

**PARENT-ADOLESCENT ATTACHMENT AND DISORDERED
EATING: A NONCLINICAL SAMPLE**

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ABSTRACT

A wide body of research has investigated the possible pathogenic role of the family in the development of eating disorders. Within the context of the research which places family dynamics at the centre of psychopathology, little research attention has been given to the relationship between parent-adolescent attachment and eating disorders. There is currently no existing South African research in this area. This study aims to redress this balance by exploring the relationship between parental attachment (as measured by the Parental Attachment Questionnaire) and disordered eating (as measured by the Eating Disorders Inventory) among white female adolescents.

The sample comprised 209 white female learners from a former 'model C' school in the Durban area. It was found that highly significant negative correlations existed between most of the subscales of the PAQ and EDI. Overall, canonical analysis revealed a significant relationship between parent-adolescent attachment and disordered eating. The relationship between the variables of attachment and disordered eating was very similar regardless of whether the two subscales of the PAQ (*Affective Quality of Attachment* and *Parental Role in Providing Emotional Support*) were combined or not.

It was found that those adolescents who described their parental relationships as affectively positive and emotionally supportive and viewed their parents as supporting their independence, also described themselves as experiencing low levels of weight preoccupation, low levels of bulimic behaviour and interpersonal distrust, and high levels of personal effectiveness and interoceptive awareness.

The above results are discussed in the light of the relevant available literature and research. The methodological and conceptual limitations of the study are explored and provide a basis for recommending possible future research.

DECLARATION

I, Tracy Angela Biggs, declare that this dissertation is my own original work. All other sources of reference have been acknowledged.

This dissertation has not been submitted previously by me for a degree at this or any other university.

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TABLE OF CONTENTS

	Page
PREFACE	
Abstract	i
Declaration	ii
Acknowledgements	iii
CHAPTER ONE: INTRODUCTION	
1.1 Placing Eating Disorders and Attachment in Context	1
1.2 Terminology	2
1.3 Motivation for this Study	3
CHAPTER TWO: LITERATURE REVIEW	
2.1 Eating Disorders: Family Characteristics	5
2.1.1 A Theoretical Overview	6
2.1.1.1 Classical Psychoanalysis	6
2.1.1.2 Object Relations Theory	7
2.1.1.3 The Family Interactional Model	8
2.1.2 A Review of the Research on the Family Characteristics of Eating Disordered Patients	10
2.2 Attachment Theory	13
2.2.1 Defining Attachment	13
2.2.2 Phases in the Formation of Attachment and Separation	15
2.2.3 Types of Attachment Behaviour and Related Maternal Response	16
2.2.4 Internal Working Models	18
2.2.5 The Relationship Between Temperament and Attachment Style	19
2.2.6 The Stability of Attachment Style Over Time	19
2.2.7 Clinical Implications of Attachment Classifications	20
2.2.8 Attachment and Object Relations Theory	22
2.2.9 The Role of the Father as an Attachment Figure	24
2.2.10 Summary	26

2.3 Eating Disorders and Attachment	26
2.3.1 Theoretical Implications for Attachment and Eating Disorders	27
2.3.2 Previous Research on Attachment and Eating Disorders	28
2.3.2.1 Conceptual Problems	28
2.3.2.2 Methodological Problems	29
2.3.2.3 A Review of the Relevant Research	30
2.4 Summary	35
CHAPTER THREE: METHODOLOGY	
3.1 Aim	37
3.2 Hypothesis	37
3.3 Sample and Subjects	37
3.4 Instruments	39
3.4.1 Confidential Data Sheet for Research Subjects	39
3.4.2 The Parental Attachment Questionnaire (PAQ)	39
3.4.3 The Eating Disorders Inventory (EDI)	40
3.5 Procedure	43
3.6 Analysis of Data	44
CHAPTER FOUR: RESULTS	
4.1 Descriptive Statistics	46
4.1.1 Sample Characteristics	46
4.1.2 Subscale Characteristics and Comparisons	46
4.2 Reliability	48
4.3 Factor Analysis	49
4.3.1 Factor Analysis of the EDI	49
4.3.2 Factor Analysis of the PAQ	55
4.4 Correlational Analysis	59
4.4.1 Correlation Coefficients	59
4.4.2 Canonical Analysis	64
4.5 Supplementary Findings	67
4.5.1 Comparison of EDI Scores with Other South African Samples	67
4.5.2 Percentage of Subjects Falling Above and Below Cut-off Points	69
4.5.3 Crosstabulation of EDI Scores with Demographic Variables	69

4.5.4	PAQ Cut-Off Points	72
4.5.5	Crosstabulation of PAQ Scores with Demographic Variables	72
4.6	Summary	77
CHAPTER FIVE: DISCUSSION		
5.1	Comparison of a South African and an American Sample	80
5.1.1	The PAQ Subscales	80
5.1.2	The EDI Subscales	80
5.2	Interrelationships Between Attachment and Disordered Eating	81
5.2.1	An Analysis of the Relationships Between the Subscales of the PAQ and EDI	81
5.2.1.1	<i>Affective Quality of Attachment/Parental Role in Providing Emotional Support</i> with EDI Subscales	83
5.2.1.2	<i>Parental Fostering of Autonomy</i> with EDI Subscales	86
5.2.2	An Analysis of the Relationship Between the Subscales of the EDI and PAQ	87
5.2.3	An Analysis of the Overall Relationship Between EDI and PAQ	88
5.3	Comparison with Other South African Samples	90
5.4	Relationship to Mother and Father Individually	91
5.5	Limitations of this Study	94
5.6	Implications of this Study	96
5.7	Recommendations for Future Research	96
5.8	Summary and Conclusion	98

REFERENCES

APPENDICES

CHAPTER ONE

INTRODUCTION

1.1 PLACING EATING DISORDERS AND ATTACHMENT IN CONTEXT

Anorexia nervosa and bulimia nervosa are serious illnesses that pose a potentially significant health problem to developing adolescent females. Consequently, the problem of eating disorders in this high risk group has become a topic of widespread concern for health professionals. The dramatic increase in the incidence of anorexia nervosa and bulimia nervosa over the past few decades (le Grange, 1993; White, 1992) has paralleled research interest in this field. The research has, inter alia, attempted to identify and explore the risk factors inherent in eating disorders. Knowledge of such risk factors may be used to implement effective methods of treatment and prevention which could reduce the incidence and improve the outcome of eating disorders. These risk factors have been broadly classified as sociocultural, developmental, familial and biological (White, 1992). While these risk factors are not assumed to operate separately, but rather by complex interactions with each other, this study will focus, most broadly, on the role of familial factors as they pertain to eating disorders.

Consideration of the role of the family in the development of eating disorders has stimulated significant research attention over the past two decades (Kog & Vandereycken, 1985). Research which has explored the possible aetiological link between family dynamics and eating disorders can be located within a broader theoretical and research context which has placed relationships within the family, particularly early relationships, at the centre of psychological development. A number of theoretical traditions including classical psychoanalysis, object relations theory and attachment theory have stressed the significance of early development, particularly in relation to the caregiving experience, as crucial to subsequent identity formation and adaptive personality development.

The past few years have witnessed a proliferation of interest in attachment theory and related research (Jones, 1996). Within the context of family functioning, the

importance of the attachment relationship between the infant and caregiver(s) and later between the developing adolescent and her parents is relevant to the present study. Attachment theory, the roots of which lie primarily in the work of John Bowlby, provided a conduit between psychoanalysis and developmental psychology by drawing on evolutionary theory, ethology and cognitive psychology (Fonagy, Leigh, Steele, Steele, Kennedy, Mattoon, Target & Gerber, 1996). Jones (1996) posits that attachment research is currently one of the most valuable avenues in developmental and clinical research to understanding the psychological antecedents of disordered behaviours.

Within the research domain of attachment, the role of ongoing parent-adolescent attachment in adaptive late adolescent adjustment has received substantial theoretical and empirical attention (Lopez & Gover, 1993). Research by Kenny (1987; 1990) found that characteristics of secure attachment were positively correlated with measures of social competence, psychological well-being and career development. The specific relationship between parental attachment and eating disorders has, however, received relatively little research attention. The research which does exist is limited by a number of methodological and conceptual difficulties. While remaining cognisant of these limitations, the research in this area does, however, provide support for the existence of a relationship between difficulties with parent-adolescent attachment and disordered eating.

1.2 TERMINOLOGY

In this thesis, the female pronoun will be used in a generic sense since the majority of individuals with eating disorders are female (APA, 1994).

For the purpose of this study it is important to distinguish between the terms 'eating disorders' and 'disordered eating'. The DSM-IV (APA, 1994), as a system for the classification of psychopathology, recognises two eating disorders: anorexia nervosa and bulimia nervosa. This taxonomy presents anorexia and bulimia nervosa as two separate diagnostic and clinical entities. Another approach to understanding problems of eating addresses the underlying attitudes of the individual towards food and body shape, eating behaviours and personality traits. The Eating Disorder Inventory (EDI)

was designed to measure such attitudes, behaviours and traits thought to underlie disordered eating, rather than to diagnose clinical eating disorders. Disordered eating as measured by the EDI is probably common to both anorexia and bulimia, but as clinical entities they each have their own salient features. Furthermore, high scores, while not indicative of a clinical diagnosis may indicate high risk groups. This study will investigate disordered eating in a nonclinical population which may have relevance for the diagnosis and treatment of eating disorders.

1.3 MOTIVATION FOR THIS STUDY

This study aims to explore further the relationship between parent-adolescent attachment and disordered eating, given the dearth of research in this area. In addition, this study arose out of an interest in both attachment theory and eating disorders and a curiosity about the possible interface between the two fields of study. Attachment difficulties and subsequent difficulties with separation have been identified as risk factors in the development of eating disorders, particularly anorexia nervosa (Armstrong & Roth, 1989). Theoretically, an aetiological link between the two areas of interest suggests that deficits in the early attachment relationship and later in the parent-adolescent attachment are indicated in the development of eating disorders. It is, however, acknowledged that the methodology employed for this research does not permit any inferences regarding causality.

Despite the fact that attachment difficulties have not occupied a central place in the research on eating disorders, the relationship between difficulties within the family context more broadly and eating disorders has received considerable research attention. The first section of the literature review will examine the theory and research which places the family at the centre of understanding eating disorders. The contribution of classical psychoanalysis and, later, of object relations theory to understanding the importance of food within the matrix of family relationships will be briefly explored. Particular attention will be given to the theory and research which has explored the relationship between eating disorders and dysfunctional patterns of interaction between family members within the context of the family as an “interpersonal network or transactional system” (Dare, 1985, p. 440).

Within this conceptual framework, the mother-daughter relationship is deemed to have particular psychological significance, in terms of both the early caregiving experience and the adolescent negotiation of separateness and autonomy. This emphasis on early relationships and the quality of relatedness between mother and daughter has obvious relevance, at least by implication, for attachment theory and research.

The second section of chapter two will focus on attachment theory and research, with particular attention to the ethological approach as espoused by Bowlby and expanded by Ainsworth and her colleagues. While other approaches to attachment are considered, this particular focus is adopted since it is congruent with the conceptual understanding of attachment, as operationalised by Kenny (1990) in the instrument selected to measure parent-adolescent attachment employed in this study.

The third section of chapter two will consider the theory which supports the existence of an aetiological link between attachment theory and eating disorders. The previous research on the relationship between attachment difficulties and eating disorders will be evaluated in terms of the methodological and conceptual limitations of this research.

Chapter three will describe the methodology employed in this study. Chapter four will provide a summary of the data analysis as outlined in chapter three. In chapter five, a discussion of these results is presented within the context of the original aim and hypothesis of the study and the literature review in chapter two. The limitations of the study and the clinical implications of the present findings are explored. Finally, recommendations for future research are discussed in the light of the limitations of this research.

CHAPTER TWO

LITERATURE REVIEW

This chapter will provide an overview and discussion of the relevant literature and research in order to contextualise the aims, hypotheses and results of this study.

2.1 EATING DISORDERS: FAMILY CHARACTERISTICS

There is a wide body of literature which has considered the role of the family in the development of eating disorders. Various family variables have been considered in terms of the pathogenesis of eating disorders (Dare, 1985; Kog & Vandereycken, 1985): (a) demographic and life cycle features of the family (b) the psychological characteristics of individuals in the family (c) genetic variables and (d) the dynamics of family interaction. While it is acknowledged that separating these variables is artificial, the present discussion will focus on analysing the patterns of interaction among the family members of eating disordered patients.

Family interaction is a complex phenomenon which has stimulated a plethora of both theoretical viewpoints and research interest (Kog & Vandereycken, 1985; Strober & Humphrey, 1987). For the sake of clarity, the literature in the following review will be divided broadly into two sections. The first section will examine the theory which underpins the hypothesis of an aetiological link between family functioning and disordered eating. The following theoretical formulations of eating disorders will be briefly elucidated: (a) classical psychoanalysis (b) object relations theory and (c) the family interactional model as outlined by Minuchin and his co-workers (Minuchin, Rosman & Baker, 1978). These theoretical conceptualisations were derived largely from the clinical observations of and therapeutic interventions with families of eating disordered patients (Johnson & Flach, 1985; Kog & Vandereycken, 1985; le Grange, 1993). The second section will review the empirical research which has been conducted in the field to test and expand upon the clinically derived theory.

2.1.1 A Theoretical Overview

2.1.1.1 Classical Psychoanalysis

Classical psychoanalysis was the first theory to highlight the psychological significance of food by focussing on feeding as the central component of our earliest relationship and an enduring component of mother-child interactions within the family context (Humphrey, 1986). In classical psychoanalysis food and feeding form the core matrix of the earliest stage of psychosexual development. During the oral stage, the infant's perceptions of the world, her needs and modes of expression are centred predominantly in the mouth, lips and tongue. The oral zone is associated with early libidinal and aggressive instincts and fantasies. Oral gratification associated with sucking and relaxation (oral eroticism) is thought developmentally to precede the more ambivalent and aggressive components of the oral stage (oral sadism). Oral sadistic impulses are expressed through biting, chewing or spitting and in fantasies of devouring and destroying (Kaplan, Sadock & Grebb, 1994).

In addition, classical psychoanalysis posits the existence of certain personality types based on developmental fixations at various stages of psychosexual development. The 'oral character' has strong elements of oral fixation which manifest in extreme dependency on others, passivity and oral preoccupations, which in addition to food, frequently centre around drinking, smoking and kissing. As a consequence of the association between feeding and nurturing in infancy, love and nourishment becomes equated with food (Blum, 1953).

For Freud, eating behaviour was inextricably linked to the sexual instinct. The classic psychoanalytic interpretation of anorexia views the eating disorder as a rejection of femininity and a fear of oral impregnation (Boskind-Lodahl, 1981; Sours, 1974). Unable to meet the maturity demands of adolescence, the individual regresses to the oral stage where gratification is associated with sexual pleasure and fertility. The symptoms of anorexia manifest as a consequence of oral ambivalence, with the refusal of food representing a defence against fears of oral impregnation. Bulimia on the other hand is conceptualised in psychoanalysis as an overidentification with

femininity, a desire for pregnancy and a breakthrough of unconscious impulses toward gratification (Bemis, 1978; Boskind-Lodahl, 1981).

2.1.1.2 Object Relations Theory

The focus in classical psychoanalysis is on the gratification of instinctual impulses and the psychic defences employed to prevent their direct expression. People are significant in an individual's psychic life only in so far as they are objects of instinctual gratification (Ivey, 1990). For this reason classical psychoanalysis has been termed an instinct-drive theory (Greenberg & Mitchell, 1983). In classical psychoanalysis the relationship between the infant and the mother, including the feeding relationship, is significant only to the extent that she is able to meet the demands of the infant's instinctual drives. However, the infant's relationship with the other is never assessed from the point of view of the quality of the interaction.

Object relations theory shifts the emphasis in classical psychoanalysis by arguing that instinctual striving is the means to the end of establishing relationships with people. Within this framework psychopathology arises not from instinctual frustration but from the internalisation of pathological relationships in early childhood. Object relations theory thus provides a powerful interpretive framework for understanding the significance of interpersonal relationships, particularly early childhood relationships within the family context. Object relations theory may be summarised as:

... a psychoanalytic developmental account of how primary interpersonal relationships in the infant's external world become internalised, represented and metabolised at the level of fantasy into a nucleus of personal identity which, whether healthy or deficient, determines subsequent personality development and deformation. (Ivey, 1990 p. 3)

Thus, the quality of the interaction with primary caregivers is deemed crucial in determining whether development will be pathological or normal. Given the emphasis in object relations theory on the quality of interaction within the family context,

particularly with the primary caregivers, it has greater theoretical relevance than classical psychoanalysis for the current study.

Bruch (1973) wrote critically about the oral impregnation interpretation of psychoanalysis. Emphasising the importance of early object relations, Bruch (1973) states that: “modern psychoanalytic thinking has turned away from this merely symbolic, often analogistic etiological approach and focuses now on the nature of the parent-child relationship from the beginning” (p. 217). Bruch (1973) and Selvini-Palazzoli (1974) have noted dysfunctional patterns of interaction in the mother-child relationship of eating disordered patients.

The interactional patterns in the mother-child relationship typically centre around restrictions on the child’s autonomy by subverting the individual needs of the child to what the mother perceives as appropriate. The authentic needs of the child are overlooked by a domineering and controlling mother who is typically overinvolved and intrusive, attempting to gain perfection for the child for her own fulfilment. Lacking a clear conception of herself as an autonomous individual, with a sense of identity and a feeling of personal effectiveness and self-worth, the control of food is used by the anorexic in the maladaptive attainment of a sense of separate identity and autonomy. As Friedlander and Siegel (1990) state:

...increasingly confronted with complex developmental tasks that require a certain level of individuation, the client’s sense of personal adequacy continues to diminish. By focussing exclusively on eating, weight, and body image, she can confine her thoughts and behaviours - and, consequently, her anxiety - to one sphere. (p. 77)

2.1.1.3 The Family Interactional Model

Beginning as early as 1873, English and French literature (Charcot, 1889; Gull, 1868; Lasegue, 1973; cited in le Grange, 1993) describe the unusual and potentially harmful interactional processes that exist in the families of anorexic patients (Sclaf-McIver & Thompson, 1989). The significance of familial influences has remained a prominent concern and has led to the identification of certain characteristics in the families of

eating disordered patients (le Grange, 1993). The work of Minuchin, a prominent family therapist and his co-workers (Minuchin et al., 1978), is seminal to an understanding of the clinical features inherent in the families of anorexic families. They identified the development of a sense of autonomy and belonging as the two crucial developmental tasks which take place within the context of the family, thereby stressing the vital role played by the family in individual development: “Family transactional patterns form the matrix of psychological growth” (Minuchin et al., 1978, p. 52).

Within this conceptual framework, Minuchin, Baker, Rosman, Liebman, Milman and Todd (1975) identified the characteristics which are typical of the families of children who suffer from psychosomatic disorders including anorexia nervosa based on their observation of nearly sixty families¹. These primary patterns of interaction are: enmeshment or overinvolvement, overprotectiveness, rigidity and lack of conflict resolution. An enmeshed family system is characterised by a high degree of involvement which is evident in the interdependence of relationships, poorly differentiated boundaries at both a personal and family subsystem level (for example, poor parent-child boundaries), and a lack of differentiation of self from other family members. Overprotective families show a high degree of concern for each other’s welfare. In ‘psychosomatic families’ (le Grange, 1993) such concern has an intrusive quality which infringes upon the development of the child’s autonomous functioning.

The psychosomatically ill child usually feels a high degree of responsibility for protecting the family. For the anorexic child, the experience of being able to protect the family by detouring family conflicts particularly within the spousal subsystem, reinforces the symptoms of the illness and fulfills a homeostatic function within the family. In this way, the rigidity of the status quo within the family is maintained and conflict is avoided (Minuchin et al., 1975). Other writers such as Haley (1973) and Crisp (1980) demonstrate theoretical consistency with Minuchin’s interactional model by viewing the families of ill children in this case anorexics, as somehow in ‘need’ of them to provide the family with stability through a united purpose.

¹ For further detail, the reader is referred to Minuchin et al. (1978).

These four characteristics of family structure elucidate how the family functions as an interpersonal network or transactional system (Dare, 1985) which provides the context for using anorexia as a mode of communication (Minuchin et al., 1975). Furthermore, conceptualising the family in this way facilitates an understanding of the illness as an interpersonal rather than an individual problem (Bemis, 1978). Treatment is therefore directed towards restructuring dysfunctional interactional patterns within the family and debunking the myth that the only family problem is the 'sick child' (le Grange, 1993; Minuchin et al. 1975)².

The classical psychoanalytic, object relations and family interactional perspectives on eating disorders outlined above have been criticised methodologically for the following reasons: (a) for relying on clinical data derived from therapeutic interventions with patients without adequate comparison or control groups (b) the inferential nature of conclusions about aetiology and (c) therapist expectancy effects have been noted in many of the case reports (Bemis, 1978; Humphrey, 1986; Kog & Vandereycken, 1985). These methodological weaknesses have stimulated a great deal of research in the area which has attempted to avoid the noted methodological pitfalls and to test quantitatively the aetiological inferences inherent in the theoretical conceptualisations of eating disorders. The quantitative research on the family dynamics of eating disordered patients will be briefly reviewed.

2.1.2 A Review of the Research on the Family Characteristics of Eating Disordered Patients.

The research conducted on the family characteristics of eating disorders can be broadly divided into those studies which compare the families of eating disordered patients to those of so called 'normal' families and those studies which compare the families of various subgroups of eating disordered patients.

One of the main difficulties inherent in attempting to compare the results of various studies is a lack of diagnostic consistency in the classification of eating disorders.

² For information on the specific goals and techniques of therapy, the reader is referred to the following references: le Grange (1993); Liebman, Minuchin and Baker (1974); Minuchin et al. (1975); Minuchin (1978) and Sargent and Liebman (1984).

Much of the research was conducted in the 1980s and the DSM-III (APA, 1980) criteria are employed. In many of the studies a comparison is made between two types of bulimic groups: normal weight bulimics and bulimic anorexics. The latter category has been re-classified in the DSM-IV (APA, 1994) as a subcategory of anorexia nervosa: binge-eating/purging type. For the purpose of reviewing the research, the DSM-IV classifications of eating disorders will be employed. Furthermore, diagnostic issues are also complicated by a lack of quantifiable severity criteria in the DSM-III. With these limitations in mind, an attempt will be made to identify overall trends which have emerged in the research.

Johnson and Flach (1985) compared the family perceptions of normal weight bulimics with a control group of normal subjects. Bulimic patients perceived their families as lacking in cohesion, high in conflict coupled with a low emphasis on open expression of feelings and low emphasis on independent and assertive behaviour when compared with the control group. Similar results were reported by Shisslak, McKeon and Crago (1990) who included a group of anorexics in the study, binge-eating/purging type, and found that subjects from both subgroups perceived their families as significantly more dysfunctional than normal control subjects. Few significant differences were noted in the family perceptions of the bulimic and the binge-eating/purging anorexics.

In keeping with the latter result, Humphrey (1986) found that normal weight bulimics and anorexics, binge-eating/purging type, experienced deficits in parental nurturance and empathy relative to normal control subjects. However, when compared with anorexics, restricting type, only deficits in nurturance were specific to the bulimic and binge-eating/purging anorexics. In a study conducted by Scalf-McIver & Thompson (1989) the mother's perceived inconsistent expression of affection toward her daughter was found to be the best predictor of the severity of bulimic symptomatology. Degree of bulimia was also correlated negatively with family cohesion which is consistent with the findings of Johnson and Flach (1985) discussed above who also reported low cohesiveness among family members of bulimics.

