THE RELATIONSHIP OF ASSERTIVENESS AND BULIMIA TO PSYCHOLOGICAL SEPARATION

DISSERTATION

Presented to the Graduate Council of the University of North Texas in Partial Fulfillment of the Requirements

For the Degree of DOCTOR OF PHILOSOPHY

By

Mary Ann O'Loughlin, B.A., M.S.
Denton, Texas
August, 1995
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The purpose of this study was to examine how parental separation is related to eating disturbances and assertiveness in females who struggle with bulimic symptoms. Two-hundred ninety-two undergraduate females from the University of North Texas comprised the subject group. Using pen and paper measures of assertiveness, bulimia, and parental separation, support was found for the prediction that there would be a relationship between assertiveness and parental separation. Likewise, partial support was found for the prediction that there would be a relationship between bulimia and parental separation. Parental separation was found to affect levels of bulimia and assertiveness. Finally, it was found that subjects endorsed greater emotional independence from fathers than from mothers.
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To my clients, who continue to teach me what formal education cannot.
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Eating disorders have increasingly become the focus of national attention during the last few decades. Bulimia Nervosa, in particular, is reportedly on the rise (Hart & Ollendeck, 1985). Among college age females, estimates of prevalence rates have ranged from 2% to as high as 18% (Thelen, McLaughlin-Mann, Pruitt & Smith, 1987). The disorder of bulimia nervosa is one of the few disorders of presumably psychogenic origin which can result in severe medical complications such as dental problems, dehydration, electrolyte disturbances, gastro-intestinal ruptures, cardiac arrhythmia/arrest and even death (Goode, 1983; Mitchell, Seim, Colon & Pomeroy, 1987). As some researchers report that the incidence of bulimia has reached epidemic proportions (Hart & Ollendeck, 1985), it is clear that the study of this disorder has become an extremely salient research issue. The research to date seems to concentrate in three broad areas bio-physical, individual personality factors, and family relationship factors. This study will focus on personality factors and family relationships.

Certain personality characteristics of bulimia have been well-documented in the research: Low self-esteem,
feelings of inadequacy, external locus of control and strong needs for external social approval are but a few of those noted (Boskind-Lodahl, Serlin & White, 1978; Bruch, 1973; Dunn & Ondercin, 1981; Pyle, Mitchell, Halverson, Nueman & Goff, 1983). One characteristic, lack of assertiveness, has often been mentioned in conjunction with eating disorders. Yet few empirical studies have been done which specifically examine the relationship of this personality feature to bulimia. The studies which have been conducted offer results which are somewhat inconsistent (Lane, 1991; Mize, 1989; Fisher-McCanne, 1985; Williams, Chamove & Millar, 1990). Therefore, the nature of the relationship between assertiveness and bulimia remains obscure. In particular, future research examining the role of any modulating factors which help clarify the connection between lack of assertiveness and bulimia is needed.

Another major area of research focuses primarily on family functioning as it relates to eating disorders (Kog & Vandereycken, 1985). Hilde Bruch (1973) was among the first to suggest that a connection existed between the eating disorder symptoms and early relationship with a parent figure. Subsequent studies of families of persons with bulimia report low cohesiveness among family members (Johnson & Flach, 1985; Kagan & Squires, 1985) as well as high levels of internal familial discord and conflict (Humphrey, 1986; Ordman & Keirschenbaum, 1986). However,
the sources of such conflict and discord have rarely been examined, and when efforts have been made to study these sources, the findings have been quite muddled.

For example, in several studies reviewed, the quality of the relationship between bulimic daughters and their fathers suggested the presence of moderate to severe disturbance in this dyad (Kog & Vandereycken, 1985; Steiger, Van der Feen, Godstein & Leichner, 1989; Strober, 1981). Yet anecdotal clinical descriptions by Bruch (1973) and others (Minuchin, Rosman, & Baker, 1978) have long postulated an enmeshed and conflictual mother-daughter relationship in bulimic families. What is certain is that family conflict is highly correlated to bulimia. Questions remain as to what systemic and interpersonal dynamics influence the etiology of bulimia the most. In particular, differences between bulimic persons' relationships with mother and father have not yet been explored.

This question may best be examined in light of the constructs entailed in attachment and separation theory, first set forth by John Bowlby (1977). Attachment may be described as the development of an internalized representation, or working model, of a consistent parent figure. According to Bowlby, these models are formed early in life, and endure throughout the life span. Separation, as described by Ainsworth (1979), is another developmental process which is intertwined with the attachment process.
During the separation phase of development, the child begins to move away from the parent figure(s) both physically (through locomotion) and emotionally. The success of this developmental phase depends in part on the security of the attachment initially developed. Indeed, attachment is most frequently measured by way of the relative success/unsuccess of the separation process (Hansburg, 1972; Hoffman, 1984). Thus, the quality of attachment to and negotiation of separation from a given parent figure affects the individual’s later functioning in life.

This study proposes to examine how attachment, as measured by successful separation from mother and father, is related to levels of assertiveness in bulimic subjects. Prior to this, however, a background must first be provided as to the constructs that will be examined.

Background of the Problem

In college populations, estimates of the frequency of eating disorders range from 4% to 13% (Katzman, Wolchik & Braver, 1984). Yet in some studies, the incidence is reported to be much higher. Grace, Jacobson and Fullager (1985), using a college sample of 280 women, found an incidence of 17.5%, strikingly high in comparison to other studies. The difference appears to lie primarily in the type of criteria used to define the eating disorders (Lane, 1991). Bulimia appears to affect primarily white upper middle class women (Garfinkle, Modlofsky & Garner, 1980).
Bulimia is much more frequently diagnosed in females than in males, and the incidence for this disorder in males is thought to be minimal (Halmi, Faulk & Schwartz, 1981; Schneider & Agras, 1987). In addition, the disorder is known to occur much more often in adolescents and young adults than it occurs in older women (Schlesier-Stropp, 1984). The mean age of onset for the disorder is estimated to be 18, which is also the approximate age of most college freshmen. Thus, the incidence reported among college age females may be very different than in the general population.

Although anorexia nervosa has been well documented in this century, extensive descriptions of bulimia have only come to light in the last two decades. However, bulimia nervosa appears to be increasing in prevalence (Streigel-Moore, Silberstein & Rodin, 1986), and is more often diagnosed than is anorexia nervosa (Mitchell, Pyle & Eckert, 1987). The research on bulimia has been sufficient to distinguish it from anorexia nervosa and to substantiate a comprehensive description of the syndrome as it is set forth in the DSM III-R (Grace, et al., 1985). The Diagnostic and Statistical Manual of Nervous and Mental Disorders (DSM III-R) (American Psychiatric Association, 1987) delineates the syndrome of bulimia nervosa according to the following criteria:
a.) recurrent episodes of binge eating
   (rapid consumption of a large amount of
   food in a discrete period of time)

b.) a feeling of lack of control over
    eating behavior during the eating binges

c.) purging via self-induced vomiting, use
    of laxatives or diuretics, strict
    dieting or fasting or vigorous
    exercise in order to prevent weight gain

d.) There must be a three month history of
    at least two binge episodes per week

These criteria provide specific and narrow parameters within
which bulimia can be identified, both for purposes of
research as well as treatment.

Despite the rather definitive criteria used in DSM III-R,
there remains some question as to whether bulimia may be
viewed as a point on a continuum of eating disorders, with
no concern for weight and normal eating at one end of the
spectrum, and full blown bulimia or anorexia at the other
end of the spectrum (Mintz & Betz, 1988; Rodin, Silberstein,
& Streigel-Moore, 1985). For example, using the DSM III-R
criteria, someone who has binged and vomited 24 times during
a three month period may be considered as bulimic, while
someone who has binged and taken massive quantities of
laxatives only 8 times in a three month period is not. Yet
the second individual may have a more severe and
debilitating eating disorder, because of the nature of purgative methods used. Likewise, there are many individuals who may purge any amount of food eaten, and may purge very frequently, but they do not binge. Such individuals often do not have a low enough body weight to meet the criteria for anorexia nervosa, yet cannot be diagnosed as bulimic. Mintz and Betz (1988) found that out of 643 college women surveyed, 61% were found to have some intermediate form of an eating disorder such as chronic dieting, binging, and or purging. Interestingly, only 33% of these women reported normal, undisturbed eating. In a study conducted by Grace, Jacobson and Fullager (1985), no differences were found between purging bulimics and non-purging bingers on personality or demographic variables. Based on previous research, Kalodner & Scarano (1992) identify six classes of eating disorders which have been proposed to be included on the continuum: normal eaters, chronic dieters, bingers, purgers, sub threshold-level bulimia, and clinically diagnosed bulimia. However, Garner, Olmstead, Polivy and Garfinkle (1984) found that as the severity of eating disorder symptoms approached the criteria necessary for diagnosis, there was a corresponding sharp increase in personality pathology, thus introducing some question about the continuum theory. Given that the bulk of the research appears to fall on the side supporting the continuum theory (Grace, Jacobson & Fullager, 1985;
Kalodner & Scarano 1992; Mintz & Betz, 1988), this study will assume that eating disorders occur along a continuum of severity.

As mentioned, the research has focused on two broad areas which will be of importance to this study, that of personality characteristics and familial characteristics as they relate to bulimia. With regard to the former, individuals with bulimia consistently demonstrate higher levels of depression than control groups (Katzman & Wolchik, 1984). In one study conducted by Gartner, Marcus, Halmi & Loranger (1989), 57% of eating disorder patients were found to have some sort of Axis II diagnosis. The most common diagnoses included borderline personality disorders, self-defeating personality disorders and avoidant personality disorders. In this same study, 40% of the subjects actually fit the criteria for two or more Axis II diagnoses. Overall, persons with bulimia appear to struggle with low self-esteem, high self-expectations, poor body image (Dunn & Ondercin, 1981), and in particular, high needs for approval from others (Dunn & Ondercin, 1981; Katzman & Wolchik, 1984).

Despite the fact that clinical descriptions of characteristics of bulimics usually include a lack of assertiveness (Bruch, 1973; Katzman, Weiss & Wolchik, 1986), few studies have been conducted which specifically address these characteristics (Fisher-McCanne, 1985). Of the
studies reviewed, only five have been done which examine the relationship of eating disorders to assertiveness. Four of these studies provide data which indicate that bulimic subjects do indeed have difficulty asserting themselves.

Williams, Chamove and Millar (1990) used a self-report measure of assertiveness and found that eating disordered subjects reported significantly less assertiveness than did dieting and non-dieting control subjects. However, no significant differences were found between eating disordered subjects and other clinical groups. Yet in an earlier study which also used self-report measures of assertion, Fisher-McCanne (1985) found that bulimic subjects were less assertive than both normal controls and clinical control groups. Using a different approach, Holleran, Pascale and Fraley (1988) found a significant correlation between low levels of self-reported assertiveness and endorsement of eating disordered symptoms among college females. Lane (1991) found a significant relationship between low levels of self-reported assertiveness and scores on the Eating Disorders Inventory subscales of Interoceptive Awareness, Interpersonal Distrust and Ineffectiveness.

Only one study offers some discrepancy with the others. Mize (1989) found no differences in role play or self-report measures of assertion when comparing bulimic subjects to non-clinical controls. However, significant differences were found such that the bulimic group endorsed
more assertive-inhibiting cognitions than did the control group. Interestingly, the population used for this study consisted of individuals who presented for treatment of an eating disorder at a large medical center. It is not clear whether treatment of the eating disorder had already begun when the data from assertiveness measures was gathered. B.F. Skinner (1981) contended that outward behaviors are easily modified via appropriate reinforcement. Such might especially be the case when a hospital staff observes assertiveness in a patient (Pope and Hudson, 1984). However, cognitions are by nature, less observable. In addition, cognitive behavioral theory postulates that certain cognitive schemes can develop as a result of previous life experiences (Beck, Freeman & Associates, 1991). Thus, assertion-inhibiting cognitions may reflect long-standing, internalized patterns of interpersonal responding, whereas outward behaviors may be modified more readily given the appropriate external environment. Such internal perceptions, attitudes and beliefs are often shaped by early experiences in family environments. (Bowlby, 1977; Beck, Freeman & Associates, 1991). Remembering that the construct of attachment deals primarily with an individual's internalized representation of parent figures, such representations may play a role in shaping perceptions and behaviors in relation to assertiveness in persons with bulimia.
As was mentioned, one of the areas most frequently studied with regard to bulimia nervosa is that of family functioning and family relationships. Although theorists have long suggested that the etiology of eating disorders includes disturbed parent/child interactions (Bruch, 1973; Humphrey, 1985; Kog & Vandereycken, 1985; Minuchin, Rosman & Baker, 1978), surprisingly little research has specifically examined the relationships of eating disordered individuals to parental figures. To this end, the theoretical construct of attachment and the negotiation of separation may be of benefit in shedding light on the nature of the parent-child relationship specific to bulimic families.

Only three studies were found in the research which examines the relationship of parental attachment and/or separation to the development of eating disorders. In the most recent to date, Kenny and Hart (1992) used the Parental Attachment Questionnaire (PAQ), and compared scores on this measure to scores on the Eating Disorder Inventory (EDI). Women who were clinically diagnosed as having an eating disorder evidenced less secure attachment and less adaptive functioning than a control group of college females. In addition, greater adaptive functioning, stronger feelings of effectiveness and less preoccupation with weight and bulimic behaviors were positively associated with parental support of autonomy, warm relations with parents and general parental emotional support.
Armstrong and Roth (1989) used the Separation Anxiety Test (Hansburg, 1972) to compare eating disordered subjects to normal controls who were in the process of struggling with identity formation. Scores on the SAT revealed that eating disordered subjects evidenced anxious attachment, whereas the control group did not. As such, eating disordered subjects were found to react to mild separation stimuli just as they would react to strong separation stimuli. Translated into current functioning, this could mean that because of early parent-child interactions, eating disordered subjects have difficulty in their ability to emotionally discriminate minor social/interpersonal disruptions from major losses. Indeed, this may explain why bulimics demonstrate knowledge of what assertive behaviors are, but either fail to carry them out or report assertiveness-inhibiting thoughts (Mize, 1989). However, this study examined the quality of attachment to only one parent figure (the mother), and it tells us little about the differential attachment to mother and father as it relates to the development of an eating disorder.

The third study is the only one which examined the relationship to both mother and father. Freidlander and Seigal (1990) used the Parental Separation Inventory (Hoffman, 1984), which yields separate scores for both parents. Unfortunately, the methodology used in this study was not designed to specifically address the issue of
whether there is a difference in separation from mother versus separation from father for the bulimic individual. Generally, the study did find a strong relationship between dependency conflicts with parents, functional difficulties in separation from parents, and scores on the EDI. For persons with bulimia, the relationship between attachment or separation difficulties with mothers versus with fathers has not yet been addressed.

 Fewer studies have been done which examine the relationship of parental attachment and subsequent separation to levels of assertiveness. Of the studies examined, Kenny (1987) found a significant, positive relationship between females college freshmen's reported quality of attachment to parents and level of assertiveness. However, this study did not include the dimension of bulimia as a significant variable in the relationship between assertiveness and attachment. Yet two studies reviewed do appear to provide substantiation for the idea that levels of assertiveness in bulimic persons might be somehow affected by reported degree of parental separation. Friedlander and Seigal (1990) found that separation difficulties were strongly predictive of the same characteristics of bulimia that Lane (1991) found in persons scoring low on an assertiveness measure. Yet the relationship between separation, assertiveness and bulimia remains unexplored by empirical investigation.
Statement of the Problem

Despite the vast amount of research generated in recent years about eating disorders, little information is available regarding the nature of relationships between assertiveness, separation and eating disorders. Of initial concern is the connection, if any, between assertiveness and bulimia nervosa. The majority of empirical studies and anecdotal clinical reports support the idea that bulimic individuals demonstrate less assertiveness than non-bulimic individuals. Yet discrepancies exist. Therefore, this question needs further examination.

