

**CONTRIBUTION OF PSYCHOLOGICAL SEPARATION
TO EATING DISORDERS**

by

Carole Gaato

M.A., Simon Fraser University, 1986

**Thesis submitted in partial fulfillment of
the requirements for the degree of
DOCTOR OF PHILOSOPHY
in the Department of
Psychology**

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SIMON FRASER UNIVERSITY

February 1996

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ISBN 0-612-16882-4

Canada

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Contribution of Psychological Separation to Eating

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ABSTRACT

Based on psychodynamic and attachment theory, it was predicted that psychological separation from parents would be associated with (a) positive family relations, and (b) absence of disturbed eating patterns. Participants were 100 women—30 eating disorder patients and 70 university students—who completed questionnaires measuring psychological separation (independence from parents and separation feelings), attachment to parents, family interaction, and eating disorder symptomatology. Participants also completed a structured clinical interview for eating disorders. Contrary to predictions, independence from parents was associated with negative separation feelings, poor parental attachment, and low levels of family cohesion and adaptability. Furthermore, correlations between psychological separation (independence from parents and separation feelings) and eating disorder symptomatology generally were small and nonsignificant. In contrast, multiple regression analyses indicated that poor parental attachment was significantly associated with eating disorder symptomatology, even after controlling for psychological separation.

ACKNOWLEDGMENTS

Heartfelt thanks to my research committee for their help in seeing me through my dissertation: to Chris Davis for his belief in me and my ability to cross the finish line, to Ron Roesch for his assistance in supporting me through the ups and downs of my graduate training, and especially to Steve Hart for his guidance and generosity of spirit and mind.

I would also like to thank the staff at the Eating Disorders Clinic at St. Paul's Hospital for their cooperation and assistance. In particular, I wish to thank Elliot Goldner for his thoughtful comments and expertise. And to Jo-Ann Birkenes—I could not have completed this project without you.

To the women in front of, as well as behind, the scenes—many thanks. Without the research assistance of J'Anne Ward, the computer skills of Joan Foster, and the desktop publishing magic of my dear friend Sharon Bell, this thesis might not have materialized.

Special thanks as well to friends and family members for their encouragement and support over the years and to Blair Degenstein for his love and companionship.

Finally, I extend my deepest appreciation to the women who dared to participate in this research project.

*This thesis is lovingly dedicated to my mother,
Edna Margaret Barker (1924–1988), and my
aunt, Lavenia Caroline Mountjoy (1910–1995).*

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INTRODUCTION

In recent years, there has been an increasing focus on the process of psychological separation in the etiology and maintenance of eating disorders. Not only are difficulties in autonomy and identity deemed predisposing factors (Garfinkel & Garner, 1982; Johnson & Connors, 1987), the binge-purge or gorge-vomiting cycle has been considered a metaphor for self and familial deficits and distress (Humphrey, 1988a; Lerner, 1983).

Separation and its companion, individuation, have become key concepts for describing the development that takes place during adolescence. Individuation has been conceptualized in different ways, with some theorists using individuation to stand for intrapsychic events (e.g., Blos, 1975, 1979), and others understanding individuation to describe aspects of family systems wherein the adolescent is permitted separate selfhood (e.g., Sabatelli & Mazor, 1985). Regardless of the conceptualization, individuation promotes autonomy from parents, self-direction, and a sense of responsibility for the self.

As the process of psychological separation from parents is viewed as a task that both male and female adolescents have to master, problems in this area are not unique to individuals with eating disorders. Yet, the characteristic age and sex distribution for anorexia nervosa and bulimia nervosa suggest that many young women are not equipped to negotiate this developmental task in a healthy manner. Rather, they “defy the bodily changes signaling maturity and adulthood through dieting” (Striegel-Moore, Silberstein, & Rodin, 1986, p. 251) and “enact conflicts surrounding needs for and loss of a need-gratifying symbiotic mother” (Lerner, 1983, p. 61). Although formulations such as these suggest a type of reversal or regression in adolescent development, another interpretation is possible.

According to Josselson (1980, 1988) and others (e.g., Chodorow, 1978; Gilligan, 1982), the "separation of self out of the more or less enmeshed child-parent web" (Josselson, 1988, p. 95) is different for boys and girls. In contrast to the male focus on autonomy and agency, females define themselves primarily in relation and connection to others. As such, not only is establishing independence problematic for many adolescent girls, it may miss the developmental mark if interpersonal development among women is identity, as Josselson maintains. From this perspective, the eating disordered adolescent may be seen as asserting her individuality or potential self (albeit psychopathologically) in connectedness with her family.

Several questions emerge from such an interpretation. Are eating disorders really synonymous with an inability to separate from parents? What distinguishes young women with disordered eating patterns from those who are not derailed during the process of second individuation (Blos, 1975, 1979)? Finally, how do parents potentiate problems or facilitate adjustment for their daughters?

In an attempt to more fully understand the notions of psychological separation and relatedness within an eating disordered population, the theoretical and evidential bases for these processes will first be presented. Furthermore, as individuation is also a family experience, the relational aspects of this process will be outlined. Although a number of theories of etiology have been developed to explain eating disorders (see Alexander-Mott, & Lunsden, 1994; Garner & Garfinkel, 1985; Garfinkel & Garner, 1982; Crowther, Tennenbaum, Hobfoll, & Stephens, 1992), the psychodynamic and family models of anorexia and bulimia are the most congruent with the relational focus of this study. Accordingly, these two perspectives will be described and research evidence presented.

Finally, a number of research questions suggested by this review and examined in this study will be outlined.

Separation and Psychoanalytic Theory

The psychology of separation has roots in psychoanalytic theory and observation. According to Freud, an infant's relationship with his or her mother is achieved developmentally and is explained primarily in terms of the mother's role in providing experiences of instinctual gratification. In other words, "love has its origins in attachment to the satisfied need for nourishment" (Freud, 1940a, as cited in Eagle, 1987, p. 9). Freud also stressed the developmental importance of the movement from dependence to autonomy. Not only does the course of childhood development lead to an ever-increasing detachment from parents, this process of detachment or separation arises with the most critical developmental period of childhood, the establishment and dissolution of the oedipus complex. Not only does Freud describe a secondary drive theory of mother-child attachment (Bowlby, 1982), he maintains that later independent functioning rests on the child's resolution of his or her libidinal attachment or early dependency (see Eagle, 1987; Greenberg & Mitchell, 1983).

During the 1940s and 1950s, a number of clinical studies were conducted with infants and children who had experienced impoverished maternal contact through institutionalization, war-related separations, or other traumatic losses (see Bloom-Feshbach, Bloom-Feshbach, & Associates, 1987 for a review). Such efforts led to a number of reformulations of traditional psychoanalytic theory and, with them, a re-emphasis on preoedipal phenomena.

Prominent among the many theorists concerned with preoedipal development and the mother-infant relationship is Margaret Mahler (1968, 1972; Mahler & McDevitt, 1980; Mahler, Pine, & Bergman, 1975). For Mahler and colleagues, "the biological birth of the human infant and the psychological birth of the individual are not coincident in time" (Mahler, 1972, p. 333). Rather, the latter is a "slowly unfolding intrapsychic process" known as separation-individuation (Mahler, 1972, p. 333). Composed of two interwoven but distinct tracks, separation refers to "the child's emergence from a symbiotic fusion with the mother," whereas individuation consists of "those achievements marking the child's assumption of his own individual characteristics" (Mahler et al., 1975, p. 4). According to Mahler, this developmental pattern proceeds from a stage of normal autism (Mahler, 1972) to a symbiotic period to the four sequentially unfolding subphases of the separation-individuation process: differentiation (5 to 9 months); practicing (10 to 14 months); rapprochement (15 to 24 months); and libidinal object constancy (24 to 36 months) (Mahler et al., 1975).

Each step in the separation-individuation process is strongly influenced by the infant-mother interaction. In fact, there is an intrinsic relation between the child's changing needs and behaviors and the mother's reactions to these new developments. For example, the responses of the optimal mother of the symbiotic period are not those of the optimal mother of the practicing subphase, and they must again be modified during the rapprochement crisis when the conflict between the need for separation and individuation is at its peak (Mahler, 1972). In Mahler's framework, "the mother's capacity to 'move with' the child is as important a determinant of character formation and pathological development as are the drives, their vicissitudes and ego maturation"

(Greenberg & Mitchell, 1983, p. 281).

Although the mother is most frequently the primary love object (Lincoln, 1984) in this dyadic story of early development, the role of the father in the separation-individuation process has also been addressed (see Henderson, 1982; Lincoln, 1984 for reviews). For example, after an extensive summary of Mahler's theory and clinical observations, Edward, Ruskin, and Turrini (1991) posit that although a specific relationship with the father begins during the symbiotic phase with the smiling response, it is during the practicing subphase that the attachment to father intensifies. Based on the results of psychoanalytic developmental (observational) studies, Abelin (1971, 1975) concludes that through the father's encouragement of exploratory behavior and opportunities for identification, this "person different from mother" (Abelin, 1975, p. 296) plays a critical role in fostering differentiation and individuation.

From a more general perspective, the preoedipal significance of the father has also been considered (Burlingham, 1973; Kramer & Prall, 1978). According to Spieler (1984), "preoedipal girls need fathers" (p. 63). Based on her review of psychoanalytic theory and observational research, Spieler concludes that if a father is absent or uninvolved during this formative stage, not only will his daughter have difficulty acquiring the needed mental representation, her progression to and through the oedipal phase will be impaired.

In summary, the psychoanalytic framework clearly recognizes the importance of the child's earliest caretaking relationships and the role of separation-individuation in promoting development or creating psychological difficulty.

Separation and Attachment

The major alternative to a psychoanalytic conception of separation lies in the attachment theory of John Bowlby (1982). Developed from extensive studies of separation, loss and early parent-child relations, this ethological approach to object relations—or affectional bonds (Bowlby 1977)—has been buttressed with strong empirical support, ranging from Harlow's (1958) studies of contact comfort in rhesus monkeys (for a review see Bowlby, 1982) to research on the mother-infant relationship (Ainsworth, 1982; 1989; Bretherton & Waters, 1985; Main, Kaplan, & Cassidy, 1985; Main & Goldwyn, 1984; Main & Weston, 1981, 1982) and studies of the father-infant tie (Lamb, 1981).

According to Bowlby, an attachment is a bond developed with “some other differentiated and preferred individual, who is usually conceived as strong and/or wiser” (1977, p. 203). Attachment behavior is “any form of behavior that results in a person attaining or retaining proximity” (p. 203) to this attachment figure. Research suggests that attachment behavior in humans becomes organized during the second half of the first year of life—although the component behaviors, such as vocalizing, eye contact, responsiveness to tactile and kinesthetic stimulation, crying, clinging and so forth, all exist from birth. These behaviors serve the survival function of protection, are universal, and are activated under conditions of danger or threat.

Theory states that the attachment system is a central feature of the developing relationship between infants and their caretakers. Through repeated transactions with one's attachment figures (of which the mother is considered primary), the infant is said to form mental representations—or internal working models (Bowlby, 1982)—both of the

self and of others. In fact, the development of this internal working model is so relationship-bound that the child internalizes both sides of the experienced attachment relationship and learns caregiving while receiving care (Sroufe & Fleeson, 1986).

Accordingly, by the end of the first year of life, the infant will have formed a generalized expectation of the caregiver as available and responsive or unresponsive and, in turn, a complementary model of the self as worthy or unworthy of care.

A classification system to categorize infants according to their attachment relations with caregivers was developed by Ainsworth, Blehar, Waters, and Wall (1978). Using the Strange Situation paradigm, Ainsworth and colleagues discovered that mother-child interactions in the first 3 months predicted 12-month-olds' behavior in a laboratory setting during brief separations and reunions. Securely attached children (whose mothers were supportive and responsive to infants' cries and needs during the first 3 months of life) either actively sought physical contact with the mother or at least greeted her after a separation. Avoidantly attached children (whose mothers were insensitive, expressed little emotion, and generally avoided physical contact with the infant) snubbed or avoided the mother on her return to the lab setting, showed little preference to her over a stranger, and also displayed episodes of spontaneous aggression toward her at home. Resistant children (whose mothers were characterized by role reversal and inconsistent responding) showed a combination of contact-seeking and angry tantrums toward the mother on her return. Main and Weston (1982) described these attachment patterns as coherent strategies for achieving felt security and regulating distress (i.e., the secure child actively seeks comfort from the attachment figure and uses the caregiver as a secure base; the avoidant child diverts attention from the attachment figure in an apparent attempt to avoid the anxiety of

potential rejection; and the resistant child exhibits extreme dependence on the parent in an attempt to gain the attachment figure's attention).

As the pattern of attachment that a child develops with his or her mother is a reflection of their interaction, "it is more than likely that, in a similar way, the pattern he develops with his father is the product of how his father has treated him" (Bowlby, 1988, p. 10). Although research examining the security of attachment status across different caretakers has tended to find no significant relationship between attachment classifications in the mother-child dyad and that exhibited between the father and child (see Paterson & Moran, 1988 for a review), in a recent meta-analysis a concordance of classification to mother and father was identified (Fox, Kimmerley, & Schafer, 1991). This led Fox et al. to question the impact of infant temperament (possibly the tendency to cry upon separation) and similar parenting styles on the classification of security-insecurity in the Strange Situation. Overall, the literature on the father-child relationship suggests that most infants are attached to both parents from the second half of the first year; the father-child tie differs from the mother-child bond in fostering more exploratory and play activity; fathers are more concerned than mothers about adherence to conventional sex roles or mores; and fathers are more directly involved in the rearing and socialization of sons than of daughters (Lamb, 1981). In summary, although fathers' and mothers' functions may be different, they are equally important.

Bowlby has also considered the impact of separation on the attachment relationship. From his perspective, separation is a natural cue to danger and elicits distress behavior (including anxiety) in the child that is aimed at reestablishing contact with the caregiver (Bowlby, 1973). Evidence suggests that the separation response

depends on the development of a preferential attachment figure. Before 16 weeks of age, differential separation responses are limited. By 6 or 7 months, the infant displays a full range of responses to separation. These include protest (anger), depression (sadness and mourning) and eventual detachment (defensive avoidance of the feelings associated with the loss of the attachment figure). The child's response to strange surroundings or strange people does not alter in form or intensity much before the third birthday (Bowlby, 1973). According to Bowlby, reactions to separation from loved ones continue throughout life, but with advancing age only longer separations will evoke a significant response, except in those who are particularly vulnerable to loss.

Although both Bowlby (1982, 1988) and Ainsworth (1989) recognized the continuity of attachment bonds over the life span, it has only been in recent years that the markers of attachment in adolescence have been assessed (see Kenny & Rice, 1995 for a review) or that measures of adult attachment styles have been developed (for a review see Lyddon, Bradford, & Nelson, 1993). In general, the evidence suggests that the quality of the primary attachment relationship not only influences the child's overall adjustment (Lopez, 1995; see Paterson & Moran, 1988; Sroufe, 1986) but serves as a prototype for later social relationships (Ainsworth, 1989; Bretherton, 1985; Sroufe, 1986; Weiss, 1982, 1986).

Separation during Infancy: Conclusion

The significance of separation for each individual originates in the nature of the caretaking relationships in early life. These relationships "create a psychological foundation that functions as a cognitive and affective template, shaping later interpersonal

experience and emotional well-being, including response to separation” (Bloom-Feshbach et al., 1987, p. 1).

From a psychoanalytic perspective, the process of psychological separation is akin to a subjective transformation in the degree of separateness of the self. In Mahler’s framework, separation-individuation prepares a child to be apart, to be a separate individual. Within attachment theory, the focus is somewhat different as separation is considered within the context of the attachment system. Separation elucidates the boundaries of the attachment bond—too much unavailability or too much separation (through lack of contact) “shrinks that bond to an insufficient level” (Bloom-Feshbach et al., 1987, p. 30).

Both Mahler and Bowlby agree that the mastery of separation events improves considerably around the age of 3. If love has been plentiful and non-conflictual, becoming separate and separating from attachments is relatively easy. If, however, the loving internalizations have been scarce, it is more difficult to become separate and harder to separate from relationships. Not only does such a foundation of separation difficulty (manifesting as a lack of separateness or insecure attachment) negatively affect later adjustment, it creates a specifically heightened difficulty in coping with life events that entail separation.

Separation During Adolescence

There are a number of developmental tasks that all adolescents must negotiate: achieving a new sense of self (involving the integration of accelerating physical growth, impending reproductive maturity, and qualitatively advanced cognitive skills);

establishing peer as well as romantic relationships; and attaining independence from parents (Kaplan, 1980; Striegel-Moore et al., 1986). In terms of the latter task, two processes are involved: "to separate psychologically from the reality parents and . . . to individuate from the internalized or introjected parents of infancy" (Josselson, 1980, p. 193).

According to **Blos (1979)**, adolescence is the second individuation process, a phase during which the self and object representations first formed during infancy are further differentiated. **Blos** presents a 5-stage theory of adolescent disengagement (or detachment), specifically focused on psychosexual development (from latency to young adulthood). As individuation proceeds, autonomy grows. "Both outer separation in the form of less dependence on parents and inner separation in the form of less power to parental introjects takes place" (Josselson, 1988, p. 93). However, in **Blos'** formulation, detachment (i.e., the process of modifying childhood representations) is attained only through conflict. In fact, "storm and stress" are seen as inevitable accompaniments of the adolescent's "shedding family dependencies" (Blos, 1979, p. 149).

From **Blos'** perspective, not only are discord, rebelliousness, and de-idealization necessary for the attainment of autonomy, so are neutral or negative reactions to parents. **Hill and Holmbeck (1986)** challenge this psychoanalytic perspective. On the basis of their literature review and the finding that close relationships with parents often continue throughout and after adolescence, they conclude that autonomy (most accurately defined in terms of self-governance or self-regulation) is related to transformations in the adolescent-parent relationship, not to freedom from parental attachments and influence. Moreover, research suggests that transformations in family relations arise out of

interactions within the family system rather than within the individual. Not only are such transformations indicative of increases in autonomy, these findings suggest that autonomy is developed in a social world and is not merely an intrapsychic phenomenon (see Hill & Holmbeck, 1986).

