

School of Psychology & Speech Pathology

**Patterns of Attachment and Reflective Functioning in Families of
Adolescents with Eating Disorders**

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Declaration

I, Elizabeth Jane Izett Seah, declare that to the best of my knowledge and belief this thesis, titled 'Patterns of Attachment and Reflective Functioning in Families of Adolescents with Eating Disorders', contains no material previously published by any other person except where due acknowledgment has been made. This thesis contains no material which has been accepted for the award of any other degree or diploma at any university.

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Abstract

Eating disorders such as anorexia nervosa, bulimia nervosa and atypical anorexia involve severe disturbance in eating behaviour and excessive concern about body weight and shape (Thompson-Brenner, Boisseau, & Satir, 2010). Eating disorders are known for their severity, comorbidity, potential for relapse and difficulty to treat (Smink, van Hoeken, & Hoek, 2013). They cause significant functional impairment and distress for the individual, affecting physical, cognitive, social and psychological domains of functioning. They also result in considerable distress, pain and anxiety for parents, siblings and friends.

Eating disorders usually begin in adolescence (Crow et al., 2009; Hoek & van Hoeken, 2003; van Son, van Hoeken, Bartelds, van Furth, & Hoek, 2006). The clinical and social impact of these disorders, particularly during this period of development, highlights the need for a greater understanding of their underlying psychological features (Gazzillo et al., 2013). While it is now generally accepted that the aetiology of eating disorders is multi-factorial, the theories of attachment and mentalising make important contributions to the understanding of the aetiology and maintenance of these disorders. An understanding of the impact of attachment patterns and mentalising capacity on the aetiology and maintenance of adolescent eating disorders can assist with prevention and treatment of these challenging conditions.

The overall aim of this research was to investigate the attachment styles and mentalising capacity of adolescent girls with eating disorders, as well as to investigate their mother's capacity to reflect on their own and their daughter's mental states, and the impact of an eating disorder on parent child relationships and family functioning, compared to a non-clinical control group.

This thesis consists of three studies. Study 1 evaluated the attachment patterns of adolescents with eating disorders (anorexia nervosa, bulimia nervosa and atypical anorexia). Study 2 investigated the attachment coherence and mentalising capacity of adolescents with eating disorders and the reflective functioning (RF) of their mothers. Study 3 involved a qualitative analysis of the Child Attachment Interview and Parent Development Interview to explore lived experiences of family relationships in families of adolescents with eating disorders.

In Study 1, 32 patients aged 12–18 years fulfilling the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; American Psychiatric Association, 2013) criteria for anorexia nervosa, bulimia nervosa or atypical anorexia, along with 25 non-clinical adolescents, were interviewed using the Child Attachment Interview, which was subsequently coded for attachment style. The adolescents with eating disorders reported significantly greater insecurity of attachment to both mother and father compared to the non-clinical sample, with the presence of preoccupied and disorganised attachment styles predicting the presence of an eating disorder. No attachment style was identified to be related to a particular eating disorder diagnosis.

In Study 2, the discourse from the Child Attachment Interview on the same sample of adolescents was coded for attachment coherence and RF. Adolescents also completed the Mentalising Stories Test for Adolescents, which was scored for accurate mentalising, avoidance of mentalising, and hypermentalising. The girls with eating disorders scored significantly lower attachment coherence compared to the girls without eating disorders, indicating that, compared to their non-clinical peers, adolescents with eating disorders are less able to identify their feelings; consider other people's perspectives, potential reactions, feelings and needs; and consider the possible causes and effects of these. No significant difference in RF scores was found between the two

groups. The girls with eating disorders also scored significantly higher on a scale of hypermentalising on the Mentalising Stories Test for Adolescents, although when symptoms of borderline personality disorder were statistically controlled for, this significant difference was no longer present. This suggests that it is the presence of borderline personality disorder traits in the clinical sample that accounts for the presence of hypermentalising in this sample.