Three studies have examined the nature of the relationship between attachment and/or separation and eating disorders (Armstrong & Roth, 1989; Freidlander & Seigal, 1990; Kenny & Hart, 1992). All three suggested that eating disordered persons have difficulty in this area. What remains to be seen is whether such difficulties in the separation process might somehow mediate subsequent personality characteristics often associated with bulimia, such as assertiveness. It is therefore unknown whether parental separation may act as a qualifying mediator to the level of assertiveness found in persons who are bulimic.

Finally, no studies have examined the differential levels of separation to both mother and father in relation to bulimia. Such an examination may reveal something about
the source of conflict and hostility so often reported in bulimic families (Kog & Vandereycken, 1985).

This study will be designed to examine how parental separation is related to bulimia, and how parental separation might be related to levels of assertiveness in persons who are bulimic. Given these goals, specific questions can be raised which may provide information as to the nature of these constructs. First, is there a relationship between levels of assertiveness and levels of bulimia in a college population of women? Second, can assertiveness be predicted by a linear combination of scores on a parental separation measure? Can bulimia be predicted by a linear combination of scores on a parental separation measure? Are there significant differences between high and low bulimic groups or high and low assertiveness groups on a parental separation measure? Finally, do persons in high or low bulimic and assertiveness groups differ in aspects of separation from mothers versus fathers?

Purpose of the Study

Jeffrey Hoffman (1984) has proposed that with regard to attachment, the process of separation and individuation from parents can result in either positive or negative emotional feelings of closeness to parent figures. He developed a self-report instrument which assesses the degree and kind of separation that a young adult has negotiated with his/her parents. Using the Parental Separation Inventory (Hoffman,
1984), emotional independence may be defined as the freedom from an excessive need for approval, closeness, togetherness and emotional support in relation to one’s parents. Conflictual independence may be defined as freedom from excessive guilt, anxiety, mistrust, responsibility, inhibition, resentment and anger in relation to the adolescent’s parents. For individuals endorsing bulimic symptoms, this study examined parental separation as reflected by the emotional and conflictual independence scales of the PSI as they relate to both mother and father. These scales were chosen on the basis of previous research, which suggests that these two scales of the PSI best represent structural equation factor loadings pertaining to separation-individuation (Rice, Cole & Lapsley, 1990). Further, levels of emotional independence and conflictual independence were examined as they related to assertiveness (or the lack thereof). Bulimia was defined using the Bulit-R (Thelen, Farmer, Wonderlich & Smith, 1991), which was designed to identify persons who fit the DSM-III-R criteria for Bulimia Nervosa (American Psychiatric Association, 1987). Assertiveness was measured using the College Self-Expression Scale, (Galassi, DeLo, Galassi & Bastien, 1974) designed to measure general assertiveness in college students.

This study may provide much needed understanding as to the source of familial conflict so often reported in the
histories of persons with bulimia. With this awareness, clinicians may be alerted to specific familial relationships which could be addressed as part of a treatment program for bulimia. In addition, if early attachment patterns and subsequent separation difficulties are found to be consistently related to the development of assertiveness problems or bulimia in later years, such patterns may be intervened upon prior to the appearance of these symptoms.

Hypotheses

**Hypothesis 1.** There will be a significant relationship between scores on the Bulit-R and scores on the assertiveness measure.

**Hypothesis 2.** There will be a significant linear relationship between assertiveness and the four PSI scales of Conflictual independence—mother, Conflictual independence—father, Emotional independence—mother and Emotional independence—father.

**Hypothesis 3.** There will be a significant linear relationship between bulimia and the four PSI scales of Conflictual independence—mother, Conflictual independence—father, Emotional independence—mother and Emotional independence—father.

**Hypothesis 4.** There will be significant differences between high and low bulimic groups on the four PSI scales of Conflictual independence—mother, Conflictual
independence-father, Emotional independence-mother and Emotional independence-father.

Hypothesis 5. There will be significant differences between high and low assertiveness groups on the four PSI scales of Conflictual independence-mother, Conflictual independence-father, Emotional independence-mother and Emotional independence-father.

Hypothesis 6. There will be significant differences between the mother and father scales of the PSI as these relate to Bulimia and Assertiveness.

Definitions

Assertiveness—-the willingness and ability to express feelings, ranging from love, affection, admiration, approval and agreement to anger, disagreement, dissatisfaction and annoyance, as well as the absence of over-apologizing, excessive interpersonal anxiety, and exaggerated concern for the feelings of others (Galassi, DeLo, Galassi & Bastien, 1974).

Attachment—-refers to the term used by John Bowlby (1977). In early childhood, attachment is characterized as the tendency to seek proximity and closeness to the caregiver. The degree to which this need is met in a consistent and nurturing manner forms the basis of attachment in later life.

Attachment/Separation—the combination of the two processes described in this section.
Binging—rapid consumption of large quantities of food within a short period of time (American Psychiatric Association, 1987).

Bulimia Nervosa—an eating disorder which fits the DSM-III-R criteria for bulimia nervosa (American Psychiatric Association, 1987).

Bulimic families--families which contain one or more persons in the nuclear family who have bulimia nervosa.

Bulimic subject group--all subjects in this study who’s scores fall in the top one-third of all scores on the BULIT-R.

Conflictual independence--as measured by the PSI the degree of freedom from excessive guilt, anxiety, mistrust, responsibility, inhibition, resentment and anger in relation to one’s parents (Hoffman, 1984).

Disordered eating--This refers to eating patterns which are not considered normal, including chronic dieting, binging, and or purging, which may or may not meet the DSM III-R criteria for bulimia nervosa or anorexia nervosa (American Psychiatric Association, 1987; Kalodner & Scarano, 1992; Mintz & Betz, 1988).

Eating disorders--disorders which fit the DSM-III-R criteria for either bulimia nervosa or anorexia nervosa (American Psychiatric Association, 1987).

Emotional independence--as measured by the PSI; the freedom from an excessive need for approval, closeness,
togetherness and emotional support in relation to parents (Hoffman, 1984).

Purging--refers to any attempt to avoid weight gain due to a binge, including self-induced vomiting, laxative abuse, diuretic abuse, fasting, and excessive exercising (American Psychiatric Association, 1987).

Separation--refers to the process whereby children begin to move away from parents physically and emotionally. The degree to which separation is positively facilitated by the parent(s) provides a framework for security and independence, both emotionally and functionally, in later life (Ainsworth, 1979).

Review of the Related Literature

In order to better understand how attachment and separation might be related to levels of assertiveness in persons with bulimia, it will be necessary to provide a background review of the constructs utilized in this study. In this chapter, an overview of bulimia nervosa will be provided, along with various etiological explanations as to the development of bulimia. In addition, personality factors of bulimic persons are explored, along with research which covers the dynamics of bulimic families. Next, the constructs of attachment and separation are delineated. The theoretical tenets of several authors, such as Bowlby (1977), Mahler (1968), and Blos (1979) are provided so that a deeper understanding can be reached regarding
attachment/separation and how these processes might relate to assertiveness and bulimia. In addition, studies which specifically examines the relationship between attachment and bulimia, as well as attachment and assertiveness are presented, along with the corresponding questions which remain unanswered by the research to date. Finally, this review will cover the existing research which relates assertiveness and bulimia.

Overview of Bulimia Nervosa

Bulimia is a clinically recognized pattern of disordered eating. The DSM-II-R (American Psychiatric Association, 1987) describes bulimia as consisting of 3 essential features, two of which are behavioral, one which is primarily subjectively experienced. The binge, which is repetitive, entails the ingestion of large quantities of food within a discriminate period of time. The purge, often considered as the second leg of the symptom cycle, consists of any method designed to prevent weight gain. As such, one may include relatively common weight loss methods, such as fad diets, fasting, intensive exercise, as well as the more radical responses, such as self-induced vomiting, laxative abuse, enema use and/or diuretic use.

The subjective feature of this disorder consists of a feeling that the eating binges cannot be stopped or controlled. The fourth criteria covered in the DSM-III-R circumscribes the severity of the symptoms necessary to make
a diagnosis, by imposing constraints on the duration of symptoms (a minimum of three months) and the frequency of symptoms (at least two binge episodes per week). Reports of the incidence of bulimia fluctuate widely, and prevalence studies have been fraught with discrepancies as to just how common the disorder is (Katzman, Wolchik & Braver, 1984). Some researchers have found the frequency of bulimia to be as high as 17.5% in college population (Grace, Jacobson & Fullager, 1985), others as high as 68% (Halmi, Faulk & Schwartz, 1981). Some authors have suggested that these discrepancies are primarily due to differences in the criterion used to define bulimia nervosa (Katzman, Wolchik & Braver, 1984; Shapiro, 1988; Lane, 1991). Since not all eating disorders fit the DSM-III-R criteria for either bulimia or anorexia, the DSM-III-R also includes a category labeled "eating disorders not otherwise specified" (American Psychiatric Association, 1987, p. 71). This category is intended to include those disorders on the continuum of eating disorders not severe enough or frequent enough to warrant a diagnosis of bulimia nervosa or anorexia nervosa (Mintz & Betz, 1988). The idea of a continuum of eating disorders has been most recently suggested by Kalodner and Scarano (1992). These authors propose that normal eating falls at one end of the continuum, while clinically diagnosed anorexia nervosa and bulimia nervosa fall at the most extreme end of the continuum. Indeed, Mintz and Betz
(1988) have found that preoccupation with weight increases as the severity of the eating disorder increases. Thus, the concept of a continuum of eating disorders appears to be fairly substantiated.

Bulimia appears to affect primarily white, upper middle-class women (Garfinkle, Modlofsky & Garner, 1980). Because of the scarcity of males who report bulimia (Schneider & Agras, 1987), the research provides few demographics for males with this disorder. However, the incidence of binge eating among males has been estimated to be relatively small, between 1 and 6% (Halmi, Faulk & Schwartz, 1981). The mean age of onset for the disorder is estimated at age 18 (Pyle, Mitchell, Halverson, Newman & Goff, 1983). Often times, the bulimic pattern may begin after an attempt at dieting (Polivy & Herman, 1987). Although the symptoms of bulimia may wax and wane over the years, research tends to support clinical observations that by the time a person with bulimia seeks treatment, the syndrome has been present for about four years (Fairburn & Cooper, 1982).

Persons with bulimia frequently report that family members are obese (Garfinkle, et al., 1980), particularly the mothers of bulimic subjects (Pyle, Mitchell & Eckert, 1981). In addition, a familial background of other compulsive disorders, such as alcoholism, is also found
frequently in the histories of persons who have bulimia (Kog & Vandereycken, 1985).

Proposed Etiologies of Bulimia Nervosa

Several psychodynamic explanation have been postulated as to the development of anorexia nervosa, and most descriptions of the etiology of bulimia appear to be extrapolated from these theories. As such, bulimia has been described as a symbolic re-enactment of an unconscious desire for oral impregnation via an ingestion of food (Pope & Hudson, 1984). Accompanying this wish is an opposing fear of such impregnation. Hence, the ritualistic gluttony and purging associated with bulimia was thought to be a manifestation of this unconscious ambivalence.

Hilde Bruch (1973) was among the first to reject this psychoanalytic conceptualization. She focused instead on patterns of interactions between the mother and the child who eventually becomes bulimic. Bruch suggested that bulimia arises out of the struggle to gain a sense of identity, autonomy and control, independent of the parent-figure. From this perspective, bulimia still has its roots in early childhood experiences with a primary caregiver. Instead of giving the child what he/she truly wants or needs, the caregiver projects her own needs onto the child. Thus, the child cries when cold, and the caregiver responds by changing the diaper. The child is hungry, and the caregiver responds by trying to cuddle the child. This
disregard of the child's self-initiated signals which reflect his/her true needs must be a consistent event, otherwise the groundwork for an eating disorder would not be laid.

Because of these consistent misinterpretations, the internal need states of the child are never matched to the appropriate responses which satisfy the need. Interoceptive awareness, the capacity of the child to distinguish and interpret internal need states, is never established. This in turn, affects the development of a separate and autonomous identity within the child. Such children typically are unable to separate adequately from their mothers. In adolescence, the battle for a separate identity and for self-regulation is enacted via the bulimic symptoms (Bruch, 1973).

Minuchin, Rosman and Baker (1978) studied families with psychosomatic related illnesses which included eating disorders. These theorists found that such families are often characterized as enmeshed, over-protective, rigid, and avoidant of open conflict (yet covertly highly conflictual). The etiology then, included a struggle for control and autonomy, but within the entire family system. Indeed, in these family systems, the symptoms of the eating disordered child are often associated with marital discord, which remains hidden by a constant preoccupation with the identified patient.
Along similar lines, Humphrey (1986) has suggested that the binge purge cycle provides an apt metaphor for pervasive, family-wide deficits and excesses. She utilizes a mixture of psychodynamic theory and family systems perspectives to describe the development of eating disorders. The bulimic family, she suggested, is deficient in nurturance, soothing and empathy. As a result, food cravings are metaphorical for these unmet needs. Family members are thought to chaotically purge themselves by taking out frustration and anger on one another without resolution, structure or focus. Binge eating is conceptualized as a substitute for maternal nurturance which was not adequate during development. The bulimic turns to food rather than to people or internal resources in order to find nurturance and to regulate dysphoric affective states. In short, the family environment to which bulimics are exposed precludes the optimal development of a stable identity, autonomy and self efficacy (Strober & Humphrey, 1987).

**Personality Factors Associated With Bulimia**

Certain personality characteristics associated with bulimia have been well documented. Researchers have noted that feelings of low self-esteem, a severe subjective sense of personal inadequacy, an external locus of control, and an over-concern for social approval are characteristic of persons with bulimia (Boskind-Lodahl, Serlin & White, 1978;
Bruch, 1973; Grace et al., 1985). In addition, persons with bulimia appear to struggle with impulse control not only in eating, but also in areas such as stealing, promiscuity, and drug/alcohol abuse (Grace, et al., 1985; Coover, Kinder & Thompson, 1989). Dunn and Ondercin (1981) found that persons who binge report a greater tension and suspiciousness, and less emotional stability.

Persons with bulimia frequently report difficulties in interpersonal relationships, in part due to poorer social adjustment, and in part due to the syndrome itself (Thelen, Farmer, McLaughlin-Mann & Pruitt 1990). The practice of bulimia in its most severe form requires considerable time and energy, and much attention is devoted to thinking about and planning binge/purge episodes (Rissuto, 1985). Thelen (et al., 1990) found that females scoring high on pen and paper measures of bulimia also report significantly more difficulties than normal controls in relationships with men, but not in relationships with women. Overall, the research generally supports the view that the lives of persons with bulimia are fraught with difficulties in social relationships.

Individuals with bulimia also tend to report more somatic disturbances than normal controls, but do not appear to be more prone to physical illnesses than do normal controls (Weiss & Ebert, 1983). In addition, Katzman and Wolchik (1984) found that when compared to controls, persons
with bulimia were significantly more depressed, had poorer body images, higher self-expectations and a higher need for approval. Overall, persons with bulimia demonstrate poorer psychological adjustment and higher levels of personal distress than do normal controls (Ordman & Keirschenbaum, 1986).

The research also suggests a relationship between affective disorders and bulimia. Szmukler (1987) found a significant relationship between bulimia and depression. Some researchers have estimated that up to 70% of the individuals who have eating disorder also have relatives with affective disorders (Hudson, Pope, Jones & Yurgelin-Todd, 1983).

Connections have been examined between eating disorders and personality disorders as well, and researchers have generally found concordance rates between bulimia and Axis II diagnoses to range from 28% to 97% (Gartner, Marcus, Halmi & Loranger, 1989). The most commonly diagnosed personality disorder appears to be borderline personality disorder, with self-defeating and avoidant personality disorders running second and third, respectively (Piran, Lerner, Garfinkle, Kennedy & Brouillette, 1988). Gartner, Marcus, Halmi & Loranger (1989) found that almost 60% of their eating disorder subjects had some form of a personality disorder, while 40% fit the criteria for two or more Axis II diagnoses.
Family Dynamics and Bulimia

Much research has been generated in recent years as to the dynamics and characteristics most often associated with eating disordered families. In an extensive review of the literature, Kog and Vandereycken (1985) report that families of eating disordered individuals generally come from higher social classes, the parents are generally older, other family members demonstrate problems in eating and weight control, and there is a high incidence of both chronic illness and alcoholism in immediate family members, especially in the fathers of bulimic subjects. In addition, Strober (1981) found that on the MMPI, fathers of bulimic-anorectics showed more signs of personality disorder, such as hostility, immaturity, impulsiveness and dyscontrol, than did fathers of restricting anorectics. Mothers of bulimics, on the other hand, evidenced more pronounced depression and general dissatisfaction with the family’s dynamics.