In an attempt to more fully understand the transformational nature of the parent-adolescent relationship, Smollar and Youniss (1989) examined adolescents' changing perceptions of their parents. On the basis of their interview data, they maintain that a process of de-idealization of parents begins at the onset of adolescence. Interestingly, although this process eventuates in an appreciation of mothers as persons, the same does not hold true for fathers. Rather, the adolescent-father connection is maintained out of respect for their status as fathers and not on their characteristics as persons. Moreover, the father-daughter relationship appears to be the "outlier, distinguished by its affective blandness and relatively low level of interaction" (Steinberg, 1990, p. 266).

Clearly, attachment is not the opposite of separation-individuation. Rather, it is coincident with it. As Josselson (1988) notes, "separation-individuation is one side of a matrix that connects individuals. When we look at the separation side, we see individuals moving away from someone. But when we turn the matrix over to view its other side, we see the separating individual revising, and thus preserving the relationship" (p. 94).

When the separation experience of late adolescence is considered from the perspective of attachment theory, the adaptive value of a secure internal working model of self and others is highlighted. According to Bowlby (1973) individuals who are emotionally stable and self-reliant are likely to have parents who are available to provide support when needed, while also permitting and encouraging autonomy. When a secure

base and opportunities for exploration are not provided by the parents, Bowlby maintains that the child, adolescent, or adult “will live in constant anxiety lest he lose his attachment figure, and as a result, [have] a low threshold for manifesting attachment behavior” (Bowlby, 1977, p. 207). According to Bretherton (1985), this pattern of anxious attachment is analogous to the clinging response demonstrated towards parents upon reunion after a separation. Bowlby (1977) also describes two other patterns of insecure attachment behavior: compulsive self-reliance, where individuals have essentially lost hope of finding an adequate attachment figure and avoid close relationships; and compulsive caregiving, which is exemplified by persons who deny personal needs to fulfill those of others. As Sroufe (1986) notes, it is not the presence of attachment, or strength of attachment that is central, but its quality. An adolescent who is self-confident has an experiential base for that confidence, namely, a history of reliably responsive care.

Adolescent-parent separation has also been considered in light of its childhood forerunner. Using the transition of leaving home, Bloom (1987) considers the process of parent-adolescent separation and the variables affecting it, including past separation experiences, cultural influences, and the effect of the family system. Although he found that the process generally follows the childhood separation sequence detailed by Bowlby, he posits that the adolescent process is somewhat different in that it does not entail a complete disengagement of the relationship but rather a change and/or progression toward a more symmetrical adult-to-adult relationship.

When sex differences in the separation process have been examined, the overall consensus is that adolescent girls and boys negotiate this developmental phase differently (Baker, 1986; Gilligan, 1982; Josselson, 1988). In a study on family functioning,

McDermott et al. (1983) found that the daughters in their sample were struggling for their individuality within the family through seeking out opportunities for emotional expression and exchange. For example, they wanted the whole family to eat together at least once a day and to have regular group activities. Such a style was not characteristic of the sons. These results suggest that adolescent girls and boys have different routes in achieving the common goal of maturity: boys separate physically, that is they substitute experiences in the outside world for family experiences, whereas girls work out their separation within the family context. Such different individuating styles not only challenge the goal of autonomy from parents, but suggest that interdependence rather than independence may be more functional during this phase of the life cycle.

In all, three different conceptualizations of parent-adolescent separation have been articulated. One argues that the task of the adolescent is to become independent of parental influence. Another suggests that, for most adolescents, the quality of the parent-adolescent relation remains largely continuous from childhood through adolescence. A third maintains that the parent-adolescent relation is transformed considerably from early adolescence into young adulthood as it is renegotiated by the parent and adolescent (for a review see Grotevant & Cooper, 1986). Consistent with the latter approach is the increasing interest in the relational aspects of the individuation process. From this perspective, not only is the adolescent individuating, so is his or her family. Grotevant and Cooper (1985; 1986) and colleagues (Cooper, Grotevant, & Condon, 1983) have identified four components of individuation in parent-adolescent relations: *separation*, the adolescent's efforts to be distinct from parents; *self-assertion*, the adolescent's acceptance of responsibility for his or her views; *mutuality*, the adolescent's efforts to

understand parents' views; and *permeability*, the adolescent's willingness to accommodate to parents' view. According to their model, an individuated relationship is one in which moderate to high levels of individuality are expressed (especially through separateness) in the context of at least moderate levels of connectedness (through mutuality and permeability). They also found that the quality of relationships and the indicators of individuation varied considerably across family dyads, suggesting that individuation is not a characteristic of individuals, but of relationships.

As evidenced in the research of Grotevant and Cooper (1983) and others (see Anderson & Sabatelli, 1990 for a review), the construct of individuation has frequently been used to refer to both individual and family processes. Moreover, it has also been used interchangeably with the concept of differentiation (Anderson & Sabatelli, 1990; Fleming & Anderson, 1986). Such conceptual muddying is problematic according to Anderson and Sabatelli as it confuses attempts to operationalize and research these two constructs. Accordingly, they suggest that individuation—an individual level variable—“involves continuous, ongoing demands to regulate the tension between personal autonomy (self as individual) and connectedness to significant others (self as related to other) which must be continually negotiated and renegotiated” (p. 33). In other words, it is a subjective process referring to the relative degree of psychological distance an individual experiences from his or her parents (Sabatelli & Mazor, 1985). In contrast, differentiation is considered a property of the family system and refers to the interpersonal processes which maintain the psychological distances between family members (Fleming & Anderson, 1986). This property, which exists on a continuum, encourages a pattern of family cohesion and adaptability (Sabatelli & Mazor, 1985).

According to the literature (see Anderson & Sabatelli, 1990; Sabatelli & Mazor, 1985), well-differentiated families are characterized by interaction patterns that encourage an age-appropriate balance of separateness and connectedness for individual members. In other words, with an optimal pattern of connectedness and an optimal degree of adaptability for coping with life's stresses, family members are able to function as part of a group while maintaining their individuality. Poorly differentiated families, on the other hand, display a low tolerance for individuality and/or intimacy among members. Characterized by a "stuck togetherness" or fusion of individuals as well as a high degree of emotional reactivity, interpersonal boundaries are regulated in extreme ways: individuals either enmesh themselves within the family's home, exhibiting both physical and psychological dependence; or disengage, that is, cut themselves off from the family system, displaying physical independence and psychological dependence. Accordingly, the ability to physically separate from the home, or leave the family, is not necessarily an indication that the individuation process has occurred. Rather, an adolescent may be "on her own" yet psychologically tied to her family by a high degree of emotional reactivity. In fact, her "disconnectedness may be evidence of a cutoff and indicative of developmental maladjustment" (Anderson & Sabatelli, 1990, p. 39). Less differentiated families not only block the psychological separation and autonomy of individual members, they potentiate social incompetence, psychological maladjustment, anxiety, and stress (Anderson & Sabatelli, 1990).

In summary, not only are the individuation processes and the family system's level of differentiation thought to be directly related (i.e., the more flexible and adaptable the system, the better able it is to maintain a balance in the separateness and

connectedness of its members), they are also viewed as interdependent. In other words, the level of differentiation impacts directly on an individual's ability to individuate, which in turn influences the degree of autonomy and psychological separation within the parent-adolescent relationship which then provides feedback to the system, thereby reinforcing the system's level of differentiation (Gavazzi & Sabatelli, 1990; Sabatelli & Mazor, 1985).

As the experience of leaving home for college is a naturally occurring parent-adolescent separation, it is not surprising that this "strange situation" has been the focus of empirical study. Unfortunately, research in the area has been hampered by the lack of suitable strategies for assessing psychological separation. Although this situation has been alleviated somewhat in recent years through the introduction of some promising measures, reviews suggest that there is still a substantial gap between the theory of separation-individuation and its instrumentation (see Anderson & Sabatelli, 1990; Hill & Holmbeck, 1986; Lopez & Gover, 1993).

In an early study of parent-adolescent separation, Murphey, Silber, Coelho, Hamburg, and Greenberg (1963) examined male college student reactions to living away from home. These researchers reported that students who were making the most successful adjustments to life away from parents were relatively autonomous (i.e., they possessed an awareness of freedom to make choices and an ability to take responsibility for their decisions) and expressed positive relationships with their parents. In a more recent investigation of college adjustment among male students, it was found that adolescents who boarded at college, rather than those who commuted from home, showed increased affection, communication, satisfaction, and independence with regard to parents

(Sullivan & Sullivan, 1980). The results from these two studies support the position that adolescence involves the problem of developing one's individuality while maintaining relationships (Sullivan & Sullivan, 1980).

A somewhat different approach to the study of parent-adolescent separation was undertaken by Moore and Hotch (1983). In a factorial study of 20 definitions of "home-leaving" (obtained from previous research), it was found that items associated with the establishment of more personal control ("make own decisions," "less parental control," "must do things for self now," and "feel mature enough") were of foremost importance. In contrast, items concerned with economic independence and physical separation were rated as "neutral" while items indicative of emotional separation ("feeling of being a visitor when at home," "feeling of not belonging to home anymore," "don't feel close to family") and dissociation ("won't go back each summer," "broken the ties") were viewed as unimportant indicators of parent-adolescent separation. In a more recent piece of research, Moore (1987) confirmed the above results and extended them further, with results suggesting that late-adolescent males and females have different experiences with regard to parent-adolescent separation, especially when the issues involve freedom and detachment from parents. Overall, Moore's research posits that as a construct, parent-adolescent separation is multi-dimensional, involving multiple attachment and autonomy-related issues. Moore also suggests that males may have greater difficulty than females maintaining positive parental ties through renegotiation of the adolescent-parent relationship. Indeed, other research suggests that young adult males do have less mature relationships with their parents than do young adult females (White, Speisman, & Costos, 1983).

In recent years, researchers have begun to use the Psychological Separation Inventory (PSI), a measure developed by Hoffman (1984) to assess the psychological separation of adolescents from their parents. Extrapolating from the work of Mahler, and consistent with the theories of Blos, Teyber (1981) and others (e.g., Kline, 1972; Winch, 1950), Hoffman (1984) conceptualized adolescent psychological separation in terms of four dimensions, each of which is a subscale on the PSI: *Functional Independence* (FI), the ability to manage and direct one's practical and personal affairs without the aid of mother or father; *Attitudinal Independence* (AI), the image of oneself as being unique and having one's own beliefs, values and opinions; *Emotional Independence* (EI), freedom from excessive need for approval, closeness, togetherness, and emotional support in relationship to the parents; and *Conflictual Independence* (CI), freedom from excessive guilt, anxiety, mistrust, responsibility, inhibition, resentment, and anger in relation to the parents. The PSI is completed separately for mothers and fathers, with high scores reflecting psychological separation from that parent.

Numerous investigators have used the PSI to explore the association between psychological separation and college student adjustment. Generally, research suggests that students who report positive feelings about separating from parents (i.e., not angry, resentful, or anxious about separating) also report healthy adjustment to college (e.g., Lapsley et al., 1989; Lopez et al., 1988, Rice et al., 1990). Conversely, attitudinal dependence typically is associated with better college adjustment (Lapsley et al., 1989; Lopez et al., 1988; see also Lopez et al., 1986). Investigators have also found that the resolution of separation tasks across the four PSI dimensions is not uniform (Lapsley et al. 1989; Rice, 1992) and that certain aspects of separation from parents relate more

strongly to various adjustment indexes than do other aspects. For example, conflictual independence is negatively correlated with depression and emotional problems reported by college students (Hoffman & Weiss, 1987; Lopez et al., 1986) and positively correlated with academic, emotional, and social adjustment (Hoffman 1984; Lapsley et al., 1989; Lopez et al., 1988).

Moreover, researchers have continued to challenge the adequacy of a unidimensional, unisex view of the relation between psychological separation and late adolescent adjustment, often with contrasting results. For example, Lopez et al. (1986) found that men tended to report higher scores on independence from parents than did women (see also Lapsley et al., 1989). In contrast, Rice (1992) determined that men and women did not differ in terms of average independence from parents when assessed over time. Rather, he found gender-specific associations and age-related separation-individuation associations with adjustment. Specifically, whereas the relationship between student and parents, especially fathers, appeared to gain stature in importance for college adjustment for men over time, for women there were shifts in the relative importance of student-parent relations during a similar time period. This led Rice (1992) to suggest that there “may be a loosening of the ties between father and daughter after freshman year” (p. 211), with better social adjustment for women being garnered through greater conflictual independence from mother. Given that gender differences are evident not only in terms of the relative importance of select dimensions of psychological separation (see Schultheiss & Blustein, 1994a) but also with respect to associations between individuation and various adjustment indexes, it is apparent that the importance of separation-individuation as a correlate of adjustment varies for men and women.

Although Hoffman's measure has proved to be a reliable and valid index of separation-individuation (Rice 1992), research with this measure has found negligible or inverse correlations between the PSI Functional, Emotional, and Attitudinal subscales and measures of adjustment (e.g., Lapsley et al., 1989; Lopez et al., 1988). As well, others (Lopez et al., 1988; Rice et al., 1990) have found that the Functional Independence, Emotional Independence, and Attitudinal Independence dimensions are highly intercorrelated and generally do not correlate significantly with Conflictual Independence. Moreover, for the most part, only the Conflictual Independence subscale relates in theoretically expected directions with other measures (see Lopez et al., 1988). Such findings have led some researchers to view the Functional Independence, Emotional Independence, and Attitudinal Independence subscales as measures of independence from parents with Conflictual Independence being considered an indicator of separation feelings (Rice et al., 1990; Rice, FitzGerald, Whaley, & Gibbs, 1995).

Fueled in part by dissatisfaction with traditional developmental models that emphasize the importance of separation-individuation and minimize the importance of connection for continued psychological well-being (see Kenny & Rice, 1995), researchers have begun to explore the relationship between attachment in late adolescence and various indices of adjustment (e.g., Frank, Avery, & Laman, 1988; Kenny, 1987, 1994; Kenny & Donaldson, 1991). In the literature, secure attachment has been positively associated with various dimensions of social and emotional well-being in late adolescent college students (e.g., Armsden & Greenberg, 1987; Holmbeck & Wandrei, 1993; Kenny, 1987; Kenny & Donaldson, 1991; Kobak & Sceery, 1988; Lapsley, Rice, & FitzGerald, 1990). Although researchers also posit that late adolescents' assessments of their

attachment to parents tend not to vary over time (Lapsley et al., 1990; Rice et al., 1995), some shifting in terms of attachment status (mostly from insecure to secure perceptions of attachment) does occur (Rice et al., 1995). According to Kenny and Rice (1995), such individual differences in attachment may be the result of current mood, student residential status, or other factors (e.g., counseling) that alter perceptions of attachment over longer periods of time.

Studies assessing gender differences in levels of attachment security have yielded mixed results. No differences were found between male and female college students' ratings of either maternal and paternal attachment in a series of studies (Lapsley et al., 1990; Rice et al., 1995) using the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987). However, studies utilizing the Parental Attachment Questionnaire (PAQ; Kenny 1987), a parental relationship questionnaire adapted from Ainsworth et al.'s (1978) conception of attachment, have generated variable findings. For example, whereas Kenny and Donaldson (1991) found that college women described themselves as significantly more attached to parents in comparison with college men, no gender differences were apparent in a more recent study of parental attachment ratings (Kenny, 1994).

Research assessing the differential impact of parent attachments on the psychological functioning of late adolescent males and females has also provided varied results. For example, although some research suggests that close parental attachments are more important to the psychological well-being of women than men (Berman & Sperling, 1991; Kenny & Donaldson, 1991), other findings present a challenge to relational theories of development by revealing a positive relationship between maternal attachment

security and college adjustment for men but not women (Schultheiss & Blustein, 1994a). From their study of individual and predictors of adjustment in first-year college students, Holmbeck and Wandrei (1993) conclude that men and women tend to value different levels of independence and connectedness and that maladjustment results when optimal levels of either characteristic are surpassed. Thus, disconnection may be maladaptive for men whereas excessive levels of connection may be less adaptive for women (see also Schultheiss & Blustein, 1994b). Although further research is needed to clarify the inconsistencies concerning gender differences in the level and importance of parental attachments, it seems that women who have access to emotionally and intellectually close relationships with both parents are more likely to be further developed than are women who do not have access to this type of parental closeness (Schultheiss & Blustein, 1994a).

Other research has examined the interrelationship amongst attachment, psychological separation, and various indices of adjustment in late adolescence. (e.g., Blustein, Wallbridge, Friedlander, & Palladino, 1991; Holmbeck & Wandrei, 1993; Rice et. al., 1990, 1995; Schultheiss & Blustein, 1994a, 1994b). Results suggest that there are advantages for late adolescents whose families foster closeness as well as independence (e.g., Grotevant & Cooper, 1986). For example, Blustein et al. (1991) found that the most adaptive configuration of family relationship factors in the vocational realm included positive perceptions of parental attachment coupled with conflictual and attitudinal independence from one's parents. In addition, parental attachment emerged as being more influential in the career development of women as compared with men. In a more recent study, however, Schultheiss and Blustein (1994a) found that attitudinal dependence (rather than independence) in conjunction with a strong emotional attachment was

important for college student development, but only for women. Contrary to expectations, the relevance of these family relationship factors to women's college adjustment was negligible. For men, limited support was found for the importance of psychological separation and parental attachment to college student adjustment. Finally, although Rice et al. (1995) found that security of attachment was positively associated with a number of indices of healthy adjustment to college, it was discovered to be inversely related to independence from parents. Given these results and the fact that the combination of psychological separation and parental attachment has not been the most adaptive configuration of family relationship factors for ego identity development (see Schultheiss & Blustein, 1994b), Schultheiss and Blustein (1994a) suggest that family relationship factors may function in different ways in different developmental domains.

Separation during Adolescence: Conclusion

Clearly, the second individuation process is not just an intrapsychic or individual expression—it is also a relational experience. Just as a young woman's positive affective attachment to her parents is important, so is the fostering of her autonomy (Kenny, 1994). Ties with parents are not broken, rather they are transformed. As Josselson (1988) puts it, individuation is “not a moving away from but an elaborate *pas de deux* in which the developing individual moves in such a way to attempt to effect the degree of autonomy that she needs within the form of relatedness that she wishes” (p. 98).

Eating Disorders

Eating disorders such as anorexia nervosa and bulimia nervosa usually occur in females (American Psychiatric Association, 1994; Halmi, 1995) during late adolescence

or early adulthood (Pike & Rodin, 1986). The diagnostic criteria for the eating disorders, as described in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994)*, are included in Appendix A.

