Yager, J. (1982). Family issues in the pathogenesis of anorexia nervosa. *Psychosomatic Medicine*, 44, 46-60.

Zerbe, K.J. (1993). Treatment: The body reclaimed. In K.J. Zerbe (Ed.) *The Body Betrayed: A Deeper Understanding of Women, Eating Disorders, and Treatment*. Carlsbad, CA: Gürze Books.

APPENDIX A

EMAIL

Thank you for participating in this study about eating attitudes and behaviors. The purpose of this study is to explore the effects of parents' attitudes and behaviors during childhood mealtimes on college females' current eating attitudes and behaviors. This study will involve approximately 150 female Texas A&M University students. In all, the survey should take around 20 minutes to complete.

Should you agree to participate in this survey you will be required to answer questions regarding your family, your current eating attitudes and behaviors, and emotions.

This research study is being conducted as part of a doctoral dissertation project. Your participation is completely voluntary. The confidentiality of your responses will be ensured. Records will be kept private and any information you provide on the survey will not be associated with your identity. When reporting, the data will be presented in aggregate form.

Your feedback is greatly appreciated and extremely important to this study! You can contact the Student Counseling Service at (979) 845- 4427 in the event that you wish to utilize their services. Thank you for your time and consideration in this matter.

http://www.surveymonkey.com/s.aspx?sm=SriqblaqdrFIXeYpzspB4g_3d_3d

Amanda J. Pfeffer, M.S.
Doctoral Candidate
Counseling Psychology
Texas A&M University

APPENDIX B1

KID'S CHILD FEEDING QUESTIONNAIRE
MOTHER

Instructions: Think about you family mealtimes up to age 18, and answer the questions below in relation to your MOTHER. Remember that you mother may include biological, adoptive, or stepmothers, as well as other adult caregivers. WRITE IN THE NUMBER of the response that most closely matches your experience. Choose only ONE response for each item.

	No 0	Sometimes 1	Yes 2
___ 1. When you said "I'm not hungry" at dinnertime, did your mother say "You need to eat anyway"?			
___ 2. Did your mother make you eat all the food on your plate?			
___ 3. If there was something your mother wanted you to eat, but you didn't eat it, did your mother make you sit at the table until you ate it?			
___ 4. Did your mother get upset when you played with your food?			
___ 5. Did your mother say things like "I don't think you've had enough to eat, you need to eat more"?			
___ 6. If you told your mother you were full and didn't want to eat anymore, did your mother say "You need to eat more anyway"?			
___ 7. Did your mother say "If you don't eat all your food, you won't get dessert"?			
___ 8. Was it okay with your mother if you didn't eat all the food on our plate?			
___ 9. Did your mother ever say things like "You've had enough to eat now, you need to stop"?			
___ 10. Did your mother ever let you have snacks?			
___ 11. Did your mother buy candy for you when you asked for it?			
___ 12. If you asked for a snack, did your mother let you have it?			
___ 13. If you were with your mother and you wanted something to eat, did she let you pick what you wanted to eat?			
___ 14. If you were with your mother and you wanted something to eat, did she let you pick how much you ate?			

APPENDIX B2

KID'S CHILD FEEDING QUESTIONNAIRE (KCFQ)
FATHER

Instructions: Think about you family mealtimes up to age 18, and answer the questions below in relation to your FATHER. Remember that you father may include biological, adoptive, or stepfathers, as well as other adult caregivers. WRITE IN THE NUMBER of the response that most closely matches your experience. Choose only ONE response for each item.

No	Sometimes	Yes
0	1	2

- ___ 1. When you said "I'm not hungry" at dinnertime, did your father say "You need to eat anyway"?
- ___ 2. Did your father make you eat all the food on your plate?
- ___ 3. If there was something your father wanted you to eat, but you didn't eat it, did your father make you sit at the table until you ate it?
- ___ 4. Did your father get upset when you played with your food?
- ___ 5. Did your father say things like "I don't think you've had enough to eat, you need to eat more"?
- ___ 6. If you told your father you were full and didn't want to eat anymore, did your father say "You need to eat more anyway"?
- ___ 7. Did your father say "If you don't eat all your food, you won't get dessert"?
- ___ 8. Was it okay with your father if you didn't eat all the food on our plate?
- ___ 9. Did your father ever say things like "You've had enough to eat now, you need to stop"?
- ___ 10. Did your father ever let you have snacks?
- ___ 11. Did your father buy candy for you when you asked for it?
- ___ 12. If you asked for a snack, did your father let you have it?
- ___ 13. If you were with your father and you wanted something to eat, did he let you pick what you wanted to eat?
- ___ 14. If you were with your father and you wanted something to eat, did he let you pick how much you ate?