32 mothers of girls with eating disorders and 26 mothers of non-clinical girls completed the Depression Anxiety Stress Scales Short Version (Lovibond & Lovibond, 1995) and the Parent Development Interview (Aber et al., 1985), which was subsequently coded RF. The mothers of girls with eating disorders scored with significantly higher symptoms of depression, stress and anxiety compared to mothers of non-clinical girls. They did not score significantly lower on RF compared to the mothers of girls without eating disorders. However, 21% of the mothers of girls with eating disorders displayed very low reflective functioning (scores < 2), compared to 3.8% of the mothers of non-clinical girls, suggesting that mentalising-based interventions would be appropriate for such parents. Mothers' reflective functioning did not correlate with daughter attachment coherence or RF across the sample.

In Study 3, the discourse of the Child Attachment Interviews and Parent Development Interviews was qualitatively analysed to identify themes related to attachment style, reflective capacity, and family relationships. The major themes that emerged included differing views of relationships, family conflict, mothers' fear of loss, and worry. Girls with eating disorders described less favourable relationships with both of their parents compared to girls in the control group. Mothers of girls with eating disorders reported high levels of conflict, and significant anxiety and fear about the potential negative medical, personality and cognitive consequences of the eating

disorder, including the fear that their daughter may die from medical complications of the eating disorder, or as a result of suicide. The mothers also expressed reduced feelings of efficacy and satisfaction in the parenting role, cycles of decreased mentalising, and feelings of hopelessness and self-doubt about the best ways to help their child. The study also revealed the disruption of the normal process of individuation and autonomy due to the onset of the eating disorder.

The results of this study indicate that the theories of attachment and mentalising may offer useful contributions to understanding adolescent eating disorders, and guide the treatments offered to these adolescents and their families.

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List of Abbreviations

AAI	Adult Attachment Interview
AN	Anorexia Nervosa
AN-R	Anorexia Nervosa—Restricting subtype
AN-BP	Anorexia Nervosa—Binge-purge subtype
ARFS	Adult Reflective Function Scale
BN	Bulimia Nervosa
BPD	Borderline Personality Disorder
CAHS (CAHMS)	Child and Adolescent Health Service (Child and Adolescent Mental Health Service)
CAI	Child Attachment Interview
CBT	Cognitive Behavioural Theory
CDI	Child Depression Inventory
CDI-S	Child Depression Inventory—Short form
CRFS	Child Reflective Functioning Scale
DASS	Depression Anxiety Stress Scales
DMM	Dynamic-Maturational Model
EDE	Eating Disorders Examination
GLMM	Generalised Linear Mixed Models
HIF	How I Feel test
ICC	Intraclass coefficients
IPPA	Inventory of Parental and Peer Attachment
MACI	Millon Adolescent Clinical Inventory
MBT	Mentalisation-Based Therapy
MBT-A	Mentalisation-Based Therapy (Adolescent)

MBT-F	Mentalisation-Based Therapy (Family)
MSTA	Mentalising Stories Test for Adolescents
OSFED	Other Specified Feeding or Eating Disorder
PBI	Parent Bonding Instrument
PDI	Parent Development Interview
RF	Reflective functioning
SEIFA	Socio-Economic Indexes for Areas

Chapter 1: Introduction

Eating disorders represent a heterogeneous diagnostic category that includes anorexia nervosa (AN), bulimia nervosa (BN), and Other Specified Feeding or Eating Disorder (OSFED). Eating disorders involve a severe disturbance in eating behaviour, and excessive concern about body weight and shape (*Diagnostic and Statistical Manual of Mental Disorders*, 5th ed.; *DSM-5*; American Psychiatric Association [APA], 2013; Fairburn & Harrison, 2003; Herzog & Eddy, 2009). Among people with eating disorders, sense of self-worth is determined by their shape and weight, and they may have an intense fear of becoming fat and a disturbed body image, and deny the seriousness of their weight loss. Abnormal eating behaviours may include binge eating, or behaviours that are intended to get rid of food and control shape or weight, such as restricting food intake, self-induced vomiting, misuse of laxatives and diuretics and excessive exercise.