Several researchers have examined the degree of emotional bonding between family members and its relationship to bulimia nervosa (Humphrey, 1986; Johnson & Flach, 1985; Kagan & Squires, 1985). Most report that bulimic families are not well-bonded emotionally. For example, using the Family Environment Scale (FES), Strober (1981) found that bulimic females were more likely to report intra-familial conflict than were restricting anorectics. Marital discord was also more frequently reported. Kagan &
Squires (1985) found that compulsive eating among females was significantly associated with a lack of family cohesion. Humphrey (1983) found that bulimics generally reported greater hostility in their families of origin, and found that the fathers were perceived to be over-controlling.

Johnson and Flach (1985) also used the FES to compare patients who met the DSM-III criteria for bulimia nervosa with control subjects. They found that those with bulimia generally perceived their families as less cohesive than did control subjects. In addition, they reported higher levels of conflict combined with less encouragement for the open expression of feelings in bulimic families than in families of the control group.

In another study which compared bulimic subjects with non-clinical controls, Ordman and Keirschenbaum (1986) used both the Family Adaptability and Cohesion Scale-II (FACES-II) and the FES. Consistent with the previous studies, bulimic subjects reported significantly more familial conflict, and described their families as lacking in the ability to process emotional issues in an open and direct manner. In discussing these findings, the authors suggested that the bulimic symptoms might serve the function of expressing some of the conflict present in the family which is not dealt with openly.

Bulimia has strongly been associated with a lack
of parental affection, as well as with an overly negative, hostile and disengaged pattern of family interaction (Strober & Humphrey, 1987). In an effort to examine the psychodynamic postulate that binge eating is reflective of family-wide deficits in nurturance, soothing and empathy, Humphrey (1986) compared bulimic subjects' reports of parental relationships to control subjects' reports. As hypothesized, it was found that women with bulimia perceived their parents as less nurturing and comforting than did control group subjects. Interestingly, this finding was most consistent for bulimics' relationships with their fathers, and less so with their mothers. Control subjects showed no such pattern.

In a similar vein, Steiger, Van der Feen, Godstein & Leichner (1989) used a measure which assessed eating disordered and control subjects' recollections of parents. Overall, the eating disordered subjects rated fathers as less caring than did controls, and uniformly recalled less empathy from their fathers than did non-bulimic controls. The authors suggested that such difficulties with fathers might be a common theme among eating disordered subjects, and an area in need of further examination.

In sum, the research examining family dynamics and characteristics of persons with bulimia points towards high levels of family conflict, low family cohesiveness, and a lack of support in openly expressing feelings. In
addition, several of the studies reviewed cited incidental findings which suggests the presence of moderate to severe dysfunction in bulimic daughters’ relationships with fathers (Kog & Vandereycken, 1985; Steiger, Van der Feen, Godstein & Leichner, 1989; Strober, 1981).

Attachment and Separation

We have seen that persons with bulimia demonstrate significant difficulties in current interpersonal relationships (Thelen et al., 1990) as well as significant familial dysfunction (Kog & Vandereycken, 1985). Given this, one issue which can be raised concerns the specifics of the emotional bondedness within the families of these subjects, especially in the parent-child dyads. One way of conceptualizing this emotional bondedness is through the construct of attachment and separation. Thus, an overview of these constructs is provided.

For every individual, the role of attachment, separation and individuation in human development is extremely complex and multi-faceted. The successful resolution of the developmental milestone we call separation-individuation has its foundation in the initial attachment to a primary caregiver that an infant develops in the early months of life (Bloom-Feshbach & Bloom-Feshbach, 1987). Perhaps the best known theorist in the area of attachment is John Bowlby (1977). The foundation of his theory rests on his effort to understand and explain the
intense emotional reactions observed in infants from about six months of age (when attachment to a primary caregiver is developed) to about three years of age, when the infant begins to separate from this primary caregiver. Bowlby describes attachment, per se as "any form of behavior which results in persons attaining or retaining proximity to some other differentiated and preferred individual who is usually conceived of as stronger and wiser (Bowlby, 1977, p. 203). Attachment then, is a life-long and enduring process. The tendency to seek proximity and contact with an attachment figure is most apparent in early childhood, but remains present throughout life, and is especially evident in situations which are highly stressful. Bowlby describes certain actions which are commonly observed when one is interacting with an attachment figure, and calls these actions attachment behaviors. Such behaviors are thought to be born out of a specific biological function: protection from predators. While attachment behaviors in children typically involve movement (both physically and emotionally) towards a significant care-giver, the opposing developmental construct of separation may be seen via exploratory movement away from the primary caregiver and into the surrounding environment. During the process of maturation, every individual vacillates between the opposing tendencies of attachment and separation.
Using Bowlby’s initial construct of attachment, Ainsworth (1979) suggested that individuals ultimately develop one of three attachment patterns. She described secure attachment as the individual’s success in building an internalized representational model of herself/himself as being capable and worthy. It is facilitated by an early environment in which the child’s needs are consistently and appropriately met by the parents, and in which the child is free to explore the world without fear of rejection, abandonment or harm. Anxious attachment is characterized by an early care-giving relationship wherein the child feels uncertain as to the availability of the care-giver in times of need. The long-standing pattern developed from this experience is often represented in adulthood by involvement in volatile, dependent and unstable relationships. Finally, an early environment characterized by abandonment, either emotionally or physically, can result in detachment, or anxious avoidant attachment, as it is sometimes referred to. These adults are likely to be unable to form close emotional bonds with significant others.

Borrowing from psychoanalytic theory, Bowlby (1977) explains the enduring aspect of attachment experiences in terms of a process of identification, and internalization of introjects. Simply put, an individual adopts the same attitude and self-perception about self as his/her parents had. The representational models of attachment figures and
of self present in childhood are thought to persist into adulthood.

Mahler (1968) has also described a process of psychological development referred to as separation/individuation, which is based on the infant’s relationship with its mother or primary care-giver. The child depends upon the interaction in this important relationship to develop a healthy capacity for functioning independently in later life. The process, according to Mahler, spans the first three years of life. It begins with an exclusive dependency-based relationship between the child and the primary care-giver, wherein the infant is unable to distinguish between itself and other. Mahler terms this phase of the process as symbiosis. As the child develops physically, he/she moves out of this initial state and into exploration of the environment, through locomotion and independent activity. Here is where the task of development is most critical. The child relies on the previous (ideally, positive) relationship with the mother in order to feel secure enough to explore the world around him/her. This process allows the child to develop a sense of consistency in the parent/child relationship, resulting in a stabilized, ongoing internal representation of the attachment figure. With the help of this internalized security, the child continues to differentiate and develop a sense of individuality. In this process of
separation/individuation, we see three vital components: that of behavioral independence via exploration and activity, a developing sense of differentiation and subsequent unique subjective identity, and a reduction in emotional dependence. With respect to the aspect of emotional independence, psychoanalytic theory has suggested that if during the separation/individuation process, the primary care-giver's response to the child is filled with consistent ambivalence, rejection or undue anxiety, the development of an internal representation of an attachment figure may be incomplete or inadequate. Such a pattern of interaction may result in a conflictual dependence on the part of the child, as opposed to a healthy balance of dependence/independence.

Blos (1979) postulated an extension of Mahler's theory of separation/individuation into the adolescent years. These years are critical to development because of the amount and rapidity of change which takes place during adolescence. Physiologically, the onset of puberty speeds up the development of the adolescent he/she begins to interact with the world more independently and in society more frequently. The adolescent also begins to separate from the family and develop intense peer relationships. Blos refers to this period as the second separation/individuation phase, and speculates that during this time the adolescent's personality organization is quite vulnerable. Healthy
psychological development requires that the adolescent successfully disengages from the parents, both emotionally and behaviorally. This process is characteristically painful, and its sub-phases mimic those in the first separation-individuation phase described by Mahler.

**Attachment, Separation and Bulimia**

Sugarman and Jaffe (1987) suggest that bulimia nervosa may be explored in light of disruptions in the separation/individuation process. These theorists postulate that parental over or under-involvement may result in the child inhibiting normal strivings towards autonomy, and that such intrusiveness or detachment may lead persons with bulimia to suppress his/her natural tendencies towards autonomy and individuation. In explaining the symptoms of bulimia per se, these authors suggest that the early caretaker's inability to facilitate the child's independence prevents the child from developing adequate boundaries between self-and object representations. Thus, the person who is bulimic is unable to evoke or sustain an internal representation of the primary care-giver when not in proximity to him/her. This in turn, creates intense dependency needs, which they struggle to gratify via food. The failure to develop an internal representation of a consistent caregiver renders the person with bulimia vulnerable to feelings of emptiness, helplessness and hopelessness. Relationships are often idealized and full of
unrealistic hopes and expectations. Yet as intimacy and
closeness develop in interpersonal relations, he or she
attempts to retain a fragile sense of autonomy and
separateness by pushing significant others away. The binging
and purging become the symbolic representation of intense
dependency needs and yearnings for symbiotic union, followed
by the aggressive rejection of this need.

Only three studies were found which examines the
relationship of bulimia to difficulties in the area of
attachment and separation. In the most recent study
available, Kenny and Hart (1992) utilized an inpatient
sample of women who were clinically diagnosed with an eating
disorder and a sample of college women as the control group.
Scores on the Parental Attachment Questionnaire (PAQ) were
examined along with scores on the EDI. Significant
differences were found between the two groups on both the
measure of attachment and the EDI. The control group
reported more secure attachment, as well as less
preoccupation with weight, and less subjective feelings of
ineffectiveness than the clinical group. A canonical
analysis suggested that a warm and close relationship with
parents along with parental support of one’s autonomy is
inversely related to preoccupation with weight, bulimia and
feelings of ineffectiveness.

Using the Parental Separation Inventory (PSI),
Freidlander and Seigal (1990) found that dependency
conflicts in relation to one's parents, difficulty in managing one's own personal and financial affairs, and a lowered sense of individuation were all strongly predictive of bulimia and the concomitant characteristics of bulimia, including a sense of personal ineffectiveness, difficulty trusting others, problems identifying internal feelings and sensations, and lack of maturity. In addition, these authors conducted separate analyses of subjects' reported relationships with mothers versus fathers. They found more complex associations for the relationship with mother in that the canonical analysis utilized in the study yielded two roots, whereas the canonical analysis for the father dimension yielded only one root. This rather complicated canonical analysis utilized nine criterion variables: eight scales of the Eating Disorder Inventory and one item regarding whether the subject had previously sought help for eating problems. Six predictor variables were used: scores on four scales of the PSI, a measure of Differentiation of Self and a measure of Permeability of Boundaries. As a result, the specific relationship of scores on the PSI to the indices of bulimia was indeed so complex that precise interpretations regarding separation and bulimia were difficult to discern (Freidlander & Seigal, 1990).

Armstrong and Roth (1989) also examined the role of attachment in bulimia using Hansburg's (1972) Separation Anxiety Test (SAT). The SAT is a projective measure
designed to assess attachment style by way of the subject's reaction to thirteen hypothetical separation experiences. Any normal developmental event, as well as any life crisis, might set in motion the internal dynamics of attachment and subsequent separation reactions. Recalling that Ainsworth, (1979) delineated three styles of attachment, the SAT also provides an assessment as to whether individuals are anxiously attached, detached or securely attached (Hansburg, 1972). In Armstrong and Roth's study (1989), clinically diagnosed eating disorder subjects were compared with normal controls who were in the process of struggling with the developmental task of identity formation. Overall, eating disordered subjects were more likely to be anxiously attached than the control group. Thus, in light of Ainsworth's (1979) perspective, the early parental relationship was probably characterized by uncertainty and inconsistency as to the availability of a primary caregiver. As such, persons with bulimia appear to be unable to distinguish minor, temporary separation reactions from major, permanent separation reactions. To the person with bulimia, all separation may feel traumatic. This subjective experience has significant implications with regard to the later interpersonal style and characteristics of persons with bulimia, specifically in the area of assertiveness. 

Attachment, Separation and Assertiveness
The processes of attachment and separation have been found to establish enduring and pervasive dynamics within the individual, which in turn affects interpersonal functioning. Two studies suggest that for the bulimic individual, the role of attachment and process of separation may be disrupted (Armstrong & Roth, 1989; Freidlander & Seigal, 1990).

Despite the obvious theoretical connection between attachment/separation and the specific characteristic of assertiveness, very few studies have been conducted which empirically examine this connection. In this vein, LaFreniere and Sroufe (1985) examined the relationship of attachment history to level of peer competence in young preschoolers. Peer competence was assessed using several methods: teacher ratings of social competence, observations and measurements of peer interactions, and behavioral measures of social participation, attention and social dominance. Overall, the researchers found that two dimensions of peer competence were related to attachment histories. Specifically, peer competence characterized by affiliation (warmth, social security and peer popularity) was significantly and positively associated with secure attachment histories. In addition, children who had histories of anxious-resistant attachment were lower in peer status. Although this study did not examine assertiveness per se, peer competence among preschoolers may be the
earliest indication of subsequent assertiveness (or lack thereof).

Only one study was found that specifically related parental attachment to levels of assertion. Using a previously developed, unpublished questionnaire designed to adapt Ainsworth's (1979) conceptualization of attachment for use with college students, Kenny (1987) found a significant positive relationship between first year college women's attachment to parents and a measure of assertion. As such, Kenny suggested that secure attachment leads to the confident expression of one's needs and feelings, along with the expectation that one can influence others and be accepted by them.

Although this study does provide some empirical support for a connection between attachment/separation and assertiveness, no studies were found which examine this relationship in bulimic subjects. The nature of relationships between assertiveness, attachment and eating disorders continues to remain muddled.

The above studies provide some empirical support for a connection between attachment/separation and assertiveness in normal college populations. What follows then, is a summary of the research to date which examines the nature of the relationship between assertiveness and bulimia.

Assertiveness and Bulimia
In reading about bulimia, one often encounters descriptions of the bulimic individual which includes a lack of assertiveness (Katzman, Weiss & Wolchik, 1986). It appears that this particular trait may have been assumed present in the bulimic for some time before empirical studies actually confirmed it (Fisher-McCanne, 1985). Five studies were found which specifically examine this relationship.

Williams, Chamove and Millar (1990) compared anorectic and bulimic females to female psychiatric patients, dieters and non-dieting controls. Subjects were assessed using the EDI, a scale for internal/external locus of control, an assertiveness measure, a measure of hostility and the Family Environment Scale (FES). Of interest to this study, results revealed that both eating disorder groups scored significantly lower on the assertiveness measure than did dieters and controls. Eating disordered subjects also scored lower on assertiveness measures than did the psychiatric control group, although this difference was not statistically significant.

Fisher-McCanne (1985) utilized clients from a university mental health clinic to examine levels of assertiveness in bulimic subjects. Twenty-three clients referred by clinicians to an eating disorder therapy group were compared to 15 clients referred by the same clinicians to general therapy groups. An undergraduate psychology
class (N=18) served as controls. The College Self Expression Scale (CSES) was administered in order to assess positive assertiveness, negative assertiveness and self-denial. Interestingly, in this study, bulimic individuals scored significantly lower on the assertiveness measures than both the control group and the treatment group.

Holleran, Pascale and Fraley (1988) used a correlational approach to examine the relationships between bulimia and assertiveness, masculinity-femininity, and externality. The results yielded low but statistically significant negative relationships between assertiveness and high scores on a measure of bulimia. In addition, when low levels of assertiveness were combined with low masculinity-femininity, even stronger predictive relationships were found with regard to endorsement of bulimic symptoms.