Strober (1981), when comparing restricting anorexics to anorexics who present with bulimic symptoms, found that binge-eating/purging anorexic families had higher levels of conflictual interactions and expressions of negativity than the restricting

anorexics who also showed higher degrees of cohesion and organisation within the family. Greater marital discord was identified in the families of binge-eating/purging anorexics and such individuals reported feeling more distant from both their parents than did the restricting anorexics. When anorexic families were compared with normal control families in a study conducted by Goldstein (1981), the anorexic families differed most significantly on the measure of dependency-insecurity which was interpreted to indicate a low tolerance for conflict and the expression of negative emotional states.

While not all of the research has consistently demonstrated a strong relationship between dysfunctional patterns of family interaction and disordered eating (Kent & Clopton, 1988; Killen, Hayward, Wilson, Taylor, Hammer, Litt, Simmonds and Haydel, 1994; Kog, Vandereycken and Vertommen, 1985) the dominant trends in the research provide fairly persuasive support for the theoretical hypotheses elucidated above. In summary, the research suggests that patients with bulimic symptomatology perceive their families as being more conflictual, less cohesive and less emotionally nurturing than restricting anorexic patients. While the families of restricting anorexic patients are characteristically more organised than patients with bulimic symptomatology, they are also perceived to be more controlling, more restricting of independent functioning and intolerant of negative emotional expression. However, both categories of eating disordered patients differ in their perception of family functioning when compared with normal controls on the dimensions of autonomous functioning, emotional expressiveness and the ability to tolerate conflict.

While the research reflects a relationship between eating disorders and patterns of disturbed relating in the family, the pathways of causality between the two variables cannot be determined given the correlational research design employed in much of the research. The theory infers an aetiological link by proposing that the family environment to which eating disordered patients are exposed hampers their development of a stable sense of identity, of autonomy and of self-efficacy through a variety of disturbed patterns of relating. It must be stressed, however, that a conservative interpretation of the direction of influence between the two variables is required.

2.2 ATTACHMENT THEORY

2.2.1 Defining Attachment

‘Attachment’ is a difficult concept to define in so far as a number of different theories have contributed to our understanding of what constitutes attachment, each offering a slightly different nuance to the concept. Historically, attachment theory has its earliest roots in the work of British psychiatrist, John Bowlby. Although supervised by Melanie Klein, Bowlby explicitly abandoned the language of drive theory in addressing the fundamental processes which underlie interpersonal relationships. Bowlby’s theory of attachment is firmly grounded in biological principles, drawing on ethology and Darwinian theory to understand human relational processes. Working within the same theoretical school as Bowlby, Mary Ainsworth emerged as a prominent attachment theorist who identified three categories of attachment styles. These three categories and the research which underpins them will be explored in detail in section 2.2.3.

The instrument selected to measure attachment in the present study is based on an understanding of attachment which is informed by ethological theory. The focus of this review will thus be on the contributions of Bowlby and Ainsworth to attachment theory. The influence of object relations theory to understanding primary relational processes cannot, however, be overlooked. The work of theorists such as Mahler (1971; 1975) and Winnicott (1965; 1971) have significantly deepened our appreciation of the importance of formative attachments to healthy psychological functioning.

Attachment has been defined as a “relationship that develops between two or more organisms as they become attuned to each other, each providing the other meaningful stimulation and arousal modulation” (Field, 1996, p. 545). Ainsworth (1989) generally referred to an attachment as a close, enduring affectional bond or relationship that exists between two persons. The term ‘attachment’ needs to be distinguished from attachment behaviours. Attachment refers to the propensity of an infant to form an emotional tie with an attachment figure, whereas attachment behaviours are those behaviours which promote proximity and contact, initially

indiscriminately, but with increasing specificity to the primary caregiver. Attachment behaviours are not manifested continuously and will be more strongly activated in certain contexts, particularly during the absence of the attachment figure (Ainsworth, 1972).

Attachment is also distinct from bonding which refers to the caregiver's emotional tie to the infant (Bukatko & Daehler, 1992). It differs from attachment in that the mother is not normally dependent on the infant as a source of security. Furthermore, research has revealed that bonding is most likely to occur when there is skin-to-skin, eye and voice contact between the mother and infant (Kaplan et al., 1994). The extent to which attachment can be distinguished from dependency is controversial, with the terms being used in different ways by different theorists. Ainsworth argues that attachment is qualitatively distinct from dependency and operates according to different principles (Gewirtz, 1972). Dependency, as viewed in this way, refers to the infant's reliance on others to meet his/her physical as opposed to emotional needs. Attachment, however, is not restricted to infancy and childhood. Although initiated early in life, individuals develop multiple attachments to a variety of people throughout the different stages of life (Field, 1996; Gewirtz, 1972).

Bowlby views the human infant as instinctively preprogrammed for attachment. His theory of attachment marks a stark shift from the drive/structure model of psychoanalysis which posits that the bond between people is predicated upon the gratification of instinctual strivings. For Bowlby, the attachment to the mother is primary and not secondary to the mother's function as a need gratifier (Greenberg & Mitchell, 1983). Bowlby suggests that attachment is mediated through five instinctive responses: sucking, smiling, clinging, crying and following, all of which are organised into a complex system involving internal controls and feedback mechanisms (Bowlby, 1969).

Bowlby further maintained that attachments develop according to a fixed sequence, in which the infant's innate ability to signal distress by crying, and the caregiver's predisposition to react to this signaling behaviour is crucial in regulating infant safety and survival (Bukatko & Daehler, 1992; Main 1996). This system of attachment is of equal importance to feeding in the environment of evolutionary adaptedness, in that it

leads the infant to: (a) monitor the availability of a protective attachment figure and (b) flee to this individual as ‘a haven of safety’ in times of distress or alarm (Main, 1996). The ability of the caregiver to relieve the child’s distress or anxiety by caring gestures of reassurance or physical contact is fundamental to the increasing attachment in the infant (Kaplan et al., 1994).

2.2.2 Phases in the Formation of Attachment and Separation

There are three phases in the first attachment stage: the *preattachment phase*, the *attachment-in-the-making phase* and the *clear-cut attachment phase*. During the *preattachment phase* (birth to 8 – 12 weeks), there are precursors of attachment: the infant orients to its mother, following her with his/her eyes and turns towards and moves rhythmically with her voice. During the second phase, *attachment-in the-making* (8 – 12 weeks to 6 months), the baby becomes differentially attached to one or more significant individuals in the environment. In the third phase, *clear-cut attachment* (6 months – 1 year), the infant shows signs of distress such as crying when separated from the caretaker or mother and this may occur as early as 3 months in some infants (Kaplan et al., 1994). Bowlby has distinguished a later phase which is characterised by a ‘goal-corrected partnership’ and is the hallmark of a mature attachment (Ainsworth, 1972).

Stranger anxiety, which involves wariness and fear at the approach of someone unfamiliar (Bukatko & Daehler, 1992) is first noted in infants about 26 weeks of age but does not develop fully until about 8 months. Infants exposed to only one caretaker are more likely to exhibit stranger anxiety than those who are exposed to a number of caretakers. Separation anxiety, which occurs between 10 and 18 months of age, involves anxiety and often obvious signs of distress when the infant is separated from the attachment figure. It is different from stranger anxiety in that an infant may still experience such anxiety while being in the arms of his/her mother (Kaplan et al., 1994).

Bowlby (1969) identified three phases which occurred when securely attached infants were separated from their mothers and placed in a hospital ward or residential nursery. Bowlby termed these phases *protest*, *despair* and *detachment*. During the

phase of *protest* the infants appear typically distressed, crying, throwing themselves about and being hypersensitive to any cues which may signal her return. During the *despair phase* children showed increasing helplessness, becoming withdrawn and crying only intermittently. This quiet stage was sometimes mistaken for recovery. During the *detachment phase*, the children seemed to actively block attachment behaviour in a defensive manner (Gewirtz, 1972). They began to show more interest in their environment and became more sociable but were remote and apathetic when visited by their mothers (Field, 1996). In instances of unusually long and depriving separations, at a vulnerable age, the block may last indefinitely. More commonly, however, such separations gave way to exaggerated attachment behaviour (Ainsworth, 1972).

2.2.3 Types of Attachment Behaviour and Related Maternal Behaviour.

Mary Ainsworth and her colleagues hypothesised broadly that maternal sensitivity and availability during the first year of life would correlate with infant's security of attachment at 1 year. In order to assess security of attachment, Ainsworth developed a structured laboratory observation called the 'Strange Situation Procedure' (Ainsworth, Blehar, Walters & Wally, 1978). This procedure involves a series of stress-inducing experiences of approximately three minutes each. The situation begins with the mother and infant together in a room with toys. A female stranger enters the room and the mother leaves the room. Next the mother returns and the stranger, followed by the mother, leaves the room and the infant is left alone. After a brief interval the stranger returns and finally, the mother returns (Field, 1996).

Those infants who were distressed at the separation, sought proximity to the caregiver on her return, were easily comforted and able to begin exploring the environment again within a short time, were said to be *securely attached* to the caregiver (57%). Another group of infants were very distressed by the separation and actively sought proximity to the caregiver during the reunion but were unable to be comforted, alternately seeking and rejecting soothing from the caregiver. These infants were said to be insecurely attached in a *resistant-ambivalent* way (17%). A third group of infants appeared undistressed by the separation and when the caregiver returned they ignored her, or made an initial approach and then turned away. This group of infants

were classified as being *avoidantly attached* (26%) (Zeanah & Emde, 1994). Sroufe and Waters (1977, cited in Zeanah & Emde, 1994) noted high levels of physiological arousal during the reunion episodes, despite the outward calm of this group. For this reason, avoidant behaviour has been thought to be largely defensive.

More recently, a fourth group of infants was identified which failed to fit into any of the above three categories. These infants were classified *insecure-disorganised-disoriented* in their attachment behaviour. Many maltreated infants fall into this category. Parental behaviour which may be alarming to the infant places her in a quandary by simultaneously activating attachment impulses to approach the parent but also activating impulses to flee from the parent as a potential source of harm. Behaviour of such infants included freezing, rising to greet the parent then falling, arms in the air with a trancelike expression and rocking on hands with face averted after a failed attempt to secure comfort (Main, 1996).

Mothers of securely attached infants were found to be more responsive to the crying and feeding signals of their infants (Krause & Haverkamp, 1996). In addition, secure attachment has been associated with the mother's sensitivity to the child's signals (noticing them and interpreting them correctly), acceptance of her maternal role, willingness to cooperate with the child and accessibility (provision of quick responses to the child's signals) (Bukatko & Daehler, 1992). By contrast, mothers of resistant-ambivalent infants were not found to be rejecting, but were unpredictable, demanding, inappropriate and insensitive to their infant's signals. Finally, mothers of avoidant infants were rejecting of their infant's attachment behaviours, unresponsive, unaccepting of their parenting role and were often averse to physical contact (Bukatko & Daehler, 1992; Main, 1996).

Mothers of securely attached infants were also found to be more affectionate and positive in their vocalisations compared with mothers of insecurely attached infants. Thus, the mental health and emotional well-being of the caregiver and his/her ability to create a warm emotional climate with the infant, as well as a positive attitude towards caregiving appears to be seminal to the formation of a secure attachment (Bukatko & Daehler, 1992).

2.2.4 Internal Working Models.

Four major organisations of attachment (secure, insecure-resistant/ambivalent, insecure-avoidant and insecure-disorganised-disoriented) have been identified and correspond to the organisations of caregiver responsiveness outlined in section 2.2.3 above. Bowlby posited that these central organisations or working models of attachment were grounded in a motivational-behavioural control system designed to serve the biological imperative of maintaining proximity to a caregiving figure.

Furthermore, Bowlby (1980) claimed that individual differences in the functioning of the system are closely related to an individual's internal working model of self, others and the world. These internal working models of the self and others are mental representations constructed out of a history of specific, significant attachment relationships which become integrated into the personality structure:

The working model of the relationship to the attachment figure will reflect not an objective picture of "the parent" but rather the history of the caregiver's responses to the infant's actions or intended actions with/toward the attachment figure. (Main, Kaplan & Cassidy, 1985, p. 75)

These mental representations include affective as well as cognitive components and play an active role in guiding behaviour. Once organised, internal working models tend to operate outside of conscious awareness and tend to be resistant to dramatic change (Bretherton, 1985).

The reconceptualisation of attachment as representation has much in common with contemporary psychoanalytic theory. The concept of the internal world of object representations as espoused by Melanie Klein and developed by Fairburn is a central tenet of object relations theory (Greenberg & Mitchell, 1983). The concept of internal working models thus creates a conduit between attachment theory and contemporary psychoanalysis. Within the concept of internal working models, as with internal object representations, early patterns of interaction with attachment figures come to be organised into more traitlike interactional styles. Exactly how this process takes place however, is not yet clearly understood.

2.2.5 The Relationship Between Temperament and Attachment Style.

Up to this point, the quality of the attachment has focussed on the behaviour of the caregiver. The role of the infant in the attachment and bonding process, with particular reference to infant temperament, is a controversial and unresolved issue (Main, 1996). Main suggests that in attempting to clarify the role of heritable factors in the attachment process, the Adult Attachment Interview (AII) should be administered to preadoptive parents. If there was the expected 75% correspondence between parent and infant, this would suggest that genetic factors have no influence on attachment behaviour.

Zeanah and Emde (1994) propose that since the infant's attachment to one caregiver is not necessarily the same as the infant's attachment to another, attachment is not an endogenous characteristic of the infant. Over time however, children appear to integrate early attachment experiences into an overall attachment organisation, so that by adolescence they have developed a predisposition towards certain attachment relationships. Furthermore, Belsky & Nezworski (1988, cited in Zeanah & Emde, 1994) suggest that temperament does not seem to influence attachment security directly, but may influence how security or insecurity is expressed³.

2.2.6 The Stability of Attachment Over Time.

Available research suggests that Strange Situation classifications are relatively stable over time and are systematically related to prior patterns of infant-caregiver interactions. Studies quoted by Zeanah and Emde (1994) suggest a range in stability from 53% - 96% and in most studies it was around 75%. In an impressive 16-year longitudinal study, Hamilton (1995, cited in Main, 1996) compared the Adult Attachment Interview (AAI) (George, Kaplan & Main, 1996; cited in Fonagy et al., 1996) classifications from the infant Strange Situation Procedure conducted sixteen years previously. Hamilton found a 77% correspondence between their attachment status on the AAI and the Strange Situation. Main (1996), however,

³ For a more thorough exploration of the influence of genetic factors on attachment, the reader is referred to Zeanah and Emde (1994).

cautions against interpreting these results as evidence for stability or continuity of attachment behaviours for methodological reasons and suggests, rather, that such results reveal the predictability of discourse usage in life narratives based upon early interaction patterns.

The findings of one study suggest that formative relationships give rise to ‘mental models’ of both self and other that influence subsequent relationships by becoming fairly stable and traitlike over time: “Early relationships are thus presumed to exert long-term impact on subsequent relationships by affecting the nature and development of these mental models” (Simpson, Rholes & Nelligan, 1992, p. 434). The term ‘mental models’ appears to have been used by the above authors to refer to the concept of ‘internal working models’ discussed in section 2.2.4.

There are a number of research studies which suggest that attachment style is not only stable over the course of time within an individual but also across generations. Studies in which the AAI was administered concurrently or following the Strange Situation have found concordance rates in attachment status of between 69% - 75% (Zeanah & Emde, 1994). In a study conducted by Van Ijzendoorn (1995, cited in Main, 1996) the parent-to-infant match across the secure-insecure categories was 75% (70% across three categories and 64% across four categories). This correspondence holds in high-risk (low socioeconomic status) samples, as well as in middle class samples, and was equally strong when the AAI was prenatally administered (Main, 1996).

2.2.7 Clinical Implications of Attachment Classifications.

Zeanah and Emde (1994) point out that the relationship of insecure attachment classifications to psychopathology is a confused one. Attachment classifications tend to become reified and confused with diagnoses. Insecure attachment is not necessarily pathological. In fact, an insecure attachment style may be viewed as an adaptation, or more accurately, a maladaptation on the part of the infant to inadequate parenting. While such attachments fail to prepare the infant for life outside the family, such behaviours protect the infant against disappointment and rejection (avoidant behaviours) and inappropriateness and inconsistency (resistant-ambivalent behaviours). Sroufe (1988, cited in Zeanah & Emde, 1994) suggests that insecure

attachments should be perceived as *risk factors* in infants which increase the likelihood of later psychiatric disorders, although the likelihood of developing such disorders is slight. Secure attachment may act as a buffer against psychopathology generally, but it does not confer absolute immunity.

Research conducted by Fonagy et al. (1996) examined the relation between patterns of attachment as measured by the Adult Attachment Interview (AAI) and psychiatric status. The study provides persuasive support for the association between psychiatric disorder with early patterns of attachment. Of particular interest is that the AAI scales were able to discriminate participants with eating disorder from those with depression. Eating disordered patients tended to have higher expectations of their attachment figures than depressed patients. In interpreting this finding it was thought that a tendency towards perfectionism and exaggerated personal standards, characteristic of anorexia nervosa patients, may also have been applied to their parents (Slade, 1982; cited in Fonagy et al., 1996).

The adaptive value of early attachments has been researched by examining the relationship between the quality of attachment during infancy (as determined by Ainsworth et al.'s (1978) taxonomy of attachment) and indices of intellectual and social competence during early childhood (Arend, Frederick, Gove & Sroufe, 1979; Waters, Wippman & Sroufe, 1979). Research conducted by Kenny (1987; 1990) examined the adaptive value of parental attachment beyond childhood. In both studies the ethological model of attachment as conceptualised by Bowlby (1969) and expanded by Ainsworth (1978) was used as a conceptual framework because of its value in explaining the persistence of family ties beyond childhood. In the findings of both studies secure attachment was positively correlated with psychological adjustment among college students on measures of assertiveness (Kenny, 1987) and career maturity (Kenny, 1990).

2.2.8 Attachment and Object Relations Theory.

A brief review of Mahler and Winnicott's contribution to the development of attachment theory is relevant given that their primary interest is in the caregiver and infant as a dyad. Furthermore, both theorists place fundamental importance on the quality of the relationship between mother and infant in understanding normal psychological development and psychopathology.

Mahler, Pine and Bergman (1975) present a stage model of infant development involving the intrapsychic processes of separation and individuation. The delineation of the subphases of the separation-individuation process elucidates the psychological birth of the human infant. It is out of the initial union of symbiosis with the mother and her fine attunement to the needs of her infant that the infant develops an increasing awareness of her separateness. The inchoate fusion with the caregiver acts as a foundation upon which the infant develops her own unique characteristics and personality, partly heredo-congenital, and partly as a result of the quality of the interaction between the infant and the mother.

Secure attachment to the mother in the first year of life facilitates the process of becoming a separate individual capable of autonomous functioning. For Bowlby, emotional dependency and difficulties with autonomous functioning was indicative of anxious attachment. Furthermore, all anxiety, whether phobic or not, was thought to be related to difficulties separating from the primary caregiver (Bowlby, 1973).

Mahler (1971) proposes that separation and individuation progress along two intertwined, but not necessarily synchronised, developmental tracks. Individuation thus involves the gradual evolution of intrapsychic autonomy, while separation runs along the track of differentiation, distancing, boundary-structuring, and disengagement from mother:

The relation between these two lines of development [separation-individuation] is intimate and complex, with the individual's overall self-identity emerging as a product of an ongoing dialect between the self as

separate and the self as experienced in its attachment to objects. (Blass & Blatt, 1992, p.190)

Given the above developmental outcome of an infant who has successfully negotiated the process of separation-individuation, we might deduce that healthy adulthood involves the ability to move freely and flexibly along a continuum from separateness to mature relatedness, without experiencing the need to deny separateness or the need for shared emotionality and intimacy.

Although not deemed an attachment theorist, Winnicott has substantially contributed to our understanding of the concept of attachment by providing an account of the development of the self out of the matrix of the infant's relationships with significant others. Winnicott, an influential contributor to the development of contemporary psychoanalytic theory and practice, eludes convenient categorisation as either an object relations theorist or a theorist of self psychology. Winnicott's work constitutes an approach to human development and experience which moves away from the drive/structure model of classical psychoanalysis and rests solidly within the relational/structure model (Greenberg & Mitchell, 1983).

For Winnicott, the quality of the attachment between mother and infant is predicated upon the mother's ability to meet the infant's needs with the maternal provisions which define 'good-enough mothering' (Winnicott, 1965). Such maternal care includes the provision of a nonintrusive 'holding' and 'mirroring' environment in which the needs of the infant are intuitively grasped, affirmed and gratified by the mother. Later, 'optimal frustration' which involves the experience, in small doses, of disillusionment and frustration, assists the infant in the process of separating from the mother.

Thus, Winnicott defines 'good-enough mothering' as involving more than the adequate mirroring of the infant's omnipotent and dependency needs. In addition, motherly love entails allowing the infant the opportunity to move from a state of dependency to one of autonomy. This process is facilitated by the emergence of a 'potential' or 'transitional space' between the infant and the mother (Winnicott,

1971). The failure to negotiate transitional space has drastic developmental consequences for the infant³.

In keeping with more traditional attachment theorists, Mahler and Winnicott clearly give precedence to early caregiving experience in understanding the development of psychopathology and the promotion of psychological adaptation. The attachment needs of the infant are viewed as a developmental imperative. If these needs are not met, meaningful psychological growth is severely retarded.

2.2.9 The Role of the Father as an Attachment Figure.

Since this research explores the relationship between parental attachment and disordered eating in adolescents, it is necessary to explore briefly the role of the father as an attachment figure. Thus far the theory and research reviewed has focussed almost exclusively on attachment to the mother as the primary caregiver. The attachment literature does not directly address the role of the father. Presumably the father falls within the category of ‘significant others’ to whom the infant develops an attachment in the *attachment-in-the-making phase* (3 - 6 months) as elucidated in section 2.2.2 above. In her paper, “Attachments Beyond Infancy”, Ainsworth (1989) briefly addresses the issue of the father as an attachment figure, acknowledging that:

... the tendency has been to consider the bond of father to child as somehow less deeply rooted than the bond of mother to child. During the past 10 years or so, however, there has been active research into father-infant interaction that suggests that fathers can and sometimes do perform a caregiving role and presumably become bonded to their infants. (p. 712)

Ainsworth (1989) concludes however, that further research with more representative samples is required in order to achieve a fuller appreciation of the significance of paternal attachment.

³ A fuller account of the concept of transitional space and the emergence of object constancy is beyond the scope of this thesis. Interested readers are referred to Winnicott (1971).

Classical psychoanalysis makes a major distinction between two and three person relationships (Wright, 1991). It is into the latter category of relationships that the father fits. Within this framework the father is central in terms of the rivalry and conflicts surrounding him that pertain to the Oedipus or Electra complex.

The 'third object' status of the father, with the onset of the Oedipus or Electra complex, does not however take cognisance of the pre-oedipal role of the father. While object relations theory focuses predominantly on the significance of the mother as the primary caregiver, the work of Mahler and her colleagues (1975) provides some useful insights into the role of the father as an attachment figure. In their work on separation-individuation the father is seen to play an increasingly important role as the process of separation from mother begins.

Father is more radically 'other' than mother and exerts a powerful pull away from maternal symbiosis. This force is important, in that when the infant is faced with the stress of separation and the collapse of primary omnipotence, she may be tempted to return to a prior state of oneness with the mother. However, a strong father figure who represents an exciting sense of otherness may facilitate the continuing progression of the infant towards true separateness. The sense of otherness about the father is further entrenched by the fact that the father generally spends less time with the infant and is continuously coming and going. As Wright (1991) claims: "It is as though the father, as father, is found out there in the world that is beginning to be discovered" (p. 113). In this way the father draws the infant out of the comfortable union with mother and into the unknown realm of exploration.

