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Eating disorders and early attachment difficulties

Jennifer Ann Dinicola
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EATING DISORDERS AND EARLY ATTACHMENT DIFFICULTIES

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Social Work

by
Jennifer Ann Dinicola
Tamara Anne Pine
June 1999
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Approved by:

Dr. Ira Neighbors, Project Advisor,
Social Work
Dr. Rosemary McCaslin,
Chair of Research Sequence,
Social Work
ABSTRACT
Numerous approaches have been used to identify the etiology of eating disorders. This study hypothesized that female college students, ages 18 to 23, experiencing medium to high levels of eating disorder symptoms were more likely to have experienced attachment difficulties in early childhood with primary caregivers than those females not experiencing medium to high levels of eating disorder symptoms. This study was conducted on the World Wide Web, where participants completed demographic information, Kenny’s (1985) Parental Attachment Questionnaire (PAQ) and the Eating Disorder Symptom Questionnaire (EDSQ). Statistical analysis included the use of Pearson’s r, which rendered a -.593 correlation (p < .01) between the PAQ and the EDSQ. Stronger correlations were identified for two of the PAQ’s subscales and the EDSQ. Results imply that early attachment plays a significant role in the development of an eating disorder. Recognizing this aspect, social workers can implement attachment components into treatment plans for those suffering from eating disorders.
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Assigned Responsibilities

This was a group project and a team effort where authors collaborated throughout the project. However, for each phase of the project, certain authors took primary responsibility. These responsibilities were assigned in the manner listed below.

1. Data Collection: Jennifer Dinicola
2. Data Analysis
   Team Effort: Jennifer Dinicola and Tamara Pine
3. Writing Report and Presentation of Findings
   Team Effort: Jennifer Dinicola and Tamara Pine
   A. Introduction and Literature Review
      Team Effort: Jennifer Dinicola and Tamara Pine
   B. Methods
      Team Effort: Jennifer Dinicola and Tamara Pine
   C. Results
      Team Effort: Jennifer Dinicola and Tamara Pine
   D. Discussion
      Team Effort: Jennifer Dinicola and Tamara Pine
INTRODUCTION

Eating disorders have been recognized as problematic since at least the late 1600s. Garner & Garfinkle (1997) report that Richard Morton first described the phenomena currently known as anorexia in 1689 as a "Nervous consumption caused by sadness and anxious cares" (p. 3). However, this behavior wasn't coined anorexia nervosa until 1873. Bulimia Nervosa type symptoms can be traced back to the Roman era, but the disease wasn't defined and named until the late 1970s (Garner & Garfinkle, 1997). The delay in discovery may have been due to the level of secrecy involved with bulimia and the individual's ability to conceal symptoms.

The American Psychological Association [APA(1994)] documents that one to four percent of adolescent women develop an eating disorder. Grunwald (1995) estimates ten percent of high school and college students have anorexia or bulimia, or a combination of both. Mortality among women with eating disorders is approximately 10% (Shekter-Wolfson, Woodside & Lackstrom, 1997). Late adolescence is the average age of onset for bulimia, but anorexia may manifest even earlier in development. The APA reports those afflicted with eating disorders are predominantly Caucasian and come from upper middle-class or
middle-class backgrounds. The Federal Drug Administration Consumer Magazine (1992) reports that women make up 90% to 95% of bulimia and anorexia cases. Based on this statistic, this current study focused solely on female participants. The mystery of eating disorders has puzzled therapists, psychiatrists and psychologists for years. Clarity of etiology and effective treatment of eating disorders continues to be obscured, while the number of young victims increases.

The Fourth Edition of the Diagnostic Statistical Manual (DSM-IV) identifies eating disorders as a psychiatric illness. Eating disorders are classified into three different categories: (a) Anorexia Nervosa (b) Bulimia Nervosa and (c) Eating Disorder NOS. Even so, the symptoms of an eating disorder share general commonalities. These symptoms include, but are not limited to a fear of gaining weight or becoming fat, having a distorted body image, strict dieting and/or exercise rituals, gorging on food followed by self-induced purging, a preoccupation with dieting, and a sense of a lack of control over eating (APA, 1994). Secondary symptoms of eating disorders cover the gamut; these include the occurrence of amenorrhea to being anxious, impulsive, obsessive, compulsive, and displaying dependent or avoidant personality traits (Pryor &
It has only been within the last four to five decades that researchers have devoted their time and energy into eating disorder research with any intensity. Since the 1950s, there have been numerous theories and perspectives of how and why eating disorders develop. Perspectives of eating disorder etiology include the biological, the sociological, the psychological, the family and the early attachment perspectives.

As the name suggests, the biological view of eating disorders is based on the premise that etiology lies within the individual’s physiological make-up. Some researchers have suggested etiology may be genetic or chemical in nature. Nagel and Jones (1992) report studies conducted on the concordance rates of eating disorders between monozygotic and dizygotic twins. Their findings revealed monozygotic twins to have a 55% to 56% concordance rate while the dizygotic twins show only a seven percent concordance rate. Gershon, Hamovit, Schreiber, Dibble, Kaye, Nuruberger, Anderson and Ebert (1983) found biological family members of individuals with anorexia have a higher rate of anorexia than the family members of the control population (Killian, 1994). Information such as this questions genetics as a cause of eating disorders.
McFarland (1995) discussed theories focused on variables such as the deregulation of serotonin which results in binge eating of foods high in carbohydrates, which ultimately drives people to eat more. Restricting intake causes the body to overcompensate for the lack of nutrients, which causes an instability in the equilibrium and cognitive processes in the individual’s body. This results in the "...eating disorder to become more entrenched and more resistant to treatment" (McFarland, p. 17).

There is a need for more evidence to support the biological theory. Exploration and objective support for a causal relationship between the physiology of the body and eating disorders is needed before an accepted method of treatment can be established.

The environmental view places the responsibility of the development of an eating disorder on today’s society. The social environment demands young women to be intelligent, athletic, creative, beautiful and thin. The pressure these young women face may lead some to turn to anorexia or bulimia type behaviors, in order to mediate feelings of loss of control. In addressing societal views of body image, Grunwald (1995) uses the example of a well-known super model who is glamorized and revered for her
bone protruding appearance. Society sends a clear message that thin is beautiful and anything less is undesirable. Grunwald exposes the lethality of this message in an interview he conducted with a young girl attending Overeaters Anonymous. During the interview, the girl disclosed she wouldn't mind dying from dieting as along as people commented on how thin she appeared in her coffin. The continuing rise of eating disorder victims can be credited to this kind of thinking.

Society views a thin body as ideal and holds it as a symbol of self-discipline, control, independence, and attractiveness. Women experience conflict when their attempt to reach societal views of perfection is interrupted by the reality of human imperfections and the fulfillment of role expectations. Society judges a woman's ability to obtain these ideal standards as a measure of success.

The environmental view encompasses some aspects of the family and early attachment perspectives. Since the family is usually the first environment experienced, it is assumed that the values of the mother and father are imbibed. In many cases these values are reflections of the greater society.

The family perspective views the etiology of eating
disorders as lying within the family structure, not the individual with the eating disorder. Eating disordered families can often be characterized as having a breakdown in the structural hierarchy. Killian (1994) reports that these families illustrate insufficient communication skills, where family members learned to speak indirectly to one another instead of stating their exact wants and needs.

Families of those suffering from eating disorders typically have rigid norms and loose boundaries. Minuchin, Rosman, & Baker (1978) identified four characteristics commonly found in the anorexic family; enmeshment, rigidity, lack of conflict resolution, and overprotectiveness. It is also common to find the mother treating the client-daughter as an adult companion with adult responsibilities. In this case the client has become "parentified" by the mother, taking on adult decisions and tasks. This relationship is frequently used against the father, which results in triangulation (Killian, 1994).

In a 1986 study on "bulimic families", Humphrey (1986) found them to be less involved with each other, achievement oriented and less cohesive than the norm group families. Further, Structural Strategic Family therapy boasts of successful outcomes in the treatment of eating disordered families and focuses on how anorexia or bulimia serves the
Some researchers who view the etiology of eating disorders to be psychological in nature tend to think the eating disordered individual's cognitive perceptions are distorted. Albert Ellis and Aaron Beck agree that psychological disturbances occur because people engage in irrational and maladaptive cognitions such as unrealistic and demeaning views of self (Meyers & Craighead, 1984). As the individual develops, cognitive constructs are built which represent his or her perceptions of the environment. These constructs become the individual's truth. Psychological problems that individuals have been a result of these faulty thought patterns. Enright (1997) explains that clients will misinterpret situations in a manner that subverts their coping abilities. Supporting the basic cognitive premise, Enright states "The critical factor lies in how patients assess specific situations or problems" (p. 1811).