Lane (1991) administered the EDI along with the Interpersonal Behavior Survey (IBS) to a group of 224 undergraduate students. The IBS includes an empirically derived scale for assertiveness. The results of this study also revealed a significant relationship between low levels of self-reported assertiveness and scores on the EDI subscales of Introceptive Awareness, Interpersonal Distrust and Ineffectiveness. However, no significant relationships were found between assertiveness scores and the clinical scales of the EDI.
Interestingly, Lane’s (1991) study relating assertiveness and bulimia appears to share common ground with the study conducted by Freidlander and Seigal (1990) which examined the connection between separation difficulties and bulimia. Freidlander and Seigal found a significant, predictive relationship between separation difficulties (as measured by the PSI) on the one hand, and a sense of personal ineffectiveness, difficulty trusting others, problems identifying internal feelings and sensations, and a lack of maturity. With the exception of Maturity Fears, Lane found the same EDI subscales used by Freidlander and Seigal (Ineffectiveness, Interpersonal Distrust and Introceptive Awareness) to also be predictive of assertiveness. Taken together, these two studies lend support to the hypothesis that level of separation from one’s parents may play a modulating role in the levels of assertiveness found in persons with bulimia.

Finally, Scott Mize (1989) used subjects who were admitted to a medical center for treatment of an eating disorder compared to normal controls from a large university subject pool. Unlike the other studies, this one was designed to examine the relationship between assertiveness specifically, and bulimia nervosa. No other characteristics were examined. Mize used three different kinds of measures of assertion in this study: a pen and paper self-report measure of assertion, a role-play measure of assertion, and
a self-report measure of assertion-inhibiting cognitions. No
differences were found in either role-play measures of
assertion or self-reported assertion for the bulimic and
control groups. Significant differences were found,
however, in that the bulimic group endorsed more assertive-
inhibiting cognitions than did the control group. Relating
this finding to the connection found between assertiveness
and attachment/separation, such results might indicate that
assertion-inhibiting cognitions reflect long-standing,
internalized patterns of interpersonal responding. Since
Mize's subjects had been admitted to a medical center for
treatment of their eating disorder, it is unknown what prior
treatment they had already undergone at the time the
assertiveness measures were taken. If these subjects had
indeed been exposed to some previous therapy for their
bulimia, (not an unusual pattern for patients who ultimately
seek hospitalization) we may speculate that these subjects
were able to recognize appropriate assertive responses, and
even role play them correctly. Yet internal perceptions,
attitudes and beliefs which inhibited their assertiveness in
everyday situations remained active.

Overall, of the five studies available to date which
examine the relationship between assertiveness and bulimia,
four provide support for the anecdotal observation that
persons with bulimia appear to have lower levels of
assertiveness than do control group members (Fisher-McCanne,
Summarization

Bulimia Nervosa is a psychological disorder which can affect as many as one out of ten college-age women (Katzman, Wolchik & Braver, 1984). The potential medical consequences of this disorder can be quite serious (Goode, 1983; Mitchell, Seim, Colon & Pomeroy, 1987). Bulimia is characterized by a syndrome of gorging on large quantities of food, followed by purging, often via self-induced vomiting, laxative abuse, fasting or compulsive exercising. Many theorists believe that eating disorders are best conceptualized on a continuum, with normal eating at one end and clinical bulimia nervosa and anorexia nervosa at the other (Klodner & Scarano, 1992; Mintz & Betz, 1988; Rodin, Silberstein & Streigal-Moore, 1985).

There are differing explanations as to the etiology of bulimia, but most theorists agree that the disorder is in some way related to parent-child interactions within the family of origin (Bruch, 1973; Humphrey, 1986; Minuchin, Rosman & Baker, 1978). These theorists generally suggest that the bulimic symptoms are a result of a struggle for autonomy and separateness, as well as an attempt to gratify intense internal need states.

Research has also been conducted which examines
the relationship of bulimia to various personality characteristics. Persons who have bulimia appear to struggle with low self-esteem, high self-expectations and poorer body images than do non-eating disordered persons (Dunn & Ondercin, 1981). They appear to be more prone to depression than the general population (Katzman & Wolchik, 1984), and often report difficulties in interpersonal relationships (Thelen, Farmer, McLaughlin-Mann & Pruitt, 1990). In addition, persons with bulimia often have a concomitant personality disorder in addition to the bulimia (Gartner, Marcus, Halmi & Loranger, 1989), the most common of which appears to be borderline personality disorder (Piran, Lerner, Garfinkle, Kennedy & Brouillette, 1988).

The family atmosphere of persons with bulimia seems fraught with hostility, lack of cohesion and conflict (Humphrey, 1986; Johnson & Flach, 1985; Kog & Vandereycken, 1985; Ordman & Keirschenbaum, 1986). Many of the studies reviewed reported significant disturbance specifically in the father-daughter dyads of bulimic families (Steiger, Vander Feen, Godstein, & Leichner, 1989; Strober, 1981). Persons with bulimia also report family environments which were not conducive to open expression of feelings (Johnson & Flach, 1985; Kog & Vandereycken, 1985; Ordman & Keirschenbaum, 1986).

The constructs of attachment and separation may be most appropriately employed in addressing the proposed etiologies
of bulimia, the subsequent personality characteristics associated with bulimia, and the family dysfunction revealed in the research. Attachment, per se, can be thought of as an internalized representation of a parent figure (Bowlby, 1977) which provides the foundation for subsequent healthy separation (Mahler, 1968). Separation, then, entails a developmental process by which a child begins to explore his or her surrounding environment and develop a separate identity from the parent-figure. Often, attachment is measured by way of separation anxiety or difficulty. Disruptions in either attachment or separation can result in later insecurity and interpersonal difficulties for the individual.

Sugarman and Jaffe (1987) have suggested that for the bulimic individual, the binge/purge represents a struggle between intense unmet dependency needs, followed by overt rejection of these needs. Three empirical studies were found which examine the attachment/separation process in persons with bulimia. Freidlander and Seigal (1990) found that overall, persons with bulimia do appear to have significant dependency conflicts with parents and functional difficulties separating from parents. Correspondingly, Armstrong and Roth (1989) found that persons with bulimia evidenced significantly more anxious attachment than did normal controls. Kenny and Hart (1992) also found that eating disordered women described themselves as less
securely attached than a control group of college women. In addition, they found that supportive and positive relationships with parents who were encouraging of the daughter’s autonomy led to greater adaptive functioning, especially in feelings of personal effectiveness, low concern with dieting and low levels of bulimic behavior. Thus, there exists considerable support for the idea that separation issues play an important role in the lives of persons who experience disordered eating. Yet the question remains as to whether such problems are related to conflictual difficulties with fathers, as suggested by much of the family literature (Kog & Vandereycken, 1985; Steiger, Van der Feen, Godstein & Leichner, 1989; Strober, 1981). In addition, these three studies appear to be the sum of research available to date regarding attachment, separation and disordered eating. It is therefore important to validate these findings.

Despite the theoretical connections between attachment and assertiveness, only one study was found which specifically addressed this relationship. Kenny (1987) found a significant, positive relationship between attachment to parents and assertiveness in college women. However, two of the studies reviewed appear to substantiate the hypothesized connection between assertiveness and attachment for bulimics. Freidlander and Seigal (1990) found that dependency conflicts and difficulty in managing one’s
own personal affairs (two indices of parental separation on the PSI) were strongly predictive of the same characteristics of bulimia that Lane (1991) found in persons who scored low on an assertiveness measure. Thus, these studies appear to support the idea that separation plays a modulating role in the level of assertiveness found in persons who experience disordered eating. Again, this question also remains unaddressed by direct empirical investigation.

Finally, five studies were reviewed which examined the relationship between assertiveness, in general, and bulimia nervosa. Of these, four provided support for the notion that persons with bulimia have difficulty being assertive (Fisher-McCanne, 1985; Holleran, Pascale & Fraley, 1988; Lane, 1991; Williams, Chamove & Millar, 1990). The remaining study found that although persons with bulimia may know how to behave assertively and are able to role-play assertiveness, they nevertheless struggle with assertion-inhibiting cognitions (Mize, 1989). However, because of this discrepancy in the research, further examination of this issue is also necessary.

In summary then, the literature has been reviewed with regards to bulimia nervosa, its possibly etiology, specific personality characteristics and disorders associated with it, and the family dynamics most often reported. The constructs of attachment and separation have been implicated
as potentially mediating variables, not only in the development of the disorder, but also in the subsequent characteristic of low assertiveness associated with bulimia. Several questions have been raised with regard to gaps in the literature. First, do persons with bulimia also struggle with assertiveness? Do they also struggle with separation difficulties? If so, how might these characteristics be related? With whom do bulimic persons have the most difficulty separating from, mother or father? And finally, how might problems in separating from one’s parents affect levels of assertiveness in bulimic individuals? This study now turns to empirical investigation of these questions.
Subjects

A total of 300 female subjects were recruited from several undergraduate psychology courses at the University of North Texas. Of the 300 subjects recruited, 292 completed the packets of instruments provided. Eight individuals did not complete the test packets provided.

A Demographic Questionnaire was administered to all subjects (Appendix A); Appendix B provides a summary of the frequencies and percentages of some of the demographic variables. Of the 292 subjects in the study, all were within the ages of 18-24. 98% of the subjects were between 18 and 22 years old; 3 subjects had recently turned 23, and one subject was 24 years old. Most of the subjects were Caucasian (81%), with 9% African-Americans, 5% Hispanic, 3% classified themselves as "other", and 2% were Asian/Oriental. The majority of subjects were single (90%), while 4% were married. 19 subjects (6.5%) reported they were living with someone.

Nearly half of the subjects (46%) were the first born child in their family of origin; 33.9% were second-born, 10.6% were third-born, 3.1% were fourth born in their
families, while only 3.8% were fifth born and beyond. The vast majority of subjects (97.3%) reported growing up with their biological mothers, and 78.8% reported growing up with their biological fathers. Over one-half of the subjects (62.3%) reported their parents were married, and approximately one-third (33.9%) reported their parents were divorced. Of those subjects whose parents had divorced, 35.1% divorced when the subject was between age five or younger, 25.7% divorced when the subject was between six and ten years old, 29.9% divorced when the subject was between eleven and sixteen years old, and 9.3% divorced when the subject was seventeen years or older. The mean age for parents’ divorce for the entire sample was nine years old (standard deviation, 5.55; range, age 1 through age 21). Only one subject reported her mother as deceased, while eight subjects reported their fathers as deceased.

With regard to the level of conflict within subjects’ families of origin, 24% of the subjects reported the presence of "quite a bit" to "constant" conflict while growing up, and 76% of the subjects reported "moderate" to "no conflict" while growing up. In describing relationships with mothers and fathers, 91.7% of the subjects reported "satisfactory" to "very satisfactory" relationships with mothers growing up, and 76% reported "satisfactory" to "very satisfactory" relationships with fathers when growing up. Conversely, 7.8% of the subjects reported "unsatisfactory"
to "very unsatisfactory" relationships with mother, and 22.6% of the them described "unsatisfactory" to "very unsatisfactory" relationships with fathers while growing up.

Subjects also were asked to describe their attitude and behaviors pertaining to eating and weight within the demographic information. Over one-half (58.6%) of the subjects reported feeling "satisfied" to "very satisfied" with their current weight, while 41.1% reported feeling "unsatisfied" to "very unsatisfied." The majority of subjects (81.5%) reported never or seldom binging, and 12.6% reported binging twice or more in the last three months. Interestingly, over one-third (36.3%) of the subjects reported using one or more of the DSM-III-R (American Psychological Association, 1987) strategies for purging at least once. However, the majority (63.4%) reported never having used these methods.

Instrumentation

A demographic questionnaire (see Appendix A) was developed to gather basic subject information, as well as to gather general information about subjects' families of origin, relationships with parents, and eating behaviors. Following this, subjects completed the College Self Expression Scale (Galassi, Delo, Galassi & Bastien, 1974), the Bulimia Test-Revised (Thelen, Farmer, Wonderlich, & Smith, 1991), and the Psychological Separation Inventory (Hoffman, 1984).
Demographic Questionnaire

A questionnaire was devised which requested information regarding subjects’ age, number of years in school, religious affiliation, ethnicity, marital status, current living arrangements, source of income, income level, information regarding family membership, satisfaction with relationship with mother, satisfaction with relationship with father, marital status of parents, current satisfaction with weight, current level of comfort with eating habits, and history of (if any) treatment for eating problems (Appendix A).

The Bulimia Test-Revised

The Bulimia Test-Revised (Bulit-R) (Thelen, Farmer, Wonderlich & Smith, 1991) is a revision of the well-validated and reliable Bulimia Test (Bulit) (Smith & Thelen, 1984). The revised version was adapted in order to accommodate the DSM-III-R (American Psychiatric Association, 1987) criteria for bulimia nervosa. It consists of 28 items on a 5-point Likert scale for which the scores are summed to yield a total Bulit-R score. Scores on the measure can range from 28 to 140 points, with higher scores reflecting greater symptomatology.

In validating the Bulit-R, four stages were used. Stage 1 was comprised of the actual test construction, using the original Bulit as well as 22 new items. Test construction and item discrimination ultimately yielded 28
items considered to best discriminate bulimic subjects from non-bulimic controls; in addition, the Bulit-R also utilizes eight non-scored items pertaining to specific weight control behaviors. Using the original validation groups in stage 1, Bulit-R scores showed significant differences between clinician-diagnosed bulimic females (mean = 117.95) and normal controls (mean = 57.50), with $t_{46} = 16.41; p < .0001$. A validity coefficient, obtained by correlating total Bulit-R scores with group membership was .74 ($p < .0001$). Validity of individual items in the Bulit-R was established by correlating item scores with group membership; point bi-serial correlations ranged from .39 to .79 ($p < .0001$). A cut-off score of 104 was established at this stage; this cut-off point was found to minimize errors in classification. Cross validation was established in stage 2, using a replication sample of bulimic females ($n = 23$) and controls ($n = 157$). The Bulit-R still yielded significant differences between the bulimic group (mean = 118.08) and the control group (mean = 59.62), $t_{41} = 17.08, p < .0001$. The over-all validity coefficient for the Bulit-R sample, obtained by correlating Bulit-R scores with group membership was .67 ($p < .0001$). Stage 3 of the validation process involved administering the Bulit-R to a large non-clinical, college population. Subjects were classified as bulimic if they scored 104 or greater on the Bulit-R. A second eating disorder scale, The Binge Scale
(Hawkins & Clements, 1980) was also administered to a subset of the sample during stage 3. A Pearson correlation was found to be significant at .85 (p < .0001). Stage 4 of the validity study consisted of subjects who scored above the cut-off at stage 3 or just below the cut-off. These subjects then participated in a structured diagnostic interview which consisted of questions regarding eating attitudes and behaviors that pertained to the DSM-III-R criteria for bulimia nervosa. Independent raters, unaware of subjects' scores on the Bulit-R, then classified subjects as bulimic or not based upon the interview material. The correlation of the Bulit-R test scores with group membership based on rater judgement was .62 (p < .0001).

Based on the results of their validation research, Thelen, et al (1991) suggest that for diagnosis, a cut-off score of 104 be used. However, given that this score also resulted in some subjects being falsely classified as non-bulimic, a cut-off score lower than this can be used to minimize the number of false negatives.

In sum, the Bulit-R demonstrates strong prediction of group membership in clinically identified bulimic females versus female college controls. Test-retest reliability for the Bulit-R is robust. Validation for the measure is also strong, and was obtained in two ways: Bulit-R scores correlated strongly with diagnostic judgments for identifying bulimic females, and strong correlations were
obtained with another measure of bulimia. Over-all, the Bulit-R is demonstrably reliable and valid measure for identifying persons with bulimia nervosa.

The College Self Expression Scale

The College Self-Expression Scale (CSES) is a 50 item self-report inventory which is designed to measure assertiveness in college students (Galassi, DeLo, Galassi & Bastien, 1974). The test measures three aspects of assertiveness: positive assertiveness, negative assertiveness and self-denial.