Eating disorders affect mainly young females (Garfinkel et al., 1995; Polivy et al., 2005; Reijonen et al., 2003). The typical age of onset of eating disorders is in mid-adolescence. The peak age of onset of AN is between 12 and 15 years; this age group makes up approximately 40% of all identified cases of AN (Hoek & van Hoeken). The peak age of onset of BN is between 15 and 19 years of age (Bulik, Reba, Siega-Riz, & Reichborn-Kjennerud, 2005; Currin, Schmidt, Treasure, & Jick, 2005; Hoek & van Hoeken, 2003; National Eating Disorders Collaboration [NEDC], 2010).

The effects of eating disorders, particularly AN, are especially serious during adolescence, when several organ systems, including the heart, brain, and skeletal system, are growing and developing (Katzman, 2005). Adolescents with eating disorders experience significant disruption to their lives at a crucial time in their development (Gowers & Bryant-Waugh, 2004). They suffer from social isolation;

interpersonal, family, academic and occupational difficulties; and considerably reduced quality of life (Abraham, Brown, Boyd, Luscombe, & Russell, 2006; Bamford & Sly, 2010; DeJong et al., 2013; Jenkins et al., 2014). Eating disorders significantly affect physical, cognitive, social and psychological health, and lead to functional impairment and distress (Patton, Selzer, Coffey, Carlin, & Wolfe, 1999; Treasure, Claudino, & Zucker, 2010). Eating disorders not only affect the individual, creating a heavy personal and economic burden (Grenon et al., 2010), but also cause considerable distress, pain and anxiety for parents, siblings, friends and colleagues (Dimitropoulos, Klopfer, Lazar, & Schacter, 2009; Kyriacou, Treasure, & Schmidt, 2008; Latzer, Ben-Ari, & Galimidi, 2002; Ma, 2011; Treasure et al., 2001). The impact on family members includes disruption to family relationships, caregiver stress and loss of family income due to parents taking time from work (Goddard, Macdonald, & Treasure, 2010; Whitney & Eisler, 2005). Having a family member with an eating disorder is associated with mental and physical health difficulties (de la Rie, van Furth De Koning, Noordenbos, & Donker, 2005). Family members suffer from high levels of stress and burnout; the impact of caring for a family member with an eating disorder is similar to that of caring for someone with psychosis (Treasure et al., 2001; Zabala, Macdonald, & Treasure, 2009). Parents of a young person with an eating disorder may feel guilt and shame about their perceived role in the illness, hopelessness and worry about the best ways to help their child, and anxiety and fear about the potential medical, personality and cognitive consequences of the eating disorder (Perkins, Winn, Murray, Murphy, & Schmidt, 2004; Eisler, 2005; Goodier et al., 2014).

Eating disorders are one of the most difficult psychological illnesses to treat, known for their severity, comorbidity, and potential for relapse (Smink et al., 2013). Treatment is hampered due to the shame, denial and lack of insight connected with the

disorder (Gowers, 2008). Many young people with eating disorders struggle to acknowledge that they have a problem, and are ambivalent about engaging with any form of intervention or the prospect of change, which makes treatment more difficult (Gowers & Bryant-Waugh, 2004). Clinical studies have indicated that 50–60% of people with eating disorders who complete clinical trials did not benefit from current treatments (Hubbard, 2013; Mitchell, Agras, & Wonderlich, 2007). Treatment outcomes are the worst for individuals with AN compared to other eating disorder diagnoses, with a recent study finding that only approximately 25% of patients recover (Zipfel et al., 2014).