APPENDIX C

CHILDHOOD FAMILY MEALTIME QUESTIONNAIRE (CFMQ)

Instructions: Think back to your family mealtimes up to age 18. Please **WRITE IN THE NUMBER** of the response that corresponds to how you felt during that time. Choose only **ONE** response for each item.

Never	Rarely	Sometimes	Usually	Always
1	2	3	4	
5				

- ___ 1. I remember thinking about my weight when I was young.
- ___ 2. I remember worrying about my weight when I was young.
- ___ 3. When I was young, I was encouraged to diet.
- ___ 4. In my family, we thought and/or talked about physical appearance.
- ___ 5. In my family, we talked about our own or each other's weight.
- ___ 6. In my family, we thought of beauty as depending a lot on weight.

APPENDIX D

DUTCH EATING BEHAVIOR QUESTIONNAIRE (DEBQ)

Please read the following and decide if you currently do the following:

(1) Never (2) Seldom (3) Sometimes (4) Frequently (5) Very Frequently (6) Not Relevant

- | | | | | | | |
|---|---|---|---|---|---|---|
| 1. If you have put on weight, do you eat less than you usually do? | 1 | 2 | 3 | 4 | 5 | 6 |
| 2. Do you try to eat less at mealtimes that you would like to eat? | 1 | 2 | 3 | 4 | 5 | |
| 3. How often do you refuse food or drink offered because you are concerned about your weight? | 1 | 2 | 3 | 4 | 5 | |
| 4. Do you watch exactly what you eat? | 1 | 2 | 3 | 4 | 5 | |
| 5. Do you deliberately eat foods that are not fattening? | 1 | 2 | 3 | 4 | 5 | |
| 6. When you have eaten too much, do you eat less than usual the following days? | 1 | 2 | 3 | 4 | 5 | 6 |
| 7. Do you deliberately eat less in order not to become heavier? | 1 | 2 | 3 | 4 | 5 | |
| 8. How often do you try not to eat between meals because you are watching your weight? | 1 | 2 | 3 | 4 | 5 | |
| 9. How often in the evening do you try not to eat because you are watching your weight? | 1 | 2 | 3 | 4 | 5 | |
| 10. When you eat, do you take into account what you weigh? | 1 | 2 | 3 | 4 | 5 | |
| 11. Do you have the desire to eat when you are irritated? | 1 | 2 | 3 | 4 | 5 | 6 |
| 12. Do you have a desire to eat when you have nothing to do? | 1 | 2 | 3 | 4 | 5 | 6 |
| 13. Do you have a desire to eat when you are depressed or discouraged? | 1 | 2 | 3 | 4 | 5 | 6 |
| 14. Do you have a desire to eat when you are feeling lonely? | 1 | 2 | 3 | 4 | 5 | 6 |
| 15. Do you have a desire to eat when somebody lets you down? | 1 | 2 | 3 | 4 | 5 | 6 |
| 16. Do you have a desire to eat when you are angry? | 1 | 2 | 3 | 4 | 5 | 6 |
| 17. Do you have a desire to eat when you are expecting something unpleasant to happen? | 1 | 2 | 3 | 4 | 5 | |
| 18. Do you get the desire to eat when you are anxious, worried or tense? | 1 | 2 | 3 | 4 | 5 | |
| 19. Do you have a desire to eat when things are going against you or when things have gone wrong? | 1 | 2 | 3 | 4 | 5 | |
| 20. Do you have a desire to eat when you are frightened? | 1 | 2 | 3 | 4 | 5 | 6 |
| 21. Do you have a desire to eat when you are disappointed? | 1 | 2 | 3 | 4 | 5 | 6 |
| 22. Do you have a desire to eat when you are emotionally upset? | 1 | 2 | 3 | 4 | 5 | 6 |
| 23. Do you have a desire to eat when you are bored or restless? | 1 | 2 | 3 | 4 | 5 | 6 |
| 24. If food tastes good to you, do you eat more than usual? | 1 | 2 | 3 | 4 | 5 | |
| 25. If food smells and looks good, do you eat more than usual? | 1 | 2 | 3 | 4 | 5 | |
| 26. If you see or smell something delicious, do you have a desire to eat it? | 1 | 2 | 3 | 4 | 5 | |
| 27. If you have something delicious to eat, do you eat it right away? | 1 | 2 | 3 | 4 | 5 | |
| 28. If you walk past a bakery do you have the desire to buy something delicious? | 1 | 2 | 3 | 4 | 5 | |
| 29. If you walk past a snack bar or café, do you have the desire to buy something delicious? | 1 | 2 | 3 | 4 | 5 | |
| 30. If you see others eating, do you also have the desire to eat? | 1 | 2 | 3 | 4 | 5 | |
| 31. Can you resist eating delicious foods? | 1 | 2 | 3 | 4 | 5 | |
| 32. Do you eat more than usual when you see others eating? | 1 | 2 | 3 | 4 | 5 | |
| 33. Do you have the desire to eat when preparing a meal? | 1 | 2 | 3 | 4 | 5 | |