The hallmark of anorexia nervosa is the relentless pursuit of thinness, coupled with a morbid fear of weight gain or fatness, body image distortion including the excessive impact of body shape or weight on self-appraisal, and menstrual dysfunction (*DSM-IV, 1994*). Literally meaning “ox hunger,” bulimia is characterized by recurrent binges or episodes of overeating followed by various forms of behavior designed to prevent weight gain including strict dieting, rigorous exercising, self-induced vomiting, and the use of laxatives or diuretics. It is also associated with extreme concerns about body shape and weight (*DSM-IV, 1994*).

Although the prevalence of anorexia nervosa amongst females in late adolescence and early adulthood has been estimated at between 0.5% to 1.0% (*DSM-IV, 1994*), the prevalence rates reported for bulimia in college women have ranged from less than 4% to more than 15% (see Klemchuk, Hutchinson, & Frank, 1990). In an attempt to synthesize this body of research, Fairburn and Beglin (1990) evaluated more than 50 prevalence studies and concluded that bulimia nervosa evidences a prevalence rate of about 1% among adolescent and young women. This rate is comparable to that determined Garfinkel et al. (1995) in their recent study of the prevalence of bulimia nervosa for women in the community.

The existence of subtypes within the spectrum of anorexia nervosa and bulimia has been described by numerous researchers and clinicians (for reviews see DaCosta &

Halmi, 1992; Mitchell, 1992). Anorexia nervosa has been subclassified into bulimic (bingeing and purging) and non-bulimic or restrictor types. Bulimia nervosa has been subtyped according to a number of variables, including the presence or absence of a history of anorexia nervosa (e.g., Hirshberg, 1989) and bulimia with and without accompanying purging behavior (see Mitchell, 1992). Although no one diagnostic group has emerged consistently as more pathological or psychodynamically impaired than another (e.g., Steiger, Goldstein, Mongrain, Van der Feen, 1990; Steiger, Van der Feen, Goldstein, & Leichner, 1989), researchers have continued to evaluate the classificatory and diagnostic importance of bulimic symptomatology across subtypes. For example, it has been suggested that all individuals with bulimia be classified together, regardless of present weight, with persons evidencing restricting anorexia being classified separately (e.g., Garner, Garfinkel, & O'Shaughnessy, 1985; Mitchell, 1992). Others maintain that individuals who purge after binge eating exhibit greater eating-related psychopathology than individuals with bulimia who do not purge (see Walsh, 1992), and that anorexic individuals with bulimia and normal-weight bulimic persons are more similar to each other than to individuals with restricting anorexia in premorbid and family obesity, emotional lability, family conflict, and psychopathology (e.g., Garner et al., 1985; Laessle, Wittchen, Fichter, & Pirke, 1989). Finally, it has also been suggested that anorexic persons with bulimia are the most severely eating disordered and psychologically distressed (e.g., Mickalide & Anderson, 1985; Rosen, Murkofsky, Steckler, & Skolnick, 1989; Shisslak, Pazda, & Crago, 1990), and that anorexic individuals who binge and purge evidence significantly more psychopathology than do persons who experience restrictor-type anorexia (Garner, Garner, & Rosen, 1993).

Reviews of this literature in preparation for *DSM-IV* resulted in the subtyping of both anorexia nervosa and bulimia in the latest revision of the manual. Also new to *DSM-IV* is the inclusion of Binge Eating Disorder, an eating disturbance characterized by recurrent binge eating in the absence of regular compensatory behaviors to avoid weight gain (Devlin, Walsh, Spitzer, & Hasin, 1992; Fairburn, Welch, & Hay, 1993; Spitzer, Stunkard, et al., 1993; Spitzer, Yanovski, et al., 1993; Walsh, 1992; Wilson & Walsh, 1991).

Although some researchers and theorists maintain that women with a clinically diagnosed eating disorder are qualitatively different from normal dieters (e.g., Bunnell, Shenker, Nussbaum, Jacobson, & Cooper, 1990; Polivy & Herman, 1987), and that severe restrictor-type anorexia nervosa and bulimia may aggregate in families (Strober, Morrell, Burroughs, Salkin, & Jacobs, 1985), others posit that anorexia nervosa and bulimia nervosa fall on a continuum, with common psychological factors acting etiologically (Steiger et al., 1989). According to the continuum hypothesis (Rodin, Striegel-Moore, & Silberstein, 1990), eating problems differ only in the frequency and severity of symptoms, with subclinical forms of eating disorders falling at intermediate points along the continuum between normal eating and formal eating pathology (Scarano & Kalodner-Martin, 1994; see also Drewnowski, Yee, Kurth, & Krahn, 1994). Regardless of whether a true continuum or a series of qualitatively different eating categories exist, a continuum of weight-related concerns provides a useful conceptualization of the developmental progression of eating problems in adolescent girls (Attie & Brool's-Gunn, 1989; see also Patton, 1988) and young women (Rodin et al., 1990).

Psychodynamic Formulations

Consistent with the evolution in psychoanalytic theory, psychodynamic conceptions of anorexia nervosa have changed (see Hirshberg, 1989; Kernberg, 1980). In the 1940s and 1950s, anorexic symptoms were regarded as a symbolic rejection of unconscious wishes (experienced in terms of oral impregnation) and as a reaction-formation against oral-sadistic impulses (Sours, 1980). An ego-psychological view of anorexia nervosa was advanced by Bruch (1973). She emphasized the perceptual and conceptual disturbances in the anorexic and hypothesized a specific set of deficits in ego development which she attributed to a particular style of mothering. Most recently, psychoanalytic thinking about anorexia nervosa has been influenced by object relations theory, especially Mahler's work on separation-individuation (e.g., Johnson & Connors, 1987; Masterson, 1977; Sours, 1980; Sugarman, Quinlan, & Devenis, 1981). According to Masterson (1977), most individuals with anorexia nervosa evidence a developmental arrest at the symbiotic or separation-individuation phase: "Their principal problems revolve around fears of loss of self (engulfment) or loss of the object (abandonment), feelings of emptiness, and struggles over autonomy" (p. 477). In essence, the object relations perspective focuses on the "symbiotic-like attachments anorectic patients have with their parents, the incompleteness of the separation-individuation phase, and the core depression that underlies the syndrome" (Lerner, 1983, p. 50).

A variety of psychodynamic explanations of bulimia have also been detailed (see Johnson & Connors, 1987; Schwartz, 1988). For example, Sugarman and Kurash (1982) trace the bulimic problem to a developmental arrest of the practicing subphase of the separation-individuation period. As the infant has not been able to make the movement

from transitional object precursor (the body) to external transitional objects, the development of new symbolic capacities and more differentiated self-other boundaries has been thwarted. When these developmental issues are reactivated during adolescence, not only is symbolization in the area of object relations unobtainable, so is the ability to utilize abstract transitional phenomena. Instead, the body becomes the arena for the concrete interplay of separation issues. From their clinical material, Sugarman and Kurash (1982) conclude that "gorging became identified as an act of symbiotic reunion; vomiting as an act of separation from, if not annihilation of, mother" (p. 65). In a similar view, Sours (1980) maintains that the developmental histories of anorexic persons who regularly binge and vomit are indicative of disturbances in separation-individuation, manifested principally in terms of separation anxiety and a clinging attachment to the mother. Overall, these formulations view bulimic disturbances as a fixation at presymbolic oral-separation levels (see Schwartz, 1988).

A structural model of eating dysfunction also has been articulated. From this perspective, bulimic symptomatology represents a "defensive regression and displacement from genital wishes" (Schwartz, 1988, p. 36), a "fully metaphorical compromise formation for oedipal impregnation fantasies" (p. 49). Finally, Tabin and Tabin (1988) conclude that since the oedipal-sexual issues are handled by anorexic individuals and bulimic persons in terms of a 2 (rather than a 5)-year-old's emotional and thought processes, it is likely that they are grounded in this earlier time (Tabin & Tabin, 1988).

Conceptual formulations of anorexia and bulimia tend to focus on disturbances in the parent-child relationship or on the dynamics of the family as factors predisposing a

child to developing an eating disorder during adolescence (e.g. Beattie, 1988; Bemporad & Herzog, 1989; Bruch, 1973; Charone, 1982; Humphrey, 1991; Humphrey & Stern, 1988; Masterson, 1977; Schwartz, 1988, Sours, 1980, Sperling, 1978, 1985). For example, unempathic, intrusive, or overprotective mothering may result in a child with an ego structure inadequate to the tasks of autonomy and self-regulation, with little capacity to monitor inner bodily states such as hunger and satiety, and with a resulting tendency to act out conflicts over independence and self-control via excessive control of the body and its food intake (e.g., Bruch, 1973). In effect, the individuation process “miscarried” (Bruch, 1985, p. 14) early in life. A different conceptualization is presented by Humphrey and colleagues (Humphrey, 1991; Humphrey & Stern, 1988) who maintain that failures in the early parental holding environment (see Winnicott, 1965) lead to deficits in nurturance, deficits in the capacity to tolerate and regulate tension, and negative affective states. Not only are these deficits adapted to differently in anorexic and bulimic families, they are family-wide and multi-generational. Moreover, failures in the aspect of the holding environment concerned with issues of separation from mother are considered “pathognomonic” of eating disorders:

Whereas in anorexia nervosa the child’s developing self is enfeebled by negative responses to separation coupled with more positive responses to dependent and regressive behavior, in bulimic families there is a paucity of positive responses to any behavior; instead, the child’s separate self is criticized, ignored, or enlisted in meeting the parents’ needs (Humphrey & Stern, 1988, p. 343).

In effect, food comes to represent the family’s primary unmet developmental needs for a good enough holding environment (Humphrey & Stern, 1988).

In summary, psychodynamic theory has tended to trace the ontogeny of all eating disorders to either times of infancy typified by the semisymbolic introjection-projection

struggles and the separation-individuation period, or to years synonymous with the formation of oedipal fantasies.

Attachment Theory

According to Bowlby (1977), certain patterns of parenting (i.e., the absence of a permanent mother figure, experiences of separation or unstable daily care, and/or parental threats of abandonment or suicide) potentiate “deviant” (p. 206) patterns of attachment behavior. These, in turn, can render an individual vulnerable to a variety of “neurotic symptoms” (p. 206), especially when under stress. In fact, Bowlby (1977) posits that when a child, adolescent or adult lives in constant fear of losing her attachment figure (i.e., in a state of anxious attachment) she is susceptible to “strong unconscious yearnings for love and support which may express themselves in some form of aberrant form of care-eliciting behavior . . . [such as] anorexia nervosa” (p. 207). Other psychological conditions associated with an anxious attachment pattern include school phobia, agoraphobia, “half-hearted” suicide attempts (p. 207), and hypochondria. Bowlby also asserts that those evidencing the pattern of compulsive self-reliance are prone to psychosomatic symptoms or depression during times of stress.

Although a variety of empirical evidence also attests to the importance of attachment concepts in assessing the possible role of relationship difficulties in a wide range of psychological disorders (for reviews, see Paterson & Moran, 1988; Rutter, 1995; Sroufe, 1986), the associations between actual separation experiences, anxious attachment, and later psychopathology are by no means direct (Lieberman, 1987).

Empirical Evidence

Although eating disorders have been the focus of psychoanalytic interest for years, it is only recently that empirical studies have begun to test clinical observations and theoretical hypotheses. In an effort to study family functioning in eating disorders in a quantitative manner, a variety of self-report rating scales have been employed.

Researchers using the Family Environment Scale (FES; Moos & Moos, 1980) report that eating disordered women perceive their families as less cohesive and expressive, more conflictual, lower in active-recreational orientation, more achievement-oriented, and less encouraging of independent and assertive behaviors than is the case in non-eating disordered families (Johnson & Flach, 1985; Ordman & Kirschenbaum, 1986; Stern, Dixon, Jones, Lake, Nemzer, & Sansone, 1989). Moreover, the family environments of bulimic individuals with and without a previous history of anorexia have been found to be similarly dysfunctional (Shisslak, McKeon, & Crago, 1990).

Additional self-report measures used to evaluate anorexic and bulimic family functioning include the Family Assessment Measure (FAM; Skinner, Santa-Barbara, & Steinhauer, 1983), Leuven Family Questionnaire (Kog, Vertommen, & Degroote, 1985), Family Assessment Device (FAD; Epstein, Bishop, & Levine, 1983), Family Adaptability and Cohesion Evaluation Scale II (FACES II; Olson, Portner, & Bell, 1982), and the Family Adaptability and Cohesion Evaluation Scale III (FACES III; Olson, Portner, & Lavee, 1985). Overall, the self-report data suggest that eating disordered families tend to avoid conflict and are more rigid than are families free of abnormal eating. As well, families with bulimic and bulimic-anorexic daughters are more conflictual and less involved, supportive and cohesive as compared to families where daughters evidence

restricting anorexia and/or show normal eating patterns (see Dare, LeGrange, Eisler, & Rutherford, 1994; Garner et al., 1985; Kog and Vandereycken, 1989a; McNamara & Loveman, 1990; Waller, Calam, & Slade, 1989; Waller, Slade, & Calam, 1990a; Waller, Slade, & Calam, 1990b).

Observational studies of family interactions in anorexic and bulimic families also have been conducted. In a set of studies utilizing Benjamin's (1974) Structural Analysis of Social Behavior, Humphrey and colleagues (Humphrey, 1986, 1988a, 1988b, 1989; Humphrey, Apple, & Kirschenbaum, 1986) have not only confirmed that anorexic and bulimic families are significantly distressed relative to controls, but have posited that there may be unique patterns of disturbed relations among subtypes. For example, because persons with restricting anorexia experience their parents as overly nurturant and inattentive, they tend to have difficulty disclosing their true feelings without also submitting to parental opinions and expectations. According to Humphrey (1989), "it may be that this pattern of parental control and negation of the anorexic's true, separate self leads to the development of her 'false' self and to her restrictive and destructive attitudes toward her body" (p. 213). In contrast, bulimic women and their parents appear to be hostilely enmeshed. Rather than showing affection or support in their interactions, both parents and daughters tend to be mutually blaming or controlling. Moreover, the tendency for mothers and daughters to be sulky and resentful in their reactions to one another further undermines the daughter's separation and self-assertion. With regard to the father-daughter relationship, anorexic daughters tend to report greater affection for their fathers than do daughters in bulimic families. The denial of parent-child distress in anorexic families has lead Humphrey (1988b) to postulate that anorexic women's relationships

with their parents are actually much more disturbed than any of them can afford to confront.

In summary, descriptive studies suggest that dysfunctional family relationships appear frequently in association with the development and persistence of eating disorders (see Strober & Humphrey, 1987). Consistent with the theory of Minuchin and colleagues (Minuchin, Rose, & Baker, 1978), anorexic families appear to have a tightly knit structure, with interpersonal boundary problems, stability, and conflict avoidance. In contrast, the families of bulimics are more conflicted, although conflict is rarely expressed by family members.

In contrast to the steadily increasing literature on the role of family factors in the pathogenesis of eating disorders, research on the process of psychological separation in anorexic and bulimic women is extremely limited. In one study, a projective measure was used to assess separation and symbiotic conflicts in women evidencing a range of disordered eating behavior (Hirshberg, 1989). Other researchers have utilized a variety of objective measures to appraise separation difficulties. For example, Friedlander and Siegel (1990) used the PSI, in conjunction with other instruments, to test the relationship between several aspects of separation-individuation and a set of psychological and behavioral traits considered characteristic of anorexia nervosa and bulimia. The results were generally supportive of the connection between separation difficulties and eating disordered attitudes and behaviors as assessed by the Eating Disorders Inventory (EDI; Garner, Olmstead, & Polivy, 1983). Friedlander and Siegel also found that the pattern of associations for subjects' reported difficulties in separating from their mothers was somewhat more complex than those reported with respect to their fathers.

More recently, Smolak and Levine (1993) assessed current attitudes concerning separation-individuation in college women reporting symptoms of anorexia and bulimia nervosa. Consistent with the results of Friedlander and Siegel (1990), the eating disordered sample evidenced more separation difficulties on the PSI than did women experiencing limited eating disturbance or no eating problems. In an analysis of separation patterns across eating disorder subtypes, Smolak and Levine found that women reporting anorexic and bulimic symptoms showed more conflictual dependence on both parents than did non-eating disordered women. Those with bulimic eating patterns also evidenced more attitudinal independence from their parents than did women with symptoms of anorexia. Such results led Smolak and Levine to posit that the combination of conflictual dependence and above average attitudinal independence may reflect a separation-individuation problem unique to the psychopathology of bulimia nervosa.

Finally, Zakin (1989) explored the interrelationship among eating disorder, emotional separation from mother and father, and body image disturbance. Using the Bulimia Test (BULIT; Smith, & Thelen, 1984), two subscales of the PSI (Emotional Independence from mother and Emotional Independence from father), and two measures of body image, Zakin found that disturbed eating patterns were associated with less emotional separation from parents, greater body dissatisfaction, and less definite body boundaries. Although he postulates that the nonsignificant relationship between body image and emotional separation measures suggests that they may independently contribute to the development of eating disorders, it is also possible that his failure to use a clinical sample as well as consider the additional dimensions of psychological separation contributed to this contradictory result.

In contrast to this small body of research is a more extensive literature focusing on the attachment aspect of the separation process. Although a number of measures have been used to assess the parent-child/adolescent relationship in individuals with eating disorders, by far the most common one is the Parental Bonding Instrument (PBI; Parker, Tupling, & Brown, 1979). When Palmer, Oppenheimer, and Marshall (1988) used this measure, they found that anorexic and bulimic patients recalled their parents as being low in “care” but within the norm in terms of “protection.” Although this failure to find differences in “protection” certainly undermines the general idea of the importance of family factors in eating disorders, it is likely that a methodological problem contributed to the nonsignificant results. Specifically, although Palmer et al. studied a British clinical sample, they used Parker’s Australian controls as a comparison group. As cited in Calam, Waller, Slade, and Newton (1990), “data presented by Parker (1983) show that Australians see their parents as more protective than British people do” (p. 480). Accordingly, by using Parker’s normative data, Palmer et al. may have masked genuine ratings of overprotection in their eating disordered sample.

The PBI was also used by Pole, Waller, Stewart and Parkin-Feigenbaum (1988) in another investigation of bulimic women’s perceptions of their parents. Their results showed that, in comparison to culturally matched controls, the individuals with bulimia not only perceived an insufficiency of parental care, they tended to see their fathers, but not their mothers, as overprotective.