A basic construct for the individual with anorexia is, "I must be thin." The pursuit of this construct minimizes the importance of all other adolescence developmental crises. In achieving and maintaining this ideal weight, the individual's feelings of self doubt and inadequacy are overridden (Enright, 1997). McGilley and Pryor (1998)
focus cognitive interventions for individuals with bulimia on "...preoccupation with body, weight and food, perfectionism, dichotomous thinking and low self esteem" (p. 2749). Enright (1997) cites Fairburn and Cooper’s work stating that an emphasis on, "...preoccupation with weight and shape, leads to excessive and inflexible dietary rules. Sufferers fail to adhere to their regimen and view this failure catastrophically, leading to abandonment of the rules and binging behavior. Self esteem becomes solely associated with weight or shape, increasing the perceived value of dieting" (p. 1815). McFarland (1995) supports these views with his list of high risk cognitive characteristics associated with the development of eating disorders, which included poor self-image, feelings of ineffectiveness, having distorted internal cues related to feeling hungry versus feeling full, labile in affect, impulsivity and numerous attempts at dieting.

The last perspective represents the theoretical concept tested in this study. Stated in the simplest terms, "Object relations theory encompasses the transformation of interpersonal relationships into internalized representations of the relationship," (Gabbard, 1994, p. 38) Object relations formulations were strengthened and elaborated on by Margaret Mahler’s
clinical observations of infants. Mahler identified the critical phases of early development that included, *autism, symbiosis, and separation-individuation*. Ainsworth expanded on Mahler's phases of development by identifying five sequential Stages of Attachment. Ainsworth concluded that the first internal representation of the infants' caregivers provides the first working model of an attachment relationship. "Specific characteristics and expectations about how a caregiver will respond to the infant's actions are organized into a complex attachment scheme" (Newman and Newman, 1995, p. 192).

The object relations interpretation of eating disorders would be that they are a result of attachment difficulties in the critical phases of early childhood. O'Kearney (1996) lists the "...main characteristics of the attachment theory: a) functionally defined behavioral, cognitive, and affective responses to the perceived unavailability of the attachment figure; b) its elicitation by threat; c) its specificity to particular attachment objects; d) its persistence" (p. 116).

Nichols and Schwartz (1995) identified adults who may have difficulties in developing a sense of identity if there were inadequate separation-individuation process in early childhood. The development of a secure attachment in
early childhood is a result of the infant’s needs being consistently and appropriately met. If the mother is overzealous in her responses to the infant, they might form an enmeshed attachment. If she is non responsive, the infant develops a defense mechanism to deal with the rejection.

It is important to note that one of the primary functions of attachment is protection and security. Object relations attachment model holds that the person with anorexia has internalized the mother-object as controlling, unresponsive and emotionally unavailable; or on the other side of the spectrum, completely enmeshed; threatening abandonment if the adolescent show signs of autonomy. Further, the attachment model suggests that bulimia is the result of the separation anxiety, caused by separation from the primary object. This anxiety resurfaces in adolescence when the primary focus changes from parents to peers (O’Kearney, 1996). In the anxiety over separation, an individual with bulimia suffers from insecure and resistant attachment developed in early childhood (O’Kearney, 1996).

Brennan and Shaver (1995) further strengthened the link between present and early attachment. They found that the type of attachment developed during early childhood is a precursor to characteristics the child will develop.
Such characteristics as healthy, dependent, overly anxious or avoidant are identified. Burge (1997) suggests, "The focal concerns of the attachment system, responsiveness, and availability of the significant other, persist as the individual matures, but may apply to relationships other than the major caregiver, such as peers and romantic partners." Gold, Goodwin, and Chrousos (1988a) supported the belief that early childhood attachments or traumatic events, such as separation or loss, are indicative of adolescent and adult psychological adjustment. Finally, Bowlby's 1988 description of this issue indicated that the dominant pattern of attachment is established during early childhood, which forms a template. This template is then imposed on all other relationships, "...distorting the child's perceptions to fit the template, and shaping reactions to the object as if to follow the primary attachment pattern" (Blizard and Bluhn, 1994, p.384).

Problem Focus

Researchers for this study hypothesized that female college students, ages 18 to 23, experiencing medium to high levels of eating disorder symptoms were more likely to have experienced attachment difficulties in early childhood with primary caregivers than those females not experiencing medium to high levels of eating disorder symptoms.
Therefore, the major research question for this study is whether there is a correlation between early attachment and eating disorder symptoms. A second major research question is what attachment characteristics are found to be most lacking or evident in individuals exuding eating disorder symptoms.
LITERATURE REVIEW

In the following literature review, the researchers present research studies, case studies and descriptive articles that were found in the data bases of three major university and multiple Internet sources. The first section of this review focuses on attachment and the link between early attachment and current attachment patterns. Following the attachment literature are reviews of attachment studies involving eating disorders. This literature review concludes with a review of ethics and Internet research.

Brennan and Shaver (1998) studied 1,407 introductory psychology students to determine possible connections between personality disorders and adult attachment patterns. Before accomplishing this task, they established that early childhood attachment experiences and adolescent or adult attachment strategies were linked. The adolescent or adult strategies were representations of early relational strategies. "Internal representations, or working models, constructed gradually over the course of infancy and immaturity, are considered to be fairly accurate reflections of actual relationship experiences. Working models of attachment theoretically account for continuity in attachment styles over the life span" (p. 15
The Bartholomew and Horowitz's 1991 methodology, Epstein's Mother-Father-Peer Scale and the Personality Diagnostic Questionnaire-revised revealed that attachment styles were related to personality disorders. Two of the three personality disorder factors, General Pathology and Counter-Dependence were found to overlap with attachment styles. A major limitation of this study was the inclusion of less than strict criteria for the categorization of personality disorders. A second limitation, noted by the researchers, was that self report measures may not be sophisticated enough to identify personality disorder dimensions.

Warren, Huston, Egeland, and Sroufe (1997) conducted a longitudinal study regarding an infant's attachment to the primary caregiver. The purpose of the research was to determine if infants with an anxious attachment style experienced anxiety disorders later in adolescence, more so than infants who developed a secure attachment style. Warren et al. administered the Ainsworth Strange Situation Procedure to infants at 12 months of age. When they reached 17.5 years old, the Schedule for Affective Disorders and Schizophrenia for School-Age Children were administered. Maternal anxiety was assessed using the Anxiety Scale Questionnaire given during the eighth month.
of pregnancy and again when the infant was three months old. Findings indicated that infants who developed anxious/resistant attachment styles, later experienced anxiety problems, while those who developed avoidant styles did not indicate such problems. This evidence supports the link between the early attachment and attachment as an adolescent or and adult. There was no connection between maternal anxiety and adolescent anxiety. The anxious/resistant category stands at high risk for developing anxiety disorders. A limitation of this study was the demographic makeup of their sample population. For example, 62% were single, 41% had dropped out of high school and 86% of the pregnancies were not planned. It was noted that the mother's fell on the lower end of the socioeconomic scale and held a high level of stress in their lives.

In a related study on adolescent attachment and psychopathology, Rosenstein and Horowitz (1996) hypothesized and found support for the continuity of one's mental organization of attachment throughout life. The researchers were able to support the developmental pathway's perspective that attachment organization strategies are transgenerational and are predictors of adolescent psychopathology. Attachment strategies,
"...produce differential vulnerability to psychiatric syndromes and personality traits" (p. 250). The population studied included 60 adolescents in a mental health, inpatient setting. The concordance of attachment strategies was analyzed on 27 adolescent-mother pairs. The size of their sample is an obvious limitation of the study. The sample also lacked cultural sensitivity, making it virtually impossible to generalize the results to other populations.

Kenny and Hart (1992) explored the relationship between parental attachment and eating disorders in 230 subjects, 68 female inpatients and 162 first year, female college students. The inpatient population consisted of DSM-III-R diagnosed bulimic and anorexic subjects, averaging twenty-two years in age. The college students were selected from a private, Jesuit university and had a mean age of eighteen years. The scales administered to their subjects were the Parental Attachment Questionnaire [PAQ (Kenny 1990)] and the Eating Disorder Inventory (EDI). This study provided empirical support to theorists who promote early attachment as a "central and healthy dimension of adolescent and adult life and add to the growing body of research indicating that characteristics of secure parental attachments are associated with adaptive
psychological functioning” (Kenny and Hart, 1992, p. 524). Findings suggested that women with eating disorders were more likely to describe their parents as less supportive and were less likely to reach out to their parents for support in times of crisis than the college population. College students who viewed their parents to be positive and supportive of autonomy, were found to have adaptive characteristics including personal effectiveness and low levels of bulimic behavior or preoccupation with thinness. Researchers may have limited the ability to generalize their results by selecting subjects that were from an inpatient residential facility and from a local private, Jesuit college. Women seeking treatment for eating disorders may vary significantly from those who have eating disorders and do not seek treatment. Selecting college students from a private, Jesuit school may bias the sample because of the socioeconomic issues.