Creative play differs qualitatively depending on whether it takes place with father or with mother, thus providing the developing child with the opportunity for more varied symbolic representation and thought. Research conducted by McLaughlin, White, McDevitt and Raskin (1983) and supported by the findings of Rondal (1980) and Ratner (1988) reveals the important role played by the father in the infant's acquisition of language. The research findings suggest that while fathers accommodate their speech to the infant through the use of 'baby talk', the language of fathers is lexically more diverse than that of mothers. The greater linguistic demands placed on the child by the father have the effect of improving speech performance.

The above examples serve to illustrate some of the ways in which the quality of paternal attachment to the infant may be significant to her subsequent development. Furthermore, interpreting the father solely in Oedipal terms emerges as wholly inadequate, particularly in the light of the extensive pre-oedipal interaction of the father with the infant. This notion is supported by Wright (1991), who highlights the important differentiation in the child's experience between father and mother based on quite other qualities and characteristics than the sexual.

2.2.10 Summary

Much of attachment theory and related research has focussed on disruptions to the attachment and caregiving systems. Abuse by, or traumatic childhood separations from attachment figures, has been found to overwhelm the attachment system and to result in insecure, anxious attachments and to increase the risk of later psychopathology and difficulties in parenting (Marvin & Pianta, 1996). The quality of the attachment relationship thus appears to be crucial in influencing the course of development, particularly with respect to risk and resilience factors. Attachment has been linked with successful cognitive, social and emotional development and therefore continues to be an important area of research in the field of developmental psychology and psychopathology.

2.3 EATING DISORDERS AND ATTACHMENT

Thus far, the literature reviewed indicates the presence of a relationship between dysfunctional patterns of parent-child interaction and pathological psychological development. The research reviewed demonstrates a relationship between certain family characteristics and eating disorders. The families of bulimic patients were reportedly relatively unsupportive, detached, conflictual, hostile and disorganised, whereas the families of anorexic patients tended towards overt conflict avoidance, enmeshment and overprotectiveness.

Furthermore, the theory and research on attachment reviewed suggests a relationship between the quality of attachment within the caregiving dyad and subsequent psychological development. Within the research domain of attachment, ongoing

parent-adolescent attachment has been positively correlated with adaptive identity formation and adolescent adjustment. The quality of the parent-adolescent attachment thus emerges as an important context for understanding adolescent development (Lopez & Gover, 1993). While the family dynamics of eating disordered patients and the implications of attachment for psychological adjustment (both to the parents as an infant and later as an adolescent) have received considerable theoretical and empirical attention, the relationship between parent-adolescent attachment and eating disorders has not been widely investigated.

2.3.1 Theoretical Implications for Attachment and Eating Disorders

Armstrong and Roth (1989) conceptualise the morbid pursuit of thinness, which is central to both anorexia nervosa and bulimia nervosa, in the context of Bowlby's ethological approach to attachment. The authors claim that feelings of low self-esteem in eating disordered patients result in perceptions of personal and social deficiency. Such perceptions lead them to depend upon the resources of significant others in order to feel worthy and secure. As Armstrong and Roth (1989) state: "This underlying sense of basic inadequacy and helplessness, coupled with insecure neediness, is the hallmark of anxious attachment" (p. 145). This disturbance in attachment manifests in specific eating disordered behaviours. For the anorexic individual, restrictively dieting ensures thinness which, in so far as it tends to be equated with competency, self-control, success and attractiveness (Geach, 1995), becomes a means of establishing and sustaining a relationship with an adult attachment figure.

The characteristic eating behaviours of bulimic individuals can also be understood in terms of attachment theory. Research on the families of bulimic patients has shown that such families tend to be conflictual, uncohesive and disorganised (Johnson & Flack, 1985; Scalf-McIver & Thompson, 1989) and lacking in emotional nurturance (Humphrey, 1986). Theoretically, within the context of such a family milieu the adolescent's parents cannot be consistently relied upon to meet her needs for support and security. This insecure and anxious attachment style then becomes generalised to relationships with others whom the individual perceives as being similarly inconsistent, insensitive and unavailable when needed for emotional support. In the face of such feelings of insecurity the adolescent turns to bingeing as a source of

emotional nourishment and self-soothing (Armstrong & Roth, 1989; Scaf-McIver & Thompson, 1989; Strober & Humphrey, 1987).

The literature thus provides cogent theoretical explanations as to why food and behaviours related to eating become a symptomatic expression of insecure attachment. Exactly how the phenomenon of attachment is linked with behaviours related to weight preoccupation, bingeing and dieting however, remains unexplained.

2.3.2 Previous Research on Attachment and Eating Disorders

This section of the review will evaluate the research which has attempted to explore the relationship between parental attachment and eating disorders. As previously stated there is a dearth of research in this area and the research which does exist is plagued with conceptual and methodological problems. These problems are outlined briefly below.

2.3.2.1 Conceptual Problems

One way that researchers have addressed the issue of attachment is by examining the process of separation in adolescence. The rationale from a theoretical perspective is that difficulties with separation, first as an infant and then as an adolescent, are a reflection of an anxious attachment (Bowlby, 1973). In this way, adolescence is thought to constitute a stage in the life cycle which parallels the process which takes place in the first three years of life which Mahler (1975) termed ‘separation-individuation’. This term is used in the research on late adolescent attachment but there is a lack of conceptual clarity between the theoretical constructs of attachment and separation-individuation.

Two varying perspectives on these concepts create ambiguity in the research. Contemporary developmental theory posits that the processes inherent in attachment and separation-individuation are complementary. Thus, affective closeness to parents can be maintained in conjunction with parental support for autonomy: “Affective closeness to parents should not be perceived as synonymous with dependency or as the antithesis of independence” (Kenny, 1990, p. 43). Psychodynamic theory, on the

other hand, tends to emphasise the importance of achieving autonomous functioning and views this process as necessarily involving a weakening in the intensity of the parent-adolescent attachment (Blos, 1979, cited in Lopez & Gover, 1993). The present study supports the view that secure attachment to parents facilitates rather than hinders the process of separation-individuation, while acknowledging that the developmental transition through adolescence may require changes in the relationship, but not a negation of the parent-adolescent attachment:

Over the course of adolescence, the parent-adolescent relationship in well-functioning families presumably develops greater tolerance for the adolescent's expressions of autonomy and separateness while it concurrently provides him or her with ongoing support and validation. From this perspective, late adolescent development is furthered by the experience of both "individuality" and "connectedness" in these important attachment relationships. (Lopez & Gover, 1993, p. 561)

Thus, close parent-adolescent attachments can facilitate separation-individuation to the extent that they also foster separateness and autonomy within the relationship.

2.3.2.2 Methodological Problems

A number of methodological problems can be identified in the research. One such problem concerns the fact that different studies have employed different measures of parent-adolescent attachment and separation-individuation. It is therefore difficult to evaluate comparatively the findings of such studies since different measures of attachment and separation-individuation tap these constructs, either conceptually or psychometrically, in different ways.

Furthermore, as in the case with research on the family characteristics of eating disordered patients, there is a lack of diagnostic consistency in the classification of eating disorders. Different studies have used different measures of disordered eating including self-report measures and DSM-III (APA, 1980) and DSM-III-R (APA, 1987) classifications. The aforementioned classifications do not distinguish between different subtypes of anorexia leading to the use of terms such as 'bulimic anorexics'

to describe those individuals who satisfy the diagnostic criteria for anorexia nervosa and who regularly engage in binge eating or purging or both. As mentioned in section 2.1.2, the re-classification of eating disorders in the DSM-IV has resulted in subtypes of anorexia nervosa which can be used to specify the presence or absence of bulimic behaviours.

An additional problem pertains to the methodological design of the research in this area. Almost all of the research is correlational in nature and thus, causal inferences concerning the relationship between the variables of parent-adolescent attachment and disordered eating cannot be made from the data. There are also limitations inherent in findings which are dependent on self-report measures (Kent & Clopton, 1988). Self-report measures of attachment are limited by their subjective interpretation of the parent-adolescent relationship which may not accurately portray the actual quality of parent-adolescent interaction. In this respect, observational research of parent-late adolescent interactions would contribute to understanding the complexity of such interactions (Kenny, 1992).

2.3.2.3 A Review of the Relevant Research

Armstrong and Roth (1989) conducted a study which examined attachment and separation difficulties in eating disorders. Disruptions in normal attachment, signalled by intense separation distress, was found to be a central risk factor underlying the development of anorexia and bulimia nervosa. The subjects comprised 27 inpatients at an eating disorder unit. Subjects were diagnosed according to the DSM-III-R (APA, 1987) criteria: 11 subjects met the diagnostic criteria for anorexia nervosa, 12 for bulimia nervosa and the remaining 4 were classified as atypical eating disorders. The majority of subjects also had a co-morbid Axis I or II diagnosis. On Axis I, 10 subjects had diagnoses of affective disorder and eleven of substance abuse. On Axis II, 12 subjects received diagnoses, the most common being borderline personality disorder. The subjects ranged in age from 17 to 43 years, with the age distribution skewed towards the early twenties and with a modal age of 20 years.

Ninety-six percent of the eating disordered patients were classified as anxiously attached using Hansburg's Separation Anxiety Test (SAT), a semi-projective measure

derived from Bowlby's attachment theory and designed to measure attachment styles. While these findings appear to offer persuasive support for the existence of a relationship between attachment style and eating disorders, the study is limited in a number of ways which require acknowledgement.

Firstly, the use of an inpatient sample restricts the generalisability of the findings since such a sample may differ from a nonhospitalised group of eating disordered patients in significant ways, thereby biasing the results. Secondly, the co-morbid diagnoses of the majority of subjects significantly confound the results. It is unclear whether the anxious attachment style is related primarily to the eating disorder or to an overall state of psychological distress. Thirdly, the SAT has only recently been extended to an adult population. Hansburg's norms, stimulus pictures, and response items were originally developed and normed upon an adolescent sample. The psychometric adequacy of the instrument is therefore not well established for an adult population and available research support is lacking. Fourthly, the study lacks an adequate control group. The 'comparison groups' were selected from published studies which used nonclinical subjects who were in the process of negotiating separation-based developmental issues. The issues thought to trigger separation distress were identity formation and the establishment of nonfamilial intimate relationships. For future research, the control group may include normal subjects or subjects who were matched for co-morbid diagnoses but who did not have an eating disorder.

Notwithstanding these methodological limitations, the overall findings of this preliminary research suggest that further research into the separation and attachment processes in eating disordered individuals is warranted, both theoretically and practically in terms of possible therapeutic implications.

The research findings of Kenny and Hart (1992) provide further support for the existence of a relationship between attachment and disordered eating. These authors investigated the relationship between parental attachment and eating disorder symptoms for an inpatient sample of women with eating disorders and for a sample of college women. Eating disorder symptoms were assessed using five subscales of the Eating Disorder Inventory (EDI). These subscales included: *Drive for Thinness*, *Body*

Dissatisfaction, Bulimia, Ineffectiveness and *Maturity Fears*. While the former three subscales specifically assess eating behaviour and feelings about one's body, the latter two subscales assess aspects of psychological functioning commonly associated with eating disorders. The subjects for the inpatient sample were diagnosed as eating disordered according to the criteria for the DSM-III-R (APA, 1987) and ranged in age from 15 to 32 years with a mean age of 22.2 years. The nonclinical sample was drawn from a first-year college student population with a mean age of 18.47 years.

Parental attachment was assessed using the Parental Attachment Questionnaire (PAQ) (Kenny, 1990), a 55-item self-report questionnaire designed to adapt Ainsworth et al.'s (1978) conceptualisation of attachment for use with adolescents and young adults. Overall, the results revealed that the college women were more securely attached to their parents. The presence of an affectively positive and emotionally supportive parental relationship, in conjunction with the perception of parents as fostering autonomy, was associated with adaptive functioning. In particular, the findings revealed low levels of bulimic behaviour, low levels of preoccupation with dieting and thinness and feelings of personal effectiveness.

This study shares some of the methodological limitations of the study conducted by Armstrong and Roth (1989). These limitations include the inability to generalise the findings to eating disordered women who are not in treatment or who are involved in outpatient treatment; the dependency of the findings on self-report data and the correlational design of the research which does not permit inferences of causality concerning the relationship among the variables.

What distinguishes this study from the previous research conducted by Armstrong and Roth (1989) is the operationalisation and measurement of the concept of attachment. Armstrong and Roth (1989) examined attachment by measuring difficulties with separation. While theory supports the relationship between attachment and the process of separation, Kenny and Hart (1992) attempted to measure the construct of attachment directly by operationalising Ainsworth et al.'s (1978) conceptualisation of attachment as an enduring affective bond, which serves as a secure base in providing emotional support and in fostering autonomy. While the PAQ demonstrates adequate

construct validity as a measure of attachment, the adequacy of the construct validity of the SAT has not been established with an adult population.

Overall, the research findings of Kenny and Hart (1992) contribute to the research indicating that characteristics of secure parental attachments are associated with adaptive psychological functioning. More specifically, the research provides persuasive support for the existence of a relationship between parental attachment and disordered eating.

Another body of research has specifically examined difficulties with separation-individuation in eating disordered individuals. While this research does not directly address the issue of attachment, difficulties with separation have been theoretically linked to disturbances in attachment and family functioning (Armstrong & Roth, 1989; Smolak & Levine, 1993). Given that the relevance of this research is defined predominantly in terms of its theoretical implications, the review will be kept brief and restricted to overall trends in the findings.

Research conducted by Friedlander and Siegel (1990) and Smolak and Levine (1993) investigated separation-individuation difficulties in relation to disordered eating in nonclinical samples of college women. Both studies employed the Psychological Separation Inventory (PSI) (Hoffman, 1984), a 138-item self-report inventory designed to measure four dimensions of separation-individuation from parents: functional (the ability to manage practical and personal affairs without parental involvement); attitudinal (the extent to which the individual espouses beliefs, attitudes and values that are distinct from those of their parents); emotional (freedom from excessive needs for parental approval, closeness and emotional support) and conflictual (freedom from excessive guilt, anger, resentment and mistrust in relation to each parent). Both studies used the EDI as a measure of disordered eating and in addition, Smolak and Levine (1993) used the DSM-III-R (APA, 1987) criteria as a symptom checklist to designate five categories of current eating problems. Both studies found robust correlations between difficulties with separation-individuation from parents and disordered eating.

The use of separate scales for mother and father individually on the PSI points to the relevance of separation-individuation from both parents in understanding eating disorders. Smolak and Levine (1993) found similar difficulties with separation from both parents, whereas Friedlander and Siegel (1990) found that the process of separating from the mother was somewhat more complex than the process in respect of the father.

The theoretical implications of this research are relevant to understanding the relationship between attachment and disordered eating. While the above investigations have been restricted to issues of separation-individuation, difficulties with this process are viewed as secondary to problems with the primary attachment process. The formation of an attachment relationship serves as a developmental prerequisite to the attainment of a sense of personal identity and psychological separateness.

A related body of research has examined the relationship between disturbances in object relations and disordered eating in a nonclinical sample of college women (Becker, Bell & Billington, 1987; Heesacker & Neimeyer, 1990). Both studies measured object relations deficits using the Bell Object Relations Inventory (BORRTI) (Bell, Billington & Becker, 1986). The four subscales of the BORRTI which assess object relations are: *Alienation*, *Insecure Attachment*, *Egocentricity* and *Social Incompetence*. While Becker et al. (1987) only assessed object relations deficits in relation to bulimic women as measured by the bulimia inventory (Pyle et al., 1983, cited in Becker et al., 1987), the women with bulimic eating patterns scored significantly higher on the *Insecure Attachment* subscale which identifies ambivalent interpersonal relations and fear of object loss when compared with non-bulimic women. Consistent with these findings, Heesacker and Neimeyer (1990) found that women with higher levels of disordered eating as measured by the EDI showed higher levels of object relations disturbances on two of four subscales: *Insecure Attachment* and *Social Incompetence*.

Taken together, these studies support the existence of a relationship between disordered eating and deficits in object relations, particularly along the dimension of insecure attachment which is indicative of painful interpersonal relationships

characterised by a fear of abandonment, sensitivity to rejection and desperate longings for acceptance, security and closeness (Bell et al., 1986).

Overall, the research reviewed supports the existence of a link between parent-adolescent attachment and disordered eating. Related research on separation-individuation difficulties and object relations deficits in eating disordered patients provide further support for the hypothesised link. On the whole, the research findings are theoretically consistent with the belief that early developmental deficits in interpersonal relationships contribute significantly to the aetiology and maintenance of disordered eating (Bruch, 1973; Selvini-Palazzoli, 1974). While the theory posits an aetiological link between attachment relationships and disordered eating the reviewed research demonstrates a correlational relationship between the two variables and is therefore unable to determine the existence or direction of causality.

2.4 SUMMARY

The literature review indicates that the aetiologies of anorexia nervosa and bulimia nervosa are complex phenomena. A number of theoretical approaches have attempted to clarify the aetiology of eating disorders by examining sociocultural, developmental, familial and biological influences on the development of eating disorders. No single theoretical system however appears able to account for all aspects of eating disorders. While this review has focused on attachment difficulties as they pertain to eating disorders, it is acknowledged that a unifocal approach to aetiology or treatment is likely to overlook important aspects of the psychological or physical components of eating disorders.

The theory and research on eating disorders has long since acknowledged the role played by the patient's family in the development and maintenance of the illness. Dysfunctional patterns of interaction within the family system and specifically between the mother and daughter have been identified by numerous theorists from different theoretical and research traditions, including family systems theory, psychoanalysis and object relations theory.

Attachment theory emerged from the psychoanalytic tradition which emphasised the importance of formative relationships but expressly abandoned instinct-drive theory in favour of a more biologically determined theory which drew on evolutionary theory, ethology and cognitive psychology. Research derived from attachment theory has generated a rich and substantial body of findings which support the importance of early caregiving experience in the development of psychopathology and adaptive psychological functioning (Jones, 1996).

As a diagnostic category of psychopathology, eating disorders have not been the focus of research in this area. While the existing research is limited and subject to methodological and conceptual problems, the overall findings suggest a relationship between disordered eating and parental attachment. In addition, the findings of the existing research support further research into the attachment relationship between late adolescents and their parents as a potential risk factor in the development of eating disorders.

This research aims to explore further the relationship between parent-adolescent attachment and disordered eating. Given the paucity of existing research it is hoped that this study will further the current status of knowledge in the field. Furthermore, through an awareness of the methodological difficulties which have plagued this field, this study aims to avoid diagnostic ambiguity and confusion surrounding the use of the concept 'attachment'. Since the correlational research design of this study is in keeping with previous research in the field, caution will be exercised in interpreting the results to avoid any inferences of causality. The following chapter will describe the methodology employed in this research.

CHAPTER THREE

METHODOLOGY

3.1 AIM

To investigate the relationship between parent-adolescent attachment (as assessed by the PAQ) and disordered eating (as assessed by the EDI) in a nonclinical sample of white female adolescents.

3.2 HYPOTHESIS

The following hypothesis was derived from the literature review in chapter two and formulated to test empirically the aim of the study as outlined above:

Greater attachment to parents, as measured by higher scores on the PAQ subscales, will be inversely related to symptoms of disordered eating as measured by the EDI. Thus, it is hypothesised that the severity of the symptoms of disordered eating will be negatively correlated with greater attachment to parents.

3.3 SAMPLE AND SUBJECTS

The sample population consisted of white female learners in grade 11 and 12 at a former 'model C' girls' high school in the Durban area. Eating disorders have traditionally been viewed as endemic to Western culture, with white, upper-middle class females constituting a high risk group (Anderson & Hay, 1985). Although there is an increasing body of research which is addressing the existence of disordered eating in other cultural groups (Choudry & Mumford, 1992; Silber, 1986; Grey, 1995; Winship, 1996) and which has challenged the relationship between socioeconomic status and vulnerability to eating disorders (Geach, 1995; Pumariega, 1986), such disorders continue to be conceptualised and treated predominantly within a Westernised Eurocentric framework.

Anorexia nervosa has been found to affect 10 times more women than men (White, 1992) with some studies finding between 15 and 20 times more females affected than males (George, 1992). The rate of bulimia nervosa in males is approximately one tenth of that in females (APA, 1994). These trends, noted in the literature and research on eating disorders, influenced the composition of the sample population which comprised white female adolescents.

A further rationale for using white adolescents as the sample population involves the purpose of the research. This study examines the relationship between attachment and disordered eating and is not a cross-cultural study of disordered eating. By including black and Indian subjects in the sample, the study would have had to address cross-cultural issues in relation to attachment and disordered eating, which may be the subject of further study.

Grade 11 and 12 learners were chosen to comprise the sample population because their ages typically range between 15 and 18 years. This age range constitutes a high risk group for the development of eating disorders. The mean age of onset for anorexia nervosa is 17 years and some research suggests bimodal peaks at ages 14 and 18 years (APA, 1994). The age of onset for bulimia nervosa is usually between 16 and 20 years (White, 1992). A narrow age range was selected to avoid the possible confounding effect of a wide variation in age on the results.

It is however acknowledged that the sample for this study is essentially a convenience sample. The researcher had access to the learners at the designated school through prior professional liaison with the guidance teacher. In addition, the school was considered fairly representative of former 'model C' schools in KwaZulu-Natal. Furthermore, random sampling of all white learners between the ages of 15 and 18 years in KwaZulu-Natal would have been beyond the time and resource constraints of the researcher.

The specific subjects for the study were those grade 11 and 12 learners from the above sample whose parents consented to their participation in the research (Appendix A) and who voluntarily consented to their own participation (Appendix B).

3.4 INSTRUMENTS

3.4.1 Confidential Data Sheet for Research Subjects

A confidential data sheet (Appendix C) was included in order to obtain necessary personal and familial details for each subject.

3.4.2 The Parental Attachment Questionnaire (PAQ)

The PAQ (Kenny, 1990) is a 55-item self-report measure designed to adapt Ainsworth et al.'s (1978) conceptualisation of attachment for use with adolescents and young adults (Appendix D). The three-factor analytically derived subscales of the PAQ are *Affective Quality of Attachment* (27 items), *Parental Fostering of Autonomy* (14 items) and *Parental Role in Providing Emotional Support* (14 items). These subscales are theoretically consistent with Ainsworth et al.'s (1978) conceptualisation of attachment as an enduring affective bond which serves as a secure base in providing emotional support and in fostering autonomy. Participants are required to respond to each item on a 5-point Likert scale ranging from *not at all* (1) to *very much* (5).

The results of a pilot study using the PAQ with first-year college students revealed no significant differences between ratings assigned to mothers and fathers (Kenny, 1990). For this reason the PAQ requires that subjects provide a single rating to describe their relationship with their parents, their feelings and experiences. If only one parent is alive, or if the subject's parents are divorced, subjects are instructed to respond with reference to the living parent or the parent to whom they feel closer. The confidential data sheet (Appendix C) asks subjects for information regarding their parents in order to determine whether a single parent or both parents are being described in their responses to the PAQ.

The PAQ demonstrates good psychometric properties. Kenny (1987) reported a PAQ full-scale internal consistency (Chronbach's alpha) coefficient of .95 for a sample of first-year college women. In a subsequent study examining PAQ scores within a combined sample of first-year and senior college students, Kenny (1990) reported alpha coefficients of .96, .88, and .88 for the *Affective Quality of Attachment*, *Parental*

Role in Providing Emotional Support and *Parental Fostering of Autonomy* subscales respectively. Test-retest reliability over a two week period was .92 for the entire measure and coefficients ranged from .82 to .91 for the three subscales.