Finally, Steiger et al. (1989) assessed the psychological defense styles and parental object representations in women with anorexia nervosa and/or bulimia. They found that all eating disordered participants exhibited more primitive defenses and fewer

mature ones than did the women experiencing no eating problems. There were no differences among eating disordered subtypes, except for the extreme reliance on Style 1 defenses or “maladaptive action patterns” (Vaillant, 1971) among the anorexic women who binged. In terms of the PBI data, there were also no reliable anorexic-bulimic differences. Rather, they found that both groups of women perceived a lack of paternal care. This finding prompted Steiger et al. to suggest that “feelings of having ‘failed to please’ fathers may reasonably be an important aspect of the self-image and heterosexual difficulties that are characteristic of these patients” (p. 137).

Another measure used to evaluate parent-adolescent relatedness is the Bell Object Relations Inventory (Bell, Billington, & Becker, 1986). According to Becker, Bell and Billington (1987), women with bulimia evidence greater disturbances in object relations ego functioning. In their study, the two bulimic subgroups (purging and restricting) obtained significantly higher scores on the Insecure Attachment subscale, suggesting that they struggle with fears of abandonment and show a lack of autonomy in relationships. Of note, the bulimic and non-bulimic groups did not differ significantly on the Social Incompetence subscale which suggests that the reported incidence of greater social anxiety amongst bulimic individuals may stem from fears of pain and rejection in relationships more than from fears of incompetent social performance. Becker and colleagues conclude that their results support the psychoanalytic theory that links bulimia to conflicting wishes for merger and autonomy.

The Bell Object Relations Inventory was also used by Heesacker and Neimeyer (1990) in their study of the relation between disordered eating and disturbances in object relations and cognitive structure. They found that women with higher levels of eating

disordered behavior manifested increased object relations disturbances (i.e., higher Insecure Attachment and Social Incompetence) and more simplistic and rigid social cognitive schemata. Although their findings differed from those of Bell et al. (1986) with respect to the significance of interpersonal anxiety, the link between early insecurity in object relations attachments and later disordered eating behavior was supported.

The relationship of parental attachment to eating disorder symptomatology has also been investigated using the Parental Attachment Questionnaire (PAQ; Kenny, 1987). In a study assessing the perceptions of women receiving inpatient treatment for anorexia and/or bulimia nervosa and college student participants (Kenny & Hart, 1992), the eating disordered women were found to be less securely attached to their parents than the college students. They characterized their relationships with their parents as more affectively negative and emotionally unsupportive, especially with regard to issues of autonomy. Given these results, Kenny and Hart queried the relative contribution of parental attachment and psychological separation to eating disorder symptomatology.

Finally, Armstrong and Roth (1989) chose the Separation Anxiety Test (SAT; Hansburg, 1980) to examine the implications of Bowlby's attachment theory in an inpatient sample of women diagnosed with anorexia nervosa and/or bulimia. Relative to the normative comparison data from two published studies, the eating disordered group evidenced severe anxious attachment and chronic separation depression characterized by overreaction to minor separations and considerable self-blame, anger, and rejection as well as denial of these painful experiences.

In summary, the association between eating disorders, separation difficulties, and impaired interpersonal attachments has been generally supported despite the fact that

studies have used widely disparate measures of separation and attachment; assessed eating disordered samples differing in diagnostic criteria, symptom severity, and associated psychopathology; and included control groups ranging from clinical samples to normative comparison data.

Psychological Separation and Eating Disorders: Conclusion

Overall, the research evidence is consistent with psychodynamic, family, and developmental approaches to eating disorders. Generally, individuals with anorexia nervosa and bulimia experience more severe separation distress and attachment difficulties from both mothers and fathers (e.g., Maine, 1991) than is normal in adolescence and in adults undergoing developmentally based relationship crises.

Integration

Considering the variety of theoretical positions and research foci detailed throughout this literature review, it is not surprising that a variety of terms and/or descriptors have been used to describe the developmental processes of interest. Accordingly, some conceptual clarification and integration are warranted.

Two different conceptualizations of early parent-infant relations have been described. One formulation is consistent with object relations theory, and represented in Mahler's theory of separation-individuation. The other is established in attachment theory. Although both approaches focus on similar phenomena, they differ in a number of subtle, yet important ways (for a review see Fishler, Sperling, & Carr, 1990). For example, although object relations theorists assume that an infant has an inborn relational capacity, the quality of the early parenting relationship not only mediates the infant's

attainment of individuation and personal autonomy, it also affects the formation of the internal object representations that govern later relational behavior. In contrast, attachment theorists recognize the importance of both an inborn attachment behavior system as well as a contextual attachment learning process. Consequently, they are less interested in the presumed intrapsychic origins of attachment behavior than in the individual differences and cognitive/organizational properties of that behavior.

Accordingly, to the degree that a caregiver is consistently accessible and responsive to an infant's signals, he or she will develop an internal working model of the caregiver as a secure base from which to explore the environment. These working models become integrated into the personality and dictate to a large extent how one anticipates and construes self, others, and the environment.

Within the analytic literature, separation is a psychological state pertaining to the separation of self and object (Edward et al., 1991). It is "a process through which the individual child develops a sense of his or her physical and mental self—an awareness of being a person apart from others" (Provence, 1988, p. 88). This usage of the term is consistent with Mahler's concept of individuation. Alternatively, attachment theory highlights the emotional impact that an actual physical separation has on a child's psychological functioning and emphasizes the possibility of pathological repercussions for the child's personality formation.

Psychodynamically oriented theories of adolescent development posit that an adolescent's psychological separation or autonomy from parents is promoted through "disengagement from infantile libidinal dependencies" (Blos, 1975, p. 158). As this involves a "simultaneous repudiation and reliance on parents" (Lapsley & Rice, 1988,

p. 113), a weakening of the parent-adolescent bond is considered a prerequisite of effective separation-individuation and identity development. From an attachment theory perspective, however, separation is a reality event such as leaving home and/or going to college. In this framework, close parent-adolescent attachments are emphasized as they facilitate developmental progress through providing the late adolescent with a secure base from which to explore and develop competencies within the extrafamilial world (Bowlby, 1988; Kenny, 1987; Ryan & Lynch, 1989).

The family systems perspective complements both object relations and attachment conceptualizations and as such provides a conceptual bridge for reconciling these different perspectives. For example, Bowen (1978) has identified two aspects of self-individuation. The first is the differentiation of emotional from intellectual functioning within the self and degree of choice one has over which type of functioning will govern one's behavior. The second is the differentiation one experiences in one's relationships, particularly those in one's family-of-origin. This latter aspect emphasizes the individual's ability to maintain an autonomous self in a relationship system. In contrast, the family's level of differentiation is seen as playing a significant role in the family's ability to adapt to social and environmental changes, individual members' developmental changes, and developmental changes for the family as a whole (see Anderson & Sabatelli, 1990). Accordingly, this perspective provides us with a framework for comprehending both individual and familial levels of the separation process.

Clearly, one cannot consider separation-individuation without connectedness as these processes are not only coincident, they are mutually enhancing (Josselson, 1988). It is also evident that our knowledge of the constructs of psychological separation and

attachment within an eating disordered population is limited. In terms of etiology, the psychoanalysts appear unequivocal in their support of a separation-individuation hypothesis. Those supportive of an attachment approach can be reasonably secure in positing the presence of an inadequate attachment pattern. Although these various theoretical positions appear to be further supported by empirical evidence, the findings are tentative given the variations in diagnostic criteria, instrumentation, and methodology.

If one considers the empirical investigations of psychological separation, relatedness, and college adjustment amongst adolescents, the necessity of considering both separateness and connectedness in the development of adolescents and young adults becomes obvious. Such a research approach is not evident in the literature on eating disorders. To date, studies have tended to consider the various individual and familial processes in isolation. They have also not assessed the associations amongst these concepts in a patient population. Accordingly, it is still not known how psychological separation, attachment, and family functioning interact to render an individual vulnerable to an eating disorder.

The Present Study

The purpose of the present study was to investigate the relationship of psychological separation, parental attachment, and family functioning to eating disorder symptomatology among young women evidencing a range of eating-related problems. Women in treatment for a diagnosable eating disorder as well as a sample of female university students were included. As prevalence rates for bulimia nervosa on university campuses range from 1% (Drewnowski, Yee, & Krahn, 1988; Drewnowski et al., 1994; Schotte, & Stunkard, 1987) to 3.8% (Striegel-Moore et al., 1989) of undergraduate

women, with the prevalence rates for disordered eating behavior (such as bingeing and/or dieting) being somewhat higher at 10% (Drewnowski et al., 1994) to 15% (Striegel-Moore et al., 1989), including a university sample ensured that women evidencing a continuum of disturbed eating patterns were sampled for inclusion in the study.

This study examines three main research questions. The first addresses the issue of the paucity of concurrent investigation of separation and relatedness constructs in the literature. Toward this end, this study explores the construct of psychological separation within the context of parental attachment and level of family functioning. Regardless of eating disorder symptomatology, women from well-differentiated families should have more psychological independence from their parents coincident with a continuing positive attachment. Women from poorly differentiated families should have lower levels of parental attachment and be psychologically dependent on their parents.

The second question concerns the association between psychological separation and eating disorder symptoms. Given that eating disorders can be viewed as one extreme of a continuum of eating pathology (Drewnowski et al., 1994), this study investigates the association between severity of eating disturbance and psychological separation from parents. Accordingly, it is likely that greater psychological separation from parents will be associated with less eating disturbance.

The third and more exploratory question involves the relative contribution of psychological separation, attachment, and family levels of differentiation to eating disorders. Specifically, does psychological separation account for variance in eating disorder symptoms over and above that accounted for by the attachment and family functioning variables?

METHOD

Participants

Participants were 100 young adult women; 30 were patients in treatment for eating disorders and 70 were university students. Women between the ages of 18 and 28 years who had two living parents (even if separated or divorced), currently lived away from the family home, or had ever lived away from home for six months or more were invited to participate. Such age requirements take into account findings which suggest that individuation in women continues well past adolescence (Lebe, 1982) and that age 28 is coincident with a shift in life structure development (Roberts & Newton, 1978) and increased competence in parent-young adult relations (Frank et al., 1988). As well, symptoms of eating disorders are most often developed by the age of 28 (Woodside & Garfinkel, 1992). Accordingly, the age criteria selected for this study ensured a range of experience with respect to the process of psychological separation and did so in a sample at risk for developing an eating disorder. In order to reduce the confounding influences of ethnicity and family structure on family dynamics, only those participants raised in Canada or the United States (see Hoffman & Weiss, 1987) or in another English-speaking industrialized country (e.g., Europe, Australia, New Zealand) were included in the final sample.

The 30 eating disordered participants were clients from the Eating Disorders Clinic at St. Paul's Hospital ($n = 20$) or from an Eating Disorders Program at a local Mental Health Center ($n = 10$). All had been diagnosed with an eating disorder according to the criteria listed in the *DSM-III-R* (American Psychiatric Association, 1987; see

Appendix A) and were in treatment. Participants at St. Paul's Hospital learned about the study from posters placed on bulletin boards in the Eating Disorders Clinic, verbal announcements made in treatment groups, and from their therapists. The names and telephone numbers of those interested in participating were given to an administrative assistant and then forwarded to a researcher. Each woman was contacted by telephone and her interest in participating further assessed. If agreeable, arrangements were made to meet at the most convenient locale for the participant. Those recruited through the Eating Disorder Programs at three Mental Health Centers became aware of the project from their therapists. Consistent with the protocol at St. Paul's Hospital, prospective participants were contacted by telephone and arrangements made for meeting.

The stipulations that participants have two living parents and not be living at home (Blustein et al., 1991; Hoffman, 1984; Hoffman & Weiss, 1987) needed to be amended to include "or, have ever lived away from home for six months or more" part way through the recruitment of the patient sample. Given that individuals with eating disorders can become medically compromised, and as such may need to convalesce at home for a period of time, it became apparent that the requirement that they be living away from the family home was unduly rigorous. Accordingly, the criteria were broadened to include a leaving home experience of at least 6 months or more. Of the 18 eating disorder participants recruited with the amended criteria, only 2 were currently residing with their parents.

The university sample consisted of 70 female undergraduate volunteers. These participants were recruited via a poster and sign-up sheet on a bulletin board in the Psychology Department ($n = 67$) and posters placed in student residences ($n = 3$).

Potential participants were informed that this was a study about women's experiences of leaving home. They were also aware that relationships with parents and eating patterns were topics included in the study. The participation of patients and students was voluntary and unpaid; however, participants recruited through the inpatient and outpatient settings and university student residences were told that by participating they would become eligible to receive one of three \$50.00 honoraria. The university students recruited through a subject pool for psychology research received course credit in return for their participation. All participants gave informed consent prior to completing the questionnaires and interview, and all experimental procedures were in accord with the guidelines of the APA and the university ethics committee.

Information on age, place of birth, ethnicity, education, and occupation were gathered from all women in the study, and are summarized in Table 1. Ninety women were born in North America, with 5 being born in the United Kingdom, and the remainder in Australia, New Zealand, Peru, and South Africa. Eighty-eight women were White. The remainder were East Indian (4 women), Asian (4 women), Black (2 women), Native (1 woman), and Hispanic (1 woman). Eighty-three women had never married. Of the 54 women who were employed, 43 were working in clerical or sales positions. Ninety-three women had achieved some post-secondary education.

Comparisons of the student and patient subsamples on these demographic variables revealed that the patients were significantly older than the students, $t(98) = 6.37, p < .001$. There were also significant differences with regard to level of education, with 77% of the patients having some post-secondary education in comparison to 100% of the student subsample, $\chi^2(1, N = 100) = 17.56, p < .001$. In terms of

Table 1***Characteristics of Participants***

Variable	All	Students	Patients
Mean Age (<i>SD</i>)	21.68 (3.31)	20.51 (0.89)	24.40 (2.54)
Place of Birth (% North American)	90.0%	88.6%	93.3%
Race (% Caucasian)	88.0%	84.3%	96.7%
Marital Status (% never married)	83.0%	91.4%	63.3%
Employment Status (% employed)	54.0%	51.4%	60.0%
Education (% post-secondary)	93.0%	100.0%	77.0%
<i>N</i>	100	70	30

relationship status, a significantly smaller proportion of the patient subsample had never married, $\chi^2 (1, N = 100) = 6.96, p = .006$.

Procedure

Participants met with a researcher at an office at either the university or the hospital or at the participant's home. Prior to participating, each woman read an information sheet describing the purpose of the project and signed a consent form relevant to the recruitment site. Each participant was informed that her participation in the study was voluntary and that she was free to terminate her involvement at any time. She was also aware that in order to ensure confidentiality, a code number would be assigned to all questionnaires and that all research materials would be secured in a locked file. Each participant also received a feedback form provided by the University Ethics Committee to ensure that participants have an opportunity to anonymously express concerns about research projects. A test packet containing the following paper-and-pencil instruments was completed by the participant: background information form; Inventory of Parent and Peer Attachment (IPPA); Psychological Separation Inventory (PSI); Family Adaptability and Cohesion Evaluation Scale II (FACES II); and Eating Disorders Inventory (EDI). The measures are described in detail below.

It took each participant took approximately 45 minutes to complete the entire test packet. Upon receipt of the completed test materials, a brief structured interview (consisting of questions based on the *DSM-III-R* criteria) was conducted to assess eating disorder symptomatology. Once completed, the participant was debriefed as to the purpose of the study.

Given the low rate of participation in the patient sample, the research protocol was amended to include the possibility of participation via the mail. Over a 12-month period, potential participants at St. Paul's Hospital and the Mental Health Centers received the test packets directly from their therapists. If willing to participate, they completed the questionnaires according to the detailed instructions enclosed and mailed the packet to a researcher using the stamped, addressed envelope provided. Upon receipt of the test materials, a telephone interview was conducted by the researcher at a time deemed convenient by the participant. Of the eight women who submitted test packets via the mail, only four were interviewed. Of the remaining, one participant did not include a telephone number and three could not be interviewed, despite repeated telephone calls. As their test packets were complete, the self-report data collected from these women were included in the present study.

Two researchers were principally involved in the study. One was a Ph.D. candidate in Clinical Psychology and the other was a Master's candidate in Clinical Psychology. Each was experienced in completing interviews in university and clinical settings and had been trained in all aspects of the procedure. Given that the interview assessing eating disorder symptomatology was structured, any bias or differential results between interviewers was minimized.

Measures of Relationship Variables

Psychological Separation Inventory (PSI; Hoffman, 1984). The PSI is a 138-item self-report questionnaire with scales representing four dimensions of psychological separation: *Functional Independence*, assessed by 26 items focusing on one's ability to

direct personal affairs without parental assistance; *Emotional Independence*, measured by 43 items that tap one's reported freedom from excessive need for approval, closeness and emotional support from parents; *Conflictual Independence*, assessed by 50 items that address one's reported freedom from guilt, anxiety, mistrust, responsibility toward, or resentment of one's parents; and *Attitudinal Independence*, measured by 28 items that tap the maintenance of attitudes, values and beliefs that differ from those of one's parents. Individuals completing the questionnaire indicate how accurately each item describes them on a 5-point scale (1 = *not at all true to me*, 5 = *very much true of me*). Half of the items pertain to mother and half to father; each scale is scored separately for the mother items and the father items. Ratings are summed and subtracted from the total possible for the scale, so that higher scores reflect greater psychological separation. Hoffman (1984) reported internal consistency estimates (Cronbach's coefficient alpha) between .84 and .92 and test-retest reliabilities (after 2 to 3 weeks) ranging from .49 to .94 for males and from .70 to .96 for females. The scale reliabilities demonstrated in the present study are highly consistent with previous research. In this study, the internal consistency (coefficient alpha) of the PSI subscales for the Mother and Father dimensions was as follows: For Mother, FI, EI, CI, and AI = .90, .89, .94, and .86, respectively; for Father, FI, EI, CI, and AI = .93, .93, .90, and .93, respectively.