Heesacker and Neimeyer (1990) hypothesized that if the object of primary support and nurturing is inadequate in fulfilling its role, a child will be unable to create a “viable internal maternal image” (p. 419). If this is correct, the child is unable to fully develop a sense of self, which causes the child to feel incapable, worthless, or ineffective. The development of an eating disorder is a
way for the child to gain control over an “otherwise externally-defined self” (p. 420). To test their hypothesis, the researchers studied 183 women from an introductory psychology course. The subjects were given the Bell Object Relations Inventory (BORRTI), the EDI, the Eating Attitudes Test (EAT) and the Repertory grid technique. The results indicated a relationship between object relation disturbances, cognitive structural variables and eating disorders; the two variables under study were found to be independent of each other. Researchers found that Insecure Attachment and Social Incompetence subscales of the BORRTI, Integration, and the interaction of Integration and Differentiation were statistically significant predictors for the Drive for Thinness Scale and the EAT scores. Heesacker and Neimeyer concluded that “these results converge on an image of eating disorder as reflecting a conflicting set of fears related to merge and autonomy. From these attachment disturbances, the individual derives a sense of the self as indefinite and ineffective” (p. 424). A limitation for this study included the possibility that the data may have reflected other variables not controlled for. For example, because researchers administered all four test at one time data may have reflected the subjects’ boredom, frustration
and/or fatigue experienced by the end of the fourth scale.

Cole-Detke and Kobak (1996) describe two categories of attachment that develop as a result of the individual's working model of the availability of the primary attachment object. A secure attachment allows for the individual to develop a Primary attachment strategy for effective, healthy attachment. A Secondary attachment strategy will develop as a result of the primary object being perceived as unavailable or aloof. Secondary attachment strategies can be broken down into two types, deactivating, which is developed in order to protect the individual against the primary object's rejection and is considered to be the attachment type that eating disordered individuals develop; and hyperactivation, which allows the individual to maintain the relationship by stressing or dramatizing issues of attachment. Studying 61 college women with varying levels of eating disorders or depression, researchers administered the Adult Attachment Interview (AAI) and conducted the Attachment Interview Q-Sort. Results indicated that deactivating strategies were associated with eating disorders when depression was controlled and that subjects with eating disorders were distinguished by their inability to express their anger to their parents and with a marked lack of insight into the
attachment relationship. Researchers noted a limitation of their study to be the lack of causality found in their results. Future studies should attempt to delineate the patterns of attachment between subjects with anorexia and bulimia.

Many researchers have concluded that the attachment style an individual develops is related to the development of eating disorders. Sharpe, Killen, Bryson, Shisslak, Estes, Gray, Crago and Taylor (1998) conducted a related study on 305 female elementary and middle school students, hypothesizing that subjects who were insecurely attached to their primary care provider would report higher weight anxieties than those who were securely attached. Researchers used the Hazan and Shaver (1987) attachment item to identify subjects as secure, avoidant, or anxious/ambivalent in attachment. Sharpe et al. also utilized three other scales on weight concern, perceptions of current body shape and self-esteem. Results indicate that insecurely attached subjects reported significantly higher concerns regarding weight and were characterized by a low sense of self worth and increased sensitivity to rejection by others. Insecurely attached subjects were more likely to score in the “at risk” range for eating disorders than the securely attached subjects. The results
of this study may have been greatly enhanced had it been conducted with subjects in adolescence or late adolescence, rather than prepubescence. A follow up study is needed to determine if those they predicted as at risk, due to attachment style, develop an eating disorder.

Rhodes and Kroger (1992) studied interpersonal and intra psychic factors among women ages 18 to 22 years old. They proposed that there are two separation-individuation processes that individuals go through. The first is between the ages of infancy to three years and the second is the transition period during adolescence, in which the adolescent moves away from the primary care-giver. During both processes, the primary caretaker is responsible for providing the necessary elements to assure the adolescent’s continued socioemotional development. In the later process, the adolescent attempts to separate from the internalized parental image, testing his or her boundaries and self-confidence. Their experimental group consisted of women with symptoms of an eating disorder and the control group consisted of women who were symptom free. The findings indicated that women with an eating disorder failed to progress through the second separation-individuation process without complication. They tended to experience higher levels of anxiety and were found to have
an overprotective, maternal-child relationship during their childhood. A notable limitation was that cultural biases were not accounted for nor considered. All forty participants in the study were Caucasian, from similar socioeconomic backgrounds, and came from intact families. Overall, the sample lacked representativeness of its target population, both in size and culture.

Armstrong and Roth (1989) focused their study on separation and anxiety in eating disorder subjects, attempting to identify distinct characteristics indicative of severe and chronic anxious attachment. The researchers administered the Separation Anxiety Test (SAT) to twenty-seven inpatient subjects; four diagnosed as having atypical eating disorder, the remaining consisting of an equal amount of anorexic and bulimic subjects. Their ages ranged from seventeen to forty-three. The comparison group was composed of subjects undergoing normal adult developmental issues, such as intimacy and identity, which would most likely trigger separation anxiety. The results of the SAT indicated that subjects with eating disorders reported considerable impairment with their interpersonal attachments. Armstrong and Roth found that 96% of this sample reported anxious attachment and 85% demonstrated extreme separation depression. The results of the SAT
reported subjects with eating disorders to have "...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" (p. 151). Their study was unique in that it found consistent results among a sample that was both anorexic and bulimic, had a wide age range, and the duration of the disease in each subject varied from three to ten years. A disadvantage of this study is that it is only representative of the inpatient eating disorder population.

Jacobson (1988) wrote a descriptive article discussing how object relations theory and attachment theory influence the development of an eating disorder in adolescent women. She describes the critical early development period of zero to three-years-old, in which the child undergoes separation-individuation. It is crucial for the infant to experience a balanced environment provided by the primary caregiver if the infant is to maneuver through the process of separation-individuation successfully. This period determines the coping skills the child will develop in order to deal with separation and loss. Jacobson further noted that women who develop an eating disorder experienced an unhealthy mother-infant interaction pattern. Just as
the infant creates a transitional object in order to soothe him/herself when the mother is unavailable and/or during times of stress, the adolescent female will develop an eating disorder as a way of dealing with separation and loss as it occurs during this stressful stage of life. The transitional object will become an active bridge between the feelings of attachment and separation. The author goes on to point out that the transitional object a person creates reflects the type of relational pattern that occurred between the mother and infant. For example, gorging and purging food is seen as symbolic to a love-hate relationship or as acceptance-rejection. Jacobson failed to back up her theoretical concept with factual data. The lack of empirical evidence is a warning to the reader to proceed with caution.

Burge, Hammen, DaVila, Daley, Paley, Lindberg, Herzberg and Rudolph (1997) studied the relationship between attachment cognitions, late adolescent adjustment and symptomology in 137 female high school seniors. Subjects were given the Revised Adult Attachment Scale (RAAS), the Inventory of Parent and Peer Attachment (IPPA) and were also interviewed using the Structured Clinical Interview for DSM-III-R (SCID). Twelve months later a follow up study was conducted using the RAAS and the IPPA.
The RAAS has three scales consisting of Close, indicating how comfortable a person is with intimacy and physical closeness; Depend, reports the amount the person feels they can depend on someone; and Anxiety, which is anxiety over abandonment (Burge et al.). The IPPA is broken down into the Parent and Peer scales each containing Trust, Communication and Alienation. Researchers' initial tests found all subscales of the IPPA to be significantly correlated with eating disorder symptomology. Follow up assessments indicated the Close scale of the RAAS, the Communication and Alienation of the IPPA-parent measure and the Alienation scale of the IPPA-peer measure were significantly correlated with eating disorder symptomology. They found that "...eating disorder symptomology was predicted by attachment cognitions about parents, peers, and romantic partners" (p. 163). The results of this research were moderate and researchers noted the possibility of the influence of many extraneous variables. One flaw noted was that the sample was made up of a "normal" population where large numbers of symptomatic subjects were unlikely to be present.

Meyer and Russel (1998) published an article studying the correlation between codependency, the development of eating disorders, and the type of parental separation.
The sample population consisted of ninety-five undergraduate, college women, ages 18-32. The inventories used to measure behavior were the Codependency Assessment, the Eating Disorder Inventory-2 and the Psychological Separation Inventory. The latter included four sub-scales; the Functional, Attitudinal, Emotional and Conflictual Independence Scales. Findings indicated codependency to be a strong correlate to women with eating disorders. Subjects reporting high scores in codependency also showed difficulty in controlling their affect and displayed difficulties in conflictual separation with their primary caregiver. The researchers state that parental "...conflictual separation seemed to be the most important parental separation predictors of eating disorders" (p. 170). A limitation for this study is the lack of an operational definition for codependency, which is unable to differentiate between "normal care-taking and healthy selflessness and excessive, self-destructive behaviors" (p. 167).