Further support for the validity of the PAQ was obtained by examining the relationships between the PAQ subscales and the subscales of the Moos Family Environment Scale (FES) (Moos, 1985). Kenny and Donaldson (1991) found significant correlations between the PAQ *Affective Quality of Attachment* and FES *Cohesion*; between PAQ *Parental Role in Providing Emotional Support* and FES *Cohesion* and between PAQ *Parental Fostering of Autonomy* and FES *Expressiveness, Independence and Control*.

3.4.3 The Eating Disorders Inventory (EDI)

The EDI (Garner, Olmstead & Polivy, 1983) is a 64-item self-report measure of behaviours and psychopathology associated with eating disorders (Appendix E). The test was constructed from a pool of 146 items that were theoretically or deductively derived from the authors' extensive research and clinical experience with eating disordered patients (Cooper, Cooper & Fairburn, 1985). Items were designed to measure 11 constructs, however, only 8 met the final reliability and validity criteria for the scale. The eight subscales (and subscale abbreviations) are listed below:

1. Drive for Thinness (DT)
2. Bulimia (B)
3. Body Dissatisfaction (BD)
4. Ineffectiveness (I)
5. Perfectionism (P)
6. Interpersonal Distrust (ID)
7. Interoceptive Awareness (IA)
8. Maturity Fears (MF)

The EDI was developed out of a recognition by the authors of the limitations of the earlier measures which permitted assessment of specific behavioural and/or symptom areas of eating disorders but failed to take cognisance of the psychological dimensions

which have been postulated as being centrally related to anorexia and bulimia nervosa (Garner & Olmstead, 1984; Cooper et al., 1985). The first three subscales assess attitudes and behaviours related to eating and body shape while the remaining five subscales measure traits which are considered to be fundamentally related to the psychopathology of eating disorders (Garner & Olmstead, 1984).

In its development, the EDI was administered to criterion groups of female anorexics, restricting and binge-eating/purging types, and to control groups of female college students. However, no bulimics were included who were not also anorexic. Psychometrically, the EDI has very respectable internal consistency. Reliability coefficients (Cronbach's alpha) for the eight subscales range from .72 to .92 among the college women and from .83 to .93 for the eating disordered individuals (Garner & Olmstead, 1984). No measure of stability over time (test-retest reliability) is offered by the authors which is surprising in the light of the fact that one of the intended uses of the instrument was to assess change as a result of treatment (Eberly & Eberly, 1985).

Evidence for the validity of the EDI includes established relationships between self-report EDI patient profile scores and clinicians' rating of their patients (criterion-related validity). Correlations of patients' subscale scores with clinicians' ratings ranged from .43 to .68 (Garner & Olmstead, 1984). A further attempt was made to establish criterion-related validity by demonstrating that anorexics, restricting and binge-eating/purging types, could be distinguished by their scores on specific EDI subscales. The anorexia nervosa patients, binge-eating/purging type, scored higher than the anorexia nervosa patients, restricting type, only on the *Bulimia* and *Body Dissatisfaction* subscales in the original validation study by Garner et al. (1983). Higher *Body Dissatisfaction* scores may be accounted for by the higher body mass of the anorexia nervosa patients, binge-eating/purging type. A discriminant function analysis correctly classified 85% of anorexia nervosa subjects into binge-eating/purging and restricting subtypes based on their *Bulimia* subscale score (Garner et al., 1983).

In a further validation study the EDI was administered to a small group of recovered anorexia nervosa patients. The recovered group scored lower than the anorexia

nervosa group on each subscale and was not significantly higher than the college control group on any dimension (Garner & Olmstead, 1984). An expected pattern of convergent and discriminant validity with a number of other psychometric instruments was also established. Theoretically, the highest correlations were expected to be the *Drive for Thinness* with the EAT (The Eating Attitudes Test) (Garner & Garfinkel, 1978; cited in Garner & Olmstead, 1984); *Body Dissatisfaction* with dissatisfaction with maturational regions and *Ineffectiveness* with feelings of inadequacy (Janis & Field, 1959; cited in Garner & Olmstead, 1984). All of the expected correlations were obtained as well as further correlations which, although not formally predicted, were not counterintuitive (Garner & Olmstead, 1984).

The EDI has applicability for both clinical and nonclinical populations (Garner & Olmstead, 1984). Clinically, the EDI may be useful in identifying subtypes of anorexia nervosa. Delineation of the psychological traits differentiating subgroups has implications for understanding and treating eating disorders. However, Eberly and Eberly (1985) caution that the possible clinical uses offered by Garner and Olmstead are not based on research and that the clinical validity of the EDI has not been established.

In nonclinical populations, the EDI may be used as a screening instrument to detect individuals who are likely to be weight-preoccupied (*Drive for Thinness*, *Bulimia*, *Body Dissatisfaction* subscales) or who have serious ego-deficits (*Ineffectiveness*, *Interpersonal Distrust*, *Interoceptive Awareness* and *Maturity Fears* subscales). Elevations on all would be indicative of an individual who was at high risk for the development of anorexia nervosa. However, the EDI manual does not provide cut-off points for pathologically high scores. Conceptually, cut-off scores are incompatible with the notion that each dimension of the EDI is a continuous trait. Furthermore, Garner and Olmstead (1984) caution the user against employing the EDI as a diagnostic tool:

The EDI can be useful as a screening tool, as an outcome measure, as an aid in typological research, or as an adjunct to clinical judgements with eating disorder patients. It is not proposed as a diagnostic instrument for anorexia

nervosa or bulimia since, in the authors' opinion, this is an inappropriate use of any psychometric instrument. (Garner & Olmstead, 1984, p. 1)

A revised version of the EDI (Eating Disorder Inventory-2) was published in 1990. The original scale was, however, considered suitable for the present study due to its availability, its extensive use in research, its good psychometric properties and the applicability of the scale to nonclinical populations. The EDI has not been officially standardised on a South African population. It has, however, been used in a number of studies including the NEDCC (National Eating Disorders Co-ordinating Committee) Survey (1996) of South African female students.

3.5 PROCEDURE

The researcher, in conjunction with colleagues from the psychology department of a government hospital in Durban delivered a seminar on eating disorders to the grade 11 and 12 learners of the same school in July 1998. These seminars were delivered at the request of the school guidance counsellor who was concerned about the problem of disordered eating at the school. In December 1998 the researcher approached the guidance counsellor about the possibility of conducting a study on eating disorders at the school. The counsellor agreed on condition that the school principal consented to the research. A letter was sent to the school principal (Appendix F) requesting her permission to conduct research at the school and also recommending that informed consent be obtained from the learners' parents and from the learners themselves before proceeding with the research.

The school principal agreed to the research and letters were sent out to the parents of the grade 11 and 12 learners requesting that the parents grant permission for their daughters to participate in the study (Appendix A). Parents indicated their consent or lack of consent by completing a short form which appeared at the bottom of the letter and which was to be detached and returned to the researcher.

The guidance counsellor distributed a set of questionnaires together with an informed consent form (Appendix B) to each of the grade 11 and 12 subjects during one of their scheduled guidance lessons in February/March 1999. To maintain confidentiality,

subjects' names did not appear on the questionnaires and the informed consent forms were not attached to the questionnaires. Furthermore, the informed consent forms were handed to the guidance teacher separately, before the questionnaires were completed.

All the subjects completed and submitted the questionnaires during the scheduled time. Subjects were informed that the research was on eating disorders although exact details of the study were not disclosed to prevent possible expectancy effects. A scale and tape measure were made available to the subjects so that accurate information regarding height and weight could be obtained. The scale and tape measure were placed in an adjacent room to provide the subjects with privacy and thereby to encourage subjects to take their height and weight measurements.

The data from the three questionnaires were then entered into an ASCII data file editor ("E") and then converted to SPSS (Statistical Programme for the Social Sciences) for statistical analysis.

3.6 ANALYSIS OF DATA

Descriptive statistics were calculated on the sample characteristics, all individual items of the PAQ (55 items) and EDI (64 items) as well as on the three PAQ subscales and eight EDI subscales. The means and standard deviations for each subscale of the two measures were compared with the findings of Kenny and Hart (1992).

Reliability coefficients (Cronbach's alpha) were calculated for each of the three subscales of the PAQ and eight subscales of the EDI. Full-scale reliability coefficients were calculated on the total scores for the PAQ and EDI respectively.

Principal-components factor analyses with varimax rotation were performed on the items of the PAQ and EDI to investigate the concordance between the factor loadings as reported in the literature and as shown by the factor analyses in this study.

Correlation coefficients were computed between all the subscales of PAQ and EDI to observe the overall pattern of interrelationship between parental-adolescent

attachment and eating disorder symptoms/behaviours. Body Mass Index (BMI) was also correlated with each of the subscales of the PAQ and EDI.

Canonical analysis, which provides a means of assessing the degree of association between two sets of variables, was used to evaluate the relationship between the three attachment scales and the eight eating disorder scales. The canonical analysis was repeated combining the *Affective Quality of Attachment* scale with the *Parental Role in Providing Emotional Support* scale following the analysis of Kenny and Hart (1992). The computed scores of the repeated canonical analysis were plotted to provide a visual representation of the correlational relationship.

As part of the supplementary findings, the mean scores on each of the EDI subscales were compared with the scores from other South African studies which have employed the EDI. In the present study, the scores of the eight EDI subscales for each subject were compared to Hooper's (1986) suggested cut-off scores (cited in Winship, 1996) and subjects were assigned to two groups according to whether their score fell above or below the cut-off point for that subscale. The percentage of subjects falling above and below the cut-off score for each subscale was calculated and crosstabulated with certain demographic variables. A chi-square analysis was used to test for statistical significance.

High and low cut-off points for each subscale of the PAQ, as well as for the entire measure, were determined by calculating those scores above which only 10% of the scores were distributed and below which only 10% of the scores were distributed. The same procedure was conducted to establish scores at a 20% cut-off point. The percentage of subjects falling above and below the cut-off scores for each subscale, and for the entire measure, was crosstabulated with certain demographic variables. As above, a chi-square analysis was used to test for statistical significance.

CHAPTER FOUR

RESULTS

This chapter will summarise the results of the data analysis as outlined in chapter three, section 3.6. Chapter five will provide a discussion of these results and implications for future research.

4.1 DESCRIPTIVE STATISTICS

4.1.1 Sample Characteristics

Two hundred and twenty-five subjects completed the questionnaires. Sixteen subjects completed the questionnaires incorrectly or submitted incomplete questionnaires and were therefore omitted from the study. The final sample comprised 209 subjects: 103 grade 11 and 106 grade 12 subjects. The subjects ranged in age between 15 and 18 years, with a mean age of 16.36 years (standard deviation = 0.68 years).

4.1.2 Subscale Characteristics and Comparisons

SPSS is well known for its voluminous output and therefore only the means and standard deviations for each subscale (and not for each individual item) of the two measures will be reported. A sample of American first-year female college students is provided for comparison (Kenny & Hart, 1992). As shown in Table 1, the mean age of the female college student sample was 18.47 years (standard deviation = 1.40 years).

Table 1

Means, standard deviations and group comparisons for measures of parental attachment and disordered eating for nonclinical school learners and college women.

Scale	Learners (Mean age = 16.36 years SD = 0.68 years)		College (Mean age = 18.47 years SD = 1.40 years)		Comparison
	M	SD	M	SD	T test (df = 369)
Parental Attachment Questionnaire (PAQ)					
Affective Quality of Attachment	102.88	19.81	95.32	15.39	4.14*
Parental Fostering of Autonomy	50.50	9.30	53.57	8.81	3.23*
Parental Role in Providing Emotional Support	50.01	8.70	53.36	8.90	3.68*
Eating Disorder Inventory (EDI)					
Drive for Thinness	6.07	6.02	5.99	5.10	0.14
Body Dissatisfaction	14.12	8.11	11.50	7.14	3.30*
Bulimia	1.99	3.03	1.60	3.10	1.21
Ineffectiveness	4.09	5.09	2.25	3.77	4.00*
Maturity Fears	4.42	4.50	3.18	3.02	3.17*
Perfectionism	3.79	3.82	-	-	-
Interpersonal Distrust	3.51	3.84	-	-	-
Interceptive Awareness	4.32	4.92	-	-	-

Level of significance: * $p < .001$

Note. The potential ranges for the PAQ subscales are as follows: Affective Quality of Attachment, 27-135; Parental Fostering of Autonomy, 14-70; Parental Role in Providing Emotional Support, 14-70. Higher scores indicate greater attachment to parents. The potential ranges for the EDI subscales are as follows: DT, 0-21; BD, 0-27; B, 0-21; I, 0-30; MF, 0-24; P, 0-0-18; ID, 0-21; IA, 0-30.

The means for the South African learners in the present study were significantly lower than Kenny and Hart's (1992) American college sample on two of the attachment subscales: *Parental Fostering of Autonomy* and *Parental Role in Providing Emotional Support*, but significantly higher on one attachment subscale: *Affective Quality of Attachment*. It should, however, be noted that given the large sample size, even small differences between the South African and American groups are likely to be significant.

Since Kenny and Hart (1992) used only five subscales of the EDI to assess eating disorder symptoms, comparisons between the two groups were made on five of the eight EDI subscales. On all of the five subscales, the means for the South African learners were higher than the means for the American college students. Differences

between the mean scores of the two groups on the *Drive for Thinness* and *Bulimia* subscales did not, however, reach significance ($p < .001$).

4.2 RELIABILITY

Table 2

Reliability coefficients (Cronbach's alpha) for the three subscales of the PAQ and for the entire measure.

Subscales of the PAQ	Reliability Coefficients (Cronbach's Alpha)	
	This Study	Kenny (1987; 1990)
PAQ: Full Scale Total	.96	.95
Affective Quality of Attachment	.95	.96
Parental Fostering of Autonomy	.85	.88
Parental Role in Providing Emotional Support	.82	.88

Table 2 illustrates how this study supports the very respectable internal consistency of the subscales of the PAQ and of the entire measure as reported by Kenny (1987; 1990).

Table 3

Reliability coefficients (Cronbach's alpha) for the eight subscales of the EDI and for the entire measure.

Subscales of EDI	Reliability Coefficients (Cronbach's Alpha)	
	This Study	Garner & Olmstead (1984) (Female College Students)
Drive for Thinness	.87	.87
Bulimia	.72	.83
Body Dissatisfaction	.90	.92
Ineffectiveness	.88	.88
Perfectionism	.72	.76
Interpersonal Distrust	.81	.80
Interoceptive Awareness	.81	.81
Maturity Fears	.82	.72
EDI: Full Scale Total	.94	-

Similarly, Table 3 shows how this study confirms the psychometric adequacy of the subscales of the EDI. While Garner and Olmstead (1984) did not calculate a full scale internal consistency coefficient for the EDI, Table 3 illustrates that the entire scale was found to be highly reliable (Cronbach's alpha = .94).

The high internal consistency of the PAQ and EDI and their respective subscales suggests that the scale items are well constructed. The high degree of comparability between the reliability scores reported in this study and the original studies of Kenny (1990) and Garner and Olmstead (1984) demonstrates that the scale items consistently measure the same constructs across time.

Other South African studies using the EDI (Geach, 1995; NEDCC, 1996; Winship, 1996) did not provide similar reliability data for comparison.

4.3 FACTOR ANALYSIS

4.3.1 Factor Analysis of the EDI

A principal-components factor analysis with varimax rotation was performed on the items of the EDI. The 64 items were initially broken down into 12 factors and thereafter into 8 factors. SPSS's default is to take out factors until the next eigenvalue falls below 1.00. This tends to produce a great many factors, often focussing on only one or two scale items. The decision to request a 12-factor solution was somewhat arbitrary, but the intention was to inspect the outcome of a somewhat less restrictive scheme, as well as the EDI's 8 factors. However, the 8-factor solution seemed to recover the original EDI subscales adequately. As a result, the 12-factor analysis was not pursued further.

There appear to be no definitive rules regarding the relative weighting of factor loadings. In general, the greater the loading, the more the variable is a pure measure of the factor. Comrey (cited in Tabachnick & Fidell, 1989) suggests that loadings in excess of .71 (50% overlapping variance) are considered excellent, .63 (40% overlapping variance) very good, .55 (30% overlapping variance) good, .45 (20% overlapping variance) fair, and .32 (10% overlapping variance) poor. In this study, the

factor loadings have been divided into three categories: good ($> .59$), moderate ($.40 - .59$), poor ($< .39$).

An examination of the final rotated factors reveals interesting comparative information. Tables 4 to 11 show the correspondence between the factor loadings of the current study and the original eight factor structure of the EDI.

Table 4

Correspondence between the factor loadings of the current study and the Drive for Thinness subscale.

Drive For Thinness		
Item Number	Factor Loading	Extent of Correspondence
1	.50	moderate
7	.55	moderate
11	.71	good
16	.64	good
25	.72	good
32	.65	good
49	.71	good

The *Drive for Thinness* subscale corresponds with the third factor identified in the factor analysis. Items 1 and 7 have a moderate loading between $.40 - .59$ and the rest are all above $.59$.

Table 5

Correspondence between the factor loadings of the current study and the Bulimia subscale.

Bulimia		
Item Number	Factor Loading	Extent of Correspondence
4	.64	good
5	.63	good
28	.43	moderate
38	.57	moderate
46	.62	good
53	.22	weak
61	.61	good

The *Bulimia* subscale corresponds with the sixth factor identified in the factor analysis. Two of the items (28; 38) have a moderate factor loading between .40 - .59 and one item (53) has a weak factor loading of .22. Item 53 reads: “I have the thought of trying to vomit in order to lose weight”. This item has a factor loading of .56 on factor three (*Drive for Thinness*) and is the only item which relates bulimic behaviour to weight loss and also the desire to be thin. It therefore seems reasonable that this item should load onto both of these factors.

Table 6

Correspondence between the factor loadings of the current study and the Body Dissatisfaction subscale.

Body Dissatisfaction		
Item Number	Factor Loading	Extent of Correspondence
2	.62	good
9	.72	good
12	.70	good
19	.71	good
31	.67	good
45	.77	good
55	.78	good
59	.71	good
62	.75	good

The *Body Dissatisfaction* subscale corresponds with the first factor identified in the factor analysis. All of the items have a high factor loading above .59.

Table 7

Correspondence between the factor loadings of the current study and the Ineffectiveness subscale.

Ineffectiveness		
Item Number	Factor Loading	Extent of Correspondence
10	.54	moderate
18	.62	good
20	.64	good
24	.52	moderate
27	.51	moderate
37	.55	moderate
41	.64	good
42	.58	moderate
50	.59	moderate
56	.63	good

The *Ineffectiveness* subscale corresponds with the second factor identified in the factor analysis. The items can roughly be divided in half: those items which have a moderate factor loading between .40 - .59 and those items which have a good factor loading above .59.

Table 8

Correspondence between the factor loadings of the current study and the Perfectionism subscale.

Perfectionism		
Item Number	Factor Loading	Extent of Correspondence
13	.58	moderate
29	.39	weak
36	.58	moderate
43	.64	good
52	.70	good
63	.61	good

The *Perfectionism* subscale corresponds with the eighth factor identified in the factor analysis. One of the items (29) has a weak factor loading of .39 which is close to .40 and, therefore, cannot be considered particularly weak. In addition, this item does not have a higher loading on any of the other factors. The item reads: "As a child, I tried very hard to avoid disappointing my parents and teachers". One explanation for the weakness of this item may be that avoiding disappointing others differs from having high personal expectations and an innate tendency or drive towards achievement and success. The remaining items have either a moderate or high loading on this factor.

Table 9

Correspondence between the factor loadings of the current study and the Interpersonal Distrust subscale.

Interpersonal Distrust		
Item Number	Factor Loading	Extent of Correspondence
15	.71	good
17	.61	good
23	.56	moderate
30	.29	weak
34	.61	good
54	.33	weak
57	.72	good

The *Interpersonal Distrust* subscale corresponds with the seventh factor identified in the factor analysis. Items 30 and 54 have weak factor loadings of .29 and .33 respectively. Neither loading is extremely weak since item 30 approximates .30 and item 54 exceeds .30. Both items have a higher loading on factor two (*Ineffectiveness*). Item 30 reads: “I have close relationships”. This item has a factor loading of .64 on the second identified factor (*Ineffectiveness*) and, rather than tapping interpersonal distrust, seems to reflect feelings of social ineffectiveness and inadequacy, as well as a personal feeling of worthlessness. Item 54 reads: “I need to keep people at a certain distance (feel uncomfortable if someone tries to get too close)”. This item has a loading of .44 on factor two. Once again this item’s higher loading on the second factor seems to reflect that the item taps feelings of social insecurity and personal feelings of self-doubt more than it does a sense of alienation from others and a reticence in forming close relationships.

Table 10

Correspondence between the factor loadings of the current study and the Interoceptive Awareness subscale.

Item Number	Interoceptive Awareness	
	Factor Loading	Extent of Correspondence
8	.39	weak
21	.62	good
26	.50	moderate
33	.53	moderate
40	.45	moderate
44	.31	weak
47	.16	weak
51	.62	good
60	.62	good
64	.08	weak

The *Interoceptive Awareness* subscale corresponds with the fifth factor identified in the factor analysis. With four of the items having a factor loading < .40 this factor may be identified as the poorest match between the outcome of the present factor analysis and the original set of scale items. These items will not be examined individually since the relative weakness of this factor may be explained by the fact that it appears to break down into two factors: one of which taps confusion and

uncertainty in recognising and accurately identifying psychological states, and the other, physiological states and experiences.

Table 11

Correspondence between the factor loadings of the current study and the Maturity Fears subscale.

Maturity Fears		
Item Number	Factor Loading	Extent of Correspondence
3	.42	moderate
6	.65	good
14	.60	good
22	.71	good
35	.50	moderate
39	.73	good
48	.64	good
58	.76	good

The *Maturity Fears* subscale corresponds with the fourth factor identified in the factor analysis. Two of the items (3; 35) have a moderate loading between .40 - .59 and the remaining items are all above .59.

While different data sets on different subject populations can be expected to divide up variation in somewhat different ways, there is an overall high level of correspondence between the factor loadings of the eight final rotated factors and Garner and Olmstead's (1984) original eight-factor structure. The good match between the factor structure of this study and the original study strengthens the conclusion that the same set of constructs is being measured reliably over time. The results of the factor analysis as presented in the tables above support the construct validity of the eating disorder measure, that is, the subscales measure what they purport to measure. In sum, the psychometric adequacy of the EDI is bolstered by the fact that the eight factors identified by Garner and Olmstead (1984) are, in the main, confirmed by this study. Moreover, the results of this study are strengthened by the robust psychometric properties of the EDI which facilitate the generalisability of the results to a population of demographic equivalence.

Other South African studies which have employed the EDI as a measure of disordered eating did not provide comparable validity data (Geach, 1995; NEDCC, 1996; Winship; 1996).

4.3.2 Factor Analysis of the PAQ

Corresponding to the inspection of the eight factors of the EDI, a principal-components factor analysis with varimax rotation was performed on the items of the PAQ. The 55 items were factor analysed into three factors. There is a fairly good correspondence between the first two factors identified in this analysis and the original factors as determined by Kenny (1990). The third identified factor corresponds with less accuracy to the third original factor, with many of the items loading higher onto the first and second identified factors.

Tables 12-14 present the final rotated factor loadings of the items which correspond with the original three factor structure for comparison.

Table 12

Correspondence between the factor loadings of the current study and the Affective Quality of Attachment subscale.