Inventory of Parent and Peer Attachment (revised version; IPPA; Armsden & Greenberg, 1987). The IPPA is a self-report instrument intended to assess the internal working model of attachment figures by tapping the affective/cognitive experiences associated with trust in the accessibility and consistent responsiveness of the attachment figure. Three separate scales assess mother, father, and peer attachment. The IPPA

consists of 25 items that have a 5-point Likert-type response format (1 = *almost never or never true*, 5 = *almost always or always true*) in three sections, with higher scores reflecting greater perceived attachment. Because the peer section was not related to the questions raised in this study, it was not used. The mother and father attachment scales have demonstrated internal consistency estimates of .87 and .89, respectively, in past research (Armsden & Greenberg, 1989). In the present study, alpha coefficients for the mother and father scales were .97 and .96, respectively. Evidence for the construct validity of the measure is inferred from its clear three-factor structure and the predictable relations between scores on the IPPA and measures of family cohesion, depression, self-concept, loneliness, life satisfaction, and affective status (e.g., depression, anxiety, resentment/alienation, and covert anger; Armsden & Greenberg, 1987, 1989), and adjustment to college (Lapsley et al., 1990). The IPPA also appears to be unrelated to socioeconomic status and ethnicity (Armsden & Greenberg, 1987).

Family Adaptability and Cohesion Evaluation Scale II (FACES II; Olson et al., 1982). FACES II is a 30-item scale designed to provide measures of family cohesion (e.g., emotional bonding, family boundaries, coalitions, time, space, friends, decision-making, and interests and recreation) and adaptability (e.g., assertiveness, leadership, discipline, negotiation, roles, and rules) as well as both perceived and ideal family functioning. In order to obtain such ratings, family members complete the instrument twice—once indicating the current perception of their family and once denoting how they would like their ideal family to be. All items are rated on a 5-point scale (1 = *almost never*, 5 = *almost always*). Four scores are calculated: Perceived cohesion, perceived adaptability, ideal cohesion, and ideal adaptability. The discrepancy between perceived

and ideal functioning provides an inverse measure of family satisfaction. Because the ideal ratings of cohesion and adaptability were not related to the questions posed in this study, only ratings of current or perceived family functioning were used.

FACES was based on Olson's Circumplex Model of family systems (see Olson, et al., 1982). The behavioral dimensions of cohesion and adaptability were defined on a continuum, yielding dysfunction at either extreme and health in the central area.

Cohesion ranged from a very low condition of disengaged to a very high condition of enmeshed. Adaptability ranged from rigid (very low) to chaotic (very high). As a result of ongoing theoretical and empirical debate (see Cluff & Hicks, 1994; Cluff, Hicks, & Madsen, 1994; Eckblad, 1993; Green, Harris, Forte, & Robinson, 1991; Olson, 1991, 1994) and the newly developed 3-D Circumplex Model, the FACES II and III are now considered to be operating in a linear manner. As a result, a linear scoring method is presently being recommended. Balanced family types are now indicated by high scores on the dimensions of cohesion (very connected rather than enmeshed) and adaptability (very flexible rather than chaotic).

Although a more recent version, the FACES III (Olson, Portner & Lavee, 1985), is available and has been used extensively, the continued use of the FACES II is recommended by Olson and colleagues due to the following:

1. The alpha reliability in FACES II is higher. For example, Cronbach's alpha for the cohesion scale is .87 (in contrast to .77 on FACES III); and for the adaptability scale, .78 (compared to .62 on the FACES III).
2. With regard to construct-related validity, although the correlation between the cohesion and adaptability scales is .03 on FACES III and .65 on the FACES II, the

high correlation has proven to be less problematic than the test developers originally had predicted.

3. The concurrent validity for FACES II is higher than for FACES III, especially for family adaptability.

In the present study, the alpha coefficients for the Cohesion and Adaptability scales were .93 and .88, respectively.

Measures of Eating Disorder Symptoms

Eating Disorders Inventory (EDI; Garner et al., 1983). The EDI is a 64-item, self-report, multiscale measure that assesses psychological and behavioral traits common to anorexia nervosa and bulimia. This instrument contains eight subscales—three measure attitudes and behaviors related to disordered eating (Drive for Thinness, Bulimia, and Body Dissatisfaction) and five assess associated psychopathology (Ineffectiveness, Perfectionism, Interpersonal Distrust, Lack of Interoceptive Awareness, and Maturity Fears). Items are rated on a 6-point scale (*never to always*), with higher scores indicating more extreme attitudes and behaviors. The EDI does not provide a unitary score by which to identify eating-disordered individuals or to differentiate between anorexia nervosa and bulimia nervosa. Instead, the manual provides norms and a normative profile with the mean scale scores for clinical (eating disorder) and nonclinical groups. These are used in the evaluation of individual profiles (Garner & Olmstead, 1984). Reliability estimates for the EDI show adequate internal consistency (Eberly & Eberly, 1985) and criterion validity. Cronbach's alpha ranged from .82 to .90 on the eight EDI scales for a criterion group of anorexic individuals and from .65 to .91 for a female comparison sample. Item-total correlation coefficients were moderately high ($M = .63$, $SD = .13$; Garner et al.,

1983; Garner & Olmstead, 1984). Other validation studies have included contrasted groups and convergent and discriminant approaches (see Klemchuk et al., 1990 for a review). Overall, a variety of clinical, subclinical, and nonclinical comparison groups have scored as theoretically predicted on specific EDI subscales (Garner & Olmstead, 1984).

In this study, three subscales of the EDI were chosen for the correlation analyses: Drive for Thinness, Bulimia and Body Dissatisfaction. These three subscales of the EDI have been shown to assess attitudes and behaviors related to eating and body shape which are central to eating disorders and distinguishing them from other psychiatric disorders (Garner & Olmstead, 1984).

DSM-III-R Symptom Counts

The information from the structured interview on eating patterns and weight was coded as to the presence or absence of symptoms consistent with the *DSM-III-R* criteria for Anorexia Nervosa and Bulimia Nervosa. These symptoms were then summed with participants receiving scores ranging from 0 (no symptoms) to 4 (full criteria) for anorexia nervosa and 0 (no symptoms) to 5 (full criteria) for bulimia nervosa.

The following questions were used to identify symptoms of anorexia nervosa:

1. Have you ever had a time when you thought that you were overweight and other people were saying that you had gotten to be too thin? (Criterion A)
2. At that time, were you fearful of becoming fat? (Criterion B)
3. At your lowest weight, how did you feel about your appearance? Did you still feel fat or that certain parts of your body were too fat? (Criterion C)

4. Did your menstrual periods stop shortly before or during the time you were losing weight? (Criterion D)

The following questions were used to identify symptoms of bulimia nervosa:

1. Have you ever had episodes during which you ate an enormous amount of food within a short space of time (i.e., had an eating binge)? (Criterion A)
2. Have you ever felt that your eating was out of control, or been afraid that you may not be able to stop eating once you begin? (Criterion C)
3. Have you ever done anything to offset the effects of the binges such as fasting, dieting, using diet pills or diuretics, taking laxatives, making yourself vomit or exercising a lot? (Criterion C)
4. When was your last eating binge? Within the last month, how often have you binged? [If at least two episodes a week] How long have you been binge eating at this frequency? (Criterion D)
5. Were you much more concerned about your weight and the shape of your body than most people your own age? (Criterion E)

The *DSM-III-R* symptom counts provided current classifications of eating disorder symptomatology in all participants. Table 2 presents the number and percentage of symptoms for the total sample, students and patients.

At the time of participation, 50 women (71%) in the student subsample reported no current or previous symptoms of anorexic eating behavior. Twenty women (29%) reported having some symptoms, with four women (6%) describing symptoms indicative of a prior history of anorexia. No woman in this subsample met diagnostic criteria for anorexia at the time of testing. In the patient subsample, 3 women (12%) reported no

Table 2

Number and Percentage of DSM-III-R Symptom Counts

	Total Sample	Students	Patients
Anorexia Nervosa			
No symptoms	53 (55%)	50 (71%)	3 (12%)
1 symptom	3 (3%)	1 (1%)	2 (8%)
2 symptoms	3 (3%)	2 (3%)	1 (4%)
3 symptoms	23 (24%)	13 (19%)	10 (38%)
4 symptoms	14 (15%)	4 (6%)	10 (38%)
Bulimia Nervosa			
No symptoms	59 (62%)	54 (77%)	5 (19%)
1 symptom	7 (7%)	6 (9%)	1 (4%)
2 symptoms	3 (3%)	3 (4%)	0 (0%)
3 symptoms	4 (4%)	2 (3%)	2 (8%)
4 symptoms	18 (19%)	5 (7%)	13 (50%)
5 symptoms	5 (5%)	0 (0%)	5 (19%)
<i>N</i>	96	70	26

current or previous anorexic eating patterns. Twenty-three women (88%) reported experiencing some symptoms of anorexia. Of the ten women (38%) describing symptoms indicative of a diagnosis of anorexia nervosa, only three women (12%) met full criteria for this eating disorder at the time of testing.

With regard to the *DSM-III-R* symptom counts for bulimia, 54 women (77%) in the student subsample reported no current or previous symptoms of bulimic eating. Of the 16 women (23%) endorsing some bulimic behaviors, 2 women (3%) described symptoms consistent with a diagnosis of bulimia nervosa. Although no woman in this subsample met diagnostic criteria for bulimia at the time of participation, two women (3%) met *DSM-III-R* criteria for Eating Disorder Not Otherwise Specified (EDNOS) due to the presence of subclinical levels of bulimia nervosa. In the patient subsample, five women (19%) indicated no current or previous bulimic behaviors. Twenty-one women (81%) reported experiencing some symptoms of bulimia, with 10 women (38%) describing symptoms consistent with a prior history of bulimia. At the time of testing, 5 women (19%) met full diagnostic criteria for bulimia nervosa.

The *DSM-III-R* symptom counts, in conjunction with information gained during the structured interview, indicate that at the time of testing, the majority of women in the student subsample showed no symptoms of anorexia (71%) or bulimia (77%). Three percent of the women in this subsample were, however, experiencing bulimic behaviors consistent with a diagnosis of EDNOS. In the patient sample, 12% of the women were diagnosed with anorexia, while 19% were currently bulimic. The majority of the women (69%) in this subsample met *DSM-III-R* criteria for EDNOS. Overall, a range of eating disorder symptomatology was identified in the women participating in the present study,

with more eating disorder symptoms being observed in the patient subsample.

Finally, as all participants recorded their height and weight when completing the Eating Disorder Inventory, information was available to permit the calculation of a body mass index for each participant. Body mass index (BMI), that is, weight in kilograms/height in meters², has been adopted widely as the least complicated and most reliable epidemiological indicator of body fat (Hannan, Wrate, Cowen, & Freeman, 1995). For patients with eating disorders, it is generally used as a guideline for determining when an individual meets the threshold for being underweight. Having a body mass index equal to or below 17.5 kg/m² is indicative of an anorexic body weight. The normal range of BMI is between 18 and 25. In the present study, the average BMI in the total sample was 20.70 ($SD = 3.26$). The mean scores on the BMI were almost identical in students ($M = 20.20$, $SD = 4.15$) and patients ($M = 20.92$, $SD = 2.78$), suggesting that these two subsamples did not differ significantly in this indicator of weight status, $t(41) = -.87$, $p > .05$.

Background information was garnered via a series of questions concerned with demographics (i.e., age, race, duration of Canadian residency, current living arrangements, education status, occupational level of parents), family structure (parents' marital status), and the move away from home.

Data Analyses

The associations among psychological separation, attachment, and family functioning were assessed using Pearson product moment correlation coefficient. Correlations were calculated among the PSI and the IPPA and FACES II scales in the total sample as well as in the student and patient subsamples. The question of the degree

of association between psychological separation and eating disorder symptoms was first addressed by computing *t* tests to determine whether the patient subsample showed lower mean scores on the PSI than did the students. Correlation coefficients were then computed to ascertain whether the PSI scores correlated negatively with EDI scores and *DSM-III-R* symptom counts in the overall sample and in each subsample. Finally, multiple regression analyses were used to determine how well psychological separation predicted eating disorder symptomatology. In a hierarchical multiple regression analysis, the IPPA and FACES II scores were entered first, followed by the PSI scores. This was done to determine if PSI scores significantly improved the prediction of *DSM-III-R* symptom counts, after controlling for IPPA and FACES II scores. In a second regression analysis, the order of the variables was reversed. With PSI scores being controlled for, the relative contribution of IPPA and FACES II scores to the prediction of eating disorder symptomatology (*DSM-III-R* symptom counts) could be ascertained.

RESULTS

Preliminary Analysis of Relationship Measures

Psychological Separation Inventory (PSI)

Given that previous researchers have found that Functional Independence, Emotional Independence and Attitudinal Independence are highly intercorrelated and generally do not correlate significantly with Conflictual Independence (e.g., Lopez et al., 1988; Rice et al., 1990), correlations among the PSI subscales were calculated in this study. The Functional Independence, Emotional Independence, and Attitudinal Independence for Mothers and Fathers subscales were found to be intercorrelated, with correlations ranging between $r = .12$ and $r = .82$ (median $r = .53$) in the total sample. Correlations between these three subscales and Conflictual Independence ranged from $r = -.03$ to $r = -.51$ (median $r = -.21$), indicating negligible to strongly negative associations (see Table 3 for correlation matrix). As this pattern of results is consistent with recent studies, a data reduction strategy recommended by Rice and colleagues (Rice, 1992; Rice et al., 1990) was used to reduce the overall number of variables in this study. This involved using the sum of the Functional Independence, Emotional Independence, and Attitudinal Independence subscales for each parent as indicators of general Independence from Mother and general Independence from Father, respectively. These two scores were averaged to give a measure of overall Independence from Parents. This score is thought to reflect an individual's ability to manage her own daily responsibilities, freedom from needing parental approval and emotional support, and beliefs or values that are distinct from those of her parents (Rice et al., 1990). The Conflictual Independence

Table 3

Correlation Matrix of Psychological Separation Inventory

Measure	1	2	3	4	5	6	7	8
<i>PSI Mother</i>								
1. Functional Independence	–	.75	.55	-.24	.60	.47	.29	-.03
2. Emotional Independence		–	.50	-.17	.36	.43	.12	.14
3. Attitudinal Independence			–	-.36	.21	.23	.57	-.22
4. Conflictual Independence				–	-.05	.05	-.15	.46
<i>PSI Father</i>								
5. Functional Independence					–	.82	.56	-.33
6. Emotional Independence						–	.56	-.29
7. Attitudinal Independence							–	-.51
8. Conflictual Independence								–

Note. $N = 100$. PSI = Psychological Separation Inventory.

subscale from the PSI served as a measure of separation feelings, with measures of Conflictual Independence from Mother and Conflictual Independence from Father being calculated. An overall measure of total Conflictual Independence from Parents was derived by averaging the two Conflictual Independence subscale scores. Positive separation feelings are reflected by hopeful, nonanxious, and unresentful reactions to a variety of separation experiences.

The means and standard deviations for the psychological separation indices (PSI) are presented in Table 4. The mean score for Independence from Parents in the total sample was 223.20 ($SD = 58.84$). This is within the range of average ratings of Independence from Parents reported by Rice et al. (1995). Specifically, in their cross-sectional study of 160 college men and women, mean scores for Independence from Parents ranged from 164.1 ($SD = 46.1$) to 230.5 ($SD = 43.2$). The average score for Conflictual Independence from Parents in the present study ($M = 152.48$, $SD = 31.68$) also falls within the range of conflictual independence mean scores reported by Rice and colleagues (124.5, $SD = 25.8$ to 167.4, $SD = 18.5$). Such comparisons suggest that the average scores of psychological separation in the present study are consistent with those reported by researchers utilizing similar methods of determining indicators of independence from parents using the PSI. There was however, more dispersion of PSI scores within the university sample in this study suggesting that the women in this study had a greater range of scores on these two indices of psychological separation. The reasons for this are not clear.

The mean score for Independence from Parents was lower in the students (218.30, $SD = 56.00$) than in the patient sample (234.60, $SD = 54.68$). The reverse was true for

Table 4

Means and Standard Deviations of Total Sample, Students, and Patients on Measures of Psychological Separation, Parental Attachment, and Family Cohesion and Adaptability

Measure	Total Sample			Students			Patients		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
<i>Psychological Separation Inventory (PSI)</i>									
Independence from Parents									
	223.20	58.84	100	218.30	56.00	70	234.60	54.68	30
Conflictual Independence from Parents									
	150.30	31.98	100	152.48	31.68	70	145.16	32.58	30
<i>Attachment to Parents (IPPA)</i>									
	84.95	20.57	100	89.16**	20.92	70	74.78**	15.84	29
<i>Family Adaptability and Cohesion Scale II (FACES II)</i>									
Cohesion									
	51.50	13.40	100	53.04*	13.28	70	47.17*	13.33	30
Adaptability									
	40.94	10.69	100	43.10**	10.30	70	35.33**	9.57	30

Note. * Test-wise $p < .05$, ** family-wise $p < .05$ (both one-tailed).

Conflictual Independence from Parents, with the mean scores for the students and patients being 152.48 ($SD = 31.68$) and 145.16 ($SD = 32.58$), respectively. A test of the difference between the means of the two subsamples on Independence from Parents indicated that the groups did not differ significantly on independence from parents, $t(56) = 1.36, p > .05$. The comparison between these two samples on Conflictual Independence from Parents also was nonsignificant, $t(54) = -1.04, p > .05$, suggesting that the university women and patients did not differ in terms of feelings associated with the separation experience.

Inventory of Parent and Peer Attachment (IPPA)

A score of total Attachment to Parents was calculated by summing and then averaging the scores on the two IPPA subscales: Attachment to Mother and Attachment to Father. As studies typically report scores of attachment to mother and father separately rather than as a total attachment score, the mean scores for ratings of Attachment to Mother and Attachment to Father among university students in this study (94.50, $SD = 23.18$ and 83.83, $SD = 24.98$, respectively) were compared with two other samples. Schultheiss and Blustein (1994a) reported mean scores of 95.4 ($SD = 21.2$) for Attachment to Mother and 84.6 ($SD = 19.4$) for Attachment to Father in their sample of 73 college women. In a study by Blustein et al. (1991), 93 university women had a mean score of 96.08 ($SD = 19.08$) on the Mother scale of the IPPA and 90.08 ($SD = 19.16$) on the Father scale. As the means and standard deviations on ratings of maternal and paternal attachment among university students in the present student are comparable to those in two other samples, it is likely that an averaged score denoting total Attachment to Parents

is a reasonable estimate of attachment status.

As presented in Table 4, the mean score for Attachment to Parents in the total sample was 84.95 ($SD = 20.57$). The comparison between the student and patient subsamples on degree of parental attachment was significant with the patient subsample scoring significantly lower than the students, $t(69) = -3.73, p < .001$. This suggests that in comparison with the students, the eating disordered patients are less attached to their parents.