Palmer, Oppenheimer and Marshall (1988) conducted a study on how women suffering from eating disorders recalled their relationship with their parents during childhood. The researchers conducted the study using the Parental Bonding Inventory (PBI). The PBI has two scales; the care
and the protection scale. The care scale reflects the level of warmth, affection and empathy in the relationship, while the protection scale reflects the level of parental control, intrusion, and over-protection. Their results indicated little differences between the eating disorder group and a standardization sample on the protection scale. However, every three out of four cases indicated lower scores on the care scale, indicating the women with eating disorders recalled a lower level of care from their parents. A limitation of this study is the use of only one instrument to determine the parental relationship during childhood. Further research is necessary to determine if the qualities of care and protection were present before the development of the eating disorder, or if the characteristics developed as a result of the eating disorder.

Friedberg and Lyddon (1996) hypothesized that individuals suffering from an eating disorder would have different attachment processes during childhood than those without an eating disorder. The study used Bartholomew’s four-category model of attachment which includes secure, preoccupied, dismissing and fearful types. The researchers then compared the results to Guidano’s 1991 theory that can be broken down into a basic premise; subjects with eating
disorders can be distinguished by a preoccupied attachment pattern they developed during early childhood. The preoccupied attachment is characterized by a strong need for others' approval and a strong fear of being rejected. These individuals tend to become over-involved in close relationships, idealize others more than they should, and lose their sense of autonomy, while attempting to project a positive self-image. A securely attached individual is believed to have a high level of self esteem, an absence of severe interpersonal problems, meaningful adult relationships and is comfortable with both intimacy and autonomy (p. 195). The measures used were the Relationship Questionnaire, the Interview for Diagnosis of Eating Disorders, the EDI-2, and the Symptom Checklist. Findings supported the hypotheses that eating disordered subjects displayed a preoccupied attachment while non eating disordered subjects displayed a secure attachment. However, there were inconsistencies in the study that limits the reliability of the results. For example, depression was found to be common among women with eating disorders. Yet depression was most apparent with the fearful attachment type, which was not considered to be associated with the development of eating disorders.

Smolak and Levine (1993) stated, "Theoretical models
of the psychopathology of eating disorders have long included problems of separation-individuation” (p. 34). These researchers attempted to distinguish how adolescents with anorexia or bulimia experience and react differently to separation-individuation. The sample included 198 female college students. Subjects were asked to compete the PSI, the EDI and a symptoms checklist based on DSM-III-R criteria for Anorexia and Bulimia. Results indicated that subjects reporting three or more symptoms of anorexia showed more conflictual dependence than symptom free subjects. Conflictual dependence is reflected in the resentment and shame the individual with anorexia feels at needing her family. These subjects reported greater dependency in fifteen of sixteen comparisons with subjects reporting symptoms of bulimia and symptom free subjects. The subjects reporting symptoms of bulimia scored significantly higher on scales of maternal and paternal dependence and attitudinal independence than symptom free subjects. The researchers point out “the combination of conflictual dependence and above average attitudinal independence may reflect a separation individuation problem unique to the psychopathology of Bulimia nervosa, that is, one distinct from both anorexia nervosa and normal development” (p. 40). A limitation of this study may be
the researchers attempt to decipher relationships between too many variables. The validity of their results may have been veiled by the complexity of the various relationships.

Friedlander and Siegel (1990) tested 124 college women to determine if psychological separation and diffuse parent-child boundaries had an effect on the amount of cognitive and behavioral distortions that are characterized by anorexia and bulimia. Subjects completed the Psychological Separation Inventory (PSI), the Differentiation of Self Scale (DSS), the Permeability of Boundaries Scale (PBS) and the Eating Disorder Inventory (EDI). The results confirmed the researchers hypothesis that there is a relationship between psychological separation, diffuse parent-child boundaries and the presence of a greater amount of cognitive and behavioral distortions characterized by eating disorders. A limitation of this study is the terminology used for two variables in the hypothesis; cognitive and behavioral distortions characteristic of anorexia and bulimia. It would seem that in order to identify a true relationship, these variables would need to be operationally defined.

O'Koon (1997) conducted a study of 167 high school students to determine how the current attachment relationship to their mother, father and peers affected
their self-image. The students were given the Offer Self-
Image Questionnaire, the Inventory of Parent and Peer
Attachment, and the Group Environment Scale. Results
indicated that the type of attachment between the
individual and their parents positively impacts how the
adolescent views himself or herself. A secure attachment
resulted in low levels of distress or over-excitability in
the adolescent. Attachment with the mother was linked with
Psychopathology, focusing on the ability to cope with
failure. The attachment relationship with the father was
linked with Mastery of External World, focusing on the
level of confidence one has when approaching the future.
Attachment towards peers was found to have a strong
correlation with the individual's views on Body Image,
Social Relationships and Sexuality Attitudes. A
limitations of this study was the sample population, which
consisted of 88% Caucasian subjects from middle to
upperclass schools. This does not give a representative
sample of the general population. The study would have
provided a more comprehensive understanding of the
attachment relationships had the styles of attachment been
explored.

Steiger, van der Feen, Goldstein and Leichner (1989)
studied the relationship between the development of mature
or primitive defense styles and the parental bonding experience as a child. Steiger et al. found that a person develops their defense style based on the level of care and protection their parental figures provided. Research indicates that women with eating disorders display primitive-like defense characteristics such as projection, denial, and displacement. These defenses are more likely to occur if the parental figure was less empathetic and more protective toward the child. One limitation of this study is the small sample size, which limited the study’s ability to generalize its results. Another limitation is that the subjective data gathered may not reflect true childhood experiences. A final limitation may be that the constructs being measured were too complex for the instruments to effectively measure them.

Using a multidimensional model of anorexia, Lyon, Chatoor, Atkins, Silber, Mosimann and Gray (1997) hypothesized the best model for anorexia would be composed of a biogenetic variable or family history of anorexia and/or affective disorders; personality features consisting of feelings of ineffectiveness and low interoceptive awareness; and family characteristics, focusing on independence. They studied 43 adolescent inpatients with anorexia and 85 control subjects administering the Eating
Attitudes Test (EAT), the Eating Disorder Inventory (EDI), the Family Environment Scale (FES) and the Perfect Child Questionnaire (PCQ). The researchers were unable to support their hypotheses that family history of eating disorders contributed to adolescent anorexia, nor were they able to support beliefs of autonomy, separation-individuation and independence as being factors in the development of anorexia. Gaps or inconsistencies in the results may account for their surprising results. For example, evidence was found to support feelings of ineffectiveness and poor interoceptive self awareness. These characteristics are frequently thought to be a result of poor separation individuation and attachment issues.

In a related study, Van der Kolk, Perry, and Herman (1991) studied the effects of childhood abuse, neglect and parental disruption on self-destructive activity in seventy-four subjects diagnosed as Bipolar, Borderline Personality, or Antisocial Disorders. The subjects were interviewed using the Traumatic Antecedents Questionnaire to obtain information on childhood histories of abuse, neglect, and disruptions in parental care. At intake, half of the subjects reported histories of binge eating and/or anorexia. At this time, the researchers found that childhood trauma scores predicted the appearance of
anorexia. Correlations between trauma and disruption during childhood and self-destructive behavior manifestations were produced using the Spearman Correlation Coefficient. The researchers report that compared to other forms of self-destructive behavior for adults, only a moderate association was found between eating disorders and histories of childhood physical and sexual abuse, as well as parental neglect and separation. They attribute their results to "the pervasiveness of binge eating and anorexia in the overall sample and of the narrow definitions of trauma and neglect used in the study" (p.1669).