Affective Quality of Attachment		
Item Number	Factor Loading	Extent of Correspondence
1	.46	moderate
2	.44	moderate
4	.52	moderate
14	.53	moderate
16	.66	good
20	.48	moderate
21	.37	weak
22	.46	moderate
26	.09	weak
28	.63	good
29	.62	good
30	.61	good
31	.71	good
32	.58	moderate
33	.67	good
34	.68	good
35	.60	moderate
36	.40	moderate
37	.70	good
38	.67	good
40	.71	good
41	.53	moderate
42	.59	moderate
43	.71	good
52	.58	moderate
53	.56	moderate
55	.64	good

The *Affective Quality of Attachment* subscale corresponds with the first factor identified in the factor analysis. Only 2 of the 27 items have a factor loading < .40 with the remaining 25 items all > .04. Items 21 and 26 have factor loadings of .37 and .09 respectively. Item 21 has a higher factor loading of .50 on the second identified factor (*Parental Support for Autonomy*). This item reads: “In general my parents are sensitive to my feelings and needs”. Perhaps the weak correspondence with the first factor can be understood in terms of the importance placed on parental sensitivity to the increasing need of the adolescent for independence during this stage of development. Item 26 has a very weak factor loading on the first factor (.09) and does

not load onto any of the other factors. Item 26 reads: “In general my parents are persons whose expectations I feel obliged to meet”. The factor analysis reflects that this item fails to tap aspects of the affective quality of the relationship between parent and adolescent such as emotional closeness, warmth and trust.

Table 13

Correspondence between the factor loadings of the current study and the Parental Fostering of Autonomy subscale.

Parental Fostering of Autonomy		
Item Number	Factor Loading	Extent of Correspondence
5	.58	moderate
6	.61	moderate
8	.59	moderate
9	.69	good
10	.41	moderate
11	.29	weak
13	.57	moderate
15	.70	good
17	.64	good
18	.65	good
23	.10	weak
24	.74	good
25	.11	weak
27	.73	good

The *Parental Support for Autonomy* subscale corresponds with the second factor identified in the factor analysis. Three of the fourteen items in the scale have a factor loading $< .3$. The remaining eleven items all have a factor loading $> .4$. Item 23 has a very weak factor loading of .10 on factor two but a moderate loading of .55 on factor three. Item 23 reads: “In general, my parents give me advice whether I want it or not”. This item appears to tap the extent of parental emotional support rather than support for autonomous functioning. Items 11 and 25 also have weak factor loadings of 0.29 and 0.11 respectively but do not load on to either of the other identified factors.

Table 14

Correspondence between the factor loadings of the current study and the Parental Role in Providing Emotional Support subscale.

Parental Role in Providing Emotional Support		
Item Number	Factor Loading	Extent of Correspondence
3	.10	weak
7	.30	weak
12	.29	weak
19	.54	moderate
39	.21	weak
44	.51	moderate
46	.59	moderate
47	.03	weak
48	.01	weak
49	.53	moderate
50	.45	moderate
51	.16	weak
54	.48	moderate

The *Parental Role in Providing Emotional Support* subscale corresponds with the third factor identified in the factor analysis. Half of the items have a factor loading $< .40$ and the other half $> .40$. Items 3, 39 and 47 all have a higher loading on factor one. Items 7, 12 and 51 have a higher loading on factor two and item 48 does not load onto any of the other identified factors. Given the proportionately high number of items with a low factor loading, this factor may be identified as the weakest of the three factors. These items will not be examined individually since the relative weakness of this factor may be understood by the fact that many of the items have a higher factor loading on factor one and two.

The overlap of the third factor with the first and second factors demonstrates that the construct tapping parental provision of emotional support is not sufficiently distinct from the two constructs which tap the affective climate of the relationship and the adequacy with which parents foster their adolescent's independence. In the original factor analysis, factors one and three were correlated to the extent that, in the canonical analysis, Kenny and Hart (1992) combined them into one⁴.

⁴ Further detail is provided in sections 4.4.1 and 4.4.2.

On the PAQ, a robust match was found between the items of the first factor identified in this study and *Affective Quality of Attachment*. In addition, there was a fairly good correspondence between the second identified factor and *Parental Fostering of Autonomy*. The overlap of the third identified factor, which corresponded with *Parental Role in Providing Emotional Support*, with the first and second factors suggests that this factor lacks conceptual distinctiveness. This lack of conceptual precision is supported by a high correlation of .80 between the first and third factors and by a correlation of .50 between the second and third factors. The overlap of the third factor with the first and second factors, weakens what would otherwise be a robust three factor structure of the assessment instrument.

These findings are in keeping with Kenny and Hart (1992) who reported a correlation of .84 between the first and third factors in a sample of first-year female college students. Kenny and Hart's (1992) combination of *Affective Quality of Attachment* and *Parental Role in Providing Emotional Support* into one subscale is supported by the findings of this study.

Overall, the first identified factor accounted for 35% of the variance, whereas the second and third identified factors accounted for only 6% and 5% of the variance respectively. The high degree of correspondence between the factor loadings of the first factor identified in this study and *Affective Quality of Attachment* provides support for the PAQ as a useful measure of attachment.

4.4 CORRELATIONAL ANALYSIS

4.4.1 Correlation Coefficients

Simple correlation coefficients were computed between the subscales of the two measures to inspect the pattern of interrelationships between parental-adolescent attachment, as measured by the PAQ, and eating disorder symptoms, as measured by the EDI.

Table 15 presents the correlations between the subscales of the PAQ and EDI. The correlation coefficients are based on 187 cases. Any case in which an item was omitted from one of the measures has not been included in the analysis.

Tabachnick and Fidell (1989, cited in Kenny & Hart, 1992) claim that variables with correlations of .70 or above contain redundant information and, with the exception of factor analysis, should not be included in the same statistical analysis. The correlation between the PAQ *Affective Quality of Attachment* and *Parental Role in Providing Emotional Support* exceeded the .70 level ($r = .80$, see Table 15). The correlation between these two subscales in the study by Kenny and Hart (1992) was .84 for the college student participants and .74 for the inpatient participants. Table 16 presents the simple correlation coefficients between the two subscales of the PAQ (combined *Affective Quality of Attachment* and *Parental Role in Providing Emotional Support*) and the eight subscales of the EDI.

Body Mass Index (BMI) was also correlated with each of the subscales of the PAQ and EDI to observe whether this variable was significantly related to the quality of parental-adolescent attachment and/or eating disorder symptoms as measured by these instruments. Table 17 presents the correlation of BMI with each of the subscales of the PAQ and EDI. The correlation of BMI with the subscales of the two measures is based on 153 cases.

Table 15
Correlations between the PAQ subscales and the EDI subscales.

	1	2	3	4	5	6	7	8	9	10	11
<i>Attachment (PAQ)</i>											
AQA	1.00	.67**	.80**	-.27**	-.34**	-.26**	-.45**	-.20*	-.38**	-.41**	-.19*
PFA	.67**	1.00	.50**	-.19*	-.32**	-.21*	-.33**	-.14	-.27**	-.26**	-.08
PRPES	.80**	.50**	1.00	-.20**	-.21*	-.29**	-.42**	-.11	-.34**	-.30**	-.14
<i>Eating Disorder (EDI)</i>											
DT	-.27**	-.19*	-.20*	1.00	.41**	.62**	.46**	.22*	.34**	.49**	.17*
B	-.34**	-.32**	-.21*	.41**	1.00	.24**	.46**	.29**	.48**	.50**	.41**
BD	-.26**	-.21*	-.29**	.62**	.24**	1.00	.46**	.17	.26**	.34**	.13
I	-.45**	-.33**	-.42**	.46**	.46**	.46**	1.00	.17	.67**	.62**	.26**
P	-.20*	-.14	-.11	.22*	.29**	.17	.17	1.00	.20*	.40**	.33**
ID	-.38**	-.27**	-.34**	.34**	.48**	.26**	.67**	.20*	1.00	.56**	.39**
IA	-.41**	-.26**	-.30**	.49**	.50**	.34**	.62**	.40**	.56**	1.00	.31**
MF	-.19*	-.08	-.14	.17*	.41**	.13	.26**	.33**	.39**	.31**	1.00

1-tailed significance: * - .01 ** - .001

AQA = Affective Quality of Attachment
PFA = Parental Fostering of Autonomy
PRPES = Parental Role in Providing Emotional Support

EDI Subscale key on page 40

Table 16

Correlations between two PAQ subscales (combined Affective Quality of Attachment and Parental Role in Providing Emotional Support) and the EDI subscales.

	1	2	3	4	5	6	7	8	9	10
<i>Attachment (PAQ)</i>										
AQA + PRPES	1.00	.65**	-.26**	-.31**	-.28**	-.46**	-.18*	-.38**	-.39**	-.18*
PFA	.65**	1.00	-.19*	-.32**	-.21**	-.33**	-.14	-.27**	-.26**	-.08
<i>Eating Disorder (EDI)</i>										
DT	-.26**	-.19*	1.00	.41**	.62**	.46**	.22*	.34**	.49**	.17*
B	-.31**	-.32**	.41**	1.00	.24**	.46**	.29**	.48**	.50**	.41**
BD	-.28**	-.21*	.62**	.24**	1.00	.46**	.17	.26**	.34**	.13
I	-.46**	-.33**	.46**	.46**	.46**	1.00	.17	.67**	.62**	.26**
P	-.18*	-.14	.22*	.29**	.17	.17	1.00	.20*	.40**	.33**
ID	-.38**	-.27**	.34**	.48**	.26**	.67**	.20*	1.00	.56**	.39**
IA	-.39**	-.26**	.49**	.50**	.34**	.62**	.40**	.56**	1.00	.31**
MF	-.18*	-.08	.17*	.41**	.13	.26**	.33**	.39**	.31**	1.00

I-tailed significance: * - .01 ** - .001

AQA = Affective Quality of Attachment
PFA = Parental Fostering of Autonomy
PRPES = Parental Role in Providing Emotional Support

EDI subscale key on page 40

Table 17
Correlation between BMI with the subscales of the PAQ and EDI.

	AQA	PFA	PRPES	DT	B	BD	I	P	ID	IA	MF	BMI
BMI	.06	.09	.07	.14	.11	.35**	-.01	.05	.01	-.04	.07	1.00

1-tailed significance: * - .01 ** - .001

AQA = Affective Quality of Attachment
 PFA = Parental Fostering of Autonomy
 PRPES = Parental Role in Providing Emotional Support

EDI Subscale key on page 40

As Table 15 illustrates, all three PAQ subscales correlate negatively with the eight EDI subscales. Similarly, Table 16 illustrates that the combined *Affective Quality of Attachment/Parental Role in Providing Emotional Support* subscale also correlates negatively with the eight EDI subscales. The following correlations are significant at $p < .001$:

- combined *Affective Quality of Attachment/Parental Role in Providing Emotional Support* with *Drive for Thinness, Bulimia, Body Dissatisfaction, Ineffectiveness, Interpersonal Distrust* and *Interoceptive Awareness*.
- *Parental Fostering of Autonomy* with *Bulimia, Body Dissatisfaction, Ineffectiveness, Interpersonal Distrust* and *Interoceptive Awareness*.

As Table 16 illustrates, a significant positive correlation ($p < .001$) exists between Body Mass Index and *Body Dissatisfaction*. Body Mass Index is not significantly correlated with any of the other subscales of the two measures.

4.4.2 Canonical Analysis

A canonical analysis was conducted to establish the degree of association among the multiple predictor (independent) and criterion (dependent) variables. The result of the first canonical analysis was statistically significant with the correlation of the PAQ composite with the EDI composite = $.502^5$, $p < .001$ indicating a significant relationship between the attachment (independent) and disordered eating (dependent) variables.

Table 17

Correlation of PAQ composite with EDI composite.

PAQ	1.000	-.502**
EDI	-.502**	1.000

No. of cases: 187 1-tailed significance: * -.01 ** -.001

⁵ Number quoted to three decimal places to provide a more precise measure for comparative purposes.

Only the first canonical correlation was significant although the second canonical correlation (.274) approached significance at $p < .05$. The third canonical correlation (.208) was not significant. A test by Wilk's determined the significance of the canonical correlations, the results of which are tabulated below.

Table 18
Canonical correlations and Wilk's test of significance.

	Canonical Correlations	Wilk's	Chi-Square	DF	Significance
1	.502	.662	74.316	24.000	.000
2	.274	.885	22.087	14.000	.077
3	.208	.957	8.000	6.000	.238

The canonical analysis was repeated combining the *Affective Quality of Attachment* subscale with the *Parental Role in Providing Emotional Support* subscale following the analysis of Kenny and Hart (1992). Once again the results of the canonical analysis revealed that only the first canonical correlation was significant with the correlation of the PAQ composite (two subscales) with the EDI composite (eight subscales) = .501, $p < .001$. This correlation is almost identical to the first canonical correlation of the original analysis (.502, see Table 18). The second canonical correlation (.209) was not significant and was very similar to the third canonical correlation of the original analysis (see Table 18). The canonical correlations and the level of statistical significance are tabulated below.

Table 19
Repeated canonical correlations and Wilk's test of significance.

	Canonical Correlations	Wilk's	Chi-Square	DF	Significance
1	.501	.716	60.191	16.000	.000
2	.209	.956	22.087	7.000	.325

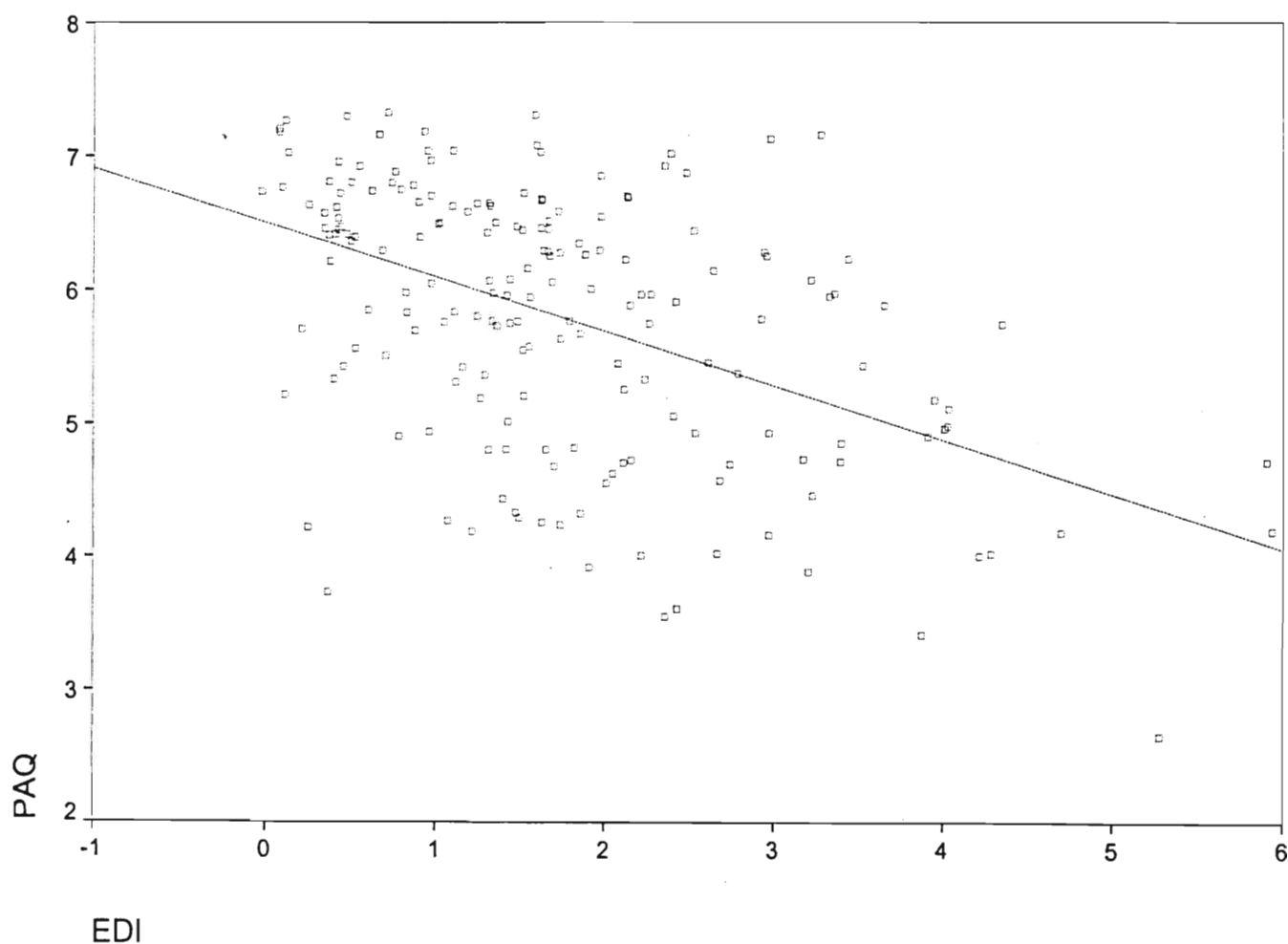
Thus, whether the two scales of the PAQ (*Affective Quality of Attachment* and *Parental Role in Providing Emotional Support*) were combined or not, a significant relationship existed between parental-adolescent attachment and disordered eating.

The computed correlation of the canonical analysis (combined *Affective Quality of Attachment* and *Parental Role in Providing Emotional Support*) is plotted below to

provide a visual representation of the interrelationship between the two variables (attachment and disordered eating).

Plot 1

Plot of repeated canonical correlation (combined AQA/PRPES).



$$r = .501$$

A more detailed understanding of the relationship between attachment and eating disorder variables can be derived from canonical structure correlations. Table 20 presents the structure coefficients which reflect the variance that the observed variable (whether dependent or independent) shares with the canonical variate (Hair & Anderson, 1995). Thus, the methodology assesses the relative contribution of each variable to the canonical variate. The larger the coefficient, the more important it is in deriving the canonical variate.

Table 20

Canonical structure correlations for analysis of the PAQ and EDI.

Measure	Correlation
Attachment (PAQ)	
AQA + PRPES	.989
PFA	.751
Eating Disorder (EDI)	
DT	-.529
BD	-.658
B	-.567
I	-.917
P	-.369
ID	-.764
IA	-.780
MF	-.351
R	.501

PAQ subscale key on page 40

EDI subscale key on page 40

In the independent (predictor) variables the canonical variate was characterised by a very strong positive loading on *Affective Quality of Attachment/Parental Role in Providing Emotional Support* and by a strong positive loading on *Parental Fostering of Autonomy*. In the dependent (criterion) variables, moderate negative loadings were noted on *Drive for Thinness*, *Body Dissatisfaction* and *Bulimia* and strong negative loadings were found on *Interpersonal Distrust* and *Interoceptive Awareness*. A very strong negative loading was observed on *Ineffectiveness*. Tabachnick and Fidell (1989, cited in Kenny & Hart, 1992) accept .3 as the criterion for significance in interpreting structure coefficients. The remaining variables, *Perfectionism* and *Maturity Fears* have structure coefficients which obtain significance but relative to the other variables, do not contribute substantially to the interpretation of the canonical variate.

4.5 SUPPLEMENTARY FINDINGS

4.5.1 Comparison of EDI Scores with Other South African Samples

The data from the present study was compared with the data from other South African studies which have employed the EDI as a measure of disordered eating. The comparison samples comprised white university students (Geach, 1995; Winship,

1996) and a combination of white university and high-school students (NEDCC, 1996). The mean age for the subjects in the comparison samples, indicated in the table below, reflects the mean age of the entire sample which includes black and white subjects (Winship, 1996) and black, white, Indian and Coloured subjects (Geach, 1995; NEDCC; 1996). The findings of Geach (1995), the NEDCC (1996) and Winship (1996) are tabulated below to provide an indication of the overall consistency of the data.

Table 21

Comparison of EDI data with different samples.

	Present Study	Winship	Geach	NEDCC	Weighted Means
Approximate N	209	120	30	147	
Mean Age (in years)	16.4	23	20	21.9	
Drive for Thinness	6.1	6.4	6.2	6.3	6.2
Bulimia	2.0	2.1	1.9	1.8	2.0
Body Dissatisfaction	14.1	13	13.1	12.3	13.2
Ineffectiveness	4.1	3.1	2.8	2.9	3.4
Perfectionism	3.8	4.9	3.8	5.6	4.6
Interpersonal Distrust	3.5	3.2	3.2	3.3	3.4
Interoceptive Awareness	4.3	2.9	2.9	3.1	3.5
Maturity Fears	4.4	2.2	2.4	2.8	3.3

The overall degree of similarity between these average EDI scale profiles was determined by calculating a correlation matrix. The correlation coefficients are presented in Table 22 below.

Table 22

Correlations between comparison samples presented in Table 21.

	Present Study	Winship	Geach	NEDCC
Present Study	1.0000	.959**	.973**	.949**
Winship	.959**	1.0000	.994**	.994**
Geach	.978**	.994**	1.0000	.978**
NEDCC	.949**	.994**	.982**	1.0000

2-tailed significance: ** - .001

The correlation coefficients are all greater than .9 suggesting a very high degree of similarity between the various comparison samples.

In the present study, the percentage of subjects falling above and below Hooper's cut-off scores (1986, cited in Winship, 1996) on each of the subscales of the EDI was calculated in order to crosstabulate the scores with some of the demographic variables⁶. Subjects scoring above the cut-off points may be considered to display significant levels of disordered eating.

4.5.2 Percentage of Subjects Falling Above and Below Cut-off Points

The scores of the eight EDI subscales for each subject were compared to Hooper's suggested cut-off scores and subjects were assigned to two groups according to whether their score fell above or below the cut-off point for that subscale. The percentage of subjects falling above and below the cut-off score for each subscale was calculated. The results are summarised in Table 22 below.

Table 22

Percentage of subjects falling above and below cut-off level.

Subscale	Cut-Off Score	% Above Cut-Off	% Below Cut-Off
DT	> 15	12.0	88.0
B	> 4	21.5	78.5
BD	>14	52.2	47.8
I	>10	14.4	85.6
P	>8	17.7	82.3
ID	>5	32.5	67.5
IA	>10	14.4	85.6
MF	>5	35.4	64.6

EDI subscale key on page 40

4.5.3 Crosstabulation of EDI Scores with Demographic Variables

Crosstabulation was used to assess the proportional differences between the subjects falling above and below the cut-off score for each of the EDI subscales and certain demographic variables. A chi-square analysis was used to test for statistical significance.

The first demographic variable to be crosstabulated with each of the eight EDI subscales was *biological/adoptive parents (alive or deceased)*. There were no

⁶ See Confidential Data Sheet for Research Subjects, Appendix C.

significant differences between the subjects whose parents were both alive and those who had one deceased parent on any of the eight EDI subscales⁷. These results will therefore not be discussed further.

The second demographic variable to be crosstabulated with each of the eight EDI subscales was *marital status of parents (married, divorced or separated)*. Once again, there were no significant differences between subjects whose parents were married, divorced or separated on any of the eight EDI subscales.

The third demographic variable to be crosstabulated with each of the eight EDI subscales was *closeness to parents (closer to mother or closer to father)*. Significant differences were noted between subjects who reported feeling closer to their mother and those who reported feeling closer to their father on two of the EDI subscales: *Drive for Thinness* and *Ineffectiveness*. Subjects' reports of closeness to either parent were based on a simple question format which formed part of the confidential data sheet (Appendix C). Neither tests of reliability nor validity were conducted and therefore the psychometric adequacy of the questions cannot be commented on. However, an interesting trend was noted which may provide a valuable opening for further research.

Table 23

Crosstabulation of subjects falling above and below the cut-off point for Drive for Thinness and Closeness to Parents.

Closeness	Drive for Thinness Subscale		
	Below the Cut-Off	Above the Cut-Off	Row Total
Closer to Mother	140	13	153 83.2%
Closer to Father	21	10	31 16.8%
Column Total	161 87.5%	23 12.5%	184 100%

Chi-Square	Value	DF	Significance
Pearson	13.30635	1	.00026
Continuity Correction	11.22255	1	.00081

⁷ Only one of the subjects who submitted an incomplete questionnaire was from a Children's Home and had parents who were both deceased.