Family Adaptability and Cohesion Evaluation Scales (FACES II)

The means and standard deviations for the FACES II scales are presented in Table 4. In the total sample, the mean score for Cohesion was 51.50 ($SD = 13.40$) and for Adaptability, 40.94 ($SD = 10.69$). Among the university women, mean scores for Cohesion and Adaptability were 53.04 ($SD = 13.28$) and 43.10 ($SD = 10.30$), respectively. The mean score for Cohesion in the patient sample was 47.17 ($SD = 13.33$) with 35.33 ($SD = 9.57$) being the average rating of perceived Adaptability. The mean scores among patients are comparable to the average ratings for Cohesion and Adaptability (51.1, $SD = 14.6$ and 38.2, $SD = 10.1$, respectively) reported in another sample of eating disordered women (Waller et al., 1990b).

In the present study, the mean scores for Cohesion and Adaptability were higher in the university students than in the patient sample. Testing the difference between the means of these two samples on Cohesion indicated that the groups did not differ significantly on perceived cohesion (the degree to which family members are separated or connected to their family) after adjusting for family-wise error, $t(55) = -2.02, p = .48$. The

comparison between these samples on Adaptability was significant, $t(59) = -3.63$, $p < .001$, suggesting that the eating disordered patients perceived their families to be lower in adaptability, or the extent to which the family system is flexible and able to change than did the university students.

Association among Psychological Separation, Parental Attachment, and Family Functioning

Intercorrelations of the psychological separation indices (independence from parents and conflictual independence from parents) with measures of parental attachment and family functioning (cohesion and adaptability) in the total sample are presented in Table 5. The hypothesis that positive associations would exist among psychological separation, attachment, and levels of cohesion and adaptability was partially supported. Cohesion and Adaptability were positively correlated as were Cohesion and Attachment to Parents, and Adaptability and Attachment to Parents. Cohesion, Adaptability, and Attachment to Parents were significantly associated with Conflictual Independence from Parents. Contrary to expectation, though, the correlation between Cohesion and Independence from Parents was significantly negative, as were the associations between Adaptability and Independence from Parents, and Attachment to Parents and Independence from Parents. These results suggest that women perceiving higher levels of family cohesion and adaptability evidence a greater attachment to their parents, experience less conflict in their relations with them, and are more psychologically dependent.

The overall pattern of results was also evident in the two subsamples (see Table 6). In the students, Cohesion, Adaptability, and Attachment to Parents were

Table 5

Intercorrelations of Psychological Separation, Attachment to Parents, and Family Cohesion and Adaptability in Total Sample

Measure	1	2	3	4	5
1. PSI: Independence from Parents	–	-.27**	-.59**	-.51**	-.55**
2. PSI: Conflictual Independence from Parents		–	.79**	.58**	.58**
3. IPPA: Attachment to Parents			–	.78**	.80**
4. FACES II: Cohesion				–	.80**
5. FACES II: Adaptability					–

Note. $N = 100$. PSI = Psychological Separation Inventory (Hoffman, 1984); IPPA = Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987); FACES II = Family Adaptability and Cohesion Evaluation Scales II (Olson et al., 1982). * Test-wise $p < .05$, ** family-wise $p < .05$ (both one-tailed).

Table 6

Intercorrelations of Psychological Separation, Attachment to Parents, and Family Cohesion and Adaptability in Students and Patients

Measure	1	2	3	4	5
1. PSI: Independence from Parents	–	-.42**	-.63**	-.58**	-.65**
2. PSI: Conflictual Independence from Parents	.11	–	.86**	.71**	.68**
3. IPPA: Attachment to Parents	-.47*	.63**	–	.84**	.83**
4. FACES II: Cohesion	-.29	.26	.54**	–	.80**
5. FACES II: Adaptability	-.27	.33*	.56**	.79**	–

Note. Correlations for students ($N = 70$) are above the diagonal; those for patients ($N = 30$) are below the diagonal. PSI = Psychological Separation Inventory (Hoffman, 1984); IPPA = Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987); FACES II = Family Adaptability and Cohesion Evaluation Scales II (Olson et al., 1982).

* Test-wise $p < .05$, ** family-wise $p < .05$ (both one-tailed).

significantly correlated with Conflictual Independence from Parents. The correlation between Cohesion and Independence from Parents was strongly negative, as were the associations between Adaptability and Conflictual Independence, and Attachment to Parents and Conflictual Independence. Although a similar pattern of associations was observed among the variables in the patient sample, the correlations tended to be less robust overall. In contrast to the strong positive correlation between Attachment to Parents and Conflictual Independence, the correlation between Adaptability and Conflictual Independence from Parents was moderate and failed to reach significance after adjusting for family-wise error. The correlation between Cohesion and Conflictual Independence was nonsignificant, as were the associations between Cohesion and Independence from Parents and Adaptability and Independence from Parents. The moderate negative correlation between Attachment to Parents and Independence from Parents was nonsignificant after Bonferroni adjustments for family-wise error.

It is clear from the results of this section that women from more differentiated families-of-origin (that is, those in which daughters perceive higher levels of family cohesion and adaptability) experienced a greater degree of parental attachment. As expected, there were positive correlations between measures of family interaction and ratings of parental attachment. Only one aspect of psychological separation performed as hypothesized, however. Conflictual independence (freedom from excessive guilt, anxiety, mistrust, and anger in relation to parents) was significantly correlated with higher levels of differentiation within the family and greater parental attachment. In contrast, the inverse association between these variables and independence from parents was unexpected. Contrary to expectations, these negative correlations suggest that higher

levels of family functioning and positive parental attachments are associated with psychological dependence rather than independence.

Although no specific hypotheses were made concerning differential patterns of associations for mother versus father in terms of the measures of psychological separation and parental attachment, the following patterns of results were identified in exploratory analyses. The first is concerned with the ratings of paternal attachment. Table 7 presents the means and standard deviations for Attachment to Father. The mean score for Attachment to Father was significantly higher in the students than in the patients, $t(55) = -3.52, p < .001$, suggesting that the patients were less attached to their fathers than were the students. The other difference between the subsamples was related to the degree of association between independence from mother and independence from father. In contrast to the strong positive correlation between Independence from Mother and Independence from Father observed in the students (see Table 8), the correlation between these two scales in the patient sample was nonsignificant. This suggests that the eating disordered patients in this study tended to view each parent distinctly with respect to strivings towards independence.

Analysis of the Eating Disorder Measures

Means and standard deviations for the eating disorder measures are presented in Table 9. The EDI scores of the students are comparable to those published for female college students in the EDI manual (Garner et al., 1984). In this normative sample, the mean scores were 5.51 ($SD = 5.5$) on the Drive for Thinness scale; 9.7 ($SD = 8.1$) on the Body Dissatisfaction scale; and 1.7 ($SD = 3.1$) on the Bulimia scale. Mean scores for the

Table 7

Means and Standard Deviations of Students and Patients on Measures of Psychological Separation and Attachment to Parents – Mother and Father Scales

Measure	Students			Patients		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
<i>Psychological Separation Inventory (PSI)</i>						
Independence from Mother	205.74	59.16	70	209.34	68.2	30
Independence from Father	230.86	33.45	70	259.93	35.79	30
Conflictual Independence from Mother	148.20	40.94	70	143.66	41.18	30
Conflictual Independence from Father	156.78	33.34	70	146.66	35.12	30
<i>Inventory of Parent and Peer Attachment (IPPA)</i>						
Attachment to Mother	94.50	23.18	70	85.47	22.79	30
Attachment to Father	83.83**	24.98	70	65.17**	23.59	30

Note. * Test-wise $p < .05$, ** family-wise $p < .05$ (both one-tailed).

Table 8

Intercorrelations of Psychological Separation from Mothers and Fathers, Attachment to Mothers and Fathers, and Family Cohesion and Adaptability

Measure	1	2	3	4	5	6
1. PSI: Independence from Mother	—	.58**	-.68**	-.28**	-.49**	-.54**
2. PSI: Independence from Father	.22	—	.30**	-.68**	-.53**	-.61**
3. IPPA: Attachment to Mother	-.47**	.23	—	.51**	.74**	.74**
4. IPPA: Attachment to Father	-.00	-.73**	-.05	—	.72**	.71**
5. FACES II: Cohesion	-.13	-.32*	.35*	.45*	—	.80**
6. FACES II: Adaptability	-.25	-.17	.44*	.40*	.79**	—

Note. Correlations for students ($N = 70$) are above the diagonal; those for patients ($N = 30$) are below the diagonal. PSI = Psychological Separation Inventory (Hoffman, 1984); IPPA = Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987); FACES II = Family Adaptability and Cohesion Evaluation Scales II (Olson et al., 1982). * Test-wise $p < .05$, ** family-wise $p < .05$ (both one-tailed).

Table 9

Means and Standard Deviations of Total Sample, Students, and Patients on Measures of Eating Disorder Symptoms

Measure	Total Sample			Students			Patients		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
<i>Eating Disorder Inventory (EDI)</i>									
Drive for Thinness									
	7.31	7.35	99	4.60**	5.74	70	13.86**	6.72	29
Body Dissatisfaction									
	11.82	8.66	99	9.11**	7.66	70	18.34**	7.44	29
Bulimia									
	2.99	4.72	99	1.34**	2.12	70	6.97**	6.60	29
<i>DSM-III-R Symptom Counts</i>									
Anorexia Nervosa									
	1.40	1.65	96	.86**	1.42	70	2.84**	1.35	26
Bulimia Nervosa									
	1.26	1.81	96	.54**	1.18	70	3.20**	1.81	26

Note. EDI = Eating Disorder Inventory (Garner et al., 1983). * Test-wise $p < .05$, ** family-wise $p < .05$ (both one-tailed).

patients in the present study were compared with the scores of the FDI normative anorexic sample ($n = 155$). In the normative sample, the mean scores were 13.86 ($SD = 6.1$) on the Drive for Thinness scale; 15.5 ($SD = 7.8$) on the Body Dissatisfaction scale; and 8.1 ($SD = 6.3$) on the Bulimia scale. By comparison, the mean scores in the current patient subsample and those in the EDI normative anorexic sample are roughly equivalent. These results suggest that in this study, the women in patient subsample are endorsing EDI items in a manner consistent with diagnoses of anorexia and/or bulimia nervosa. In contrast, the students appear to be relatively free of serious eating disorder symptomatology.

In the present study, the patient subsample scored higher than the students on each of the three EDI subscales. The differences between the means on the Drive for Thinness scale was significant, $t(48) = 6.52, p < .001$, indicating that the university students and patients differed significantly with respect to excessive preoccupation with weight and dieting. The comparison between the two samples on the Body Dissatisfaction scale was also significant, $t(57) = 5.77, p < .001$, with the patients being more dissatisfied with the maturational areas of the body such as the hips and thighs. The difference between the means of the two groups on the Bulimia scale was significant as well, $t(32) = 4.62, p < .001$, with the patients having an increased tendency toward episodes of uncontrolled overeating and self-induced vomiting.

The *DSM-III-R* symptom counts provided a tally of the number of eating disorder symptoms experienced by each participant during her lifetime. The means and standard deviations for these symptom counts are presented in Table 9. In both categories of eating disorders, the patients reported more symptoms of disturbed eating. The difference

between the two samples on number of symptoms of anorexia was significant, $t(47) = 6.34, p < .001$, with the patient sample reporting more anorexic symptoms. The comparison between the means of the two groups on number of bulimic symptoms was also significant, $t(33) = 6.93, p < .001$, with the patient sample describing considerably more symptoms of bulimia.

Correlations of the three subscales from the EDI with the *DSM-III-R* symptom counts in the total sample are presented in Table 10. Among the three EDI scales, Drive for Thinness was significantly correlated with the Body Dissatisfaction and the Bulimia subscales. The Body Dissatisfaction and Bulimia subscales also were strongly associated. Each EDI subscale was positively related to the symptom counts of anorexia and bulimia. The correlations between anorexic symptomatology and the EDI subscales were large and significant, ranging between .35 and .60. A similar pattern of associations (with correlations ranging between .33 and .58) was observed between the bulimia symptoms and the EDI scales. The symptom counts of anorexia and bulimia were also positively associated ($r = .53$). Given the large correlations between the interview data (*DSM-III-R* symptom counts) and the self-report inventory (EDI), it is likely that eating disorder symptoms have been accurately assessed in this study.

Table 11 presents the intercorrelations of the EDI subscales and the *DSM-III-R* symptom counts in the student subsample. The Drive for Thinness subscale was significantly associated with the Body Dissatisfaction scale and the Bulimia subscale. There was also a positive correlation between the Body Dissatisfaction scale and the Bulimia subscale. The symptom counts of anorexia and bulimia were positively associated as were anorexic symptoms with the Drive for Thinness scale, the Body

Table 10

Correlations Among Eating Disorder Measures in Total Sample

Measure	1	2	3	4	5
1. EDI: Drive for Thinness	–	.77**	.57**	.60**	.47**
2. EDI: Body Dissatisfaction		–	.49**	.55**	.33**
3. EDI: Bulimia			–	.35**	.58**
4. <i>DSM-III-R</i> Symptom Counts: Anorexia Nervosa				–	.53**
5. <i>DSM-III-R</i> Symptom Counts: Bulimia Nervosa					–

Note. $N = 99$ for EDI subscales; $N = 96$ for *DSM-III-R* symptom counts. EDI = Eating Disorder Inventory (Garner et al., 1983). * Test-wise $p < .05$, ** family-wise $p < .05$ (both one-tailed).

Table 11

Correlations Among Eating Disorder Measures in Students and Patients

Measure	1	2	3	4	5
1. EDI: Drive for Thinness	–	.69**	.56**	.43**	.38**
2. EDI: Body Dissatisfaction	.71**	–	.49**	.32**	.16
3. EDI: Bulimia	.33**	.24	–	.34**	.39**
4. <i>DSM-III-R</i> Symptom Counts: Anorexia Nervosa	.43*	.59**	-.11	–	.45**
5. <i>DSM-III-R</i> Symptom Counts: Bulimia Nervosa	-.18	-.21	.40*	-.02	–

Note. Correlations for students ($N = 70$) are above the diagonal; those for patients ($N = 29$ for EDI subscales; $N = 26$ for *DSM-III-R* symptom counts) are below the diagonal. EDI = Eating Disorder Inventory (Garner et al., 1983). * Test-wise $p < .05$, ** family-wise $p < .05$ (both one-tailed).

Dissatisfaction scale and the Bulimia subscale. The symptom counts of bulimia and the Drive for Thinness scale were also positively associated as were bulimic symptoms and the EDI Bulimia subscale. The association between bulimic symptoms and the Body Dissatisfaction scale was nonsignificant.

Within the patient subsample (see Table 11), the pattern of associations between the eating disorder measures tended to be less robust overall. Among the three EDI scales, the only strong correlation was between the Drive for Thinness scale and the Body Dissatisfaction scale. In comparison, the association between the Drive for Thinness scale and the Bulimia scale was moderate and, when controlling for family-wise error rate, failed to reach significance. The correlation between the Body Dissatisfaction scale and the Bulimia subscale was nonsignificant. Although the association between the symptom counts of anorexia and bulimia nervosa was also nonsignificant, the correlation between symptom counts of anorexia and scores on the Body Dissatisfaction subscale was strongly positive. The correlation between anorexic symptoms and the Drive for Thinness scale was less strong, however, and after Bonferroni adjustments for family-wise error rate, no longer reached significance. The association between symptom counts of anorexia and the Bulimia subscale was also nonsignificant. The only correlation of moderate size observed between bulimic symptoms and EDI scores was that between the symptom counts of bulimia and the Bulimia subscale. When adjusting for family-wise error, however, this association was no longer significant. Correlations between symptoms of bulimia and both the Drive for Thinness scale and Body Dissatisfaction subscale were also nonsignificant.

In summary, the results from these analyses of the eating disorder measures

suggest that women evidencing a range of disordered eating behaviors participated in the study. The two subsamples appeared to be significantly different with respect to severity of disturbed eating patterns. Yet, the findings indicating that the students and patients also obtained scores on the EDI consistent with published norms suggest that the subsamples are representative of their respective populations. The positive correlations between the interview data and self-report measure provide evidence of the convergent validity for the measurement of eating disorder symptomatology in the present study. Finally, the reduced magnitude of the correlations among the eating disorder measures in the patient sample is likely due to range restriction (see Howell, 1987).

Association between Psychological Separation and Eating Disorder Severity

It was hypothesized that greater psychological separation from parents would be associated with less eating disturbance. This hypothesis generally was not supported. Intercorrelations of the psychological separation indices (Independence from Parents and Conflictual Independence from Parents) with the eating disorder measures are presented in Table 12. In the total sample, the correlations between Independence from Parents and the Drive for Thinness scale, the Body Dissatisfaction scale, and the Bulimia subscale were nonsignificant. Small and nonsignificant correlations were also observed between Independence from Parents and the symptom counts for anorexia nervosa and bulimia nervosa. Conflictual Independence from Parents was negatively associated with the Drive for Thinness subscale, the Body Dissatisfaction scale, and the Bulimia subscale. These correlations did not reach significance after controlling for family-wise error. The results from these analyses suggest that psychological separation (independence from parents

Table 12

Psychological Separation Correlations with Eating Disorder Measures in Total Sample

Measure	Independence from Parents	Conflictual Independence from Parents
<i>Eating Disorder Inventory (EDI)</i>		
Drive for Thinness	-.01	-.17*
Body Dissatisfaction	.03	-.18*
Bulimia	.06	-.20*
<i>DSM-III-R Symptom Counts</i>		
Anorexia Nervosa	.03	-.11
Bulimia Nervosa	.10	-.15

Note. $N = 99$ for EDI subscales; $N = 96$ for DSM-III-R symptom counts. * Test-wise $p < .05$, ** column-wise $p < .05$ (both one-tailed).

and conflictual independence from parents) is not significantly related to disturbed eating patterns.

In the student subsample (see Table 13), the associations between Independence from Parents and the Drive for Thinness subscale, the Body Dissatisfaction scale and the Bulimia subscale were nonsignificant. There was, however, a moderate negative correlation between Conflictual Independence from Parents and the Bulimia subscale of the EDI. The remaining associations between Conflictual Independence from Parents and the Drive for Thinness subscale and the Body Dissatisfaction scale were small and nonsignificant. The correlation between Conflictual Independence from Parents and the symptom counts of anorexia was also nonsignificant. The modest negative association between Conflictual Independence from Parents and the symptom counts of bulimia was nonsignificant after adjusting for family-wise error.