A case study conducted by Hartman, Crisp, and McClelland (1997) explored the developmental relationship between non-identical twins and subsequent emergence of anorexia nervosa. The authors' discuss the theory that twins would identify each other, rather than their mother, as the primary object during separation individuation. Problems arise, usually in puberty, when one twin starts to disengage and seek outside interests, leaving the other to feel threatened at the loss of the primary object. The development of anorexia nervosa served to protect the threatened twin in this case, from this loss. The case study is based on a 28-year-old female and her nonidentical twin, a twenty-nine-year-old sister and a younger sister.
aged twenty-four. The parents were described as alcoholic and unavailable by the patient. Hartman et al. (1997) believe that the birth of the twins less than a year after the birth of their older sister put an immense strain on the mother’s ability to nurture. The twins were able to make up for this by their engagement with each other. The patient and her twin became competitive about their weight. However, during a stringent exercise routine the other twin suffered a cardiac arrest and was diagnosed with a rare hereditary heart disease. Again the patient was threatened by the loss of her primary object and subsequently developed the symptoms for a DSM-IV diagnosis of anorexia nervosa. The authors’ describe the patient’s anorexia as “an attempted regression to the stability and security of her prepubescent relationship with her sister,” (p.226). As with any case study, the characteristics of this case are unique to this family and this situation. This study would be greatly enhanced by empirical research on the developmental relationship between twins, both nonidentical and identical. Unfortunately, a study of this kind is complex, requiring the documentation of these families over decades. Attachment issues with twins and the degree of strength between the twin bond and the individual bond to the mother would make for an enlightening future study.
Duncan (1996) examines the use of the Internet to conduct research studies and the ethical debates that may arise. Today's technology has given us an amazing opportunity to study and learn about the world. By utilizing the Internet services, researchers no longer need to be present to conduct a study. We are privileged to seek a much broader perspective from those, not only in another state, but in foreign countries. We can now integrate knowledge from different cultures and ethnicities from our living rooms or offices. Duncan reviews ethical issues that researchers need to be aware of when utilizing the Internet to gather data. It is necessary for them to be competent, knowing what it is they are studying and the limitations they may face. Having integrity involves being honest, and respecting the rights of others. Also, included is respecting confidentiality, people's privacy and encouraging autonomy among participants. Researchers also have a responsibility to the public to allow their findings to be available to interested readers. Duncan addresses specific areas where ethical questions may arise. These include minimizing invasiveness, providing participants with information about the study, confidentiality, sharing and utilizing data, and institutional approval. Suggestions are given on how to deal with the ethical concerns
regarding Internet research. He also encourages researchers to seek second opinions from review boards or other knowledgeable individuals to assure ethical standards are met. This was a descriptive article which attempts to cover uncharted territory. Since this type of research is novel for the social sciences, there are few, if any, empirical studies that rate the effectiveness of using the Internet. The only limitation was the length of the article. Researchers would benefit from a more in-depth review.
CHAPTER THREE
METHODS

The purpose of this research study was to add to the existing body of knowledge regarding the relationship between eating disorders and early attachment difficulties. It was hypothesized that female college students, ages 18 to 23, experiencing medium to high levels of eating disorder symptoms were more likely to have experienced attachment difficulties in early childhood with primary caregivers than those females not experiencing medium to high levels of eating disorder symptoms. The researchers used a Post-Positivist paradigm in order to account for the lack of control of sample size and representation. The Post-Positivist approach allowed researchers greater flexibility in data collection than afforded by other paradigms. Participants completed a demographic information sheet, the Parental Attachment Questionnaire (PAQ), (which is a standardized attachment scale), and an Eating Disorder Symptoms Questionnaire (developed by the researchers).

Sample

Participants for this study were voluntary Internet users whom accessed the research web address. Only female college students, ages 18 to 23, were accepted.
Procedure

Participants contacted the web address by one of two routes: a) by responding to an email they received describing the research and soliciting participants; or b) by entering the key words: Eating Disorders, Research, Attachment, Bulimia and/or Anorexia into a search engine and entering the corresponding link to the study’s web address. Email regarding this study was sent out in bulk (See Appendix B). Email addresses were obtained by using the Floodgate program which has access to ten million email addresses.

This study was conducted over the Internet from January 26, 1999 to April 4, 1999. The study was accessible through the world wide web address:


Once connected to the web site, participants read the Informed Consent explaining the research and the measurements that would be used (See Appendix C). Only after participants placed an “X” in the box indicating their understanding and agreement could they continue.

Demographic information was requested of each participant (See Appendix D). These questions requested the participants age, sex, college level, parental
socioeconomic status, and ethnicity. In addition to this
information, participants were asked questions regarding
history of eating disorders, treatment and current status.

Once the demographic information was completed,
participants then scrolled down to Kenny's (1985) Parental
Attachment Questionnaire (See Appendix E). The FAQ
assesses the participant's perceived parental availability,
understanding, acceptance and respect for autonomy, the
facilitation of autonomy, interests in interaction with
parents and affect toward parents during visits, student
help-seeking behavior in stressful situations and finally,
satisfaction with help obtained from parents. The FAQ is a
three scale, fifty five-item measurement where participants
select from a five point Likert scale (1, not at all; 2,
somewhat; 3, a moderate amount; 4 quite a bit; 5, very
much). The FAQ's three scales are a) Affective Quality of
Relationships; b) Parents as Facilitators of Independence;
and c) Parents as a Source of Support. Each scale is
scored separately. The total score possible for the entire
fifty-five question instrument is 270 points, which
reflects the strongest positive attachment to parents
possible. The lowest possible score is fifty-five,
indicating a poor attachment to parents.

The FAQ has a reliability coefficient of .92 and an
internal consistency of .95 for college females. Paired against the Family Environment Scale (FES) the PAQ was able to establish construct validity by correlating each of the three factor scales with sub-scales of the FES, (Kenny, 1985). Adding the evidence of construct validity, the PAQ’s three factor scales are consistent with Ainsworth’s (1978) theory of attachment as an enduring, cohesive bond that serves to provide emotional support and fosters autonomy (Kenny, 1985).

The next screen held the Eating Disorder Symptom Questionnaire (See Appendix F), which was designed specifically for this study by the researchers. The scale has ten statements with a 4-point Likert scale: strongly agree with this statement (SA); agree with the statement (A); disagree with this statement (D); and strongly disagree with this statement (SD). Questions for this scale were developed after reviewing several eating disorder scales and are based primarily on DSM-IV criteria for Anorexia, Bulimia and Eating Disorder NOS. Six of the ten questions reflected the DSM-IV criteria and were valued at a maximum of eight points each, two questions reflected characteristics of eating disordered individuals and were valued at a maximum of four points each, and two questions reflected normal eating behavior which were valued between
-2 to +2 points. Ten to twenty-five points reflected low levels of symptoms to no symptoms reported. Twenty-six to forty-five points reflects medium level of symptoms, while forty-six to sixty points is representative of a high level of symptomology.

Once the eating disorder scale was completed the participants clicked the "submit" button with their mouse. The information was automatically emailed to the researchers and downloaded to a formatted database. Participants' confidentiality was preserved without difficulty because no identifying information was needed or requested. The final screen that appeared before the participants contained a Debriefing Statement (See Appendix G), which repeated the information given initially as to the types of tests taken and the purpose of the study. This screen provided web sites and telephone numbers of eating disorder hotlines in case negative side effects developed due to participation in this study. Participants were also informed that the results of the study would be available on June 10, 1999 at the same web address.
CHAPTER FOUR
RESULTS

Data from the Demographic Information Sheet, the Parental Attachment Questionnaire and the Eating Disorders Symptoms Questionnaire was analyzed using the Statistic Package for the Social Sciences (SPSS). Descriptive statistics were used to describe the sample, while Pearson's r analyzed the correlations. In order to account for Type I error, $p < .01$ was used for all tests.

Descriptive Statistics

The sample studied was composed of sixty-four college females. The mean age was 20.5, with a range of eighteen to twenty-three. Twenty-four of the sixty-four participants reported that they were Freshmen. Eleven participants reported that they were Sophomores. Ten respondents reported that they were Juniors, and eighteen reported Senior status.

Responses to inquiry regarding Parental Socioeconomic status rendered sixty-two responses, with two participants choosing not to answer. The Lower Class, Middle Class, and Upper Class categories consisted of $n = 4$, $n = 46$, and $n = 12$, respectively.

The sample contained thirty-eight participants that reported either having been treated or were currently being treated for an eating disorder. Of those thirty-eight,
participants two reported a positive outcome from treatment, twenty reported the treatment was somewhat helpful, twelve reported the treatment to be unsuccessful and four chose not to answer.

Participants were geographically located across the United States, with a total of twenty-two states represented. The state with the most participants was California which provided 40% of the sample. Appendix A provides a list of the states of residency for the participants.