Table 24

Crosstabulation of subjects falling above and below the cut-off point for Ineffectiveness and Closeness to Parents.

Closeness	Ineffectiveness Subscale		
	Below the Cut-Off	Above the Cut-Off	Row Total
Closer to Mother	135	18	153 83.2%
Closer to Father	22	9	31 16.8%
Column Total	157 85.3%	27 14.7%	184 100%

Chi-Square	Value	DF	Significance
Pearson	6.13860	1	.01323
Continuity Correction	4.83693	1	.02786

As Tables 23 and 24 illustrate, there were significant differences between subjects on the variable of *closeness to parents (closer to mother or closer to father)* in percentages falling above and below the cut-off scores on *Drive for Thinness* ($p < .001$) and *Ineffectiveness* ($p < .05$). Eighty-three percent of all the subjects reported feeling closer to their mother and 17% reported feeling closer to their father. Those subjects who reported feeling closer to their mother were proportionately less likely to be preoccupied with their weight than those subjects who reported feeling closer to their father. Thirty-two percent of those subjects who reported feeling closer to their father were also above the cut-off score on the *Drive for Thinness* subscale, whereas only 8.5% of those subjects who reported feeling closer to their mother fell into the same category.

Similarly, those subjects who reported feeling closer to their mother were proportionately less likely to experience themselves as ineffective and inadequate when compared with those subjects who reported a closer bond with their father. Twenty-nine percent of the latter subjects scored above the cut-off point on the *Ineffectiveness* subscale, whereas less than 12% of those subjects who reported feeling closer to their mother fell above the same cut-off point.

4.5.4 PAQ Cut-Off Points

Kenny (1990) does not provide comparable cut-off scores for the PAQ to indicate either high or low levels of parent-adolescent attachment. Each subscale of the PAQ has a potential range of scores, with higher scores indicating greater attachment to parents (Kenny & Hart, 1992). For the purpose of performing similar crosstabulation procedures with the PAQ scores and demographic variables, cut-off points were devised by the researcher. A cut-off score for high attachment was determined by extracting the score above which only 10% of the scores were distributed. Similarly, the cut-off score for low attachment was the score below which 10% of the scores fell or above which 90% of the scores were distributed.

It was thought that a 10% cut-off at each end of the distribution may be too stringent a criterion for determining high and low scores. Consequently, for the purpose of exploring the data, cut-off scores were also calculated for those scores which fell within the bottom 20% and top 20% of the distribution. Table 25 below displays the cut-off scores at four different intervals for each of the three subscales of the PAQ, as well as for the entire measure.

Table 25
Cut-off scores for the PAQ

	10% (10% of the scores below this point)	20% (20% of the scores below this point)	80% (20% of the scores above this point)	90% (10% of the scores above this point)
PAQ Subscales				
Affective Quality of Attachment	71	85	120	126
Parental Fostering of Autonomy	37	42	58	61
Parental Role in Providing Emotional Support	37	40	57	60
PAQ Total	151	170	233	240

4.5.5 Crosstabulation of PAQ Scores with Demographic Variables

As in section 4.5.3 above, crosstabulation was used to assess the proportional differences between the subjects falling above and below the cut-off scores for each of the PAQ subscales, as well as for the entire measure, and certain demographic

variables. Once again, a chi-square analysis was used to test for statistical significance.

As above, the first demographic variable to be crosstabulated with each of the PAQ subscales was *biological/adoptive parents (alive or deceased)*. No significant differences were noted between the subjects whose parents were both alive and those who had one deceased parent on any of the PAQ subscales. These results will therefore not be discussed further.

The second demographic variable to be crosstabulated with each of the PAQ subscales was marital status (*married, divorced or separated*). While there were no significant differences between the subjects whose parents were married, divorced or separated on the PAQ subscales, the differences approached significance on two of the subscales: *Affective Quality of Attachment* ($p = .114$) and *Parental Role in Providing Emotional Support* ($p = .199$). Tables 26 and 27 below present the crosstabulation and chi-square analysis at the 10% cut-off point for *Affective Quality of Attachment* and *Parental Role in Providing Emotional Support* respectively.

Table 26

Crosstabulation of subjects falling above and below the 10% cut-off point for Affective Quality of Attachment and Marital Status.

Marital Status	Affective Quality of Attachment Subscale		
	Below the 10% Cut-Off	Above the 10% Cut-Off	Row Total
Married	8	121	129 66.5%
Divorced	9	50	59 30.4%
Separated	1	5	6 3.1%
Column Total	18 9.3%	176 90.7%	194 100%

Chi-Square	Value	DF	Significance
Pearson	4.343	2	.114

Table 27

Crosstabulation of subjects falling above and below the 10% cut-off point for Parental Role in Providing Emotional Support and Marital Status.

Marital Status	Parental Role in Providing Emotional Support		
	Below the 10% Cut-Off	Above the 10% Cut-Off	Row Total
Married	8	121	129 66.5%
Divorced	8	51	59 30.4%
Separated	1	5	6 3.1%
Column Total	17 8.8%	177 91.26%	194 100%

Chi-Square	Value	DF	Significance
Pearson	3.225	2	.199

These findings suggest that those subjects with married parents were proportionately less likely to achieve low scores on these two subscales (that is, to fall below the 10% cut-off point) than those subjects whose parents were divorced or separated. Those subjects whose parents were divorced or separated were thus proportionately more likely to perceive their relationship with their parents as affectively negative and less likely to perceive the relationship as emotionally supportive. While these findings are interesting in so far as they reveal a certain trend, they should be interpreted with caution since the differences between subjects falling above and below the designated cut-off points did not reach statistical significance. These findings will therefore not be discussed further.

The third demographic variable to be crosstabulated with the PAQ subscales was *closeness to parents (closer to mother or closer to father)*. Significant differences were found between subjects who reported feeling closer to their mother and those who reported feeling closer to their father on two of the PAQ subscales: *Parental Fostering of Autonomy* and *Parental Role in Providing Emotional Support*. Significant differences were also noted between subjects on this variable for the PAQ total scores. The crosstabulation and chi-square analyses presented in the Tables below have been calculated at the 20% and 80% cut-off points.

Table 28

Crosstabulation of subjects falling above and below the 20% cut-off point for Parental Fostering of Autonomy and Closeness to Parents.

Closeness	Parental Fostering of Autonomy		
	Below the 20% Cut-Off	Above the 20% Cut-Off	Row Total
Closer to Mother	27	126	153 83.2%
Closer to Father	11	20	31 16.8%
Column Total	38 20.7%	146 79.3%	184 100%

Chi-Square	Value	DF	Significance
Pearson	5.005	1	.025
Continuity Correction	3.975	1	.046

The significant difference between subjects falling above and below the cut-off on the *closeness to parents (closer to mother or closer to father)* demographic variable suggests that those subjects who reported feeling closer to their mother were also proportionately less likely to achieve low scores on the *Parental Fostering of Autonomy* subscale. Of those subjects who reported feeling closer to their mother, only 17.6% fell below the 20% cut-off, whereas 35.5% of those subjects who reported feeling closer to their father fell below the same cut-off.

Table 29

Crosstabulation of subjects falling above and below the 20% cut-off point for Parental Role in Providing Emotional Support and Closeness to Parents.

Closeness	Parental Role in Providing Emotional Support		
	Below the 20% Cut-Off	Above the 20% Cut-Off	Row Total
Closer to Mother	20	133	153 83.2%
Closer to Father	11	20	31 16.8%
Column Total	31 16.8%	153 83.2%	184 100%

Chi-Square	Value	DF	Significance
Pearson	9.242	1	.002
Continuity Correction	7.712	1	.005

The significant difference illustrated in Table 29 above suggests that those subjects who reported feeling closer to their mother were proportionately less likely to experience their parents as failing to provide them with adequate emotional support when compared with those subjects who reported a closer bond with their father. Thirty-five percent of the latter subjects scored below the cut-off point, whereas 13% of those subjects who reported a closer bond with their mother fell into the same category.

Table 30

Crosstabulation of subjects falling above and below the 80% cut-off point for Parental Role in Providing Emotional Support and Closeness to Parents.

Closeness	Parental Role in Providing Emotional Support		
	Below the 80% Cut-Off	Above the 80% Cut-Off	Row Total
Closer to Mother	111	42	153 83.2%
Closer to Father	28	3	31 16.8%
Column Total	139 75.5%	45 24.5%	184 100%

Chi-Square	Value	DF	Significance
Pearson	4.408	1	.036
Continuity Correction	3.498	1	.061

In keeping with the results reported in Table 29 above, the significant difference illustrated in Table 30 suggests that those subjects who reported feeling closer to their mother were proportionately more likely to achieve high scores on the *Parental Role in Providing Emotional Support* subscale when compared with those subjects who reported feeling closer to their father. Of those subjects who reported a closer bond with their mother, 27.5% scored above the 80% cut-off point, whereas less than 10% of those subjects who reported a closer bond with their father fell above the same cut-off point.

Table 31

Crosstabulation of subjects falling above and below the 80% cut-off point for the total PAQ scores and Closeness to Parents.

Closeness	Total PAQ Scores		
	Below the 80% Cut-Off	Above the 80% Cut-Off	Row Total
Closer to Mother	105	48	153 83.2%
Closer to Father	27	4	31 16.8%
Column Total	132 71.7%	52 28.3%	184 100%

Chi-Square	Value	DF	Significance
Pearson	4.337	1	.037
Continuity Correction	3.474	1	.062

Table 31 illustrates that those subjects who reported a closer bond with their mother were proportionately more likely to have achieved scores which fell within the top 20% of all the scores for the entire measure when compared with those subjects who reported feeling closer to their father. High overall attachment to parents was reported by 31.4% of those subjects who stated feeling closer to their mother, compared with 12.9% of those subjects who reported a closer bond with their father.

4.6 SUMMARY

The results confirmed the hypothesis. That is, greater attachment to parents as measured by the PAQ was found to be inversely related to symptoms of disordered eating as measured by the EDI. In other words, a significant negative correlation was found between disordered eating and parent-adolescent attachment.

The means and standard deviations for each subscale of the two assessment measures were compared with an American sample of female college students (Kenny & Hart, 1992). The means for the South African learners in the present study were significantly lower than Kenny and Hart's (1992) American college sample on two of the attachment subscales and higher on all five of the comparison subscales of the EDI.

The PAQ and EDI, as well as the respective subscales of the assessment instruments demonstrated high internal consistency. The results of a principal-components factor analysis with varimax rotation recovered the original eight subscales of the EDI well and supported the construct validity of the disordered eating measure. With respect to the PAQ, two of the three original subscales were recovered adequately. The third subscale demonstrated some overlap with the first and second, but overall the results supported the original three-factor structure. These findings support the psychometric adequacy of the assessment measures employed in this study which serves to substantiate the results of this research.

Highly significant negative correlations were noted between most of the subscales of the PAQ and EDI. Canonical analysis was conducted to establish the overall degree of association between the two sets of variables. The canonical analysis revealed a significant relationship between the multiple predictor (attachment) and criterion (disordered eating) variables. The canonical correlation, that is, the correlation between the EDI and the PAQ variates (with a combined *AQA* and *PRPES* subscale) was .501, $p < .001$. In sum, a significant relationship was found between parent-adolescent attachment and disordered eating.

Furthermore, canonical structure correlations facilitated an analysis of the relative contribution of each of the variables (whether criterion or predictor) to their respective canonical variates. In the predictor variables the canonical variate was characterised by a very strong positive loading on *Affective Quality of Attachment/Parental Role in Providing Emotional Support* and a strong positive loading on *Parental Fostering of Autonomy*. In the criterion variables there was a very strong negative loading on *Ineffectiveness*, a strong negative loading on *Interpersonal Distrust* and *Interoceptive Awareness* and moderate negative loadings on *Drive for Thinness*, *Body Dissatisfaction*, *Bulimia*. In sum, *Affective Quality of Attachment/Parental Role in Providing Emotional Support* and *Ineffectiveness* shared the greatest degree of variance with their respective canonical variates. Thus, these variables contributed most substantially to their respective canonical functions.

In the supplementary findings, a high degree of similarity was noted between the average EDI scale profile in the present study and other South African studies. In this

study, significant differences were noted between subjects falling above and below the cut-off scores on two of the EDI subscales when crosstabulated with *closeness to parents (closer to mother or closer to father)*. Those subjects who reported feeling closer to their mother were also proportionately less likely to be preoccupied with their weight and to experience themselves as inadequate and lacking a sense of control in their lives.

Similarly, significant differences were noted between subjects falling above and below the cut-off points on two of the PAQ subscales when crosstabulated with *closeness to parents (closer to mother or closer to father)*. Those subjects who reported a closer bond with their mother were proportionately less likely to perceive their parents as failing to facilitate their independent strivings or as failing to provide adequate emotional support when compared with those subjects who reported feeling closer to their father. Conversely, subjects who reported a closer bond with their mother were proportionately more likely to feel emotionally supported by their parents and to report greater overall attachment to their parents.

CHAPTER FIVE

DISCUSSION

In this chapter the results presented in chapter four will be discussed in terms of the original aim and hypothesis of this study and the literature review in chapter two. The limitations of the study will be examined and the implications of the present findings for future research will be explored.

5.1 COMPARISON OF A SOUTH AFRICAN AND AN AMERICAN SAMPLE

In chapter four, section 4.1.2 the sample of learners in the present study was compared with Kenny and Hart's (1992) American sample of first-year female college students.

5.1.1 The PAQ Subscales

South African learners perceived their relationship with their parents as more affectively positive than the American college students but characterised the relationship as less emotionally supportive and less supportive of their strivings towards autonomy. It is important to re-emphasise, however, that the large sample size meant that the differences between the two groups were relatively small, despite reaching statistical significance. Overall, however, the American sample reported greater attachment to their parents.

5.1.2 The EDI Subscales

The means for South African learners in this study were higher than the American college sample on all five of the compared EDI subscales (see Table 1). South African learners and American college students reported similar levels of weight preoccupation and bulimic behaviour, whereas the South African learners reported a significantly greater degree of body dissatisfaction, feelings of personal and social ineffectiveness and fears surrounding biological and psychological maturity. Hence, the psychological features of disordered eating were found to be more prevalent, on average, in white South African learners than in the American comparison sample.

This finding is supported by Winship (1996) who found that white female South African university students scored higher, on average, on four of the five EDI subscales referred to above when compared with a sample of Canadian female college students. On *Perfectionism*, the mean scores of the Canadian and South African samples were equal. In keeping with the present study it was the *Body Dissatisfaction* subscale (of the first three subscales which measure attitudes and behaviours related to eating and body shape) which most differentiated the two groups. Thus, South African learners and students reported more dissatisfaction with their body shape or body image than American and Canadian students, but similar attitudes towards eating behaviours and weight preoccupation. Of the subscales which measure the psychological dimensions of disordered eating, *Ineffectiveness* most differentiated the sample of South African learners from the sample of American and Canadian college students.

In keeping with the hypothesis of the study, one would expect that the sample with lower scores of disordered eating, on average, would also be the sample with overall higher attachment scores. The results support this hypothesis, that is, the American comparison sample scored higher on the PAQ and lower on the EDI, on average, than the South African sample in this study. These findings stimulate questions concerning the pathway(s) of relationship between attachment and disordered eating. One possible pathway may consider the impact of the quality of attachment on the personality of the adolescent, which may then predispose her to the psychopathology of eating disorders. Another possible pathway may consider the direct impact of parent-adolescent attachment on eating behaviours and attitudes and the impact of such dysfunctional behaviours and attitudes on the adolescent's personality.

5.2 INTERRELATIONSHIPS BETWEEN ATTACHMENT AND DISORDERED EATING

5.2.1 An Analysis of the Relationships Between the Subscales of the PAQ and EDI

The negative correlations between the three subscales of the PAQ and the eight subscales of the EDI confirm the hypothesis of this study (see Table 15). That is, greater attachment to parents, as measured by higher scores on the PAQ subscales,

was inversely related to disordered eating as measured by higher scores on the EDI subscales. Overall, greater attachment to parents was negatively correlated with severity of disordered eating.

The first three subscales of the EDI (*Drive for Thinness*, *Bulimia* and *Body Dissatisfaction*) assess attitudes and behaviours related to disordered eating. All three subscales were significantly negatively correlated with all of the attachment subscales at the .01 level of significance. In keeping with the hypothesis of the study, the findings suggest the existence of a relationship between parent-adolescent attachment and disordered eating attitudes and behaviours. Of the remaining five subscales of the EDI which assess personality traits commonly associated with disordered eating, *Ineffectiveness*, *Interpersonal Distrust* and *Interoceptive Awareness* were significantly negatively correlated with all of the attachment subscales at the .001 level of significance. These findings suggest a relationship between parent-adolescent attachment and the psychological dimensions of disordered eating. Of particular interest is the *Ineffectiveness* subscale which, in keeping with the findings of Kenny and Hart (1992), was the subscale of the EDI which correlated most highly with the PAQ subscales. In the study by Kenny and Hart (1992), *Ineffectiveness* was the only subscale to correlate significantly with all three of the PAQ subscales.

Negative correlations between the PAQ subscales and the EDI subscales were anticipated from the research on attachment and eating disorders (Armstrong & Roth, 1989; Kenny & Hart 1992; Smolak & Levine 1993). This expectation was supported by the data with a large number of highly significant correlations ($p < .001$) between the attachment and disordered eating subscales. These findings may be interpreted in the light of the theoretical formulations and research presented in the literature review. For clarity of presentation, this section of the discussion will be divided into two sections. The first section will interpret the relationship between the combined *Affective Quality of Attachment/Parental Role in Providing Emotional Support (AQA/PRPES)* subscale and the EDI subscales. This combined subscale taps the extent to which the parent-adolescent relationship is warm, trusting and emotionally close, as well as the extent to which the adolescent is able to reach out and receive emotional support and comfort when needed. The second section will explore the relationship between the *Parental Fostering of Autonomy (PFA)* subscale and the EDI

subscales. This subscale taps the extent to which the adolescent feels supported and encouraged to function autonomously, for example, by making her own choices, forming her own opinions and learning from her own experiences.

From a methodological standpoint, a number of the eating disordered phenomena are directly interrelated. Their individual significance in regard to their relationship with parent-adolescent attachment is unclear in some instances. This makes a direct interpretation of the relationship between certain dimensions of disordered eating and attachment somewhat obscure and contrived. Thus, the oblique relationship which exists between certain variables of disordered eating and attachment emerges within the context of their interrelationship with other variables. This interrelationship may also create some overlap in the interpretation of the correlations.

5.2.1.1 *Affective Quality of Attachment/Parental Role in Providing Emotional Support with EDI subscales*

The combined *Affective Quality of Attachment/Parental Role in Providing Emotional Support* subscale was significantly negatively correlated at the 0.001 level of significance with the following EDI subscales: *Drive for Thinness*, *Bulimia*, *Body Dissatisfaction*, *Ineffectiveness*, *Interpersonal Distrust* and *Interoceptive Awareness*. The relationship between the combined *Affective Quality of Attachment/Parental Role in Providing Emotional Support* subscale and each of these subscales will be discussed in turn below.

The pursuit of thinness is described by Bruch (1973) and others (Armstrong & Roth, 1989; Crisp, 1980) as the central feature of anorexia and bulimia nervosa, encompassing both the desire to lose weight, as well as the fear of gaining weight. The emphasis placed on this feature is supported by Geach (1995) who used *Drive for Thinness* as the primary measure of disordered eating and by Winship (1996) who acknowledged that: “*Drive for Thinness* provides a truer measure of disordered eating than *Body Dissatisfaction* which focuses on body image” (p. 60). Thus, the significant relationship between high scores on *Body Dissatisfaction*, and low scores on the combined *Affective Quality of Attachment/Parental Role in Providing Emotional Support* subscale supports the existence of an association between what may be

identified as the cardinal feature of disordered eating and the affective and supportive qualities of parent-adolescent attachment.

Theoretically, bulimic behaviour has been interpreted by some authors as a form of self-soothing and as a means of obtaining temporary comfort in the context of relationships which are characterised by deficits in parental support and emotional nurturance (Armstrong & Roth, 1989; Humphrey, 1986; Scalf-McIver & Thompson; Strober & Humphrey, 1987). Furthermore, Ordman and Kirschenbaum (1986) posit that bingeing and purging may serve the function of expressing some of the anger, resentment and conflict that the adolescent experiences at not having her emotional and supportive needs met. Thus, the significant relationship between high scores on *Bulimia*, and low scores on *Affective Quality of Attachment/Parental Role in Providing Emotional Support*, suggests that those adolescents who tended towards bingeing and purging were also likely to be those adolescents who described their relationship with their parents as lacking in positive affectivity and emotional support.

The relationship between *Affective Quality of Attachment/Parental Role in Providing Emotional Support* and *Body Dissatisfaction* may be explained in part by the highly significant positive correlation between *Body Dissatisfaction* and *Drive for Thinness* ($r = .62$). Dissatisfaction with body shape has been found to be related to disturbances in body image which involve the self-perceived overestimation of body size (Bruch, 1973; Crisp, 1980). Crisp (1980) perceived dieting and a preoccupation with weight as a response to dissatisfaction with body shape, particularly those parts of the body most associated with shape change during puberty, for example, the thighs, hips and buttocks. Uys and Wassenaar (1996) found that anorexic females overestimated the width of their waists and thighs significantly more than normal females and experienced significantly lower satisfaction with their body shape.

In this study, low scores on *Affective Quality of Attachment/Parental Role in Providing Emotional Support* were significantly related to high scores on *Body Dissatisfaction*. Thus, those adolescents who did not perceive their relationship with their parents to be affectively positive, or who were less likely to seek out and receive comfort from their parents in times of stress, were also likely to be those adolescents who tended to be dissatisfied with their body image and concerned with their weight.

Ineffectiveness was the subscale which was most negatively correlated with *Affective Quality of Attachment/Parental Role in Providing Emotional Support*. Garner and Olmstead (1984) suggest that the concept of ineffectiveness includes a negative self-evaluation component. Armstrong and Roth (1989) posit that eating disordered individuals perceive themselves as being personally or socially deficient. It is possible that such feelings of inadequacy and low self-esteem result from exposure to patterns of interaction in the family which may be characterised by high levels of conflict and a lack of emotional support and positive emotional expression (Strober, 1981; Strober & Humphrey, 1987). *Ineffectiveness* will be further explored in relation to *Parental Fostering of Autonomy* (section 5.2.1.2) and also in the section on canonical analysis (section 5.2.3).

While no apparent or direct relationship exists between *Affective Quality of Attachment/Parental Role in Providing Emotional Support* and *Interpersonal Distrust*, an indirect relationship may be extrapolated from the theory and research presented in the literature review. Attachment theory's concept of 'internal working models' as presented by Main, Kaplan and Cassidy (1985) is useful in understanding this relationship. Within the context of a family where the provision of parental emotional support and positive affectivity is low, the individual may construct an internal working model of others, and of relationships in general, as failing to meet her needs for emotional connectedness, security and support. The adolescent may develop a sense of alienation from others and become reticent to reach out to others. Furthermore, a positive correlation between *Interpersonal Distrust* and *Ineffectiveness* of .67 suggests that these difficulties may be aggravated by feelings of personal worthlessness and social incompetency.

The reluctance to form intimate relationships with others has been identified by Garner and Olmstead (1984) as important in the development of anorexia nervosa. Thus, the significant relationship between low scores on *Affective Quality of Attachment/Parental Role in Providing Emotional Support*, and high scores on *Interpersonal Distrust*, suggests that those adolescents who perceived their relationship with their parents as lacking in warmth, trust, positive affect and emotional support, were also likely to be those adolescents who experienced difficulty establishing close and trusting relationships.