Positive assertiveness consists primarily of expression of feelings of love, affection, admiration, approval and agreement. Negative assertions include expressions of justified feelings of anger, disagreement, dissatisfaction and annoyance. Self-denial is a negatively scored construct, in that it includes over-apologizing, excessive interpersonal anxiety, and exaggerated concern for the feelings of others. The test measures an individual’s general level of assertiveness in relationship to many different roles, i.e., assertiveness with strangers, authority figures, business relations, family/relatives, and like or opposite-sex peers. Scores on the test are summed to yield one composite total score. Low scores are indicative of a generalized non-assertive pattern, while high scores reflect general assertiveness.
Test-retest reliabilities for two samples of college students were .89 and .90, respectively. Construct validity for the measure was established by correlating the CSES with 24 scales of the Adjective Checklist (Gough & Heilbrun, 1965), a measure which operationalizes constructs of the Murray need-press system. Significant positive correlations were found between the CSES and the Adjective Checklist on scales such as Self-Confidence, Achievement, Dominance, Autonomy, Exhibition, Change, and several other scales which typify assertiveness.

The Psychological Separation Inventory

Jeffrey Hoffman (1984) draws on the theoretical assumptions of Mahler (1968) and Blos (1979) in constructing a measure which is designed to assess the level of psychological separation from parents in late adolescence. Four scales make up the PSI, and each scale is designed to reflect a specific aspect of separation. The Functional Independence scale was designed to reflect the adolescent’s reported ability to manage his or her own practical affairs, independent of help from mother and father. The Attitudinal Independence Scale purports to measure the degree to which adolescents view themselves as unique and different from their parents, with separate attitudes, values and beliefs. The Conflictual Independence Scale is designed to assess the degree of freedom from excessive guilt, anxiety, mistrust, responsibility, inhibition, resentment and anger.
in relation to the adolescent's parents. Finally, the Emotional Independence Scale measures freedom from an excessive need for approval, closeness, togetherness and emotional support in relation to parents. Overall, Hoffman designed the PSI to measure the relationship of the adolescent to mother and father, separately.

The PSI is comprised of 138 items, each rated on a Likert scale of 1 to 5. There are four separate scales in the PSI, each scale measuring different aspects of separation. Each scale consists of two parts—one for mother and one for father. Subjects were asked who it is that they consider mother and/or father, e.g., biological parent, adoptive parent, step-parent, and so forth.

The PSI was developed specifically for and validated on undergraduate college students, ages 18 to 22. Therefore, this study will limit the age range of subjects to conform to these ages. Estimates of the internal consistency of the test's 138 items ranged from .84 to .92. There are high intercorrelations among each of the four subscales. As such, the Functional Independence and Emotional Independence scales are the most highly correlated. Test-retest reliabilities (2-3 week intervals) range from .70 to .96 for females, with a median of .83.

Construct validity for the PSI has been established based on significant predicted associations with various
college adjustment instruments. Of particular interest to this study is a validation study conducted by Rice, Cole and Lapsely (1990). Using the entire PSI, the Separation Anxiety Test (SAT) developed by Hansburg (1972) and another measure of separation anxiety, an exploratory factor analysis revealed that three scales of the PSI, the Functional (.85), Attitudinal (.67) and Emotional Independence Scales (.81) comprised one factor, which was labeled Independence from parents (Rice, Cole & Lapsely, 1990). A second factor was found which was comprised of positive loadings from the conflictual independence scale of the PSI, the Individuation scale of the SAT, and a negative loading on another measure of separation anxiety. This factor was labeled Positive Separation Feelings. A subsequent linear structural equation model was conducted; in it, the Functional, Emotional and Attitudinal scales of the PSI were constrained to load onto the independence from parents factor. This resulted in a new set of factor loadings for independence from parents, such that Emotional independence loaded the highest (.92), followed by Conflictual independence (.83) and Attitudinal independence (.62). Based on this research, this study uses the most representative scales of the two factors (after the structural equation model was applied). Thus, the Emotional independence—mother scale, the Emotional independence—father scale, the Conflictual independence—mother scale and the
Conflictual independence-father scale were utilized in this study. Internal consistency coefficients for these four scales are .88, .89, .92 and .88, respectively. Test-retest correlations on these four scales (for females only) are .85, .83, .96 and .85, respectively.

**Procedure**

Three hundred females attending the University of North Texas were solicited from undergraduate psychology classes. They were asked to participate in a study which examined the relationship between personality characteristics, eating behaviors and family relationships. Students who participated in the study did so on a volunteer basis. Class instructors offered two points of extra credit for participation in the study. Subjects were given two copies of an informed consent; one for them to keep (Appendix C) and one for them to sign and hand in prior to beginning the study. The informed consent also included the name, address and telephone number of the primary researcher, as well as the researcher's faculty sponsor. In addition, subjects were also provided with the location and telephone number of the University Counseling and Testing Center should they wish to explore any potential personal issues they may have had during or following the administration of the instruments, or if they had any questions which arose after the testing procedure is completed. Subjects were invited
to contact the researcher for the results of the study, if they were so inclined.

Potential volunteers for the study were approached in several ways. Several teaching fellows who had courses offered during the fall semester of 1994 were asked to poll their classes for female students interested in participating in a research study for extra credit. Student teachers announced the opportunity in class, and as requested by the examiner, described the subject qualifications necessary (female, between ages 18 and 22). Interested students were then told of the time and location of testing, which was either during or after the class period and in the same location of the class, or in some cases, testing was done at a separate location on campus. In addition, flyers which also included the necessary subject qualifications and extra credit offered were posted on the second floor of the psychology building at the University of North Texas, specifying separate times, dates and locations for interested participants.

For all subjects, whether they participated through a particular undergraduate class or whether they presented at the specified location on one of the two dates offered, the primary researcher conducted the administration of the test packets. Subjects were first provided with the informed consents (2 forms) which were read aloud by the researcher. Prior to beginning the administration of the instruments,
subjects were asked to keep one of the informed consent forms and hand a signed informed consent forward to the researcher. The researcher explained that at no time would the subjects' names be associated with their test packets, and that anonymity was assured. After receiving all of the signed informed consents, subjects were then asked to complete the test packets handed out to them. Each packet was identified by a subject number, which subjects were asked to copy onto the instruments given. All instruments were administered in the same order, with the Demographic Questionnaire first, the College Self Expression Scale second, the Bulit-R third, and the PSI fourth. Following the PSI, and addendum page was provided which asked what the relationship of the parent figure referred to in the PSI was to the subject (Appendix E). Most subjects completed the test packets within 45 to 60 minutes.

Once the test packets were completed, subjects handed them to the examiner. Subjects were provided extra credit via extra credit slips, signed by the examiner.

Although subjects were provided with the opportunity to contact the examiner for a summary of the study, to this date, no subjects have requested information regarding the study.

Statistical Analysis

The first hypothesis of this study was that there would be a significant relationship between scores on the Bulit-R
and scores on the assertiveness measure. In order to examine this hypothesis, a simple linear correlation was computed between these two scales.

The second hypothesis, which predicted a significant linear relationship between assertiveness and the four PSI scales, was tested via multiple regression analysis.

The third hypothesis, which predicted a significant linear relationship between bulimia and the four PSI scales, was also tested using a multiple regression analysis.

The fourth hypothesis, which predicted a significant difference between high and low bulimic groups on the four scales of the PSI, was tested by way of two separate Multiple Analyses of Variance (MANOVAS) with repeated measures. The dependent variable for the first MANOVA consisted of the PSI Conflictual Independence variable, with the mother and father scales acting as repeated measures (as these scales are exactly commensurate, save the gender identified in them); the independent variables of this MANOVA consisted of the Buit-R variable and the assertiveness variable (CSES), both of which were dichotomized into the upper one-third of scores (high) and the lower one-third of scores (low). A second MANOVA with repeated measures design was used to examine the dependent variable of the PSI Emotional Independence scales, again utilizing the mother and father scales for the repeated measures; again, the independent variables for this MANOVA
consisted of the Bulit-R variable and the assertiveness variable (CSES), both of which were dichotomized again into the upper one-third of scores (high) and lower one-third of scores (low).

The fifth hypothesis, which predicted significant differences between high and low assertiveness groups on the four PSI scales, was also tested by way of the two MANOVAS with repeated measures described above.

The sixth hypothesis, which predicted significant differences between the mother and father scales of the PSI as these related to bulimia and assertiveness, was also tested by way of the MANOVAS described above. In addition several post-hoc analyses were conducted to further explore the results.
CHAPTER III

RESULTS

Six hypotheses were tested in this study. The first hypothesis utilized a simple correlational analysis; the second and third hypotheses utilized separate multiple regression analyses, and the last three hypotheses were tested by way of two Multiple Analyses of Variance (MANOVAS) with repeated measures design.

Major Study Variables

Bulimia (Bulit-R scores), assertiveness (CSE scores), and the four PSI scales of Conflictual Independence-mother (CIM), Conflictual Independence-father (CIF), Emotional Independence-mother (EIM) and Emotional Independence-father (EIF), comprised the six variables utilized in the statistical analysis of the results. Table 1 provides the means and standard deviations for the entire subject group for these variables. Table 2 provides the means and standard deviations for the high and low bulimia groups, the means and standard deviations of the assertiveness scores and the PSI scores for persons who scored within these groups, prior to the MANOVA procedures. Table 3 provides the means and standard deviations for the high and low
Table 1
Means and Standard Deviations for the PSI Subscales.
Assertiveness and Bulimia (Entire Sample)

<table>
<thead>
<tr>
<th>PSI Scales</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIM</td>
<td>73.97</td>
<td>17.22</td>
</tr>
<tr>
<td>CIF</td>
<td>73.71</td>
<td>18.73</td>
</tr>
<tr>
<td>EIM</td>
<td>34.83</td>
<td>14.84</td>
</tr>
<tr>
<td>EIF</td>
<td>43.57</td>
<td>16.76</td>
</tr>
<tr>
<td>Assertiveness (CSEs)</td>
<td>118.47</td>
<td>22.89</td>
</tr>
<tr>
<td>Bulimia (Bulit-R)</td>
<td>48.72</td>
<td>18.95</td>
</tr>
</tbody>
</table>


assertiveness groups, the means and standard deviations of
the bulimia scores and the PSI scores for persons who scored
within these groups, prior to the MANOVA procedures.

The overall means and standard deviations of the PSI,
the assertiveness measure and the Bulit-R are comparable to
those reported by Hoffman (1984) on the PSI, by Galassi,
DeLo, Galassi and Bastien (1974) on the CSE measure of
### Table 2

**Means and Standard Deviations for High and Low Bulimia Groups Prior to MANOVA Procedures**

<table>
<thead>
<tr>
<th></th>
<th>High Bulimia</th>
<th>Low Bulimia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>105.92</td>
<td>27.22</td>
</tr>
<tr>
<td>Bulimia</td>
<td>69.30</td>
<td>17.76</td>
</tr>
<tr>
<td>CIM</td>
<td>67.71</td>
<td>18.32</td>
</tr>
<tr>
<td>CIF</td>
<td>69.68</td>
<td>18.97</td>
</tr>
<tr>
<td>EIM</td>
<td>33.72</td>
<td>15.46</td>
</tr>
<tr>
<td>EIF</td>
<td>42.72</td>
<td>15.51</td>
</tr>
</tbody>
</table>

**Note.** CIM = Conflictual Independence—mother; CIF = Conflictual Independence—father; EIM = Emotional Independence—mother; EIF = Emotional Independence—father.  
N = 292.

Assertiveness, and by Thelen, Farmer, Wonderlich and Smith (1991) on the Bulit-R. This suggests that the sample drawn from this study was similar to the populations from which these norms were drawn, despite the use of all females in this study.

Several of the major study variables yielded statistically significant correlations. The relationship
Table 3

Means and Standard Deviations for High and Low Assertiveness Groups Prior to MANOVA Procedures

<table>
<thead>
<tr>
<th></th>
<th>High Assertiveness</th>
<th>Low Assertiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>142.43</td>
<td>12.70</td>
</tr>
<tr>
<td>Bulimia</td>
<td>42.49</td>
<td>18.97</td>
</tr>
<tr>
<td>CIM</td>
<td>76.84</td>
<td>18.37</td>
</tr>
<tr>
<td>CIF</td>
<td>76.44</td>
<td>17.58</td>
</tr>
<tr>
<td>EIM</td>
<td>36.58</td>
<td>15.37</td>
</tr>
<tr>
<td>EIF</td>
<td>46.24</td>
<td>15.27</td>
</tr>
</tbody>
</table>

Note. CIM = Conflictual Independence—mother; CIF = Conflictual Independence—father; EIM = Emotional Independence—mother; EIF = Emotional Independence—father. 
N = 292.

between scores on the Bulit-R (Thelen, Farmer, Wonderlich & Smith, 1991) and scores on the CSE measure of assertiveness (Galassi, DeLo, Galassi, & Bastien, 1974) are discussed in the results for hypothesis one. There was a small but significant relationship ($r = .1169, p < .05$) between the assertiveness measure and the PSI scale of Emotional Independence—father. This study also found that the
variables of Conflictual Independence-mother and Conflictual Independence-father were significantly correlated with each other ($r = .3576, p < .01$). In addition, the Emotional Independence-mother and Emotional Independence-father variables were also significantly correlated ($r = .4608, p < .01$). Hoffman (1984) reported high intercorrelations for mother and father scales of the PSI on the Conflictual and Emotional attributes as well. Given that these two scales are comprised of the same items, save changes in gender identification, it is not surprising that such high correlations were found.

A significant (negative) correlation was found between the Emotional Independence-father and Conflictual Independence-father scales ($r = -.2157, p < .01$). Hoffman (1984) found no significant correlation between these two scales. Recalling that Hoffman’s study utilized both male and female subjects in the study sample, it is possible that the discrepancy between these findings are due to the gender differences of the two samples. Table 4 provides the Pearson correlations among the PSI subscales, as well as assertiveness and bulimia.

Hypothesis One

This hypothesis predicted a significant correlational relationship between bulimia (scores on the Bulit-R) and assertiveness (scores on the CSE). The Pearson correlation
Table 4

Correlational Matrix for Key Variables

<table>
<thead>
<tr>
<th></th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Assertiveness</td>
<td>1.00</td>
<td>-.24**</td>
<td>.21**</td>
<td>.17**</td>
<td>.10</td>
</tr>
<tr>
<td>2.</td>
<td>Bulimia</td>
<td>1.00</td>
<td>-.31**</td>
<td>-.16</td>
<td>-.05</td>
<td>-.08</td>
</tr>
<tr>
<td>3.</td>
<td>CIM</td>
<td>1.00</td>
<td>.36**</td>
<td>-.10</td>
<td>.11</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>CIF</td>
<td>1.00</td>
<td>.02</td>
<td>-.22**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>EIM</td>
<td>1.00</td>
<td>.46**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>EIF</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. CIM = Conflictual Independence--mother; CIF = Conflictual Independence--father; EIM = Emotional Independence--mother; EIF = Emotional Independence--father.

*p ≤ .05

**p ≤ .01
between these two variables yielded a low but significant negative correlation \((r = -0.2384, p < .01)\).

**Hypothesis Two**

This hypothesis predicted a significant linear relationship between the dependent variable of assertiveness and the four PSI scales of Conflictual Independence-mother, Conflictual Independence-father, Emotional Independence-mother and Emotional Independence-father. The over-all regression equation was significant \((F, 4,281 = 5.506, p < .001)\). Table 5 summarizes the critical components of the regression equation.

The multiple regression equation accounts for 7.3% of the variance in the dependent variable of assertiveness. The Conflictual Independence-mother scale contributed significantly to the equation \((p = .001)\), accounting for 3.67% of the variance. The Emotional Independence-mother scale also significantly contributed to the equation with an additional 1.69% of the variance accounted for \((p = .025)\). In contrast, the Emotional Independence-father scale and the Conflictual Independence-father scale did not reach significance; together, they contributed 1.9% to the over-all variance accounted for by the equation \((p = .090, p = .092, \text{ respectively})\).
Table 5

Summary Table for the Multiple Regression: R-squared, F(equation), R-squared Change, F(R-squared change), Zero-Order Correlation, and Beta for the Assertiveness Equation

<table>
<thead>
<tr>
<th>Step/Variable</th>
<th>R</th>
<th>R²</th>
<th>F(eqn)</th>
<th>R²(chg)</th>
<th>F(chg)</th>
<th>Zero-order Correlation</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/CIM</td>
<td>.1916</td>
<td>.0367</td>
<td>10.827</td>
<td>.0367</td>
<td>10.827**</td>
<td>.1916</td>
<td>.1916</td>
</tr>
<tr>
<td>2/EIM</td>
<td>.2316</td>
<td>.0536</td>
<td>8.018</td>
<td>.0169</td>
<td>5.053*</td>
<td>.1125</td>
<td>.1305</td>
</tr>
<tr>
<td>3/CIF</td>
<td>.2515</td>
<td>.0632</td>
<td>6.345</td>
<td>.0096</td>
<td>2.893</td>
<td>.1670</td>
<td>.1049</td>
</tr>
<tr>
<td>4/EIF</td>
<td>.2696</td>
<td>.0727</td>
<td>5.506</td>
<td>.0094</td>
<td>2.863</td>
<td>.1343</td>
<td>.1189</td>
</tr>
</tbody>
</table>

Note. CIM = Confictual Independence--mother; CIF = Confictual Independence--father; EIM = Emotional Independence--mother; EIF = Emotional Independence--father.