The correlations among Independence from Parents and the Drive for Thinness scale, the Body Dissatisfaction scale and the Bulimia subscale in the patient subsample were also nonsignificant (see Table 13). The moderate negative correlation between Independence from Parents and anorexic symptomatology failed to reach significance when controlling for family-wise error. Independence from Parents was also not associated with symptom counts of bulimia. All of the correlations between Conflictual Independence from Parents and the Drive for Thinness subscale, the Body Dissatisfaction scale, and the Bulimia subscale were nonsignificant. The associations between Conflictual Independence from Parents and the symptom counts of anorexia and bulimia were also nonsignificant.

In exploratory analyses, correlations were calculated among the indicators of

Table 13

Psychological Separation Correlations with Eating Disorder Measures

Measure	Independence from Parents	Conflictual Independence from Parents
<i>Students</i>		
<i>Eating Disorder Inventory (EDI)</i>		
Drive for Thinness	-.07	-.10
Body Dissatisfaction	.01	-.09
Bulimia	-.04	-.34**
<i>DSM-III-R Symptom Counts</i>		
Anorexia Nervosa	.06	-.06
Bulimia Nervosa	.02	-.23*
<i>Patients</i>		
<i>Eating Disorder Inventory (EDI)</i>		
Drive for Thinness	-.22	-.15
Body Dissatisfaction	-.23	-.26
Bulimia	-.02	-.04
<i>DSM-III-R Symptom Counts</i>		
Anorexia Nervosa	-.36*	-.12
Bulimia Nervosa	.05	.01

Note. Correlations for students ($N = 70$); correlations for patients ($N = 29$ for EDI subscales; $N = 26$ for *DSM-III-R* symptom counts). * Test-wise $p < .05$, ** column-wise $p < .05$ (both one-tailed).

psychological separation from mothers and fathers and eating disorder symptomatology (see Table 14). Although the majority of the correlations among variables were nonsignificant, there was a moderate negative association between **Conflictual Independence from Mother** and the **Bulimia** subscale in the university students. This suggests that bulimic symptoms may be related to increased levels of parental conflict, especially with regard to relations between mothers and daughters.

In summarizing the results of these analyses, it is evident that the correlations between psychological separation (**Independence from Parents** and **Conflictual Independence from Parents**) and eating disorder symptomatology tended to be small and nonsignificant. The only association that was consistent with expectations was the correlation between increased bulimic symptomatology and greater parental conflict, especially with mother, in the student sub sample. Despite this finding, however, the overall pattern of correlations between the variables was such that greater psychological separation from parents was generally not associated with less eating disturbance as hypothesized.

Contribution of Psychological Separation to Eating Disorder Symptomatology

Given the small and generally nonsignificant correlations between indicators of psychological separation and eating disorder symptomatology, multiple regression analyses were performed to determine how well indices of psychological separation predicted symptoms of anorexia and bulimia after controlling for ratings of attachment status and family interaction. A hierarchical multiple regression strategy was used to more rigorously assess the pattern of associations among the relationship variables

Table 14

Correlations of Psychological Separation from Mothers and Fathers with Eating Disorder Measures

Measure	Independence from Mother	Independence from Father	Conflictual Independence from Mother	Conflictual Independence from Father
<i>Students</i>				
<i>Eating Disorder Inventory (EDI)</i>				
Drive for Thinness	-.02	-.11	-.13	.03
Body Dissatisfaction	-.03	.04	-.06	-.10
Bulimia	.06	-.11	-.33**	-.25*
<i>DSM-III-R Symptom Counts</i>				
Anorexia Nervosa	.08	.04	-.07	-.04
Bulimia Nervosa	.01	.02	-.17	-.23*
<i>Patients</i>				
<i>Eating Disorder Inventory (EDI)</i>				
Drive for Thinness	-.27	-.08	-.22	-.02
Body Dissatisfaction	-.29	-.08	-.19	-.26
Bulimia	-.01	-.03	-.01	-.06
<i>DSM-III-R Symptom Counts</i>				
Anorexia Nervosa	-.14	-.39*	-.20	-.01
Bulimia Nervosa	.26	-.17	-.07	.10

Note. Correlations for students ($N = 70$); correlations for patients ($N = 29$ for EDI subscales; $N = 26$ for *DSM-III-R* symptom counts). * Test-wise $p < .05$, ** column-wise $p < .05$ (both one-tailed).

(psychological separation, parental attachment, and family cohesion and adaptability) and eating disorder symptomatology. For these analyses, the *DSM-III-R* symptom counts were used as measures of anorexia and bulimia.

Separate analyses were performed for anorexic and bulimic symptoms. In the first set of analyses, *DSM-III-R* symptom counts of anorexia were predicted. The predictor variables Independence from Parents and Conflictual Independence from Parents (PSI), Attachment to Parents (IPPA), and Cohesion and Adaptability (FACES II) were entered in two blocks. In the first block, Attachment to Parents, Cohesion, and Adaptability scores were entered into the regression equation. In the second block, scores from the PSI (Independence from Parents and Conflictual Independence from Parents) were entered. This order of entry was used to determine if the PSI scores significantly improved the prediction of anorexic symptoms after controlling for IPPA and FACES II scores.

In the second set of analyses to predict *DSM-III-R* symptom counts of anorexia, the order of entry of the predictor variables was reversed. Accordingly, in the first block, the PSI indices (Independence from Parents and Conflictual Independence from Parents) were entered into the regression equation. Attachment to Parents (IPPA) scores and ratings of Cohesion and Adaptability (FACES II) were entered in the second block. The purpose of this reversal was to clarify the roles of parental attachment, family interaction, and psychological separation as they relate to anorexia.

Results from the first set of regression analyses appear in Tables 15 and 16. Anorexic symptoms were not significantly predicted by the first block of variables (Attachment to Parents, Cohesion, and Adaptability), which accounted for only 4% of the variance in eating disorder symptoms. The addition of the PSI scores (Independence from

Table 15

Summary of Hierarchical Regression Analysis for Variables Predicting DSM-III-R Symptom Counts of Anorexia Nervosa (N = 96)

Variable	<i>B</i>	<i>SE B</i>	β
<i>Step 1</i>			
Attachment to Parents	-.02	.02	-.20
Adaptability	-.01	.03	-.07
Cohesion	.01	.02	.07
<i>Step 2</i>			
Attachment to Parents	-.04	.02	-.47
Adaptability	-.01	.03	-.08
Cohesion	.01	.02	.07
Independence from Parents	-.01	.01	-.20
Conflictual Independence from Parents	.02	.02	.20

Note. $R^2 = .04$ for Step 1; $\Delta R^2 = .03$ for Step 2. None of the coefficients reached statistical significance (all $p > .10$).

Table 16

Summary of Hierarchical Regression Analysis for Variables Predicting DSM-III-R Symptom Counts of Anorexia Nervosa (N = 96)

Variable	<i>B</i>	<i>SE B</i>	β
<i>Step 1</i>			
Independence from Parents	-.00	.01	-.01
Conflictual Independence from Parents	-.01	.01	-.13
<i>Step 2</i>			
Independence from Parents	-.01	.01	-.20
Conflictual Independence from Parents	.02	.02	.20
Cohesion	.01	.02	.07
Adaptability	-.01	.03	-.08
Attachment to Parents	-.04	.02	-.47

Note. $R^2 = .02$ for Step 1; $\Delta R^2 = .05$ for Step 2. None of the coefficients reached statistical significance (all $p > .10$).

Parents and Conflictual Independence from Parents) did not significantly improve the prediction ($\Delta R^2 = .03$). When the order of entry of the predictor variables was reversed and the block of PSI scores entered first, anorexic symptoms were not significantly predicted by the two indicators of psychological separation (Independence from Parents and Conflictual Independence from Parents) which accounted for only 2% of the variance. The prediction of anorexia nervosa was substantially, although not significantly, improved with the addition of the second block of variables (Attachment to Parents, Cohesion, and Adaptability; $\Delta R^2 = .05$). Overall, such results suggest that while attachment adds to the construct of psychological separation in predicting anorexia nervosa, the contribution of separation over and above parental attachment is minimal.

A second set of hierarchical analyses were completed to determine if the PSI scores significantly improved the prediction of bulimic symptoms after controlling for IPPA and FACES II scores. In order to answer this question, the same procedures as described above were used for entering the blocks of predictor variables into the regression equations. Accordingly, the first block of variables consisted of the Attachment to Parents (IPPA), and Cohesion and Adaptability (FACES II) scores. The second block contained the scores from the PSI (Independence from Parents and Conflictual Independence from Parents). In the second set of analyses to predict the *DSM-III-R* symptom counts of bulimia, the order of entry of the predictor variables was reversed. In these analyses, the first block of variables consisted of the PSI indices (Independence from Parents and Conflictual Independence from Parents). Attachment to Parents (IPPA), and Cohesion and Adaptability (FACES II) formed the second block of predictor variables.

Tables 17 and 18 summarize the results from the second set of hierarchical regression analyses. Bulimic symptoms were significantly predicted by the first block of variables (Attachment to Parents, Cohesion, and Adaptability) which accounted for approximately 11% of the variance, $F(3,91) = 3.89, p = .01$. The addition of the PSI scores did not significantly improve the prediction of bulimia ($\Delta R^2 = .02$). In this regression analysis, Attachment to Parents made a significant contribution to the prediction of this eating disorder ($\beta = -.44$). The more modest contribution made by Cohesion ($\beta = .34$) was nonsignificant. When the two blocks of variables were entered in reverse order (with the PSI scores being entered first), bulimic symptoms were not significantly predicted by the two indices of psychological separation (Independence from Parents and Conflictual Independence from Parents), accounting for only 4% of the variance. However, when the second block of variables was entered (Attachment to Parents, Cohesion, and Adaptability), the prediction of bulimia was significantly improved, $F(5,89) = 2.63, p = .03$ ($\Delta R^2 = .09$). Once again, Attachment to Parents made a significant contribution to the prediction of bulimia ($\beta = -.67$). The modest contribution made by Cohesion ($\beta = .34$) was nonsignificant in this regression equation. The results of these two regression analyses suggest that parental attachment is a significant predictor of bulimia and that psychological separation is not an improvement over attachment in the prediction of this eating disorder.

Although the overall pattern of results was more robust in predicting symptoms of bulimia, in both sets of analyses the order in which the blocks of predictor variables were entered into the regression equations had an appreciable effect on the contribution of variable scores to the prediction of disordered eating. Taken together, these regression

Table 17

Summary of Hierarchical Regression Analysis for Variables Predicting DSM-III-R Symptom Counts of Bulimia Nervosa (N = 96)

Variable	B	SE B	β
<i>Step 1</i>			
Attachment to Parents	-.04	.02	-.44**
Adaptability	-.02	.03	-.13
Cohesion	.04	.02	.34*
<i>Step 2</i>			
Attachment to Parents	-.06	.02	-.67**
Adaptability	-.02	.03	-.13
Cohesion	.04	.02	.34*
Independence from Parents	-.01	.01	-.14
Conflictual Independence from Parents	.02	.02	.19

Note. $R^2 = .11$ for Step 1; $\Delta R^2 = .02$ for Step 2. * $p < .10$; ** $p < .05$.

Table 18

Summary of Hierarchical Regression Analysis for Variables Predicting DSM-III-R Symptom Counts of Bulimia Nervosa (N = 96)

Variable	B	SE B	β
<i>Step 1</i>			
Independence from Parents	.01	.01	.04
Conflictual Independence from Parents	-.02	.02	.20
<i>Step 2</i>			
Independence from Parents	-.01	.01	-.14
Conflictual Independence from Parents	.02	.02	.19
Cohesion	.05	.02	.34*
Adaptability	-.02	.03	-.13
Attachment to Parents	-.06	.02	-.67**

Note. $R^2 = .04$ for Step 1; $\Delta R^2 = .09$ for Step 2. * $p < .10$; ** $p < .05$.

analyses suggest that psychological separation does not contribute independently to the prediction of disordered eating. Rather, lower levels of parental attachment appear to be associated with symptoms of bulimia nervosa.

DISCUSSION

Association among Psychological Separation, Parental Attachment, and Family Functioning

One purpose of this study was to examine the association among psychological separation, parental attachment, and two indices of family interaction. As hypothesized, increased levels of cohesion and adaptability were found to be correlated with greater attachment to parents and positive separation feelings. Contrary to expectation, however, women from more differentiated families of origin did not evidence more independence from parents coincident with a positive attachment. Rather, psychological dependencies on both parents were observed.

The interrelation among higher levels of differentiation in a family system, greater attachment to parents, and increasing freedom from mistrust, anger, and resentment in parent-daughter relations is consistent with research suggesting distance regulation patterns indicative of well-differentiated families in conjunction with low levels of familial conflict are related to psychosocial adaptation (Gavazzi & Sabatelli, 1990). The results also converge with findings suggesting that more securely attached women experience higher levels of social competence and psychological well-being (Kenny & Donaldson, 1991; Schultheiss & Blustein, 1994a). What was not expected, however, was the inverse association between attachment status and independence from parents as attachment is viewed as an enduring emotional bond that, within a context of family closeness, promotes the development of autonomy or self-governance and self-regulation (Ryan & Lynch, 1989). Equally surprising were the negative correlations between independence from parents and indices of family cohesion and adaptability as physical

and/or psychological dependence tends to be associated with poorly differentiated families, not ones showing higher levels of cohesion and adaptability.

There are a number of possible explanations for the presence of dependencies within the context of positive attachments and well-differentiated families. Perhaps the results in the present study reflect an inadequate view of the separation-individuation process, especially for women. Another possible explanation could be derived from the nature of the sample included in this study. It is also conceivable that the PSI as a measure of the separation-individuation construct is limited. Each of these possibilities is addressed below.

The first explanation for the results focuses on the theory of separation-individuation. If healthy separation is associated with independence from parents then separation difficulties are indicative of parental dependency and, by implication, maladjustment. Consistent with results of the present study, previous researchers using the PSI with college student samples have found that women tend to evidence more dependence, rather than separation from parents. However, these "dependencies" have not translated into a poorer profile of adjustment (Lapsley et al., 1989). Moreover, in studies using the PSI in conjunction with the IPPA (Blustein et al., 1991; Rice et al., 1995; Schultheiss & Blustein, 1994a), personal/emotional, interpersonal, and college adjustment have been associated with parental dependency in conjunction with a secure attachment bond. In the present study, the majority of women came from quite stable family situations (68% of the parents had never separated or divorced). Perhaps a consistent family structure in conjunction with greater parent-daughter attachment fosters what could be considered "healthy dependence" as apposed to a dependency where one

relies on another for satisfaction of needs.

This notion is further supported by results in this study as the patient subsample scored significantly higher than the students on Independence from Parents prior to adjusting for family-wise error. As eating disorders are typically associated with heightened psychological, biological, and familial distress and not healthy separation, the notion of dependency as adaptive or synonymous with adjustment is a plausible explanation for the results. Moreover, this interpretation is consistent with recent theory (e.g., Grotevant & Cooper, 1985 ; Josselson, 1988) suggesting that separation-individuation may be most adaptively attained within the context of adolescent-parent connectedness. Given the centrality of relationships and emotional closeness to women's development (Gilligan, 1982; Josselson, 1988; Miller, 1976; Surrey, 1991), it has been suggested that perhaps development is not a path from dependence to autonomy, but a movement to increasingly differentiated forms of relating to others. Perhaps autonomy is merely a form of relatedness. Such a notion is a challenge to the autonomy-separation-achievement model of adult development.

A second explanation considers the nature of the sample included in the present study. It is possible that greater attachment to parents along with more harmonious relations does not facilitate independence. Rather, these relationship attributes may function to effectively block or delay the separation-individuation process. In evaluating the evidence for the possibility that, as a sample, the women in the study tended to be stuck with regard to the individuation process, it is important to recall that all participants had lived away from home for at least six months or more. Although physical and emotional separation from parents does not necessarily imply intrapsychic separateness

or individuation, these selection criteria ensured a range of experience with respect to independence. Moreover, although young adults do get “off-time” developmentally, this tends to occur more frequently in poorly differentiated family systems and is often accompanied by emotional reactivity and a preoccupation with struggles for separateness from family (Sabatelli & Mazor, 1985). In the present study, the average rating of perceived family cohesion and adaptability was within the range most viable for healthy family functioning (Olson et al., 1982). Higher levels of differentiation were also associated with parent-daughter relationships free from enduring conflict, anger, and mistrust (or conflictual dependence). These attributes are not consistent with family systems in which a “needy dependence” (Sabatelli & Mazor, 1985) or inability to separate from others is the rule. Accordingly, it is not likely that a finding of increased dependency coincident with positive attachments to parents and healthy interaction patterns among family members is due to the nature of the sample in the study.

As a third possible explanation for these results, characteristics of the PSI as a measure of psychological separation are summarized. Consistent with previous research, the Conflictual Independence subscale of the PSI related in theoretically expected directions with the other measures in this study (see Lopez et al., 1988). Lower levels of separation anxiety (conflictual independence) were associated with ratings of greater attachment to parents within a family context of increasing differentiation, a systemic attribute also associated with reduced levels of familial conflict. However, and also consistent with previous studies (Lapsley et al., 1988; Lopez et al., 1988), the Independence from Parents indicator of the PSI (composed of the Functional Independence, Attitudinal Subscales, and Emotional Independence subscales) did not

relate to the other relationship variables as predicted. Accordingly, the validity of these subscales as a measure of independence from parents merits review.

It could be that the PSI as a measure of separation-individuation is assessing a construct more similar to emotional detachment from parents than independence. This possibility was considered by Rice and colleagues (1995) after they, too, observed an inverse association between security of attachment and independence from parents in their study on college student adjustment. If independence is synonymous with self-reliance and detachment akin to an absence of experienced attachment or cohesion between parent and child (Ryan & Lynch, 1989), then the present results are supportive of the premise that Independence from Parents (as assessed by the PSI) may be an index of detachment. Certainly, the strong positive associations consistently observed between ratings of parental attachment and indices of family cohesion and adaptability are suggestive of low levels of detachment.

According to Lopez and Glover (1993), measures of the separation-individuation construct have tended to stress either items assessing emotional detachment from parents (i.e., parents as less influential, less important) or emotional autonomy (i.e., the experience of personal freedom) in the parent-adolescent relationship. Based on the results of this study, it is quite possible that the PSI is assessing something more akin to unhealthy detachment rather than healthy autonomy.