An understanding of the aetiology and factors that maintain eating disorders is essential to guide prevention and treatment approaches. Although several theories on the aetiology of eating disorders exist, no single theory has evidenced explanatory superiority. The symptoms of eating disorders are conceptualised as underpinned by deficits in affect regulation, interpersonal problems, low self-esteem, and lack of sense of self (Gilboa-Schechtman, Avnon, Zubery, & Jeczmiem, 2006; Skårderud, 2007). Eating disorder symptoms are considered to develop as an effort to gain a sense of self and regulate affect in the absence of adaptive emotion regulation strategies (Skårderud & Fonagy, 2012). One of the approaches beginning to be recognised as offering useful insights is attachment theory (Zachrisson & Skårderud, 2010; Tasca, Ritchie, & Balfour, 2011). Attachment theory (Bowlby, 1969, 1973, 1980, 1982) highlights the role of early caregiving experiences as either a protective factor or a risk factor associated with ongoing relationship difficulties and a range of outcomes across domains relating to psychosocial functioning (Main, 1996; Fonagy & Target, 1996). Bowlby proposed that human beings have a fundamental need to form attachments with others throughout life, and that the quality of these attachments affects an individual's ongoing psychosocial

functioning. Attachment theory offers a unique contribution to understanding eating disorders due to its perspective on the developing sense of self, autonomy, self-efficacy, self-esteem, capacity to regulate affect and motivation, interpersonal relationships, and development of psychopathology (Tasca et al., 2011). Individuals with eating disorders exhibit difficulties across these domains, including difficulty with affect regulation, interpersonal problems, low self-esteem, and lack of sense of self (e.g., Fairburn & Harrison, 2003; Treasure & Schmidt, 2013). Attachment theory provides a theory that can explain the interplay between developmentally based vulnerabilities, such as interpersonal style, affect regulation, and sense of self, and how these affect eating disorder symptoms, such as starving, bingeing, bingeing and purging, and over-exercising (Tasca & Balfour, 2014b).

Considerable empirical evidence has identified a connection between insecure patterns of attachment and eating disorders in adults (e.g., O’Kearney, 1996; Soares & Dias, 2007; Ward, Ramsay, Turnbull, Benedettini, & Treasure, 2000; Zachrisson & Skårderud, 2010; see Kuipers & Bekker, 2012, for review). While the connection between insecure attachment and eating disorders has been well researched in adults, there is less research available on adolescent populations, and the mechanisms and factors linking attachment insecurity and eating disorders are not well understood.

One way to understand the connection between attachment and psychopathology is through the concept of mentalisation. Fonagy and colleagues drew on the fields of psychoanalytic theory, attachment theory, theory of mind and developmental psychology to develop the concepts of mentalisation theory (Fonagy, Gergely, Jurist, & Target, 2002; Fonagy & Target, 1996). They defined *mentalising* as understanding that one’s own behaviour and the behaviour of others are dictated by internal states, such as intentions, thoughts, desires, feelings, beliefs, goals and motivations. *Mentalising*

capacity develops within the context of a secure attachment relationship (Fonagy et al., 2002), and is key to understanding the association between attachment and psychopathology. Maternal mentalising capacity has been found to play an important role in the development of children's attachment security, and attachment security to affect the development of mentalising capacity in children. Within an attachment paradigm, the mentalising model of eating disorders (e.g., Skårderud, 2007a) proposes that failures in attachment lead to unstable or reduced mentalisation, which is characteristic of patients with eating disorders.

Mentalising theory proposes that the onset of eating disorders occurs in the context of insecure attachment patterns. The model proposes that insecure attachment patterns result in a deficit in mentalising capacity, and that this deficit highlights discontinuities in the structure of self, and results in poor affect regulation, interpersonal problems, low self-esteem, and lack of sense of self (Skårderud & Fonagy, 2012). Preliminary studies indicate that individuals with eating disorders demonstrate deficits in mentalising capacity (e.g., Skårderud, 2007a; Tchanturia et al., 2012; Ward et al., 2001). The broad construct of mentalisation can be measured by a person's capacity for *reflective functioning* (RF; Fonagy et al., 2002; Fonagy & Target, 1997). RF assesses mentalising capacity in the context of attachment relationships, and refers to the capacity to think about mental states and their relation to behaviour (Katznelson, 2014). The terms 'mentalising' and 'reflective functioning' will be used interchangeably in this thesis.