APPENDIX E

BINGE EATING SCALE (BES)

Instructions: Below are groups of lettered statements. Read all of the statements in each group and CIRCLE THE LETTER of the statement that best describes the way you feel about your eating habits. Be sure to circle ONE answer in each group.

1. A. I don't feel self-conscious about my weight or body when I'm with others.
 B. I feel concerned about how I look to others, but it normally does not make me feel disappointed with myself.
 C. I do get self-conscious about my appearance and weight which makes me feel disappointed in myself.
 D. I feel very self-conscious about my weight and frequently, I feel intense shame and disgust for myself. I try to avoid social contacts because of my self-consciousness.

2. A. I don't have any difficulty eating slowly in the proper manner.
 B. Although I seem to "gobble down" foods, I don't end up feeling stuffed because of eating too much.
 C. At times, I tend to eat quickly and then, I feel uncomfortably full afterwards.
 D. I have the habit of bolting down my food, without really chewing it. When this happens I usually feel uncomfortably stuffed because I've eaten too much.

3. A. I feel capable to control my eating urges when I want to.
 B. I feel like I have failed to control my eating more than the average person.
 C. I feel utterly helpless when it comes to feeling in control of my eating urges.
 D. Because I feel so helpless about controlling my eating I have become very desperate about trying to get in control.

4. A. I don't have the habit of eating when I'm bored
 B. I sometimes eat when I'm bored, but often I'm able to "get busy" and get my mind off food.
 C. I have a regular habit of eating when I'm bored, but occasionally, I can use some other activity to get my mind off eating.
 D. I have a strong habit of eating when I'm bored. Nothing seems to help me break the habit.

5. A. I'm usually physically hungry when I eat something.
 B. Occasionally, I eat something on impulse even though I really am not hungry.
 C. I have the regular habit of eating foods, that I might not really enjoy, to satisfy a hungry feeling even though physically, I don't need the food.
 D. Even though I'm not physically hungry, I get a hungry feeling in my mouth that only seems to be satisfied when I eat a food, like a sandwich, that fills my mouth. Sometimes, when I eat the food to satisfy my mouth hunger, I then spit the food out so I won't gain weight.

6. A. I don't feel any guilt or self-hate after I overeat.
 B. After I overeat, occasionally I feel guilt or self-hate.
 C. Almost all the time I experience strong guilt or self-hate after I overeat.

7. A. I don't lose total control of my eating when dieting even after periods when I overeat.
 B. Sometimes when I eat a "forbidden food" on a diet, I feel like I "blew it" and eat even more.
 C. Frequently, I have the habit of saying to myself, "I've blown it now, why not go all the way" when I overeat on a diet. When that happens, I eat even more.
 D. I have a regular habit of starting strict diets for myself, but I break the diets by going on an eating binge. My life seems to be either "feast" or "famine".