In summary, of the three possible explanations for the finding of psychological dependency within a context of greater parental attachment and well-differentiated families, those addressing the limitations of separation-individuation theory and its operationalization via the PSI appear to be the most viable.

The pattern of association among the relationship variables and indicators of psychological separation observed in the total sample was also evident in both the student and patient subsamples. However, the correlations among measures were less robust in the eating disordered patients. Possible explanations for the reduced size of the correlations include the small sample size of patients participating in the study. Smaller samples make it more difficult for statistical effects of low to moderate size to reach significance (Howell, 1987).

As hypothesized, lower levels of differentiation among family members and weaker parental attachments were evidenced in the women experiencing greater eating disorder symptoms. Compared to the students, the patients perceived their families to be considerably lower in adaptability. When not controlling for family-wise error, they also rated their families as significantly lower in perceived cohesion. Although these results are consistent with previous findings identifying an association between increased eating disorder symptomatology and less differentiation among family members (e.g., Kagan & Squires, 1985; Leon, Fulkerson, Perry, & Dube, 1994), they challenge Minuchin's (1978) descriptions of eating disordered families as being enmeshed. In the present study, the patients also appeared to be more poorly attached to their parents. Empirical support for a connection between insecure attachment and disordered eating behavior has been found in recent research with inpatient (Armstrong & Roth, 1989; Kenny & Hart, 1987) and university student samples (Becker et al., 1987; Heesacker & Neimeyer, 1990).

Overall, the results of these analyses suggest that greater parental attachment is coincident with healthy levels of differentiation and conflict-free relations within the family. The association between these attributes and ratings of dependency can be

considered evidence of parental reliance coincident with support for autonomy; a block or delay in the individuation process; or evidence of a faulty operationalization of the four aspects of parent-adolescent independence presumed to “theoretically underlie the construct of psychological separation” (Hoffman, 1984, p. 173). Regardless, experiences with separateness (e.g., positive separation feelings) and connectedness (e.g., attachment to parents) appear to describe women evidencing a range of eating-related problems.

Association between Psychological Separation and Eating Disorder Severity

The second research question was concerned with the association between psychological separation from parents and severity of eating disturbance. Contrary to expectation, the correlations between psychological separation (independence from parents, conflictual independence from parents) and eating disorder symptomatology were generally small and nonsignificant.

Separation difficulties as assessed by the PSI have been associated with increases in disordered eating behavior in previous studies (Friedlander & Siegel, 1990; Smolak & Levine, 1993; Zakin, 1989). When considering possible explanations for the nonsignificant results in the present study, the adequacy of the assessment of eating disorder symptomatology, the nature of the sample, and the applicability of the separation-individuation hypothesis of eating disorders are reviewed.

One explanation for the results concerns the assessment of eating disorder symptoms. Perhaps the lack of association between psychological separation and eating disorder severity was due to poor measurement. In this study, eating disorder symptomatology was assessed by structured interview and self-report. The structured

interview was composed of questions based on *DSM-III-R* criteria for anorexia and bulimia and permitted a classification of eating problems based on total numbers of anorexic and/or bulimic symptoms. As an adjunct to the clinical interview, participants completed the EDI. This self-report measure has demonstrated utility both as an empirical and a clinical instrument in the measurement of behavioral and psychological traits common in anorexia and bulimia (Klemchuk et al., 1990). It was also used in the earlier studies evaluating psychological separation in university women with eating disorders (Friedlander & Siegel, 1990; Levine & Smolak, 1993). In addition to including multiple measures of eating disorders, this study extended the literature by including an eating disordered patient sample. Not only did the patient subsample in this study endorse significantly more symptoms of anorexia and bulimia than did the students, their mean scores on the EDI were consistent with the published norms for anorexia and/or bulimia. There were also strong correlations between the self-report and interview data, suggesting not only that eating disorder symptoms had been accurately assessed, but that women evidencing a range of eating disordered symptomatology had participated in the study. As such, it is unlikely that the nonsignificant results in the present study are due to the poor measurement of eating disorder symptoms.

Another possible explanation for the findings concerns the nature of the sample, given that some novel selection criteria were used. The present study attempted to improve upon previous research by specifying age requirements and residency status. This was done to ensure that all participants had at least some psychological and/or physical experience with the process of separating from family and were at an age when eating disorders typically develop. When comparing the present study with the two

existing studies addressing psychological separation (using all subscales of the PSI) and eating disorders in terms of age, the average age for participants in this study (21.68, $SD = 3.31$) was only slightly higher than that reported by Friedlander and Siegel (1990) and Smolak and Levine (1993; 20.62, $SD = 3.31$ and 20.5, $SD = 8.5$, respectively). Although the age range was more limited in the present sample (18 to 28 years) than in the sample reported by Friedlander and Siegel (18 to 39 years), fewer separation struggles are predicted after the age of 28, not more. As no information was available in either of the two existing studies on participants' places of residence, comparisons on this demographic variable were not possible. In summary, while age and residency status could have been a factor in the largely nonsignificant associations between psychological separation and eating disorder severity, it seems highly unlikely.

It is also possible that separation difficulties were not observed in the present study due to treatment effects. All of the women in the patient subsample were participating in intensive inpatient and/or outpatient psychotherapy for eating disorders at the time of participation. Accordingly, issues of separation-individuation could have been addressed in therapy and, if resolved, may have contributed to the lack of significant findings regarding individuation struggles and eating disorders. On the other hand, therapy could have precipitated increasing awareness of such issues making them more salient. Overall, it is difficult to discern the relative impact of psychotherapy on the strength of the association between psychological separation and eating disorder symptoms.

As the present study improved on previous research by including a patient sample and using multiple measures to assess eating disorder symptoms in women actively

involved in separation experience, it is also possible that the nonsignificant findings are evidence of a lack of support for the separation-individuation hypothesis of eating disorders. On the other hand, the results may simply be a reflection of the PSI measure and its poor operationalization of the separation-individuation construct. As mentioned previously, the construct of independence may need to be conceptualized somewhat differently to more accurately reflect issues of healthy autonomy.

Overall, of the possible explanations for the nonsignificant association between separation difficulties and eating disorder symptoms discussed, the most likely ones appear to be those associated with limitations in the theory of separation-individuation and its measurement.

The only finding consistent with expectations was the significant association between increased parental conflict and greater bulimic symptomatology as assessed by the EDI Bulimia subscale in the university sample. As the modest negative correlation between Conflictual Independence from Parents and Symptom Counts of bulimia was nonsignificant after adjusting for family-wise error, this finding suggests a connection between subclinical episodes of bulimic behavior and experiences of guilt, anger, anxiety, and resentment in relations with parents. Subsequent analyses revealed that this distress is most often experienced in the mother-daughter relationship. The connection between bulimic eating patterns and maternal conflict has been identified in previous studies using university samples (Friedlander & Siegel, 1990; Smolak & Levine, 1993).

In summary, the results suggest that struggles in separation-individuation may not be intrinsic to eating disorder symptomatology. The association between bulimic behaviors and affective instability, especially in terms of relations between mothers and

daughters is consistent with psychodynamic and family theories of eating disorders (e.g., Bemporad & Herzog, 1989; Humphrey, 1991) and previous research (e.g., Humphrey, 1989).

Contribution of Psychological Separation to Eating Disorder Symptomatology

When the contribution of psychological separation to eating disorder symptomatology was more rigorously assessed through multiple regression techniques, it became apparent that psychological separation did not contribute independently to the prediction of anorexic or bulimic symptoms. Rather, poor parental attachment was associated with eating disorder symptomatology, and, in particular, bulimic behaviors. The association between inadequate attachment and disturbed eating behaviors has been identified in previous studies (Armstrong & Roth, 1989; Becker et al., 1987; Heesacker & Neimeyer, 1990; Kenny & Hart, 1992). The present findings extend the literature through assessing the combined contributions of psychological separation and parental attachment to predictions of eating disorder symptoms.

Although no specific hypotheses were made regarding the differential pattern of associations for mother versus father in terms of the measures of psychological separation and attachment, subsequent analyses identified the following significant findings. The eating disorder patients were more poorly attached to their parents in general, and to their fathers in particular. They also tended to view each parent distinctly with respect to issues of independence. These findings converge with the lower ratings of perceived cohesion (disengaged) and adaptability (rigid) observed in this sample. Families characterized by disengaging distance-regulating patterns allow autonomy at the expense of intimacy,

support, responsiveness and mutual-relatedness (Anderson & Sabatelli, 1990). From an attachment theory perspective, the secure base of support and assistance needed for healthy emotional autonomy has not been provided by either the mother or the father.

Overall, the results from these analyses suggest that although difficulties in psychological separation may make a small contribution to eating disorder symptoms, inadequate parental attachment is the more significant predictor. These findings also point to the relevance of attachment to both parents for understanding eating disorders.

Implications for Research

The present findings challenge the theoretical and empirical evidence that psychological separation from parents is associated with positive family relations and absence of disturbed eating patterns. One implication is that separation-individuation theory offers an inadequate view of women's development and eating disorder etiology and as such merits revision. On the other hand, it is important to recall that the conceptualization of the individuation construct on the PSI continues to be a major methodological concern. Given this measurement issue, it appears premature to dismiss a model associating eating disorders with difficulties in separation-individuation on empirical grounds.

As no one study can give definitive answers to research questions of this magnitude, methodological limitations of the present study will be delineated and suggestions for further research presented.

Despite the strong correlations among indices of family interaction, attachment and conflictual independence from parents and the association between bulimic behavior

and maternal conflict, the correlational nature of this study does not establish the presence of cause-and-effect relations among the variables of interest. For example, it is not possible to know if maternal conflict precipitates bulimic behaviors or if disturbed eating behaviors lead to problems in the mother-daughter relationship.

As previously mentioned, the measurement of psychological separation proved to be problematic in the present study. The PSI was selected because it had been examined with respect to several indexes of late adolescent functioning including eating disorders and provided ratings of separation from mothers and fathers. The results of the current investigation coupled with recent research findings and critical review (e.g., Lopez & Glover, 1993) now suggest that this measure may not offer an adequate operationalization of the construct of psychological separation. Rather, the PSI may be more akin to an index of detachment or “disconnectedness” (Anderson & Sabatelli, 1990, p. 39). Future research would benefit from new or refined methods of measuring individuation, such as self-report instruments assessing both closeness and separateness (e.g., emotional autonomy) in relations between parents and young adults. Clinical interviews could also be used to gather information on a variety of functional, emotional, and behavioral manifestations of successful or unsuccessful individuation (i.e., how individuals behave toward significant others when they experience feelings of anger, guilt, anxiety, etc. as a result of demands from others for conformity or the fulfillment of obligations) thereby addressing the full range of content reflective of this complex developmental process. Finally, information from mothers and fathers and observations of interactions between parents and daughters would further enhance our understanding of the association between individuation and differentiation in eating disorder families.

Apart from the structured interview assessing eating disorder symptomatology, the majority of information on the constructs investigated in the present study was gathered through self-report questionnaires. Accordingly, the present findings may be open to the criticism that the results may be partly due to differences in response style. Typical response styles include the tendency to generally agree (termed acquiescence) or disagree (referred to as criticalness) with statements without attending to their actual content. This most often occurs on test items which are ambiguous to the test completer and not on items which are clear and unambiguous (Murphy & Davidshofer, 1988). Given that the majority of items in the questionnaires used in this study were unambiguous (e.g., I feel angry with my mother), it is likely that responses were being directed at the content of the items. As it is also unlikely that the strong and positive correlations that were obtained could have occurred if a response style or bias were predominant, response style was not considered a factor in the present study.

All participants in this study were born in an industrialized country, had two living parents (even if separated or divorced), and had lived away from home for at least six months or more. Although these selection criteria were chosen to increase the comparability of participants with respect to exposure to culturally mediated influences precipitating and perpetuating eating disorders (e.g., dieting and weight control), family structure, and separation experiences, the findings cannot be generalized to women not meeting these specifications. Moreover, as all participants in the patient subsample were also involved in inpatient and/or outpatient treatment for eating disorders, the results cannot be generalized to eating disorder women who are not in treatment. Future research would benefit from comparing the results of the present study with those obtained with

less restricted populations (e.g., immigrant women undergoing rapid cultural change; daughters from single-parent families).

Given that individuation is a developmental process, there is also a need for longitudinal research. By assessing the separation process at more points in time and including multiple measures, combining concurrent or retrospective self-reports, clinical interviews, and observational methods, changes in individuation over time can be observed. In particular, longitudinal research would be valuable in clarifying possible shifts in the process of individuation coincident with the development of eating disorder symptoms and their diminishment as a result of treatment. Research comparing persons diagnosed with anorexia or bulimia nervosa with those having other psychological disorders, such as depression, is needed to determine which components of individuation are specifically associated with eating disorders and which are associated more generally with psychological adaptation and distress. Future studies would also do well to recruit a much larger sample of eating disordered patients thereby permitting comparisons between eating disorder subtypes with respect to psychological separation.

Another implication from the present study concerns the role of attachment. Not only do the results suggest that late adolescent and early adult development is not a transition time characterized by a substantial weakening in parent-adolescent attachment but that inadequate parental attachment rather than separation distress is associated with eating disorders. Findings such as these underscore the importance of understanding separation-individuation within (and not apart from) the context of parent-adolescent attachment. Future research would benefit from a more comprehensive assessment of attachment domains involving interview and self-report. The IPPA was chosen for the

present study because it provided an adequate and expedient measure of attachment to mothers and fathers. Future researchers are encouraged to include measures of parent-adolescent and romantic/peer relationships as these commonly serve attachment needs for late adolescents and young adults (Bartholomew & Thompson, 1995). A related area of interest concerns the relative advantage of supportive relationships involving separateness (e.g., positive separation feelings) and connection (e.g., attachment to parents) with that of nonsupportive relationships involving separateness (e.g., detachment) and connectedness (e.g., separation anxiety) in eating disorders. Do certain types of relationships act as buffers for women at risk for developing eating disorders?

Implications for Clinical Practice

More generally, the results of the present study emphasize the importance of both connection in relationships and separateness during young adulthood. In contrast with the more traditional view of late adolescent development as repudiating parental ties, positive affective attachments towards parents were evident.

Given these findings, it is tempting to consider how psychotherapy could be improved by attention to attachment concepts. Any attempt to do so would be premature, however. Not only has the majority of attachment research been basic rather than applied (see Bartholomew & Thompson, 1995), difficulties in attachment represent one of many potential risk factors for a range of psychological dysfunction (Kenny & Rice, 1995) and are not specific to eating disorders. Accordingly, more research, especially applied research, is needed to advance our understanding of the applicability of attachment theory to clinical practice.

In conclusion, the results of the present study highlight the interrelationships among psychological separation, parental attachment, and family cohesion and adaptability in women evidencing a range of eating-related problems. Parental attachment emerged as a more significant predictor of eating disorder symptomatology than did psychological separation. Deepening our understanding of how experiences with separateness and connectedness potentiate eating disorder symptoms for women offers important implications for theory, practice, and further research.

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APPENDIX A

Diagnostic Criteria

DSM-III-R

Anorexia Nervosa

- A. Refusal to maintain body weight over a minimal weight for age and height (e.g., weight loss leading to maintenance of body weight 15% below that expected, or failure to make expected weight gain during period of growth, leading to body weight 15% below that expected.)
- B. Intense fear of gaining weight or becoming fat, even though underweight.
- C. Disturbance in the way in which one's body weight, size, or shape is experienced (e.g., the person claims to "feel fat" even when emaciated, believes that one area of the body is "too fat" even when obviously underweight).
- D. In females, the absence of at least three consecutive menstrual cycles when otherwise expected to occur.

Bulimia Nervosa

- 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 eating binges.
- C. The person regularly engages in either self-induced vomiting, use of laxatives or diuretics, strict dieting or fasting, or vigorous exercise in order to prevent weight gain.
- D. A minimum average of two binge eating episodes a week for at least three months.
- E. Persistent overconcern with body shape and weight.

Eating Disorder Not Otherwise Specified

Disorders of eating that do not meet the criteria for a specific eating disorder. Examples:

- (1) A person of average weight who does not have binge eating episodes, but frequently engages in self-induced vomiting for fear of gaining weight.
- (2) All of the features of Anorexia Nervosa in a female except absence of menses.
- (3) All of the features of Bulimia Nervosa except the frequency of binge eating episodes.

DSM-IV

Anorexia Nervosa

- A. Refusal to maintain body weight at or above a minimally normal weight for age and height (e.g., weight loss leading to maintenance of body weight less than 85% of that expected; or failure to make expected weight gain during period of growth, leading to body weight less than 85% of that expected).
- B. Intense fear of gaining weight or becoming fat, even though underweight.
- C. Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or denial of the seriousness of the current low body weight.
- D. In postmenarcheal females, amenorrhea, i.e., the absence of at least three consecutive menstrual cycles. (A woman is considered to have amenorrhea if her periods occur only following hormone, e.g., estrogen, administration.)

Specify type:

Restricting Type: during the current episode of Anorexia Nervosa, the person has not regularly engaged in binge-eating or purging behavior (i.e., self-induced vomiting or the misuse of laxatives, diuretics, or enemas).

Binge-Eating/Purging Type: during the current episode of Anorexia Nervosa, the person has regularly engaged in binge-eating or purging behavior (i.e., self-induced vomiting or the misuse of laxatives, diuretics, or enemas).

Bulimia Nervosa

- A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
 - (1) eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances.
 - (2) a sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating).
- B. Recurrent inappropriate compensatory behavior in order to prevent weight gain, such as self-induced vomiting; misuse of laxatives, diuretics, enemas, or other medications; fasting; or excessive exercise.

- C. The binge eating and inappropriate compensatory behaviors both occur, on average, at least twice a week for 3 months.
- D. Self-evaluation is unduly influenced by body shape and weight.
- E. The disturbance does not occur exclusively during episodes of Anorexia Nervosa.

Specify type:

Purging Type: during the current episode of Bulimia Nervosa, the person has regularly engaged in self-induced vomiting or the misuse of laxatives, diuretics, or enemas.

Nonpurging Type: during the current episode of Bulimia Nervosa, the person has used other inappropriate compensatory behaviors, such as fasting or excessive exercise, but has not regularly engaged in self-induced vomiting or the misuse of laxatives, diuretics, or enemas.