The theories of attachment and mentalisation offer perspectives for understanding the presence of emotional, behavioural and relationship difficulties during adolescence. In order to better understand, prevent and treat eating disorders,

more knowledge is required about the roles of attachment and mentalising in their development.

1.1 Aim and Scope of Study

This research broadly aims to investigate the attachment styles and mentalising capacities of adolescent girls with eating disorders, their mothers' capacities to reflect on their own and their daughters' mental states, and the impact of eating disorders on parent-child and family relationships and family functioning compared to a non-clinical control group. To date, although there have been several studies with clinical samples of adults with eating disorders, few have assessed attachment styles in adolescents with eating disorders, and very few have investigated the relationships between attachment, mentalising and eating disorders. This study is one of only a few studies that have considered the parental RF of adolescents with eating disorders in order to investigate a possible intergenerational transmission of RF between mother and daughter. To the author's knowledge, this is the first study that has utilised both quantitative and qualitative analysis to explore attachment styles and reflective functioning on parent child relationships and family functioning in families of adolescents with eating disorders. This research offers new understanding by using measures of adolescent attachment and RF not previously utilised with this sample. It also utilises a measure of parental RF not previously used with parents of Australian adolescents.

1.2 Overview of Thesis

This research project is positioned within the context of three bodies of literature and research: (a) aetiology of eating disorders, (b) attachment theory and (c) mentalising theory. Chapter 2 of this thesis will describe eating disorders and present various theoretical approaches to understanding their aetiology and maintenance. Chapter 3 will explore attachment theory and its usefulness as a model for understanding the aetiology

and maintenance of eating disorders. Specifically, the chapter will explain the importance of attachment theory to the period of adolescence, discuss the measurement of attachment styles in adolescence and explore the links between attachment and adolescent mental health, including eating disorders. Chapter 4 will focus on the construct of mentalisation, outlining the development of mentalising capacity and measurement of RF in adolescents and parents, and examining the connections between mentalising capacity, mental health, and eating disorders. Chapter 4 will also review the current literature on mentalising and eating disorders. Chapter 5 will outline the rationale and aims of the empirical studies. Chapter 6 will address the studies' methodology. Chapters 7, 8 and 9 will document Studies 1, 2 and 3 respectively, presenting their aims and results and discuss their findings. Chapter 10 will provide an overall discussion of the results, presenting key findings and discuss them in terms of theoretical and clinical implications.

Chapter 2: Theoretical Approaches to Understanding Eating Disorders

2.1 Defining Eating Disorders

2.1.1 Anorexia nervosa

AN is a serious psychiatric illness with potentially fatal consequences. It involves restriction of energy intake leading to a drastically low body weight, the presence of intense fear of gaining weight or becoming fat, and disturbances in the experience of body weight and shape (*DSM-5*; APA, 2013). The restricting subtype of AN (AN-R) is characterised by strict dieting. Individuals with the binge eating and purging subtype (AN-BP) experience binge episodes or engage in self-induced vomiting or misuse of laxatives, diuretics or enemas (Brownell & Fairburn, 2002). Due to the absence of large-scale prevalence studies in Australia, information is dependent on international estimates, which suggest that between 0.3% and 1.5% of the population meet criteria for AN (NEDC, 2013).