The ethnicity of the majority of participants was Caucasian ($n = 45$). Provided in Table 1 is the ethnic makeup of the sample. Approximately 10% of the sample chose the "Other" category or chose not to answer. Also provided in Table 1 is a breakdown of the participants' ages. The ages of the participants fell with greater frequency towards the extreme ends of the age continuum.
<table>
<thead>
<tr>
<th>Demographic Category</th>
<th>Frequency</th>
<th>%</th>
<th>Accumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>4.0</td>
<td>6.2</td>
<td>6.2</td>
</tr>
<tr>
<td>Asian</td>
<td>4.0</td>
<td>6.2</td>
<td>12.4</td>
</tr>
<tr>
<td>Caucasian</td>
<td>45.0</td>
<td>70.0</td>
<td>82.4</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5.0</td>
<td>8.0</td>
<td>90.4</td>
</tr>
<tr>
<td>Other</td>
<td>6.0</td>
<td>9.6</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>64.0</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>14.0</td>
<td>21.9</td>
<td>21.9</td>
</tr>
<tr>
<td>19</td>
<td>13.0</td>
<td>20.3</td>
<td>42.2</td>
</tr>
<tr>
<td>20</td>
<td>8.0</td>
<td>12.5</td>
<td>54.7</td>
</tr>
<tr>
<td>21</td>
<td>3.0</td>
<td>4.7</td>
<td>59.4</td>
</tr>
<tr>
<td>22</td>
<td>10.0</td>
<td>15.6</td>
<td>75.0</td>
</tr>
<tr>
<td>23</td>
<td>16.0</td>
<td>25.0</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>64.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

The distribution for the PAQ and the EDSQ was found to be negatively skewed, or clustering to the right. The distribution for the PAQ gave evidence to a marked peak.
between the scores of 166-201, followed by a severe drop. The scores for the EDSQ clustered mildly at the medium level symptom range, but peaked severely at the EDSQ scoring range of 51 to 60. This is important to note when viewing the measures of central tendency for these scales. For example, the mean score for the PAQ was 158.8, which is slightly below the scoring range where the distribution was found to cluster. Table 2 provides the mean, median, and mode for the PAQ, Affective Quality of Relationship (AQR) subscale, Parents as Facilitators of Independence (PFI) subscale, Parents as Source of Support (PSS) subscale and the EDSQ.

**Table 2.**

**Measures of Central Tendency**

<table>
<thead>
<tr>
<th>Scale</th>
<th>M</th>
<th>Mdn</th>
<th>mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDSQ</td>
<td>42.7</td>
<td>45.0</td>
<td>37a</td>
</tr>
<tr>
<td>PAQ</td>
<td>158.8</td>
<td>170.5</td>
<td>185</td>
</tr>
<tr>
<td>AQR</td>
<td>78.8</td>
<td>85.5</td>
<td>107</td>
</tr>
<tr>
<td>PFI</td>
<td>44.9</td>
<td>45.5</td>
<td>37</td>
</tr>
<tr>
<td>PSS</td>
<td>34.8</td>
<td>34.0</td>
<td>34</td>
</tr>
</tbody>
</table>

*Note. N = 64. *Multiple modes exist. The smallest value is given.*
The participant's results, as demonstrated by their Quartile ranking, are provided in Table 3. The majority of participants scored just under the 75\textsuperscript{th} percentile. The skewed distribution of the PAQ is identifiable in this Table, as seen in 41\% of the participants falling between the 51\textsuperscript{st} and 75\textsuperscript{th} percentiles.

**Table 3.**

**Participant’s Combined PAQ Scores**

<table>
<thead>
<tr>
<th>Percentile</th>
<th>Frequency</th>
<th>%</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 25\textsuperscript{th}</td>
<td>18.0</td>
<td>28.8</td>
<td>28.8</td>
</tr>
<tr>
<td>26\textsuperscript{th} - 50\textsuperscript{th}</td>
<td>12.0</td>
<td>19.2</td>
<td>48.0</td>
</tr>
<tr>
<td>51\textsuperscript{st} - 75\textsuperscript{th}</td>
<td>27.0</td>
<td>41.0</td>
<td>89.0</td>
</tr>
<tr>
<td>76\textsuperscript{th} - 100\textsuperscript{th}</td>
<td>7.0</td>
<td>11.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>64.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

The Affective Quality of Relationships (AQR) subscale is the largest of the three subscales, consisting of twenty-seven questions with the highest possible score being one-hundred-thirty-five points. The higher the score reported, the stronger the Affective Quality of
Relationships was perceived by the participant. The highest score in this sample was 125 points. Of the total sample, 25% scored a 74% or better (See Table 4.). The majority scored between 52% and 73%.

Table 4.

Results of the Affective Quality of Relationships, PAQ Subscale

<table>
<thead>
<tr>
<th>Scores</th>
<th>Frequency</th>
<th>%</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>39 - 68</td>
<td>21</td>
<td>32.8</td>
<td>32.8</td>
</tr>
<tr>
<td>70 - 99</td>
<td>27</td>
<td>42.1</td>
<td>74.9</td>
</tr>
<tr>
<td>100 - 125</td>
<td>16</td>
<td>25.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

The Parents as Facilitators of Independence (PFI) consists of fourteen questions with a total possible score of seventy points. As was with the AQR subscale, the higher the score, the stronger the variable in question was detected. Of the sixty-four participants, forty-three scored between twenty-seven and fifty-one points. The remaining sixteen scored at 72% or higher on this subscale. Table 5 provides the results of the PFI subscale.
Table 5.
Results of the Parents as Facilitators of Independence.

PAQ Subscale

<table>
<thead>
<tr>
<th>Scores</th>
<th>Frequency</th>
<th>%</th>
<th>Cumulative %</th>
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</thead>
<tbody>
<tr>
<td>27 - 51</td>
<td>43</td>
<td>67</td>
<td>67</td>
</tr>
<tr>
<td>52 - 68</td>
<td>21</td>
<td>33</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Tables 6 provides a breakdown of the PSS subscale. The (PSS) consists of thirteen questions with a possible score of sixty-five points. Again, as was with the other subscales, the higher the score, the stronger the variable in question was detected. The highest score achieved for this subscale was forty-four points.

Table 6.
Results of the Parents as Sources of Support, PAQ Subscale

<table>
<thead>
<tr>
<th>Scores</th>
<th>Frequency</th>
<th>%</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 - 22</td>
<td>32</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>32 - 44</td>
<td>32</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
Results of the Eating Disorder Symptom Questionnaire (EDSQ) indicated that 84.5% of the sample reported eating disorder symptoms in the Medium to High level. Table 7 reports the exact number of participants from each category. The mean score for this scale was forty-two, with a range of forty-four.

Table 7.
EDSQ Category Breakdown for Sample Population

<table>
<thead>
<tr>
<th>Categories</th>
<th>Frequency</th>
<th>%</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of Symptoms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low (^a)</td>
<td>10.0</td>
<td>15.5</td>
<td>15.5</td>
</tr>
<tr>
<td>Medium (^b)</td>
<td>24.0</td>
<td>37.5</td>
<td>53.0</td>
</tr>
<tr>
<td>High (^c)</td>
<td>30.0</td>
<td>47.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>64.0</td>
<td>100.0</td>
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</tbody>
</table>

Note. Results are interpreted as Low, Medium, or High level of symptoms if they fall between ^a10 - 25, ^b26 - 45, or ^c46 - 60, respectively.

Correlations

The Pearson's r statistical correlation was run between the EDSQ, the combined total of the PAQ, the Affective Quality of Relationship subscale (AQR), the
Parents as Facilitators of Independence subscale (PFI) and the Parents as Source of Support subscale (PSS).

A strong negative correlation was found between the PAQ and the EDSQ. A marked degree of correlation was found between the EDSQ and the AQT, as well as between the EDSQ and the PFI. Table 8 illustrates the degree of correlation and level significance.

**Table 8.**

**Inter-variable Correlations**

<table>
<thead>
<tr>
<th></th>
<th>EDSQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAQ</td>
<td>-.593**</td>
</tr>
<tr>
<td>AFQ</td>
<td>-.605**</td>
</tr>
<tr>
<td>PFI</td>
<td>-.652**</td>
</tr>
<tr>
<td>PSS</td>
<td>-.393**</td>
</tr>
</tbody>
</table>

*Note. *p < .05. **p < .01.*
CHAPTER FIVE
DISCUSSION

This study hypothesized that female college students, ages 18 to 23, experiencing medium to high levels of eating disorder symptoms, were more likely to have experienced attachment difficulties with primary caregivers in early childhood than those not experiencing medium to high levels of eating disorder symptoms. Results indicated a negative correlation between the EDSQ and the PAQ. The negative correlation implies that as the scores of the EDSQ went up, the scores or level of attachment went down, therefore supporting our hypothesis. Analysis also reported a strong negative correlation between the EDSQ and the Affective Quality of Relationships and the Parents as Facilitators of Independence, while a moderate negative correlation was found between the EDSQ and the Parents as Source of Support subscale.

The results of this study support the object relations' view of the etiology of eating disorders (Gabbard, 1994). A simplistic summary of the etiology would be the development of unhealthy perceptions of self and the self in relations to others during childhood resulted in the greater likelihood of developing an eating disorder.

Low results on the AQR indicate that participants
reporting medium to high levels of eating disorder symptoms are more likely to perceive their parents as lacking in compassion, less nurturing and less supportive. These perceptions can be tied to early infancy and the level of communication between the infant and the primary caregiver. Often, individuals with eating disorders become suspicious of those attempting to get close to them. This can be seen in the difficulty experienced by social workers attempting to establish a therapeutic relationship with clients suffering from eating disorders.