*p < .05

**p < .01
Hypothesis Three

This hypothesis predicted a significant linear relationship between the dependent variable of bulimia and the four PSI scales of Conflictual Independence-mother, Conflictual Independence-father, Emotional Independence-mother and Emotional Independence-father. The over-all regression equation was significant ($F_{4,281} = 8.299, p < .001$). Table 6 summarizes the critical components of the regression equation.

The overall equation accounts for 10.57% of the variance in the dependent variable of bulimia. Only one of the four independent variables, Conflictual Independence-mother, contributed significantly to the predictive utility of the equation with 9.67% of the total variance accounted for by the negative correlation ($r = -.311, p < .001$). This left only .9% of the variance contributed by the other scales of the PSI. The negative correlation describes an inverse relationship between Conflictual Independence with mothers and endorsement of bulimic symptoms. The Conflictual Independence scale was designed to measure the absence of excessive guilt, anxiety, mistrust, responsibility, inhibition, resentment and anger in relation to one's parents. The results of the multiple regression equation indicate that these scores reflecting absence of such feelings associated with one's mother became smaller as
Table 6

Summary Table for the Multiple Regression: R-squared, F(eqn), R-squared Change, F(R-squared change), Zero-Order Correlation, and Beta for the Bulimia Equation

<table>
<thead>
<tr>
<th>Step/Variable</th>
<th>R</th>
<th>R^2</th>
<th>F(eqn)</th>
<th>R^2(chg)</th>
<th>F(chg)</th>
<th>Zero-order Correlation</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/CIM</td>
<td>.3110</td>
<td>.0967</td>
<td>30.413</td>
<td>.0967</td>
<td>30.413**</td>
<td>-.3110</td>
<td>-.3110</td>
</tr>
<tr>
<td>2/EIM</td>
<td>.3219</td>
<td>.1036</td>
<td>16.360</td>
<td>.0069</td>
<td>2.181</td>
<td>-.0552</td>
<td>-.0834</td>
</tr>
<tr>
<td>3/CIF</td>
<td>.3245</td>
<td>.1053</td>
<td>11.064</td>
<td>.0017</td>
<td>.525</td>
<td>-.1525</td>
<td>-.0437</td>
</tr>
<tr>
<td>4/EIF</td>
<td>.3250</td>
<td>.1057</td>
<td>8.299</td>
<td>.0003</td>
<td>.110</td>
<td>-.0809</td>
<td>-.0229</td>
</tr>
</tbody>
</table>

Note. CIM = Conflictual Independence--mother; CIF = Conflictual Independence--father; EIM = Emotional Independence--mother; EIF = Emotional Independence--father.

*p < .05

**p < .01
bulimic symptoms were increasingly endorsed. Put differently, scores on the bulimia measure increased as the amount of conflict between subjects and their mothers increased. While hypothesis three was supported, the amount of variability accounted for by the parental separation measures suggest that the practical utility of the equation may be of questionable value.

**Hypothesis Four**

This hypothesis predicted significant differences between high and low bulimia groups on the four PSI scales of Conflictual Independence—mother, Conflictual Independence—father, Emotional independence—mother and Emotional Independence—father. Two separate MANOVAS were utilized to analyze the results. One MANOVA utilized Conflictual Independence as the dependent variable (with mother and father scales as repeated measures) and bulimia (high and low groups) and assertiveness (high and low groups) as the independent variables. Table 7 provides the means, standard deviations and cell numbers produced by this MANOVA. A second MANOVA was run which was the same in all respects, except that Emotional Independence was utilized as the dependent variable. Table 8 provides the means, standard deviations and cell numbers produced by this MANOVA.

The results of the MANOVA for Conflictual Independence yielded a significant main effect for
Conflictual Independence, such that reported levels of conflict differed as an effect of high or low Bulit-R scores. Specifically, scores on the Conflictual Independence scales were higher for the low bulimia group than they were for the high bulimia group (Bulit-R $F_{1,107} = 4.05, p = .047$). There were no significant interactions on the independent variable of Conflictual Independence by the dependent variables of bulimia and assertiveness measures together. Table 9 provides the summary information yielded by this MANOVA.

The results of the MANOVA for the Emotional Independence scales did not yield any significant effects by bulimia (high versus low groups) nor any significant interaction effects on the independent variable of Emotional Independence by the dependent variables of bulimia and assertiveness measures. Hypothesis Five

This hypothesis predicted significant differences between high and low assertiveness groups on the four PSI scales of Conflictual Independence-mother, Conflictual Independence-father, Emotional Independence-mother and Emotional Independence-father. Utilizing the same MANOVAS described above, a significant main effect was found for Conflictual Independence, in that reported levels of assertiveness measures together. Table 10 provides the summary information yielded by this MANOVA.
Table 7

Means and Standard Deviations and Cell Numbers for Conflictual Independence MANOVA

<table>
<thead>
<tr>
<th>Dependent Measure</th>
<th>CFI-Mother</th>
<th></th>
<th>CFI Father</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Cell Number</td>
<td>Mean</td>
</tr>
<tr>
<td>Bulimia-High</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assertiveness-High</td>
<td>74.00</td>
<td>19.19</td>
<td>16</td>
<td>75.94</td>
</tr>
<tr>
<td>Assertiveness-Low</td>
<td>65.93</td>
<td>15.97</td>
<td>42</td>
<td>69.62</td>
</tr>
<tr>
<td>Bulimia-Low</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assertiveness-High</td>
<td>81.79</td>
<td>14.01</td>
<td>38</td>
<td>78.71</td>
</tr>
<tr>
<td>Assertiveness-Low</td>
<td>74.13</td>
<td>15.71</td>
<td>15</td>
<td>74.40</td>
</tr>
<tr>
<td>Sample Total</td>
<td>73.63</td>
<td>16.98</td>
<td>111</td>
<td>74.29</td>
</tr>
</tbody>
</table>

Note. CFI - Conflictual Independence.

Conflictual Independence differed as an effect of high or low assertiveness. Specifically, scores on the Conflictual Independence scales were higher for persons in the high assertiveness group than for persons in the low assertiveness group (Assertiveness F 1,107 = 5.07, p = .026). There were no significant interactions on the independent variable of Conflictual Independence by the
Table 8

Means and Standard Deviations and Cell Numbers for Emotional Independence MANOVA

<table>
<thead>
<tr>
<th>Dependent Measure</th>
<th>EMI-Mother</th>
<th>EMI Father</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Bulimia-High</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assertiveness-High</td>
<td>38.31</td>
<td>15.65</td>
</tr>
<tr>
<td>Assertiveness-Low</td>
<td>30.95</td>
<td>13.18</td>
</tr>
<tr>
<td>Bulimia-Low</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assertiveness-High</td>
<td>36.08</td>
<td>15.14</td>
</tr>
<tr>
<td>Assertiveness-Low</td>
<td>36.60</td>
<td>14.64</td>
</tr>
<tr>
<td>Sample Total</td>
<td>34.56</td>
<td></td>
</tr>
</tbody>
</table>

Note. EMI - Emotional Independence.

dependent variables of bulimia and assertiveness measures together (see table 9). Therefore, as in hypothesis 4, significant effects were found for the Conflictual Independence variable. The correlation between assertiveness and bulimia were controlled for within the MANOVA analyses, thus adding to the robustness of the findings.
Table 9

Summary Table of Variance with Repeated Measures;
Conflictual Independence with Mother and Father Scales as
Repeated Measures

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>F sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subject Effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>40866.29</td>
<td>107</td>
<td>381.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulimia</td>
<td>1546.41</td>
<td>1</td>
<td>1546.41</td>
<td>4.05</td>
<td>.047</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>1937.25</td>
<td>1</td>
<td>1937.25</td>
<td>5.07</td>
<td>.026</td>
</tr>
<tr>
<td>Bulimia by Assertiveness</td>
<td>16.38</td>
<td>1</td>
<td>16.38</td>
<td>.04</td>
<td>.836</td>
</tr>
<tr>
<td><strong>Within Subject Effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>24476.81</td>
<td>107</td>
<td>228.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental*</td>
<td>22.11</td>
<td>1</td>
<td>22.11</td>
<td>.10</td>
<td>.756</td>
</tr>
<tr>
<td>Bulimia by Parental</td>
<td>198.66</td>
<td>1</td>
<td>198.66</td>
<td>.83</td>
<td>.353</td>
</tr>
<tr>
<td>Assertiveness by Parental</td>
<td>72.50</td>
<td>1</td>
<td>72.50</td>
<td>.32</td>
<td>.575</td>
</tr>
<tr>
<td>Bulimia by Assertiveness by Parental</td>
<td>7.07</td>
<td>1</td>
<td>7.07</td>
<td>.03</td>
<td>.861</td>
</tr>
</tbody>
</table>

*Parental = repeated measure of mother and father

Conflictual Independence scales.
Table 10

Summary Table of Variance with Repeated Measures; Emotional Independence with Mother and Father Scales as Repeated Measures

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>F sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subject Effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>37957.25</td>
<td>106</td>
<td>358.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulimia</td>
<td>4.79</td>
<td>1</td>
<td>4.79</td>
<td>.01</td>
<td>.908</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>982.94</td>
<td>1</td>
<td>982.92</td>
<td>2.74</td>
<td>.101</td>
</tr>
<tr>
<td>Bulimia by Assertiveness</td>
<td>598.59</td>
<td>1</td>
<td>598.59</td>
<td>1.67</td>
<td>.199</td>
</tr>
<tr>
<td><strong>Within Subject Effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>14348.47</td>
<td>106</td>
<td>135.36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental*</td>
<td>3443.94</td>
<td>1</td>
<td>3443.94</td>
<td>25.44</td>
<td>.000</td>
</tr>
<tr>
<td>Bulimia by Parental</td>
<td>84.63</td>
<td>1</td>
<td>84.63</td>
<td>.63</td>
<td>.431</td>
</tr>
<tr>
<td>Assertiveness by Parental</td>
<td>72.98</td>
<td>1</td>
<td>72.98</td>
<td>.54</td>
<td>.464</td>
</tr>
<tr>
<td>Bulimia by Assertiveness by Parental</td>
<td>3.30</td>
<td>1</td>
<td>3.30</td>
<td>.02</td>
<td>.876</td>
</tr>
</tbody>
</table>

*Parental = repeated measure of mother and father Emotional Independence scales.
The results of the MANOVA for the Emotional Independence scales did not yield any significant effects by assertiveness (high versus low groups) nor any significant interaction effects on the independent variable of Emotional Independence by the dependent variables of bulimia and assertiveness measures together (see table 10).

Hypothesis Six

This hypothesis predicted significant differences between the mother and father scales of the PSI as these related to bulimia and assertiveness. A significant within-subjects effect was found in the MANOVA utilized for the Emotional Independence criterion variable. This MANOVA yielded a significant main effect for parental gender, such that subjects utilized in the analysis scored higher on Emotional Independence-father than on Emotional Independence-mother (F 1,106 = 25.44, p < .001). There was no interaction effect for bulimia by parental gender nor assertiveness by parental gender; therefore, high and low scores on either assertiveness or bulimia had no impact on parental gender differences reported for the sample (see Table 10). An examination of the MANOVA which analyzed Conflictual Independence yielded no effects for parental gender, nor interaction effects for parental gender by high or low bulimia and assertiveness groups (see Table 9).
Post-hoc Analyses

The Parental Separation Inventory (PSI) was immediately followed by a series of questions, which can be found in Appendix E. These questions identified who the primary parent figure was that the subject was thinking about when filling out the PSI. Four separate Analyses of Variance (ANOVAS) were utilized in examining subjects' responses on the PSI as they related to the identified parent.

One ANOVA examined the mother scales of the Emotional Independence attribute as the independent variable. The dependent variables consisted of two levels: biological mothers as level 1 and adoptive mother, stepmother or grandmother as level 2. This ANOVA was not significant. A second ANOVA examined the mother scales of the Conflictual Independence attribute as the independent variable. The dependent variables consisted of the same two levels: biological mothers as level 1 and adoptive mother, stepmother or grandmother as level 2. Again, this ANOVA was not significant. Therefore, regardless of whether subjects were thinking of biological mothers versus other mother-figure, there were no differences in the PSI scale scores for Conflictual Independence-Mother nor the PSI scale scores for Emotional-Independence mother.

A third ANOVA examined the father scales of the Emotional Independence attribute as the independent
variable. The dependent variables consisted of three levels: biological fathers as level 1, adoptive fathers as level 2 and stepfathers as level 3. This ANOVA was not significant. A fourth ANOVA examined the father scales of the Conflictual Independence attribute as the independent variable. The dependent variables consisted of the same three levels: biological fathers as level 1, adoptive fathers as level 2 and stepfathers as level 3. Once again, this ANOVA was not significant. Therefore, regardless of whether subjects were thinking of their biological fathers, their adoptive fathers or step-fathers, there were no differences in the PSI scale scores for Conflictual Independence-Father, nor were there any differences in the PSI scale scores for Emotional Independence-Father.

A second area explored by post-hoc analysis provided added validation of the Bulit-R measure developed by Thelen, Smith, Wonderlich and Farmer (1991). The last five questions of the Demographic Questionnaire (Appendix A) included the criteria for Bulimia Nervosa from the DSM-III-R (American Psychological Association, 1987). These questions arranged the criteria for bulimia in Likert format. A Pearson correlation was then calculated between a summed total for these questions and subjects' scores on the Bulit-R. The resultant Pearson coefficient was .8571 (p.< .01). This result lends further validation for the Bulit-R as a measure for clinical use in diagnosing Bulimia Nervosa.
CHAPTER IV

DISCUSSION

This study was conducted in order to explore the nature of the relationship of eating disorders, specifically, bulimia, to parental separation and to assertiveness. Several key issues were explored which previous research had not fully addressed. This issues were approached from the viewpoint that bulimia may be conceptualized as falling on a continuum of severity (Mintz & Betz, 1988; Rodin, Silberstein & Streigal-Moore, 1985). The relationship of bulimia and assertiveness was initially explored, followed by an examination of the relationship between assertiveness as a whole and parental separation. The overall relationship between bulimia and parental separation was also explored. In addition, assertiveness and bulimia were dichotomized into high and low groups, and these differences were explored in relation to parental separation. Finally, differences in separation from mothers versus fathers were examined, as such differences related to bulimia and assertiveness.

Hypothesis One

Hypothesis one stated that a significant relationship would be found between scores on the bulimia measure and
scores on the assertiveness measure. The Pearson correlation between these two variables was indeed significant and revealed an inverse relationship between the two variables ($r = -0.2384, p < 0.01$). This correlation is strikingly close to the correlation found by Holleran, Pascale and Fraley (1988), who utilized 236 undergraduate females, the original Bulit measure developed by Smith and Thelen (1984) and an assertiveness inventory. In their study, a significant negative correlation of $-0.208 (p < 0.01)$ was found between the Bulit and assertiveness.

Williams, Chamove and Millar (1990) reported a significant negative correlation of $-0.51$ between scores on the EDI and an assertiveness measure. However, this study specifically utilized previously diagnosed eating disorder subjects ($N = 31$), other psychiatric diagnosed subjects ($N = 30$), a dieting group ($N = 30$) and a non-dieting, non-diagnosed control group ($N = 93$), all of whom were females. Thus, while the correlation between eating disorder symptoms and assertiveness deficits was strong, the sample group contained subjects who by definition demonstrated more severe pathology than found in the general population. The strength of this correlation may have been due to the increase in pathology for this subject group.