8. A. I rarely eat so much food that I feel uncomfortably stuffed afterwards.
 B. Usually about once a month, I eat such a quantity of food, I end up feeling very stuffed.
 C. I have regular periods during the month when I eat large amounts of food, either at mealtime or at snacks.
 D. I eat so much food that I regularly feel quite uncomfortable after eating and sometimes a

- bit nauseous.
-
9. A. My level of calorie intake does not go up very high or go down very low on a regular basis.
 B. Sometimes after I overeat, I will try to reduce my calorie intake to almost nothing to compensate for the excess calories I've eaten.
 C. I have a regular habit of overeating during the night. It seems that my routine is not to be hungry in the morning but overeat in the evening.
 D. In my adult years, I have had week-long periods where I practically starve myself. This follows periods when I overeat. It seems I live a life of either "feast or famine".
-
10. A. I usually am able to stop eating when I want to. I know when "enough is enough".
 B. Every so often, I experience a compulsion to eat which I can't seem to control.
 C. Frequently, I experience strong urges to eat which I seem unable to control, but at other times I can control my eating urges.
 D. I feel incapable of controlling urges to eat. I have a fear of not being able to stop eating voluntarily.
-
11. A. I don't have any problem stopping eating when I am full.
 B. I usually can stop eating when I feel full but occasionally overeat, leaving me feeling uncomfortably stuffed.
 C. I have a problem stopping eating once I start and usually I feel uncomfortably stuffed after I eat a meal.
 D. Because I have a problem not being able to stop eating when I want, I sometimes have to induce vomiting to relieve my stuffed feeling.
-
12. A. I seem to eat just as much when I'm with others (family, social gatherings), as when I'm by myself.
 B. Sometimes, when I'm with other persons, I don't eat as much as I want to eat because I'm self-conscious about my eating.
 C. Frequently, I eat only a small amount of food when others are present, because I'm very embarrassed about my eating.
 D. I feel so ashamed about overeating that I pick times to overeat when I know no one will see me. I feel like a "closet eater".
-
13. A. I eat three meals a day with only an occasional between meals snack.
 B. I eat three meals a day, but I also normally snack between meals.
 C. When I am snacking heavily, I get in the habit of skipping regular meals.
 D. There are regular periods when I seem to be continually eating, with no planned meals.
-
14. A. I don't think much about trying to control unwanted urges.
 B. At least some of the time, I feel my thoughts are pre-occupied with trying to control my eating urges.
 C. I feel that frequently I spend much time thinking about how much I ate or about trying not to eat anymore.
 D. It seems to me that most of my waking hours are pre-occupied by thoughts about eating *or* not eating. I feel like I'm constantly struggling not to eat.
-
15. A. I don't think about food a great deal.
 B. I have strong cravings for food but they last only for brief periods of time.
 C. I have days when I can't seem to think about anything else but food.
 D. Most of my days seem to be pre-occupied with thoughts about food. I feel like I live to eat.
-
16. A. I usually know whether or not I'm physically hungry. I take the right portion of food to satisfy me.
 B. Occasionally, I feel uncertain about knowing whether or not I'm physically hungry. At these times it's hard to know how much food I should take to satisfy me.
 C. Even though I might know how many calories I should eat, I don't have any idea what is a "normal" amount of food for me.

APPENDIX F

BRIEF POSITIVE AND NEGATIVE AFFECT SCALE (PANAS)

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to the word. Indicate to what extent you generally feel this way after eating. Use the following scale to record your answers.

1	2	3	4	5
very slightly or not at all	a little	moderately	quite a bit	extremely
_____	interested		_____	irritable
_____	distressed		_____	alert
_____	excited		_____	ashamed
_____	upset		_____	inspired
_____	strong		_____	nervous
_____	guilty		_____	determined
_____	scared		_____	attentive
_____	hostile		_____	jittery
_____	enthusiastic		_____	active
_____	proud		_____	afraid

VITA

Name: Amanda Jane Pfeffer

Address: Department of Educational Psychology
College of Education
Texas A&M University, MS 4225
College Station, TX 77843-4225

Email Address: apfeffer@tamu.edu

Education:

B.A., Psychology, Texas A&M University, 2002

M.S., Educational Psychology, Texas A&M University, 2005

Ph.D., Counseling Psychology, Texas A&M University, 2009

APA-Accredited Pre-Doctoral Internship:

Appalachian State University Counseling and Psychological
Services center, 2007-2008.