The low scores on the PFI suggest that the participants experienced low self-esteem and anxiety over personal decision making. This scale also suggests that the participants viewed their family’s values and beliefs as their own. Object relations would attribute this phenomena to a lack of independence fostered by the primary caregiver during the Rapprochement phase of development. During the Rapprochement phase of development, the toddler is consistently encouraged and supported to explore his or her environment. If the toddler is not encouraged and supported, he or she will become uncertain of his or herself and fear straying to far from the primary caregiver (Longress, 1995).

The negative, moderate correlation found between the
EDSQ and the PSS subscale suggests that the participants did not feel their primary caregiver was dependable in important situations. This may stem from early attachment deficits in the communication and reception of needs between the infant and the primary caregiver. In order to survive, these infants were forced to develop their own support mechanisms which were consistent and soothing in order to survive.

The pressure of becoming independent, forming new and intimate relationships and feeling unable to turn to the family for support are major contributing factors in the development of an eating disorder in college. The ritualistic behavior that is observed in eating disorders serves as a way to control their seemingly uncontrollable environment.

There were several limitations to this study. The methods used in this study was most likely responsible for the sample having such a high prevalence of eating disorders. It would be logical to assume that individuals receiving the email regarding this study would be more likely to respond if they had an interest in or personal experience with eating disorders. Another methodological limitation was the use of the EDSQ instead of a standardized eating disorder scale. Although the EDSQ was
developed based on DSM-IV criteria for anorexia and bulimia, the Eating Disorder Inventory, with well established validity and reliability would have strengthened the credibility of the results. Although specific criteria was requested of participants, the Internet made it impossible for researchers to verify their true identity.

Ideally, identifying a correlation between attachment and eating disorders would lay the foundation needed to develop comprehensive, effective treatment plans and methods of prevention. However, the fact that the correlation between the two variables was not at (±)1, indicates a multitude of other contributing variables that this study was not designed to account for.

The methodology used in this study is replicable and the use of the Internet in future studies is encouraged. This medium of research provides future researchers the opportunity to reach participants all over the world in a relatively inexpensive manner. Future researchers should broaden their focus by taking into account biological, social, family and interpersonal variables involved in the development of an eating disorder. In the future, researchers may need to turn to subjective measures so that the identification of these variables can be made. It is
also suggested that future studies use a larger comparison group of participants not reporting eating disorder symptoms. This will help to clarify the strength of the relationship between the variables.

In summary, future studies should focus on the family, and identify separate levels of attachment between the participant and the mother and father. Although expensive and time consuming, longitudinal studies beginning in early childhood and continuing until late adolescence would provide invaluable information on all aspects of the development of an eating disorder. Longitudinal studies can also provide answers as to cause and effect for the population studied.

IMPLICATIONS FOR SOCIAL WORK

Implications from the results of this study can be far reaching. The results indicate the wisdom in social workers working with small children, evaluating their level of attachment, so that early interventions may be made. Parenting programs that are accessible to working parents and provide childcare may prove an effective measure of early prevention. School social workers should conduct groups in the elementary grades in order to increase self-esteem, self-worth and to model a healthy attitude and environment.
Another implication of the results is in the treatment of eating disorders. Treatment plans should include interventions that address the client’s attachment issue as well as the eating disorder symptoms. Results also imply that social workers attempting to establish a therapeutic relationship with a client suffering from an eating disorder would benefit from understanding the underlying concepts of attachment. If the social worker understands the motives behind the suspicion, distrust and emotional retreat of the client suffering from an eating disorder, the worker may be more sensitive and better prepared for the work ahead. The social worker will develop the awareness of future complications that may arise with termination, due to the client’s difficulties with long term relationships. In conclusion, this study’s results suggest the importance of the social worker involving the family in the treatment of an eating disorder.
## Appendix A

### Geographic Breakdown of Participants

<table>
<thead>
<tr>
<th>State</th>
<th>Frequency</th>
<th>%</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
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<td>1.6</td>
<td>1.6</td>
</tr>
<tr>
<td>California</td>
<td>25</td>
<td>40.0</td>
<td>41.6</td>
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<td>3.12</td>
<td>44.7</td>
</tr>
<tr>
<td>Connecticut</td>
<td>2</td>
<td>3.12</td>
<td>47.8</td>
</tr>
<tr>
<td>Florida</td>
<td>5</td>
<td>7.8</td>
<td>55.6</td>
</tr>
<tr>
<td>Hawaii</td>
<td>2</td>
<td>3.12</td>
<td>58.8</td>
</tr>
<tr>
<td>Idaho</td>
<td>1</td>
<td>1.6</td>
<td>60.4</td>
</tr>
<tr>
<td>Illinois</td>
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<td>1.6</td>
<td>61.9</td>
</tr>
<tr>
<td>Indiana</td>
<td>1</td>
<td>1.6</td>
<td>63.6</td>
</tr>
<tr>
<td>Kentucky</td>
<td>1</td>
<td>1.6</td>
<td>65.2</td>
</tr>
<tr>
<td>Missouri</td>
<td>2</td>
<td>3.12</td>
<td>68.3</td>
</tr>
<tr>
<td>Montana</td>
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<td>3.12</td>
<td>71.4</td>
</tr>
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<td>North Carolina</td>
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<td>73.0</td>
</tr>
<tr>
<td>Nebraska</td>
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<td>1.6</td>
<td>74.6</td>
</tr>
<tr>
<td>New Jersey</td>
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<td>1.6</td>
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<tr>
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<td>3.12</td>
<td>79.3</td>
</tr>
<tr>
<td>Oregon</td>
<td>3</td>
<td>4.8</td>
<td>84.1</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>3</td>
<td>4.8</td>
<td>88.9</td>
</tr>
<tr>
<td>Texas</td>
<td>4</td>
<td>6.4</td>
<td>95.3</td>
</tr>
<tr>
<td>Utah</td>
<td>1</td>
<td>1.6</td>
<td>96.9</td>
</tr>
<tr>
<td>Washington</td>
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<td>3.12</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>64</strong></td>
<td><strong>100.00</strong></td>
<td></td>
</tr>
</tbody>
</table>
Appendix B

Bulk Email

To Whom It May Concern,

We are graduate students at California State University, San Bernardino's Department Of Social Work and are conducting a research project on eating disorders and early attachment difficulties. If you or someone you know is a female college student between the ages of 18-23 and are interested in participating in the study, please click on the Internet link below. Your honest participation would be greatly appreciated.

Thank you,

Jennifer Dinicola
Tamara Pine

Appendix C

Informed Consent

Thank you for your interest in our eating disorder and attachment research. Please read the following very carefully in order to decide whether or not you would like to participate in our study.

The study in which you can now participate is designed to identify the relationship between eating disorders and attachment difficulties. This study is being conducted by Jennifer Dinicola and Tamara Pine, under the supervision of Dr. Ira Neighbors, Associate Professor of Social Work at California State University at San Bernardino. This study has been approved by the Institutional Review Board of California State University, San Bernardino. The university requires that you give your consent before participating in a research study.

In this study you are asked to complete two instruments, one examining parental bonding issues and one examining the presence eating disorders symptoms. This study will take approximately 30-40 minutes to complete. The only requirements for this study are that you are female and a college student between the ages of 18 and 23.

Please be assured that any information you provide will be held in strict confidence by the researchers. This study will not ask for subjects' names. Therefore, data can not be traced back to individual subjects. Data will be submitted to a formatted data base as well as to the researchers via email. Data will be statistically analyzed as a whole. For your convenience, results of this study will be posted on this web site by the end of June.

The risk to you in participating in this study are minimal. If you have any questions regarding this study, please contact Jennifer Dinicola, Tamara Pine or Dr. Ira Neighbors at (909)880-5501. Information regarding eating disorders, counseling, or Hot Line numbers can be reached through the following link. INFORMATION LINK

Please understand that your participation in this study is voluntary and you are free to withdraw at any time during the study without penalty. Data will not be received unless you submit it.
By placing a mark in the space provided below, I acknowledge that I have been informed of, and understand the nature and purpose of this study, and I freely consent to participate. By this mark, I further acknowledge that I am at least 18 years of age.

Give your consent to participate by marking a 'X' here: □

Today's date is □□□□
Appendix D

Demographic Information Sheet

Please fill out all the information requested below. Remember, no identifying information will be requested so you may answer honestly and freely, knowing your confidentiality will be insured.

Age [ ] Sex [ ] College Level [ ]

Parental Socioeconomic Status [ ]
Please identify as: Upper Class
Middle Class
Lower Class

Ethnicity [ ] State of Residency [ ]

Have you ever sought counseling or been treated for an eating disorder? [ ] Please answer yes or no

If so, how long ago? [ ]

Do you feel that the treatment was successful? [ ]

Any Comments regarding eating disorders & their cause? Or comments in general? [ ]
Appendix E

Parental Attachment Questionnaire
© 1985 M. Kenny

The following pages contain statements that describe family relationships and the kinds of feelings and experiences frequently reported by college students. Please respond to each item by entering into the box the number on a scale of 1 to 5 that best describes your parents, your relationship with your parents, and your experiences and feelings. Please provide a single rating to describe your parents and your relationship with them. If only one of your parents is living, or if your parents are divorced, respond with reference to your living parent or the parent towards whom you fell closer. The following scale will be provided several times throughout the test to facilitate the test taking process.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at All (0-10%)</td>
<td>Somewhat (11-35%)</td>
<td>A Moderate Amount (36-65%)</td>
<td>Quite A Bit (66-90%)</td>
<td>Very Much (91-100%)</td>
</tr>
</tbody>
</table>

In general, my parents...