While a relationship between *Affective Quality of Attachment/Parental Role in Providing Emotional Support* and *Interoceptive Awareness* may appear obscure and difficult to interpret, it is possibly best understood in the light of the fairly strong positive correlation between *Interoceptive Awareness* and *Ineffectiveness* of .62. As mentioned above, feelings of personal inadequacy and low self-esteem may be associated with the adolescent's location within the matrix of a dysfunctional family system and patterns of interaction. Diminished self-worth may impact upon the adolescent's confidence in accurately identifying and interpreting emotional and physiological cues. Thus, the significant relationship between high scores on *Affective Quality of Attachment/Parental Role in Providing Emotional Support*, and low scores on *Interoceptive Awareness*, suggests that those adolescents who perceived their relationship with their parents to be affectively positive, emotionally close and supportive were also likely to be those adolescents who were able to accurately identify and interpret emotional cues and physical sensations.

5.2.1.2 Parental Fostering of Autonomy with EDI subscales

The *Parental Fostering of Autonomy* subscale was significantly negatively correlated at the .001 level of significance with the following EDI subscales: *Bulimia*, *Body Dissatisfaction*, *Ineffectiveness*, *Interpersonal Distrust* and *Interoceptive Awareness*. Only *Bulimia* and *Ineffectiveness* were correlated above -.3 and therefore the discussion will focus on interpreting the relationship between *Parental Fostering of Autonomy* and these two EDI subscales.

As mentioned in section 5.2.1.1 above, Ordman and Kirschenbaum (1981) contend that the bingeing/purging that characterises bulimic behaviour may serve as an expression of the adolescent's anger at the failure of the parents to meet her emotional needs. In addition, anger, resentment and conflict may also be experienced in relation to the weak sense of independence and self-sufficiency the adolescent may experience outside of the family. This notion is supported by the research of Armstrong and Roth (1989), Friedlander and Siegel (1990) and Smolak and Levine (1993) who found that eating disordered adolescents typically have difficulties with separation-individuation. Thus, the significant association between low scores on *Parental Fostering of Autonomy*, and high scores on *Bulimia*, suggests that those adolescents who described

their parents as less supportive of their independent strivings were also likely to be those adolescents who tended towards episodes of bingeing and purging.

Once again, *Ineffectiveness* was the subscale of the EDI which was most negatively correlated with the attachment subscale. The contributions of Bruch (1973), Minuchin et al. (1978) and Selvini-Palazzoli (1974) are helpful in interpreting the relationship between *Ineffectiveness* and *Parental Fostering of Autonomy*. These theorists provide support for the contention that feelings of personal ineffectiveness and inadequacy may result from parental failure to foster a sense of independence and self-reliance in the developing adolescent. The parents' insensitivity to the adolescent's need to individuate may result in a weaker sense of autonomy and self-sufficiency outside the family. In the case of anorexia specifically, a pattern of overinvolved and overprotective relationships between the adolescent and the parents, particularly the mother, may fail to equip the adolescent with the necessary confidence in her own ability to cope and, thereby, to gain a sense of personal mastery. Thus, the significant relationship between high scores on *Parental Fostering of Autonomy*, and low scores on *Ineffectiveness*, suggests that those adolescents who perceived their parents to be supportive of their autonomous strivings were also likely to be those adolescents who experienced a greater sense of self-confidence and self-worth.

5.2.2 An Analysis of the Relationships Between BMI and the Subscales of the EDI and PAQ

Body Mass Index (BMI) was significantly positively correlated with *Body Dissatisfaction*. Thus, those adolescents who, relatively, had a higher body mass in relation to their height, were also more likely to be those adolescents who were dissatisfied with their physical appearance. This finding is supported by Winship (1996) who reported a significant positive correlation between BMI and *Body Dissatisfaction*. These findings are in keeping with Western society's current preference for slimness and confirms the perception that slimness is desirable as the ideal body image.

5.2.3 An Analysis of the Overall Relationship Between EDI and PAQ

Whereas the simple correlation coefficients, discussed in sections 5.2.1.1 and 5.2.1.2 above, provided a means of assessing the association between the individual subscales of the two measures, canonical analysis provided a means of assessing the overall degree of relationship between the two measures. The two sets of variables in this study: parent-adolescent attachment and disordered eating, as measured by the PAQ and EDI respectively, were found to be highly significantly related to each other. The relationship between the variables of attachment and disordered eating was very similar regardless of whether the two subscales of the PAQ (*Affective Quality of Attachment* and *Parental Role in Providing Emotional Support*) were combined or not.

Canonical loadings or structure correlations permitted an assessment of the relative contribution of each of the variables to the overall relationship between attachment and disordered eating. The findings revealed that adolescents who described their parental relationships as affectively positive and emotionally supportive and viewed their parents as supporting their independence, also described themselves as experiencing low levels of weight preoccupation, low levels of bulimic behaviour and interpersonal distrust and high levels of personal effectiveness and interoceptive awareness. In keeping with Kenny and Hart's (1992) findings, *Ineffectiveness* was the variable which contributed most substantially to the interpretation of the canonical variate.

While the relationship between *Ineffectiveness* and *Affective Quality of Attachment/Parental Role in Providing Emotional Support* and *Ineffectiveness* and *Parental Fostering of Autonomy* has been discussed in sections 5.2.1.1 and 5.2.1.2 respectively, an attempt will be made to interpret the importance of *Ineffectiveness* to the overall relationship between attachment and disordered eating. Bruch (1973) identifies a lack of self-confidence, effectiveness and competence as central to anorexia:

The third outstanding feature is a paralysing sense of ineffectiveness, which pervades all thinking and activities of anorexic patients. They experience

themselves as acting only in response to demands coming from other people in situations, and not as doing things because they want to (p. 254).

In section 5.2.1.2 the adolescent's focus on weight and body image was understood as facilitating a sense of personal mastery and control in the face of an overbearing adult, usually the mother, who is insensitive to the adolescent's individuation needs (Bruch, 1973; Selvini-Palazzoli, 1974). A vicious circle is thus created whereby the adolescent, having failed to adequately separate from her parents, finds herself ill-equipped to cope with the developmental tasks of adolescence. This reinforces a sense of personal inadequacy which aggravates disordered eating patterns in an attempt to create a sense of control.

Heesacker and Neimeyer (1990) found that insecure attachment in parental relationships and social incompetence, as measured by the Bell Object Relations Inventory (BORRTI), was associated with greater eating disturbance as measured by the *Drive for Thinness* subscale of the EDI and Eating Attitudes Test. The sensitivity to rejection, desperate longings for acceptance and closeness, and fear of object loss that characterise *Insecure Attachment* on the BORRTI, may result from underlying feelings of unworthiness and inadequacy. Furthermore, the interpersonal anxiety, shyness, fears of loneliness and abandonment which characterise high levels of *Social Incompetence* may reflect an underlying sense of the self as indefinite and ineffective. Similarly, Becker, Bell and Billington (1987) found a corresponding linear increase between the severity of disordered eating and the scores on the *Insecure Attachment* subscale of the BORRTI. Given that feelings of ineffectiveness may underlie insecure attachment as operationalised by the BORRTI, these studies provide some support for the finding of the current study that *Ineffectiveness* contributes substantially to the relationship between attachment and disordered eating.

It is interesting to note that a pervasive sense of personal and social ineffectiveness, a personality trait thought to constitute part of the psychological make-up of eating disordered individuals, and not an attitude or behaviour directly related to eating, was the variable which contributed most to the statistical relationship between attachment and disordered eating.

5.3 COMPARISON WITH OTHER SOUTH AFRICAN SAMPLES

The mean scores on each of the EDI subscales were compared with other South African studies. A high degree of correlation between the average EDI scale profiles indicated that the data in the present study was consistent with the data from previous studies (Geach, 1995; NEDCC, 1996; Winship, 1996). While the mean age of the subjects in the comparison samples ranged from 16.4 to 21.9 years, the overall similarity of mean subscale scores was high. This finding enhances the validity of the results of this study and facilitates the generalisability of the results to a demographically comparable population.

Other South African studies have investigated disordered eating among black, Indian and white university students (Grey, 1995; Zahoul, 1996) and school learners (Selmer, 1997) but did not employ the EDI as an assessment measure. Direct comparison across data sets is, therefore, not possible. Most notably, however, these studies found a high degree of body dissatisfaction amongst the white students. Grey (1995) and Selmer (1997) found white female students to be significantly more dissatisfied with their body shape than either Indian or black students. Zahoul (1996) did not find a significant difference in the scores between white, Indian and black students, although white students exhibited the most disturbed eating behaviours and attitudes.

In keeping with these findings, Winship (1996) found that dissatisfaction with body shape, as measured by the EDI, significantly differentiated white students from black students. Geach (1995) reported higher scores for white students when compared with black students on the *Body Dissatisfaction* subscale of the EDI, although the difference did not reach significance. The mean score on the *Body Dissatisfaction* subscale in this study was higher than the mean scores reported in the studies of Geach (1995) and Winship (1996). This study thus provides support for the finding that a high degree of body dissatisfaction is experienced among young white females in South Africa.

5.4 RELATIONSHIP TO MOTHER AND FATHER INDIVIDUALLY

Chapter four, sections 4.5.2 and 4.5.3 examined the proportional differences between subjects falling above and below Hooper's (1986, cited in Winship, 1996) suggested EDI cut-off scores when crosstabulated with certain demographic variables. The results revealed significant differences between subjects on the *Drive for Thinness* and *Ineffectiveness* subscales when crosstabulated with the *closeness to parents (closer to mother or closer to father)* demographic variable. Although this study did not investigate differences in the patterns of adolescent attachment to mother and father individually, but rather to parents overall, these findings have important implications for further research⁹.

The limited theory and research in the area of differential attachment to parents and eating disorders precluded an hypothesis in this study regarding those subjects who reported a closer bond with their mother versus those subjects who reported a closer bond with their father. While theorists such as Bruch (1973) and Selvini-Palazzoli (1974) have emphasised the role of early disturbances in the mother-infant relationship¹⁰, little mention has been made of the possible role of the father in the development of eating disorders. Studies by Strober (1981) and his colleagues (Strober, Salkin, Burroughs & Morrell, 1981, cited in Humphrey, 1986) compared the families of anorexics, restricting type, with those of anorexics, binge-eating/purging type. The findings revealed that the mothers of anorexics, binge-eating/purging type, were more likely to be depressed and hostile, whereas the fathers were more likely to be irritable, impulsive, alcoholics and have poorer frustration tolerance. The research, however, fails to address how these noted characteristics contribute to eating disordered behaviour.

In chapter two, section 2.3.2.3 the studies by Friedlander and Siegel (1990) and Smolak and Levine (1993) were reviewed. Both studies employed the Psychological Separation Inventory (Hoffman, 1984) which has separate scales for mother and father individually to investigate separation-individuation difficulties in relation to disordered eating. The theoretical implications of separation-individuation to

⁹ See section 5.7

¹⁰ See chapter two, section 2.1.1.3. and section 5.3.1.2. above.

attachment were discussed in the same section. The results of these studies, however, are not consistent. The former study found that the process of separation from the mother was a more complex process than the same process in respect of the father, whereas the latter study reported no significant differences.

The research discussed above offers little to support the formulation of an hypothesis regarding the possible relationship between differential attachment to parents and disordered eating. The findings of the present study suggest that those subjects who reported feeling closer to their mother were proportionately less likely to be preoccupied with being thin or to experience themselves as ineffective and inadequate when compared with those subjects who reported a closer bond with their father. These findings may suggest that while dysfunctional patterns of interaction between mother and daughter have been linked with disordered eating (Bruch, 1973; Selvini-Palazzoli, 1974), an affectively close and healthy attachment in the mother-daughter relationship may act as a protective factor in the development of disordered eating.

Furthermore, it is possible that in the case where the relationship between mother and daughter is overbearing, overprotective and controlling, the daughter draws closer to the father as an attachment figure. This may explain why the subjects who reported feeling closer to their father were also proportionately much more likely to be concerned with being thin, gaining weight and dieting. It is also possible, however, that disturbances in the relationship between father and daughter play a role in the development of eating disorders. These possible explanations require further empirical investigation and create openings for future research in the area of attachment and eating disorders.

Chapter four, sections 4.5.4 and 4.5.5 examined the proportional differences between subjects falling above and below the designated cut-off points on the PAQ when crosstabulated with certain demographic variables. Significant differences were noted between subjects on the *Parental Fostering of Autonomy*, *Parental Role in Providing Emotional Support* subscales, and for the total PAQ scores, when crosstabulated with the *closeness to parents (closer to mother or closer to father)* demographic variable.

Subjects who reported a closer bond with their mother than their father were less likely to perceive their parents as failing to support their need for autonomy. While there was no particular correlation with high attachment scores on the *Parental Fostering of Autonomy* subscale, a close relationship between mother and daughter may be a protective factor against scoring low on this subscale.

Once again, it is possible that where an overprotective, controlling and emotionally unsupportive relationship exists between mother and daughter that stifles the daughter's independence, a closer attachment is formed between father and daughter. This may account for why those subjects who reported a closer relationship with their father were also more likely to experience their parents as inhibiting their attempts at independent functioning. It is equally possible, however, that dysfunctional patterns of interaction in the father-daughter relationship may contribute towards the daughter's perception of her parents as being insensitive towards her increasing need for independence.

These findings provide support for the contention that emotional closeness or connectedness is not antithetical to the experience of individuality or independence. Thus, these findings are in keeping with the conceptual understanding of an attachment as a close, enduring emotional bond that promotes the development of autonomy by providing a secure base of support, without interfering with, or limiting the offspring's independent strivings (Kenny & Hart, 1992). In sum, a close mother-daughter relationship appears to facilitate rather than hinder the process of becoming an autonomous individual.

On the *Parental Role in Providing Emotional Support* subscale, those subjects who reported feeling closer to their mother than their father, were less likely to achieve low scores and more likely to achieve high scores. A close relationship between mother and daughter may, therefore, protect against scoring low, and facilitate scoring high, on this subscale. Thus, a close mother-daughter relationship appears more likely to be associated with the perception of parents as being able to provide emotional support, encouragement and guidance when needed, when compared with a close father-daughter relationship.

On the entire PAQ measure, greater attachment to parents was more likely to be associated with those subjects who reported a closer bond with their mother than their father. Overall, these findings may indicate that an affectively close, emotionally supportive and unrestrictive mother-daughter relationship may facilitate a healthy attachment and adaptive psychological functioning. These findings provide further support for the need to empirically investigate the process of father-daughter attachment and its possible implications for understanding disordered eating.

5.5 LIMITATIONS OF THIS STUDY

Perhaps the most obvious methodological limitation is the correlational design of this study. The findings of this study reflect correlational associations between the variables and hence the causal relationship between attachment and disordered eating cannot be determined. Although attachment theory focuses on the role of the parent-child relationship as an important determinant of psychological adjustment, it is equally plausible that the causal chain is reversed. It is thus possible that disrupted attachment patterns are the product of the symptoms of an eating disorder rather than contributing to those symptoms. It is also possible that other variables, for example, psychiatric disturbance in the parents or sociocultural pressure to maintain a slim body shape, may account, in part, for disordered eating behaviour.

Furthermore, while the findings reflect a relationship between the observed variables, this relationship is not necessarily unique to disordered eating. Ordman and Kirschenbaum (1986) found that the pattern of responses given on the Family Environment Scale by a sample of bulimics was not a pattern unique to the syndrome of bulimia but, rather, was consistent with the pattern observed in families where at least one member was receiving psychiatric treatment. In the present study, it is possible that the primary relationship exists between disrupted attachment and psychological distress more broadly. While *Ineffectiveness* contributed most significantly to the relationship between attachment and disordered eating, it is possible that feelings of inadequacy, worthlessness and a lack of control underlie many psychological problems, or exist at the core of psychological disturbance more generally.

A further methodological limitation of the present study involves the generalisability of the results. Findings from a sample of nonclinical adolescent learners cannot be generalised to a clinical sample of eating disordered adolescents. High scores on the EDI are not equivalent to a diagnosis of an eating disorder. While scores above the cut-off points used in this study indicate high risk groups, follow-up interviews with high scorers would be needed to make a clinical diagnosis of anorexia or bulimia nervosa. Furthermore, neither findings related to disordered eating nor attachment, based on a sample of nonclinical white adolescents, can be generalised to other South African ethnic groups.

The conceptual understanding of attachment as applied to this study is informed by ethological theory. In order to measure attachment as a construct, it was operationalised in accordance with Ainsworth et al.'s (1978) conceptualisation of attachment as an enduring affective bond, which serves as a secure base in providing emotional support and fostering autonomy. Within this conceptualisation of attachment, self-report measures such as the PAQ are thought to limit the validity of the findings by eliciting subjective interpretations from the respondents which may not be objectively accurate. This study may be limited by this conceptual understanding of attachment which does not take cognisance of attachment in the broader sense of internal working models. Within this framework, the manner in which the adolescent recalls and reports her relationship with her parents is by definition subjective, since it is a reflection of the predominantly unconscious nature of her internal working models of relationships. Internal working models, constructed largely from primary parent-child attachments, have important implications for the establishment of attachments outside of the parent-child relationship (Main, Kaplan & Cassidy, 1985).

Furthermore, the PAQ, as an assessment instrument of attachment, does not have separate scales for mother and father individually. The study was thus unable to discriminate between the quality of mother-adolescent attachment and father-adolescent attachment or to address the implications of possible differences in understanding eating disorders.

5.6 IMPLICATONS OF THIS STUDY

While the design of this study does not allow for any inferences of causality between the observed variables, a relationship has been found to exist between attachment and disordered eating, which may have useful therapeutic implications. A therapist or clinician working with an eating disordered patient should consider the quality of the attachment relationship which exists between the adolescent and her parents. The family therapy approach of Minuchin et al. (1978) places eating disordered behaviour squarely within the context of interpersonal transactional conflicts that exist between the parents and the adolescent. Treatment is a wholly collaborative effort that involves change at the level of the structure and functioning of the family system.

In dealing with attachment difficulties, the therapist may note whether the adolescent experiences adequate emotional support from her parents. At the same time, however, the adolescent should not feel overprotected so as to facilitate the process of attaining an individuated identity. Signs of a disrupted attachment may direct the therapist towards intervening to restructure certain dysfunctional parent-child interactional patterns.

In addition, the existence of a relationship between attachment and disordered eating, albeit not necessarily a causal one, may have some implications for primary prevention. Parents may be educated about the developmental importance of facilitating the process of separation from the family within an emotional climate of support, trust and dependability. Such ideas could be integrated into already existing parent training programmes, for example, P.E.T. (Gordon, 1970) and STEP (Dinkmeyer & McKay, 1982), as well as forming part of parent counselling. In this way, parents may become alert to the potentially detrimental developmental consequences of viewing separation and attachment as incompatible processes.

5.7 RECOMMENDATIONS FOR FUTURE RESEARCH

The limitations discussed in section 5.5 above suggest valuable areas for future research. The findings of this study have revealed attachment concomitants of disordered eating that are relevant to aetiological hypotheses but that fail to demonstrate causal relationships. Longitudinal studies, although difficult to conduct in

terms of the time and financial resources required, would be valuable in untangling the causal chain. Parent-child attachment could initially be assessed using the Strange Situation Procedure (Ainsworth et al., 1978). Thereafter, attachment could be re-assessed at intervals of approximately three years to identify any changes in parental attachments over time. Those adolescents who have demonstrated a consistent history of disrupted attachments could then be monitored in order to determine whether they were, in fact, more likely than others to develop disordered eating behaviour.

Other valuable research should compare parent-adolescent attachment in eating disordered adolescents with the attachment patterns which accompany adolescents with other psychiatric disorders. Both longitudinal and comparative studies would more directly assess the contribution of disrupted parent-adolescent attachment to the development of disordered eating.

The inclusion of other South African ethnic groups in future research studies would provide useful cross-cultural information on parent-adolescent attachment. This would contribute to the body of research investigating the adaptive value of healthy, secure attachment in the area of developmental psychology. In addition, the inclusion of other ethnic groups would facilitate a cross-cultural comparison of the relationship between attachment and disordered eating. A study of this nature would also contribute to the growing body of research investigating the cultural distribution of disordered eating attitudes and behaviours in South Africa (Geach, 1995; Grey, 1995; NEDCC, 1996; Selmer, 1997; Winship, 1996; Zahoul, 1996).

Future research investigating adolescent attachment to both parents individually may be valuable in identifying possible differences in the attachment relationship which could have important implications for understanding disordered eating. In the literature and research on eating disorders, little emphasis has been placed on the significance of the adolescent's attachment to the father. Future research which assesses attachment to mother and father separately may contribute to addressing this imbalance and to coming to a more comprehensive understanding of disordered eating.

Future research efforts of the nature outlined above will hopefully refine and expand our understanding of the relationship between attachment and disordered eating.

While research investigating this relationship is currently limited, it is hoped that further research in the recommended areas will deepen our understanding of these harmful and complex disorders of adolescence.

5.8 SUMMARY AND CONCLUSION

This study's finding that greater attachment to parents, as measured by higher scores on the PAQ, was associated with lower levels of disordered eating, as measured by the EDI, supports the findings of Kenny and Hart (1992). In this study, greater attachment to parents was associated with adaptive functioning, particularly feelings of effectiveness, interpersonal trust, accurate interoceptive labelling and low levels of bulimic behaviour and preoccupation with thinness and body shape. Overall, parent-adolescent attachment and disordered eating were found to be highly significantly related to each other.

More specifically, the relatively important contribution of *Ineffectiveness* to the relationship between the variables of attachment and disordered eating is in keeping with the findings of Kenny and Hart (1992). In the present study, as well as in the study of Kenny and Hart (1992), the reported lack of an affectively positive and emotionally supportive relationship with parents, in conjunction with the perception of parents as having failed to foster adolescent autonomy, was most strongly associated with feelings of personal ineffectiveness and a lack of control. Such feelings have been linked theoretically with disordered eating behaviour.

Bruch (1973) and Selvini-Palazzoli (1974) posited that restrictive dieting facilitates a sense of personal control and effectiveness within the context of parent-child relationships that are overinvolved and intrusive. Such patterns of interaction typically curtail the adolescent's autonomy and complicate the process of separation from the family and the establishment of an individuated identity (Minuchin et al., 1978). Bulimic behaviour, on the other hand, is thought to compensate for a lack of parental emotional involvement and support which results in low self-evaluation (Armstrong & Roth, 1989; Scalf-McIver & Thompson, 1989; Strober & Humphrey, 1987). In this study, however, the prediction of possible pathways of causality between disrupted

parent-adolescent attachment and disordered eating is curtailed by the correlational design of the study.

More broadly, the findings of this study provide support for Ainsworth's (1985; 1989) contention that attachments to parents continue beyond childhood:

We have good reason to suspect from research so far, however, that although other affectional bonds may be and usually are formed in the course of childhood, adolescence and adulthood, humans continue to be attached to their parents, whether these attachments are secure, anxious or defensively cut off. (Ainsworth, 1985, p. 799)

In addition, the findings of this study provide support for the growing body of research that emphasises the importance of parental attachment to healthy adolescent adjustment and the development of competencies within the extrafamilial environment (Kenny, 1987; Kenny 1990; Ryan & Lynch, 1989). Blos (1979, cited in Lopez & Gover, 1993) contends that adolescence signifies a 'second individuation' in the parent-child relationship that is modelled on the first process of separation-individuation that takes place in early childhood. This study supports the notion that a healthy parent-adolescent attachment, while facilitating the adolescent's increasing need for autonomy, continues to remain supportive, emotionally nurturing, warm and trusting. Thus, separation and attachment are not viewed as mutually exclusive, separate processes and autonomous functioning is viewed as a healthy and adaptive component of a secure attachment.