These findings, taken in conjunction with the low but significant negative correlations found between eating disorder symptoms and assertiveness in undergraduate
populations lends support to the notion that bulimia may fall on a continuum, whereby the lack of assertiveness and other problematic characteristics are likely to become more pronounced as eating disorder symptoms become more severe.

Another study which utilized college samples was Lane's (1991) exploration of the relationship between scores on the EDI and an assertiveness measure. Using a regression analysis, Lane found that 20.4% of the variance in the dependent variable of assertiveness could be accounted for by the regression equation. However, none of the clinical scales of the EDI contributed significantly to the equation. The three subscales of the EDI which did significantly contribute to the overall regression equation were, in order of contribution, Interpersonal Distrust, Ineffectiveness, and Interoceptive Awareness. The Interpersonal Distrust subscale reflects a general reluctance to form close interpersonal relationships. The Ineffectiveness subscale reflects feelings of general inadequacy, insecurity, worthlessness and a subjective sense of not being in control of one's life. The Interoceptive Awareness subscale reflects one's difficulty in recognizing and identifying emotions and sensations.

In comparison, the definition of assertiveness for this study consisted of the ability to express feelings, ranging from love and affection to anger and disagreement, as well as the absence of over-apologizing, excessive interpersonal
anxiety, or exaggerated concern for others. Comparing this definition with the subscales of the EDI which Lane found significantly contributed to the regression equation for assertiveness, similarities may be drawn. These factors may be psychological characteristics commonly found in persons with eating disorders, but not, taken alone, indicative of the presence of a clinical disorder. Rather, the presence of such characteristics may reflect general psychological difficulties which may become more pronounced as eating disorder symptomatology increased.

The research has typically approached the study of personality characteristics and bulimia in one of two ways. One frequently used method is to identify groups a priori as eating disordered, psychiatric and controls, and then use some form of analysis of variance to differentiate between the groups with regard to specific characteristics like assertiveness. These studies typically identify one or more groups as having more or less of that particular characteristic. However, this approach may artificially dichotomize eating disorders, such that variations in severity of eating problems as they relate to characteristics like assertiveness cannot be examined thoroughly. The second method often utilized involves using general, non-psychiatric samples, and a correlational analysis to identify contributions in variance as it relates to a specific personality variable. This method is also
limited, in that the general college female sample may contain few individuals which fit the diagnostic category of an eating disorder. If indeed bulimia falls on a continuum, further research is necessary in order to adequately describe the relationship of personality variables such as assertiveness to bulimic symptoms and tendencies. What is the nature of the relationship between these two constructs? Is there a steady increase in problematic personality characteristics as the severity of the eating disorder increases? Or, do personality characteristics remain undifferentiating until the individual suddenly reaches the criteria necessary to be diagnosed as bulimic? It is likely that the answers to these questions will not be as linear as the questions themselves.

Hypothesis Two

Hypothesis two stated that there would be a significant linear relationship between assertiveness and the four PSI scales of Conflictual Independence-mother, Conflictual Independence-father, Emotional Independence-mother and Emotional Independence-father. The overall regression equation was significant ($F, 4,284 = 5.506, p < .001$). Two of the PSI scales contributed significantly to the regression equation: Conflictual Independence-mother contributed 3.67% of the total variance, and Emotional Independence-mother contributed 1.69% to the total variance.
Interestingly, the father scales of the PSI did not contribute significantly to the overall equation.

The overall regression equation accounted for only 7.3% of the variance in the dependent variable of assertiveness. Thus, the relationship between assertiveness and parental separation was surprisingly weak. The research pertaining to the relationship of assertiveness and parental separation provides few comparisons with which to examine the results of this study.

Kenny (1987) used first year college students and a multiple regression analysis to study the linear relationship between a dependent variable of assertiveness and an unpublished attachment questionnaire. After factor analyzing items of the attachment measure, four factors reflecting attachment were then utilized as the independent variables in the multiple regression analysis. Two factors emerged as positively correlated with the assertiveness measure. The greatest contribution to the equation came from the factor labeled Quality of Relationship with parent figures, which was thought to reflect subjects' level of emotional attachment to parents. The second factor which contributed significantly to the regression equation was labeled Adjustment to Separation, which was thought to reflect subjects' affective reactions to college life in general. These factors were the best combined predictors of assertion with $r = .51 (F_{2, 97} = 17.01, p < .001)$. 
This study differed from Kenny’s (1987) research in that the factor labeled Adjustment to Separation did not include questions regarding subject’s relationships with parents; rather, this factor focused on aspects of college life such as "a time in which I have felt lonely" (p. 25), or "a situation in which I have felt confident" (p. 25). In contrast, the questions in the PSI (Hoffman, 1984) focus specifically on subjects’ relationships with parents in assessing levels of separation. Therefore, the definitions of separation in these two studies are not comparable.

However, the greatest contribution in Kenny’s (1987) multiple regression analysis consisted of the factor labeled Quality of Relationship (r = .44, p < .001), and this factor does appear to parallel Hoffman’s (1984) separation measure in that both relate to subjects’ responses regarding their relationship to their parents. Therefore, the difference in outcome of these studies warrants exploration. Sampling differences exist between the two studies. Specifically, Kenny utilized only first year residential college students, presumably between ages 18 and 19. As such, subjects in her study were experiencing initial transitions from home to college. Previous research suggests that feelings of closeness to parents may actually increase following departure from home (Sullivan & Sullivan, 1980), while at the same time young adults appear to feel more independent and responsible than at any other age (Pipp, Jennings,
Shaver, Lamborn & Fischer, 1985). It is possible that the relationship between assertiveness and parental separation may indeed be stronger for first-year college students. This study utilized females ages 18-24. Thus, the difference in outcomes suggests that while a moderate correlational relationship between assertiveness and separation was found at ages 18-19, predictions of assertiveness by parental separation are less useful as one approaches second, third and fourth years of college.

Blos (1979) suggested that adolescence is accompanied by tumultuous growth of personality and psychological development. Changes during this second separation and individuation phase occur very rapidly. The personality organization of the individual in this phase is therefore in flux. Studies which examine specific characteristics such as assertiveness may need to be redefined, taking into account the possibility that research outcomes may be affected by differences in developmental levels of college students. For example, research designs might benefit from changes which account for age differences among college subjects. Such comparisons may further illuminate the process of separation and individuation in terms of specific age groups, and how progression through this phase impacts the development of characteristics such as assertiveness.
Hypothesis Three

This hypothesis predicted a significant linear relationship between the dependent variable of bulimia and the four PSI scales of Conflictual Independence-mother, Conflictual Independence-father, Emotional Independence-mother and Emotional Independence-father. This hypothesis was only partially supported, in that Conflictual Independence-mother was the only variable of the PSI which contributed significantly to the overall regression equation. The relationship between bulimia and Conflictual Independence-mother was in the expected direction, such that as scores on the bulimia measure increased, there was less separation from mother reported on the Conflictual Independence scale. Thus, persons who scored higher on the bulimia measure characterized their relationships with mothers as reflecting more guilt, anxiety, mistrust, responsibility, inhibition, resentment and anger than did persons who scored lower on the bulimia measure.

These results corroborate previous research which suggests a relationship between attachment and separation difficulties and eating disorders (Armstrong & Roth, 1989; Friedlander & Seigal, 1990; Kenny & Hart, 1992). However, the overall correlation between bulimia and Conflictual Independence-mother in this study was only moderate ($r = -.311$); therefore, caution must be used in interpreting the results. The entire regression equation accounted for only
about 10% of the variance in bulimia that could be explained by the PSI scales. Since none of the studies previously reviewed utilized multiple regression analysis, direct comparisons of results would be inappropriate to make. However, a review of one study of college women may provide some enlightenment.

Friedlander and Seigal (1990) utilized canonical analysis to examine the relationship between scores on scores on the EDI and an item assessing previous help sought for eating problems as the criterion variables and the PSI scales, a measure of permeability of boundaries and a measure of differentiation of self as the predictor variables. Separate analyses were conducted for the mother and father scales. The results of this study yielded a single root for fathers, which consisted of a strong relationship between the measure of differentiation of self and Conflictual Independence—father on the predictor side of the equation, and the EDI Bulimia, Drive for Thinness, Ineffectiveness, Interoceptive Awareness and Maturity scales on the criterion side of the equation. Two canonical roots were extracted for mothers. One root consisted of a positive association between the measure of differentiation of self on the predictor side of the equation, and the EDI Bulimia, Ineffectiveness, Interpersonal Distrust, Interoceptive Awareness and Maturity scales on the criterion side of the equation. A second root for mothers was found
which consisted of an inverse relationship between Functional Independence-Mother and Emotional Independence-mother on the predictor side of the equation, and the EDI Drive for Thinness scale.

The current study did not include an analysis of the Functional Independence scales of the PSI. This decision was based on validation research for the PSI, which suggested that the Conflictual and Emotional Independence scales were the strongest representative factors of separation from parents (Rice, Cole & Lapsely, 1990). Therefore, it is not known whether this scale may have contributed significantly to the overall regression equation conducted.

This study found significance in the contribution of the Conflictual Independence-mother scale as it related to one criterion variable of bulimia, while Friedlander and Seigal found significance in the Functional Independence-mother, the Emotional Independence-mother and the Conflictual Independence-father scales as these related (differently) to the nine criterion variables examined. Given the breadth and scope of their analysis, it is not surprising that significance was found in so many areas.

The lack of contribution of the Emotional Independence scales in this study warrants some examination. This scale is thought to reflect a freedom from excessive need for approval, closeness, togetherness and emotional support from
parents. Examples of questions on this scale are: 'I feel longing if I am away from my mother too long' and 'I am not sure I could make it in life without my father'. These are rated on a Likert scale of 'not at all true of me' to 'very true of me'. Such needs were not significantly related to bulimia as measured by the Bulit-R, although a small negative correlation was found.

Previous research examining family dynamics and characteristics of persons with bulimia suggest high levels of family conflict, low family cohesiveness, and a general lack of support in openly expressing feelings (Kog & Vandereycken, 1985; Steiger, Van der Feen, Godstein & Leichner, 1989; Strober, 1981). The hypothetical presence of a significant negative relationship between bulimia and Emotional Independence would have suggested an increased need for approval and closeness from parents as Bulit-R scores increased. Conversely, a significant positive relationship between bulimia and Emotional Independence would have suggested less need for approval and closeness from parents as Bulit-R scores increased. Neither of these hypothetical possibilities would fall in line with previous research of family dynamics of bulimic individuals. It may be suggested then, that persons struggling with bulimia neither desperately want nor strongly avoid closeness and support from parents; rather, such questions may not apply to the experience of growing up in a family characterized by
conflict, low cohesiveness and lack of support in expressing feelings.

**Hypothesis Four**

This hypothesis predicted significant differences between high and low bulimia groups on the four PSI scales of Conflictual Independence-mother, Conflictual Independence-father, Emotional Independence-mother and Emotional Independence-father. The results of the two MANOVAS utilized for this hypothesis will be discussed separately.

The MANOVA for Conflictual Independence revealed that levels of conflict do differ depending on high or low Bulim-R scores. Persons in the low bulimia group scored higher on the Conflictual Independence scales than did persons in the high bulimia group. This finding is not surprising, in light of the previous research concerning bulimia and family conflict. Humphrey (1983) found that persons with bulimia generally reported greater levels of hostility in their families of origin, a dynamic consistent with the conceptual meaning of the Conflictual Independence scales. Johnson and Flach (1985) also reported that persons with bulimia report higher levels of family conflict than do controls. Ordman and Keirschenbaum (1986) found that bulimic subjects reported more familial conflict than did non-bulimics, along with a lack of ability to process emotional issues in an open and direct manner.
The MANOVA for Emotional Independence did not yield any significant differences for high and low bulimic groups. The Emotional Independence scales tap into subjects' affective responses towards parents, such that it reflects an emotional dependence (or lack of it) on parents and a need for emotional connectedness to parents in times of stress. It appears that from these results that the need for closeness to and approval from parents is not affected by levels of reported eating problems. The results of the MANOVA parallel the findings in hypothesis three, which showed no significant relationship between eating problems and Emotional Independence from parents. Thus, while conflict does exist in relationship to parents, this conflict may be independent of eating disordered persons feelings of emotional closeness to parents. This is an important distinction, in that such emotional connectedness may reflect a basic capacity for relatedness on an affective level. Persons in this study who scored high on the bulimia measure were as capable of this connectedness as were persons scoring low on the bulimia measure. Some theorists have suggested that the development of bulimia nervosa reflects an inability to evoke or sustain an internal representation of the primary caregiver (Sugarman & Jaffe, 1987). The results of this study do not support these notions. While disturbances in attachment and separation may indeed be present for the bulimic individual, these may
manifest primarily in the amount of conflict present in parent-child relationships.

The MANOVAS used to examine hypotheses four through six also provided an examination of whether levels of assertiveness might play a modulating factor in high and low bulimia groups' scores on the Parental Separation Inventory. These MANOVAS yielded no interaction effects for levels of assertiveness. No studies were found which specifically examined bulimia as it relates to both separation from parents and assertiveness; therefore, the literature provides little explanation as to why these constructs, taken together, appear to be unrelated. The results of this study do not support the idea that assertiveness may somehow play a modulating role in bulimics separation from parents. If the continuum theory of bulimia nervosa is incorrect however, it is possible that for persons clinically diagnosed as bulimic, the characteristic of assertiveness may have a stronger impact on the process of separation from parents. More research may be necessary, utilizing clinical samples of persons with bulimia and non-psychiatric controls, in order to fully explore the constructs of bulimia, assertiveness and parental separation.

Hypothesis Five

This hypothesis predicted significant differences between high and low assertiveness groups on the four PSI scales of Conflictual Independence—mother, Conflictual
Independence-father, Emotional Independence-mother and Emotional Independence-father. The results of the two MANOVAS utilized for this hypothesis will be discussed separately.

The MANOVA for Conflictual Independence revealed that levels of conflict do differ depending on high or low assertiveness scores. Persons in the high assertiveness group scored higher on the Conflictual Independence scales than did persons in the low assertiveness group. These findings suggest that a lack of assertiveness may indeed be related to difficulty in separating from parents. It is particularly interesting that lower assertiveness was related to greater parent-child conflict, and that higher assertiveness was related to less parent-child conflict. This finding is conceptually understandable. Assertiveness skills are likely to reduce tension in the parent-child relationship, such that these individuals are able to work out disagreements with parents directly, and diffuse conflict. Those lacking in these skills may not be able to discuss differences of opinion openly with parents, and therefore conflict in these relationships remains high.

The MANOVA for Emotional Independence did not yield any significant effects for high and low assertiveness groups. Thus, the need for affective closeness and emotional connectedness to parents was not affected by either a lack of or proficiency of assertiveness. Regardless of the
amount of assertiveness one may possess, emotional bonding with parents appears to remain comparable.

This is an important distinction, in that it may be conceptualized that the more assertive an individual is, the less dependency may be felt on one’s parents. The construct of Hoffman’s (1984) Emotional Independence attribute may not necessarily accurately reflect separation difficulties from one’s parents. Rather, emotional connectedness and bonding with parents may be independent of separation and individuation as a whole. High scores on this attribute may not necessarily reflect parental independence per se, and low scores on this attribute may not necessarily reflect parental dependence. Kenny’s research (1987) supports the notion that assertiveness may be strongly, positively related to warm, close parental relationships, and further suggests that feeling emotionally close to one’s parents is not synonymous with parental dependency. Therefore, future research would be helpful in order to examine the ways in which young adults achieve separation from their families of origin; the finding that warm, close parental relationships are related to assertiveness suggests that this aspect of "separation" may actually be enhanced by emotional closeness to one’s parents.

**Hypothesis Six**

This hypothesis predicted significant differences between the mother and father scales of the PSI as these
related to bulimia and assertiveness. The results of the two MANOVAS utilized to examine this hypothesis will be discussed separately.