1. Are persons I can count on to provide emotional support when I feel troubled. □ □ □ □ □
2. support my goals and interests. □ □ □ □ □
3. live in a different world. □ □ □ □ □
4. understand my problems and concerns. □ □ □ □ □
5. respect my privacy. □ □ □ □ □
6. restrict my freedom or independence. □ □ □ □ □
7. are available to give me advice or guidance when I want it. □ □ □ □ □
8. take my opinions seriously. □ □ □ □ □
9. encourage me to make my own decisions. □ □ □ □ □
10. are critical of what I can do. □ □ □ □ □
11. impose their ideas and values on me. □ □ □ □ □
12. have given me as much attention as I have wanted. □ □ □ □ □
13. are persons to whom I can express differences of opinion on important matters. □ □ □ □ □
14. have no idea what I am feeling or thinking.  

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<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at All (0-10%)</td>
<td>Somewhat (11-35%)</td>
<td>A Moderate Amount (36-65%)</td>
<td>Quite A Bit (66-90%)</td>
<td>Very Much (91-100%)</td>
<td></td>
</tr>
</tbody>
</table>

In general my parents...

15. have provided me with the freedom to experiment and learn things on my own.  

21. are disappointed in me.  

16. are too busy or otherwise involved to help me.  

23. give me advice whether or not I want it.  

17. have trust and confidence in me.  

24. respect my judgement and decisions, even if different from what they would want.  

18. try to control my life.  

25. do things for me, which I could not do for myself.  

19. protect me from danger and difficulty.  

26. are persons whose expectations I feel obligated to meet.  

20. ignore what I have to say.  

27. treat me like a younger child.  

During recent visits or time spent together, my parents were persons...

28. I looked forward to seeing.  

32. I wanted to be with all the time.  

29. with whom I argued.  

33. towards whom I felt cool and distant.  

30. with whom I felt relaxed and comfortable.  

34. who got on my nerves.  

31. who made me angry.  

(goto the next column)
35. who aroused feelings of guilt and anxiety. □
36. to whom I enjoyed telling about the things I have done and learned □

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<th>5</th>
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<tbody>
<tr>
<td>Not at All (0-10%)</td>
<td>Somewhat (11-35%)</td>
<td>A Moderate Amount (36-65%)</td>
<td>Quite A Bit (66-90%)</td>
<td>Very Much (91-100%)</td>
</tr>
</tbody>
</table>

During recent visits or time spent together, my parents were persons...

37. for whom I felt feelings of love. □
38. I tried to ignore. □
39. to whom I confided my most personal thoughts and feelings. □

Following time spent together, I leave my parents...

42. with warm and positive feelings. □
43. feeling let down and disappointed by my family. □

When I have a serious problem or an important decision to make...

44. I look to my family for support, encouragement, and/or guidance. □
45. I seek help from a professional, such as a therapist, college counselor, or clergy. □
46. I think about how my family might respond and what they might say. □
47. I work it out on my own, without help or discussion with others. □
48. I discuss the matter with a friend. □
49. I know that my family will know what to do. □
50. I contact my family if I am not able to resolve the situation after talking it over with my friends.

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<th>5</th>
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<tbody>
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<td>A Moderate Amount (36-65%)</td>
<td>Quite A Bit (66-90%)</td>
<td>Very Much (91-100%)</td>
</tr>
</tbody>
</table>

When I go to my parents for help...

51. I feel more confident in my ability to handle the problems on my own.  

54. I feel confident that things will work out as long as I follow my parent’s advice.

52. I continue to feel unsure of myself.  

55. I am disappointed with their responses.

53. I feel that I would have obtained more understanding and comfort from a friend.

(go to next column)
Parental Attachment Questionnaire

Revised Scoring Instructions (3/94)

© 1985 M. Kenny Ph.D.

Recode the following questions [(1=5), (2=4), (4=2), (5=1),] where the first number is the respondents’s answer, and the second number is the value to which it should be recoded.

Questions to be recoded:

3, 6, 10, 11, 14, 16, 18, 20, 22, 23, 25, 26, 27, 29, 31, 33, 34, 35, 38, 41, 43, 47, 52, 53, 55

SCALE 1: Affective Quality of Relationships

1, 2, 4, 14, 16, 20, 21, 22, 26, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 40, 41, 42, 43, 52, 53, 55

SCALE 2: Parents as Facilitators of Independence

5, 6, 8, 9, 10, 11, 13, 15, 17, 18, 23, 24, 25, 27

SCALE 3: Parents as Source of Support

3, 7, 12, 19, 39, 44, 46, 47, 48, 49, 50, 51, 54
Appendix F

Eating Disorder Symptoms Questionnaire

The following is a scale that measures the level of symptoms an individual may have for eating disorders. The results of this measurement do not in any way diagnose the eating disorder. Listed below are ten statements and the following scale: (SA) strongly agree with this statement; (A) agree with the statement; (D) disagree with this statement; (SD) strongly disagree with this statement; and (U) unsure about this statement. Read each statement and place an X in the box that indicates to what extent the given statement applies to you.

1. I get angry and anxious when I gain even one pound.

2. Regardless of what the scale says, I always feel 10-15 lbs. heavier.

3. I spend the majority of my day thinking about food and planning my next meal.

4. Sometimes I feel that I've eaten so much that I need to throw up.

5. I often eat out of control, where I can't stop.

6. On a regular basis, I am comfortable eating sweets.

7. If I eat too much, I feel anxious and exercise for hours to work it off.

8. Even if I was underweight, I could never be too thin.

9. I have considered using laxatives, diuretics or enemas to lose weight.

10. The majority of the time I eat until I am comfortable/full and then am able to stop.

Please enter the year you were born.

73
Scoring for Eating Disorder Symptoms

**DSM-IV CRITERIA QUESTIONS**
For these questions double the number selected. [(SA=8), (A=6), (D=4), (SD=2)]
This applies for questions:

2, 4, 5, 7, 8, 9

**CHARACTERISTICS OF THOSE W/ EATING DISORDERS (per DSM-IV)**
For these questions, the number selected is the actual score for that question.
[(SA=4), (A=3), (D=2), (SD=1)]
1, 3

**“NORMAL” EATING PATTERN QUESTIONS**
Scoring for these questions is as follows

- Strongly Agree = -2
- Agree = -1
- Disagree = 1
- Strongly Disagree = 2

High Levels of ED Symptoms 46-60
Medium Levels of ED Symptoms 26-45
No-Low Levels of ED Symptoms 10-24
Appendix G
Debriefing Statement

This research was conducted by Jennifer Ann Dinicola and Tamara Anne Pine, graduate students in the Masters of Social Work Program and supervised by Dr. Ira Neighbors at California State University, San Bernardino. This study was approved by the institutional review board at California State University, San Bernardino. The purpose of this study was to identify a relationship between attachment difficulties in early childhood and the manifestation of eating disorders in late adolescence. The measures used were the Parental Attachment Questionnaire and an Eating Disorder Symptoms Questionnaire developed by the researchers for this study.

Your participation in this study should be free of any risk. However, emotional discomfort may surface as we are dealing with very personal issues. If for any reason you need counseling assistance please call your local health care provider, or the Youth Crisis Hotline at (800)448-4663. Please consult your local phone book under Emergency/ Crisis Hotlines for more services. For more information on Eating Disorders, please call any of the following:

American Anorexia/Bulimia Association..(201) 836-1800
National Anorexic Aid Society, Inc.....(614) 895-2009
Anorexia Nervosa & Related Eating Disorders .. . . . . . . (503) 344-1144

or on the world wide web at http://www.anred.com

A brief summary of the research results will be posted on this web site after June 1, 1999 (www.evisions.eatingdisorder.research.com). If you have any further questions, please contact Jennifer Dinicola, Tamara Pine, or Dr. Ira Neighbors at (909) 880-5501. Thank you for your participation.
Appendix H

University Review Board Approval

To Whom It May Concern:

February 11, 1999

This will advise you that the study, "Eating Disorders and Early Attachments," by Jennifer Dinacola and Tami Pine, graduate students in social work at CSUSB, has been approved by the University Institutional Review Board for issues related to human subjects research.

Morley D. Glicker, DSW
Professor
REFERENCES