Attachment disturbances do not attempt to provide a complete explanation of the risk factors associated with eating disorders, nor do they exclude the role of other factors. Many potential risk factors have been identified in the development of eating disorders. These risk factors were outlined in chapter one, section 1.1 and include sociocultural, developmental, familial and biological factors (White, 1992). No single factor, however, seems able to account for the development of eating disorders and these different factors may be intricately related to each other. In sum, the present findings, together with the findings of Armstrong and Roth (1989), Friedlander and Siegel (1990), Kenny and Hart (1992) and Smolak and Levine (1993)¹¹, offer

¹¹ See chapter two, section 2.3.1.3, for a review of the findings of these studies

incremental support for an attachment component to eating disorders. The present study has identified disturbed parent-adolescent attachment relationships as a possible critical factor in the development of disordered eating behaviour.

REFERENCES

- Ainsworth, M. D. S. (1972). Attachment and dependency: A comparison. In J. L. Gewirtz (Ed.), Attachment and dependency (pp. 97-139). Washington, D.C.: Winston & Sons.
- Ainsworth, M. D. S. (1985). Attachments across the life span. Bulletin of the New York Academy of Medicine, 61 (9), 792-812.
- Ainsworth, M. D. S. (1989). Attachments beyond infancy. American Psychologist, 44 (4), 709-716.
- Ainsworth, M. D. S., Blehar, M. C., Walters, E., & Wally, S. (1978). Patterns of attachment: A psychological study of the strange situation. Hillsdale, NJ: Erlbaum Associates.
- American Psychiatric Association (1980). Diagnostic and statistical manual of mental disorders (3rd ed.). Washington, DC: Author.
- American Psychiatric Association (1987). Diagnostic and statistical manual of mental disorders (3rd ed., revised). Washington, DC: Author.
- American Psychiatric Association (1994). Diagnostic and statistical manual of mental disorders (4th ed., revised). Washington, DC: Author.
- Anderson, A.E. & Hay, A. B. (1985). Racial and socioeconomic influence in anorexia nervosa and bulimia. International Journal of Eating Disorders, 4, 479-487.
- Arend, R., Gove, F. L. & Sroufe, L. A. (1979). Continuity of individual adaptation from infancy to kindergarten: A predictive study of ego-resiliency and curiosity in preschoolers. Child Development, 50, 950-959.

- Armstrong, J. G. & Roth, D. M. (1989). Attachment and separation difficulties in eating disorders: A preliminary investigation. International Journal of Eating Disorders, 8 (2), 141-155.
- Becker, B., Bell, M. & Billington, R. (1987). Object relations ego deficits in bulimic college women. Journal of Clinical Psychology, 43 (1), 92-95.
- Bell, M., Billington, R., & Becker, B. (1986). A scale for the assessment of object relations: Reliability, validity, and factorial invariance. Journal of Clinical Psychology, 42, 733-741.
- Bemis, K. M. (1978). Current approaches to the etiology and treatment of anorexia nervosa. Psychological Bulletin, 85 (3), 593-617.
- Blass, R. B. & Blatt, S. J. (1992). Attachment and separateness. Psychoanalytic Study of the Child, 47, 189-200.
- Blum, G. S. (1953). Psychoanalytic theories of personality. New York: McGraw-Hill.
- Boskind-Lodahl, M (1981). Cinderella's stepsisters: A feminist perspective on anorexia nervosa and bulimia. In Howell, E. & Bayes, M. (eds). Women and mental health (pp. 248-262). New York: Basic Books
- Bowlby, J. (1969). Attachment and loss: Volume 1. Attachment. New York: Basic Books.
- Bowlby, J. (1973). Attachment and loss: Volume 2. Separation anxiety and anger. New York: Basic Books.
- Bretherton, I. (1985). Attachment theory: Retrospect and Prospect. Monographs of the Society for Research in Child Development, 50 (1/2), 3-35.
- Bruch, H. (1973). Eating disorders: Obesity, anorexia nervosa, and the person within. New York: Basic Books.

- Bukatko, D. & Daehler, M. W. (1992). Child development: A topical approach. Boston: Houghton Mifflin Company.
- Choudry, I. Y. & Mumford, D. B. (1992). A pilot study of eating disorders in Mirpur (Pakistan) using an Urdu version of eating attitudes test. International Journal of Eating Disorders, 11 (3), 243-251.
- Cooper, Z, Cooper, P. J. & Fairburn, C. G. (1985). The specificity of the eating disorder inventory. British Journal of Clinical Psychology, 24, 129-130.
- Crisp, A. H. (1980). Anorexia nervosa: Let me be. London: Academic Press.
- Dare, C. (1985). The family therapy of anorexia nervosa. Journal of Psychiatric Research, 19 (2/3), 435-443.
- Dinkmeyer, D. & McKay, G. D. (1982). The parent's handbook: STEP, Systematic Training for Effective Parenting. Circle Pines: American Guidance Service.
- Eberly, C. C. & Eberly, B. W. (1985). A review of the eating disorder inventory. Journal of Counseling and Development, 64, 285.
- Field, T. (1996). Attachment and separation in young children. Annual Review of Psychology, 47, 541-561.
- Fonagy, P., Leigh, T., Steele, M., Steele, H., Kennedy, R., Mattoon, G., Target, M. & Gerber, A. (1996). The relation of attachment status, psychiatric classification, and response to psychotherapy. Journal of Consulting and Clinical Psychology, 64 (1), 22-31.
- Friedlander, M. L. & Siegel, S. M. (1990). Separation-individuation difficulties and cognitive-behavioural indicators of eating disorders among college women. Journal of Counseling Psychology, 37 (1), 74-78.

- Garner, D. M., Olmstead, M. P. & Policy, J. (1983). Development and validation of a multidimensional eating disorder inventory for anorexia nervosa and bulimia. International Journal of Eating Disorders, 2, 15-34.
- Garner, D. M. & Olmstead, M. P. (1984). Manual for Eating Disorder Inventory (EDI). USA: Psychological Assessment Resources. Inc.
- Geach, M. F. (1995). A cross-cultural study of eating disordered behaviour in female university residence students. Unpublished Masters Thesis, Rhodes University, Grahamstown.
- George, C. L. (1992). A phenomenological analysis of anorexia nervosa. Unpublished Masters Thesis, University of Durban-Westville.
- Gewirtz, J. L. (1972). Attachment and dependency. Washington, D.C.: Winston & Sons.
- Goldstein, M. J. (1981). Family factors associated with schizophrenia and anorexia nervosa. Journal of Youth and Adolescence, 10 (5), 385-405.
- Gordon, T. (1970). P.E.T.: Parent Effectiveness Training: The tested new way to raise responsible children. New York: David McKay.
- Greenberg, J. & Mitchell, S. (1983). Object relations in psychoanalytic theory. Cambridge: Harvard University Press.
- Grey, A. R. (1995). Disordered eating and body shape issues in a cohort of black, Indian and white undergraduate students. Unpublished Masters Thesis, University of Durban-Westville.
- Haley, J. (1973). Uncommon therapy: The psychiatric techniques of Milton H. Erickson. New York: W. W. Norton.

- Hair, J. F. & Anderson, R.E. (1995). Canonical correlational analysis. In R. L. Tatham & W. C. Black (Eds.), Multivariate data analysis (4th ed.). London: Prentice-Hall.
- Heesacker, R. S. & Neimeyer, G. J. (1990). Assessing object relations and social cognitive correlates of eating disorder. Journal of Counseling Psychology, 37 (4), 419-426.
- Hoffman, J. A. (1984). Psychological separation of late adolescents from their parents. Journal of Counseling Psychology, 31 (2), 170-178.
- Humphrey, L. L. (1986). Structural analysis of parent-child relationships in eating disorders. Journal of Abnormal Psychology, 95 (4), 395-402.
- Ivey, G. (1990). An introduction to object relations theory. Unpublished paper, University of Natal, Durban.
- Jones, E. E. (1996). Introduction to the special section on attachment and psychopathology: Part I. Journal of Consulting and Clinical Psychology, 64 (1), 5-7.
- Johnson, C. & Flach, A. (1985). Family characteristics of 105 patients with bulimia. American Journal of Psychiatry, 142 (11), 1321-1324.
- Kaplan, H. I., Sadock, B. J., & Grebb, J. A. (1994). Synopsis of psychiatry: Behavioural sciences clinical psychiatry. (7th ed.). Baltimore: Williams & Wilkins.
- Kenny, M. E. (1987). The extent and function of parental attachment among first-year college students. Journal of Youth and Adolescence, 16 (1), 17-29.
- Kenny, M. E. (1990). College seniors' perception of parental attachments: The value and stability of family ties. Journal of College Student Development, 31, 39-46.

- Kenny, M. & Donaldson, G. (1991). Contributions of parental attachment and family structure to the social and psychological functioning of first-year college students. Journal of Counseling Psychology, 38, 479-486.
- Kenny, M. E. & Hart, K. (1992). Relationship between parental attachment and eating disorders in an inpatient and a college sample. Journal of Counseling Psychology, 39 (4), 521-526.
- Kent, J. S. & Clopton, J. R. (1988). Bulimia: A comparison of psychological adjustment and familial characteristics in a nonclinical sample. Journal of Clinical Psychology, 44 (6), 964-971.
- Killen, J. D., Hayward, C., Wilson, D. M., Taylor, C. B., Hammer, L.D., Litt, I., Simmonds, B. & Haydel, F. (1994). Factors associated with eating disorder symptoms in a community sample of 6th and 7th grade Girls. International Journal of Eating Disorders, 15 (4), 357-367.
- Kog, E. & Vandereycken, W. (1985). Family characteristics of anorexia nervosa and bulimia: A review of the research literature. Clinical Psychology Review, 5, 159-180.
- Kog, E., Vandereycken, W. & Vertommen, H. (1985). Towards a verification of the psychosomatic family model: A pilot study of ten families with an anorexia/bulimia nervosa patient. International Journal of Eating Disorders, 4, 525-538.
- Krause, A. M. & Haverkamp, B. E. (1996). Attachment in adult child – older parent relationships: Research, theory, and practice. Journal of Counselling & Development, 75, 83-92.
- le Grange, D. (1993). Family therapy outcome in adolescent anorexia nervosa. South African Journal of Psychology, 23 (4), 174-179.

- Liebman, R., Minuchin, S. & Baker, L. (1974). An integrated treatment program for anorexia nervosa. American Journal of Psychiatry, 131 (4), 432-436.
- Lopez, F. G. & Gover, M. R. (1993). Self-report measures of parent-adolescent attachment and separation-individuation: A selective review. Journal of Counseling and Development, 71, 560-569.
- Maher, M. S. (1971). A study of the separation-individuation process and its possible applications to the borderline phenomena in the psychoanalytic situation. Psychoanalytic Study of the Child, 26, 403-424.
- Mahler, M. S., Pine, F. & Bergman, A. (1975). The psychological birth of the human infant. New York: Basic Books.
- Main, M. (1996). Introduction to the special section on attachment and psychopathology: 2. Overview of the field of attachment. Journal of Consulting and Clinical Psychology, 64 (2), 237-243.
- Main, M., Kaplan, N. & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. Monographs of the Society for Research in Child Development, 50 (1/2), 66-104.
- Marvin, R. S. & Pianta, R. C. (1996). Mother's reactions to their child's diagnosis: Relations with security of attachment. Journal of Clinical Child Psychology, 25 (4), 436-445.
- McLaughlin, B., White, D., McDevitt, T. & Raskin, R. (1983). Mothers' and fathers' speech to their young children: Similar or different? Journal of Child Language, 10, 245-252.
- Minuchin, S., Baker, L., Rosman, B. L., Liebman, R., Milman, L. & Todd, T. C. (1975). A conceptual model of psychosomatic illness in children. Archives of General Psychiatry, 32, 1031-1038.

- Minuchin, S., Rosman, B. L. & Baker, L. (1978). Psychosomatic families: Anorexia nervosa in context. London: Harvard University Press.
- Moos, R. (1985). Family Environment Scale manual. Palo Alto: Consulting Psychologists Press.
- NEDCC (1996). The NEDCC survey of South African female students using Garner's Eating Disorder Inventory. Unpublished manuscript, University of Natal, School of Psychology, Pietermaritzburg.
- Ordman, A. M. & Kirschenbaum, D. S. (1986). Bulimia: Assessment of eating, psychological adjustment, and familial characteristics. International Journal of Eating Disorders, 5 (5), 865-878.
- Pumariega, A. J. (1986). Acculturation and eating attitudes in adolescent girls: A comparative and correlational study. American Academy of Child Psychiatry, 25 (2), 276-279.
- Ratner, N. B. (1988). Patterns of parental vocabulary selection in speech to very young children. Journal of Child Language, 15, 481-492.
- Rondal, J. A. (1980). Fathers' and mothers' speech in early language development. Journal of Child Language, 7, 353-369.
- Ryan, R. M., & Lynch, J. H. (1989). Emotional autonomy versus detachment: Revisiting the vicissitudes of adolescence and young adulthood. Child Development, 60, 340-356.
- Sargent, J. & Liebman, R. (1984). Outpatient treatment of anorexia nervosa. Psychiatric Clinics of North America, 7, (2), 235-245.
- Scalf-McIver, L. & Thompson, J. K. (1989). Family correlates of bulimic characteristics in college females. Journal of Clinical Psychology, 45 (3), 467-472.

- Selmer, C. A. (1997). Disordered eating, dieting practices and body shape issues in a sample of black, Indian and white Schoolgirls. Unpublished Masters Thesis, University of Durban-Westville.
- Selvini-Palazzoli, M. (1974). Self-starvation: From the intrapsychic to the transpersonal. London: Chancer Press.
- Shisslak, C. M., McKeon, R. T. & Crago, M. (1990). Family dysfunction in normal weight bulimic and bulimic anorexic families. Journal of Clinical Psychology, 46 (2), 185-189.
- Silber, T. (1986). Anorexia nervosa in blacks and Hispanics. International Journal of Eating Disorders, 5 (1), 121-128.
- Simpson, J. A., Rholes, W. S. & Nelligan, J. S. (1992). Support seeking and support giving within couples in an anxiety-provoking situation: The role of attachment styles. Journal of Personality and Social Psychology, 62 (3), 434-446.
- Smolak, L. & Levine, M. P. (1993). Separation-individuation difficulties and the distinction between bulimia nervosa and anorexia nervosa in college women. International Journal of Eating Disorders, 14 (1), 33-41.
- Sours, J. A. (1974). The anorexia nervosa syndrome. International Journal of Psychoanalysis, 55, 567-576.
- Strober, M. (1981). The significance of bulimia in juvenile anorexia nervosa: An explanation of possible etiologic factors. International Journal of Eating Disorders, 1 (1), 28-43.
- Strober, M. & Humphrey, L. L. (1987). Familial contributions to the etiology and course of anorexia nervosa and bulimia. Journal of Consulting and Clinical Psychology, 55 (5), 654-659.

- Uys, D. C. & Wassenaar, D. R. (1996). The perceptual and affective components of body image disturbances in anorexic and normal females. South African Journal of Psychology, 26 (4), 236-242.
- Waters, E., Wippman, J. & Sroufe, L. A. (1979). Attachment, positive affect, and competence in the peer group: Two studies in construct validation. Child Development, 50, 821-289.
- White, J. H. (1992). Women and eating disorders, part I: Significance and sociocultural risk factors. Health Care for Women International, 13, 351-362.
- Winnicott, D. W. (1965). The maturational process and the facilitating environment. New York: International Universities Press.
- Winnicott, D. W. (1971). Playing and reality. London: Tavistock Publications.
- Winship, J. R. (1996). Cross-cultural variation in disordered eating attitudes and behaviours: A study of female university students in KwaZulu-Natal. Unpublished Masters Thesis, University of Natal (Pietermaritzburg).
- Wright, K. (1991). Vision and separation: Between mother and baby. London: Free Association Books.
- Zahoul, B. (1996). Prevalence of eating disturbances among South African university students. Unpublished Masters Thesis, University of Natal (Pietermaritzburg).
- Zeanah, C. H. & Emde, R. N. (1994). Attachment disorders in infancy and childhood. In Rutter, M., Taylor, E. & Hersov, L (eds). Child and adolescent psychiatry (3rd ed.) (pp. 490-504). Oxford: Blackwell Scientific Publications.

APPENDIX A

12 February 1999

Dear Parent

RE: PARENTAL INFORMED CONSENT TO PARTICIPATE IN RESEARCH

As an Intern Clinical Psychologist I became increasingly aware of the problem of eating disorders among adolescent females and identified the need for further research in this field. For the thesis component of my Masters degree in clinical psychology I will be conducting research through the University of Natal.

I am writing to request your permission for your daughter to participate in the research by completing two standard questionnaires at school which will take approximately 25 minutes to complete. Confidentiality will be maintained by ensuring that your daughter's name does not appear anywhere on the response sheets. Her identity will not be known to either the researcher or the school. All information obtained in this research will be treated entirely confidentially.

In the event that the results of the research reveal high group trends towards disordered eating, I will make recommendations to the school regarding the development of an appropriate counselling programme and provide advise on the resources available for the treatment of eating disorders within the greater Durban area.

This research does not involve an experimental design, it is simply an information gathering procedure in which two self-report questionnaires are completed and your consent would be appreciated.

Should you have questions regarding the research, please do not hesitate to contact me by telephone on xxxxxxx or by fax on xxxxxx.

Thank you for your kind consideration.

Yours sincerely

Tracy Biggs
Intern Clinical Psychologist

(Please tear off and return to the guidance counsellor)

I _____ (name of parent or guardian) have read and understand the contents of this letter and consent / do not consent (please delete whichever is not applicable) to my daughter, _____ participating in the research on eating disorders.

Signed: _____

Date: _____

APPENDIX B**INFORMED CONSENT TO PARTICIPATE IN RESEARCH**

I understand that by completing the attached forms I am participating in research on eating disorders.

I understand that my participation involves completing a data sheet and two self-report questionnaires. There will be no follow-up contact by the researcher.

I understand that my name will not be known to the researcher in order to maintain confidentiality of all information provided.

I realise that my participation is voluntary and I am willing to participate in this research.

Signed: _____

Date: _____

APPENDIX C**CONFIDENTIAL DATA SHEET FOR RESEARCH SUBJECTS**

Grade: 11 or 12 (Please circle which applies).

Age: _____

Race: Black / Coloured / Indian / White (Please circle which applies)

Height: _____ m (tape measure available on request).

Weight: _____ kgs (scale available on request).

Are both your parents (biological or adoptive) alive? Yes / No (Please circle which applies).

If you responded no to the above question, are your parents:

both deceased / mother alive / father alive? (Please circle which applies).

Are your parents: married / divorced / separated? (Please circle which applies).

With whom do you live (adult caretakers only, not siblings)? e.g. mother and step-father

Which parent do you share a closer bond with / feel closer to? Mother / Father
(Please circle which applies).

Thank you for your co-operation.

APPENDIX D

Parental Attachment Questionnaire

c 1985 M. Kenny Ph.D.

Boston College

The following pages contain statements that describe family relationships and the kinds of feelings and experiences frequently reported by young adults. Please respond to each item by filling in 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 parent is living, or if your parents are divorced, respond with reference to your living parent or the parent with whom you feel closer.

1 = Not at All (0-10%); 2 = Somewhat (11-35%) ; 3 = A Moderate Amount (36-65%);
4 = Quite A Bit (66-90%); 5 = Very Much (91-100%).

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.
- ___15. have provided me with the freedom to experiment and learn things on my own.
- ___16. are too busy or otherwise involved to help me.
- ___17 have trust and confidence in me.
- ___18. try to control my life.
- ___19. protect me from danger and difficulty
- ___20. ignore what I have to say.
- ___21. are sensitive to my feelings and needs
- ___22. are disappointed in me.
- ___23. give me advice whether or not I want it.
- ___24 respect my judgment and decisions, even if different from what they would want.
- ___25. do things for me, which I could do for myself.

1 = Not at All (0-10%); 2 = Somewhat (11-35%) ; 3 = A Moderate Amount (36-65%);
4 = Quite A Bit (66-90%); 5 = Very Much (91-100%).

In general, my parents.... . .

___26. are persons whose expectations I feel obligated to meet.

___27. treat me like a younger child.

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

___28. I looked forward to seeing.

___29. with whom I argued.

___30. with whom I felt relaxed and comfortable.

___31. who made me angry.

___32. I wanted to be with all the time.

___33. towards whom I felt cool and distant.

___34 who got on my nerves.

___35. who aroused feelings of guilt and anxiety.

___36. to whom I enjoyed telling about the things I have done and learned.

___37. for whom I felt a feeling of love.

___38. I tried to ignore.

___39. to whom I confided my most personal thoughts and feelings.

___40. whose company I enjoyed.

___41. I avoided telling about my experiences.

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

___42. with warm and positive feelings.

___43. feeling let down and disappointed by my parents.

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

___44. I look to my parents 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 parents 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 parents will know what to do.

___50. I contact my parents if I am not able to resolve the situation after talking it over with my friends.

When I go to my parents for help. . .

___51. I feel more confident in my ability to handle the problems on my own.

___52. I continue to feel unsure of myself.

___53. I feel that I would have obtained more understanding and comfort from a friend.

___54. I feel confident that things will work out as long as I follow my parent's advice.

___55. I am disappointed with their response.

APPENDIX F

(All identifying data has been deleted to maintain confidentiality).

The Principal

xxxxxxxxxxxx High School

xxxxxxxxxxxxxxxx

xxxxxxxx

xxxx

5 February 1999

Dear xxxxxxxxx

RE: RESEARCH ON EATING DISORDERS

As an Intern Clinical Psychologist at King George V Hospital last year, my colleagues and I delivered two seminars on eating disorders at xxxxxxxxxxxx High School. These seminars raised my awareness of and interest in the problem of eating disorders among adolescent women.

For the thesis component of my Masters degree in Clinical Psychology, I will explore disordered eating among adolescents and I am writing to request permission to conduct this research at your school. Most broadly, the research will investigate the relationship between family dynamics and disordered eating. I have two standard questionnaires which I would like to administer to the grade 11 and 12 learners. The approximate time required to complete the two questionnaires is 25 minutes. Confidentiality will be maintained by ensuring that the learners' names do not appear on the response sheets.

It is recommended that the learners' parents be informed of the proposed research and be asked to provide their consent for the participation of their daughter in such research. Each learner will also be required to provide informed consent to participating in the research before completing the questionnaires. I have enclosed two informed consent forms, for the parents and the learners respectively, for your consideration.

I have spoken to the guidance counsellor, Mrs xxxxx, and she is willing to assist in the administration of the questionnaires. The results of the research will be written up as a Masters Thesis and neither the identity of the school nor any of the learners will be disclosed. I will prepare a written report for both yourself and Mrs xxxxx on the outcome of the research. It is hoped that this research will contribute to understanding the increasing problem of disordered eating among adolescent females, and more specifically, provide valuable information on the status of disordered eating among the grade 11 and 12 learners.

In the event that the results of the research reveal high group trends towards disordered eating, I would be willing to make recommendations regarding the development of an appropriate counselling programme and provide advise on the resources available for the treatment of eating disorders within the greater Durban area.

This research will be supervised by a senior member of staff at the University of Natal, Pietermaritzburg in order to ensure that it complies with the ethical and empirical standards required for postgraduate research in psychology.

Thank you for your consideration of this request and I look forward to your reply at your earliest convenience.

Yours sincerely

Tracy Biggs
Intern Clinical Psychologist