The MANOVA for Conflictual Independence did not support the hypothesis. There were no effects for parental gender (mother versus father) on this attribute, nor were there any interaction effects for parental gender by high or low bulimia and high or low assertiveness groups. This finding is interesting, in light of the results of hypotheses two and three. The multiple regression analyses for those hypotheses yielded significant contributions to the regression equation for the dependent variable of bulimia by the Conflictual Independence-mother scale, but no significant increase of contribution by the Conflictual Independence-father scale. Thus, the father scale of this attribute did not provide sufficient change in the overall regression equation to contribute meaningfully to the equation.

The results of hypotheses four and five indicate that conflict with parents is greater for persons who struggle with eating problems. However, this conflict appears to permeate relationships with both mothers and fathers equally. Anecdotal clinical descriptions by some theorists suggested that eating disorders may be specifically related to problems in the mother-daughter dyad (Bruch, 1973; Minuchin, Rosman & Baker, 1978). Sugarman and Jaffe (1987)
also suggested that difficulties in relationship to the primary caregiver (usually mothers) may contribute to the development of bulimia nervosa. This study does not support the notion that conflict with mothers is a stronger factor in the development of bulimic symptomatology than is conflict with fathers.

Little research has been done as to mother-father differences in separation and the characteristic of assertiveness. This study suggests that assertiveness is not affected by differences in Conflictual Independence from mothers versus fathers. Therefore, although it may be conceptualized that daughters who are lacking in assertiveness may have greater conflict with one parent versus the other, this does not appear to be the case.

The results of the MANOVA for Emotional Independence also did not support the hypothesis. There were, however, main effects for the within-subjects analysis, such that all subjects, regardless of high or low scores on the bulimia or assertiveness measures, reported greater Emotional Independence from fathers than they did for mothers. On the whole, females may be more emotionally bonded to mothers than to their fathers. Since this study did not include males, it is speculative as to whether this bondedness is sex-role defined or due to a developmental history which includes mothers as the primary care-giver and fathers as a peripheral caregiver.
This greater emotional bonding to mothers was not affected by high or low levels of bulimia or assertiveness. In addition, the results of hypotheses four and five suggest that Emotional Independence from parents is not affected by either bulimia or assertiveness. The multiple regression analyses used for hypotheses two and three also do not support the notion of a strong relationship between emotional bondedness with one or both parents and bulimia or assertiveness. Previous research suggests that both bulimia and assertiveness have been related to separation difficulties (Armstrong & Roth, 1989; Friedlander & Seigal, 1990; Kenny, 1987; Kenny & Hart, 1992), yet this does not hold true for the Emotional Independence attribute in this study. Again, it may be suggested that this scale of the PSI may not be reflective of separation and individuation (or conversely, dependency) per se. Rather, this scale may measure the emotional connectedness an individual feels towards their parent(s), which is not necessarily indicative of parental dependence or independence.

Post hoc analyses

This study provided some added validation for the use of the Bulit-R measure developed by Thelen, Smith, Wonderlich and Farmer (1991). The correlation between scores on this measure and subjects' responses to the DSM-III-R (American Psychological Association, 1987) was .86 (p < .01). Recalling that the Bulit-R was developed in light
of the criteria necessary for diagnosing bulimia nervosa, this linear relationship between subjects’ responses to the measure and its relationship to the criteria was quite strong. Thus, the Bulit-R appears to be a useful instrument in identifying potential eating disordered individuals.

Post hoc explorations concerning the PSI were also conducted in this study. After completing the PSI measure, subjects were asked to identify whom they were thinking about when answering questions regarding mothers and fathers. The results indicated that there were no discernable differences in scores yielded by the PSI when subjects answered with regard to biological parents, step-parents, grandparents or adoptive parents. Based on the results of this study, the separation process may be thought of as virtually the same when an individual separates from any other parent figure besides the biological parent. By the same token, this assumption may also be made regarding the attachment process to parent figures other than biological parents.

Recommendations

This study examined the nature of the relationship between bulimic symptoms, assertiveness and parental separation. A thorough examination of these areas was conducted using a female undergraduate sample. Several areas were identified as requiring further exploration and research.
The first question which arose concerned the nature of the clinical syndrome of bulimia. While specific criteria have been set forth in order to appropriately diagnose this disorder, it is evident that variations of the clinical disorder are common. Bulimia, while clinically identified by a specific set of behavioral indices, may also include specific personality characteristics which are likely to become more problematic as the severity of the disorder increases. In this study, one such characteristic was identified as assertiveness. Previous research on bulimia and assertiveness has typically followed a design whereby bulimia is dichotomized by subjects who have it and subjects who do not have it. This approach is useful in studying characteristics of clinical samples, but it tells us little about the development of such characteristics prior to subjects' reaching treatment. Conversely, studies which utilize non-clinical samples have as comparison only those few subjects who fall at the extreme of the continuum and qualify for clinical diagnosis. The actual frequency of these subjects found in non-clinical samples is quite low. Therefore, significant changes in research design may be necessary in explaining the relationship between bulimia and assertiveness or other characteristics thought to be related.

This research utilized, among other approaches, a linear model design on a female college sample. There are
several basic limitations to such designs. As mentioned, the use of a non-clinical sample group to derive predictive equations for criteria such as bulimia and assertiveness will typically result in few individuals at the extreme (or clinical) ends of these criteria. Thus, the results of this study may not be generalizable to clinical populations. In addition, the multiple regression approach provides a predictive equation for that particular sample group; the same equation used for other sample groups may be less accurate in predictive utility. Thus, the results may also not necessarily be generalizable to other populations. Complex relationships may also exist among the variables, such that curvilinear equations may provide more accurate predictive utility. With regard to the limitations of the MANOVA designs utilized in this study, the lack of clinically identified bulimic subjects raises some concern as to the differences found both between groups (high versus low assertiveness and bulimia) and within groups (parental differences by bulimia and assertiveness). Finally, the nature of this design utilizes a cross-sectional sample of individuals taken at a particular point in time. Such designs give us a freeze-framed picture, so to speak, of the current sample in question. It tells us little about the development of the results over a period of time.

Given these limitations as well as a general consideration for the type of information to seek out from
future research, the following recommendations for study designs may be made. Cross-sectional designs which utilize clinically diagnosable subjects, sub-threshold subjects and normal controls may be helpful. Another approach would be to utilize longitudinal designs, which follow the development of bulimic symptoms over the course of several years in subject samples. Finally, a combination of cross-sectional and longitudinal studies would highlight both current, within samples differences as well as long term changes in both bulimic symptoms and personality characteristics.

Another area which requires additional research concerns the developmental process of separation and individuation. This process may be conceptualized as reaching well into late adolescence (Kenny, 1987; Blos, 1979). Much research regarding this process is conducted using college samples. However, developmental changes occur rapidly during this phase, and may just as rapidly decrease once the process has reached a critical level. These critical periods may be modulated by life circumstances (i.e., moving away from home for the first time, loss of a parent, marriage, etc.). This study has suggested that one such critical period is the first year of college; as such, these individuals may respond quite differently to separation measures than would individuals who have had a year (or several years) to adjust. Research may be useful
in examining whether there are any differences in separation measures for adolescents living at home, first year college residents and college students in subsequent years of residential education. Such research may shed light on potential critical periods in the separation process.

Finally, the use of the PSI in this study (Hoffman, 1984) has raised some questions as to the constructs utilized in measuring parental separation. While this measure has demonstrated construct validity by way of several measures of adjustment as well as another measure of attachment, the Emotional Independence attribute utilized for this study was unrelated to either assertiveness or bulimia. This scale also was the only scale which indicated differences for mothers versus fathers, which were present regardless of bulimic grouping or assertiveness grouping. It is possible that this scale may focus more on the attachment quality of parent-child relationships, versus the quality of separation in parent-child relationships. Whereas attachment has often been thought to be measurable by way of separation difficulties (Hansburg, 1972), these two processes may not be completely synonymous. Therefore, it is suggested that research be focused on the nature of these two constructs, and be designed to illuminate the areas in which attachment and separation can be measured independently.
APPENDIX A

DEMOGRAPHIC QUESTIONNAIRE
General Information

Please complete the following information first. Read each question thoroughly. Remember, all answers are confidential.

1. Age:__________

2. Marital Status (circle one):
   1=single
   2=married
   3=divorced
   4=separated
   5=living together

3. Classification (circle one):
   1=Freshman
   2=Sophomore
   3=Junior
   4=Senior

4. Religion (circle one):
   1=Protestant
   2=Catholic
   3=Jewish
   4=No identified religion
   5=Other

5. Primary Ethnicity (circle one):
   1=African American
   2=Caucasian
   3=Hispanic
   4=Asian/Oriental
   5=Other (please specify)

6. Number of family members during majority of your youth? ______

7. Which child were you in the family you spent the majority of your youth in? (circle one):
   1=first-born
   2=second-born
   3=third-born
   4=fourth-born
   5=fifth-born
   6=other (6th on...)

8. Who was the "mother" whom you lived with in the majority of your youth? (circle one):
   1=biological mother
   2=adoptive mother
   3=step-mother
   4=grandmother
   5=no "mother" figure
   6=other (please specify)
9. Who was the "father" whom you lived with in the majority of your youth? (circle one):
   1=biological father
   2=adoptive father
   3=step-father
   4=grandfather
   5=no "father" figure
   6=other (please specify)

10. Are your mother and father presently (circle one):
   1=married to each other
   2=separated
   3=divorced
   4=never married
   5=living together but not married

11. If your parents are now separated, what was your age at the time of their separation? (if not now separated, leave blank)

12. If your parents are now divorced, what was your age at the time of their divorce (if not now divorced, leave blank)

13. Is your "mother" (circle one):
   1=still living
   2=no longer living

14. Your age at time of her death? (if still living, leave blank)

15. Is your "father" (circle one):
   1=still living
   2=no longer living

16. Your age at time of his death? (if still living, leave blank)

17. How much conflict was present in your family while growing up? (circle one):
   1=almost no conflict
   2=a little bit of conflict
   3=a moderate amount of conflict
   4=quite a bit of conflict
   5=almost constant conflict

18. My relationship with my mother while I was growing up was (circle one):
   1=very satisfactory
   2=moderately satisfactory
   3=satisfactory
   4=unsatisfactory
   5=very unsatisfactory
19. My relationship with my father while I was growing up was (circle one):

1=very satisfactory
2=moderately satisfactory
3=satisfactory
4=unsatisfactory
5=very unsatisfactory

20. Currently, I am living...(circle one):

1=with one or more parents
2=in a college dormitory
3=in a house/apartment alone
4=in a house/apartment with a roommate
5=with a spouse or romantic partner
6=other (please specify)

22. I earn (circle one) per year: (do not include parents', spouse or others' income)

1=less than $5000
2=between $5000 and $10,000
3=between $10,000 and $15,000
4=between $15,000 and $20,000
5=over $20,000

23. I am (circle one) with my weight:

1=very satisfied
2=moderately satisfied
3=satisfied
4=unsatisfied
5=very unsatisfied

24. I feel I have (circle one) control over my eating:

1=almost or complete
2=quite a bit of
3=a moderate amount of
4=a little bit of
5=almost no

25. I am (circle one) with the amount of food I eat:

1=very comfortable
2=moderately comfortable
3=comfortable
4=uncomfortable
5=very uncomfortable

26. Please circle one that best applies to you:

1=I have never sought counseling for eating problems.
2=I have thought of seeking counseling for eating problems
3=I have gotten counseling in the past for eating problems
4=I am in counseling now for eating problems
27. I experience eating binges (rapid consumption of a large amount of food in a discreet period of time):

1=never
2=seldom
3=sometimes
4=often
5=always

28. I experience a lack of control over my eating behavior during the eating binges:

1=never
2=seldom
3=sometimes
4=often
5=always

29. To lose or prevent weight gain, I have either made myself throw up, used laxatives, used water pills, engaged in strict dieting or fasting, and/or exercised vigorously:

1=never
2=seldom
3=sometimes
4=often
5=always

30. In the last three months, I have experienced eating binges:

1=never
2=about once a month
3=about twice a month
4=about once a week
5=twice a week or more
APPENDIX B

SUMMARY TABLE OF MAJOR DEMOGRAPHIC VARIABLES
### Summary of Major Demographic Variables

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<th>Variable</th>
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**Level of Family Conflict**

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**Relationship with Mother**

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<tr>
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<tr>
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<tr>
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**Relationship with Father**

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<tr>
<td>Moderately satisfactory</td>
<td>66</td>
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<td>Satisfactory</td>
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<th>Percent</th>
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<tbody>
<tr>
<td><strong>Satisfaction with Weight</strong></td>
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<tr>
<td>Very satisfied</td>
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<td>Unsatisfied</td>
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<td><strong>Control over Eating</strong></td>
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<tr>
<td><strong>Comfort with Amount Eaten</strong></td>
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<td>3.4</td>
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<tr>
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<td>Sometimes</td>
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<td>Often</td>
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<td>6.2</td>
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<tr>
<td>Always</td>
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<td>.3</td>
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<td>Total</td>
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</tbody>
</table>
CONSENT FOR PARTICIPATION IN RESEARCH

You are asked to participate in a study which is designed to explore the relationship between family relations, personality traits and eating patterns. The purpose of the study is to find out if these areas are related, and if so, how.

Please do not put your name on any of the forms. This research project seeks females between the ages of 18 and 22. You will be asked to complete four forms. The first form is a demographics form. The second form is about your interpersonal interactions. The third form is about your eating behaviors. The fourth concerns your relationship with your mother and father. About 45 minutes of your time will be necessary to complete all of the forms. Your participation is totally voluntary. Your time and effort will be of vital importance in providing information regarding college students. However, you may withdraw your participation in the project for any reason at any time, with no repercussions to you.

All information is gathered in conformance to the American Psychological Association guidelines for human subjects participation. All responses will be completely confidential and anonymous. Only the person doing the study will have access to your responses. Your responses will not be shared with your instructors or with anyone else. Nor will your responses be linked to your name at any time, or with any information which might identify you. Results will be reported as grouped data, not as individual responses.

You will receive credit for your participation in this study.

The following resources are provided so that anyone who is interested in receiving psychological counseling can do so at little or no financial cost.

The Counseling and Testing Center
University of North Texas
Student Union, #321
Denton, Texas 76203
(817)-565-2741

Free to all students of the University of North Texas. Appointments may be scheduled in advance, or immediately for emergency situations.
Denton County MHMR
515 Locust
Denton, Texas
(817)-387-0323
Counseling available on a sliding scale basis.

For counseling services in cities other than Denton, please contact the local Mental Health Association for the city in question.

Should you have any questions which may arise later, or if you are interested in receiving a summary of the research findings, please contact:

(secondary researcher)
Mary Ann O'Loughlin, M.S.
18333 N. Preston Road
Suite 430
Dallas, Texas 75252
(214)-407-1191

You may also contact the faculty supervisor of this study if you have any concerns or questions:

Timothy Lane, Ph.D.
UNT Counseling and Testing Center
Student Union, room 321
Denton, Texas 76203

I have read these instructions and understand my rights. I understand that I may withdraw my participation at any time. I have received a satisfactory explanation as to the purpose of this study, and have had the opportunity to ask any questions I might have. I voluntarily consent to participate in this study as described in the paragraphs on the preceding page.

Signed: _____________________________
Subject

Date: ______________
APPENDIX E

PSI ADDENDUM
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Please answer the following questions as well by circling the answer that best fits for you.

1. When filling out the questions regarding your relationship with "mother", what is the relationship of the person you were thinking about?

   1=Biological mother
   2=Adoptive mother
   3=Stepmother
   4=Grandmother
   5=Other (please explain)

2. If this person is not your biological mother, please state your age when this person became a significant parental figure for you. If this person is your biological mother, please skip the question.

3. When filling out the questions regarding your relationship with "father," what is the relationship of the person you were thinking about?

   1=Biological father
   2=Adoptive father
   3=Stepfather
   4=Grandfather
   5=Other (please explain)

4. If this person is not your biological father, please state your age when this person became a significant parental figure for you. If this person is your biological father, please skip the question.
REFERENCES