As people with AN lose weight, they experience symptoms of irritability, labile mood, poor concentration, depression and anxiety (Fairburn & Harrison, 2003). As they deteriorate, people with AN typically lose interest in their usual activities, and become socially withdrawn and isolated. As a result, AN is frequently associated with other ongoing comorbid problems such as depression, anxiety, social withdrawal, self-consciousness, fatigue and medical complications (Bulik et al., 2005; Hudson, Hiripi, Pope Jr, & Kessler, 2007; Lewinsohn, Striegel-Moore, & Seeley, 2000). Adolescents with AN are more likely than adults to require hospitalisation for their illness, due to these associated medical complications occurring at a critical time for growth and development (Castro, Gila, Puig, Rodriguez, & Toro, 2004). In an Australian study, Madden, Morris, Zurynski, Kohn, and Elliot (2009) observed that 61% of newly

diagnosed AN cases among adolescents had at least one potentially life-threatening medical complication. Physical consequences of eating disorders include electrolyte imbalances, nutritional deficiencies and cardiovascular complications (Treasure et al., 2010). A reduction in bone density is often detected within a year of restricted food intake from an eating disorder, with long-term outcomes being fractures and osteoporosis (Treasure et al., 2010). AN can also reduce long-term growth potential, as well as fertility and maternity (Hjern, Lindberg, & Lindblad, 2006).

The average duration of an eating disorder is between five and seven years (NEDC, 2010). Due to the treatment-resistant features of AN, full recovery is achieved in only 50–60% of sufferers (Gura, 2008; Wilson, Grilo, & Vitousek, 2007), even after years of psychotherapy. Mortality from AN is the highest among all psychiatric disorders (Lock, Agras, Le Grange, Couturier, Safer, & Bryson, 2013). Within a 10-year period, 5% of people with an eating disorder will die as a result of their illness, with various emerging causes of death, including suicide and sudden heart failure (Garner, Vitousek, & Pike, 1997; Steinhausen, Seidel, & Winkler Metzke, 2000).

2.1.2 **Bulimia nervosa**

BN is characterised by recurrent episodes of binge eating that occur on average at least once per week; compensatory behaviours used to avoid weight gain, such as vomiting or laxative use; and self-evaluation that is overly influenced by body shape and weight (*DSM-5*; APA, 2013). Binge eating is defined as eating an unusually large amount of food in a short period of time with an accompanying sense of loss of control. In most cases of BN, individuals meet the criteria for the purging subtype, in which binge eating is followed by self-induced vomiting or laxative misuse (Fairburn & Harrison, 2003). Individuals with the non-purging subtype use other means of compensatory behaviour, such as fasting or excessive exercise (Brownell & Fairburn,

2002). The prevalence of BN is slightly higher than that of AN, with prevalence rates between 0.9% and 2.1% in women (NEDC, 2010).

BN is associated with dental, gum, and mouth problems that occur as a result of purging by vomiting. Other physical consequences can include gastrointestinal bleeding and rupture, heart arrhythmias and heart failure (Mehler, 2010). BN patients are noted to demonstrate characteristics of compulsiveness, impulsivity and affective instability, with the binge-purge cycle seen to serve a function of affect regulation (Johnson, Lewis, & Hagman, 1984; Vitousek, & Manke, 1994).

2.1.3 Other Specified Feeding or Eating Disorder (OSFED)

A third diagnostic category for eating disorders outlined in the *DSM-5* (APA, 2013) is OSFED, a residual category designed to capture other clinically significant eating disorder presentations besides AN and BN. Typically, individuals in this category resemble sufferers of AN or BN, but only partially meet diagnostic criteria. For instance, an individual may meet the full criteria for AN except that, despite significant weight loss, the individual's weight is still within the normal range (atypical AN); another individual may meet all the criteria for BN, except that the binge eating and compensatory behaviours occur less than once a week, or for less than three months (BN of low frequency and/or limited duration; APA, 2013). Typically, individuals who fall under this category experience the same distressing fear of weight gain and disabling disturbances in body image (NEDC, 2010), as well as clinically significant distress and impairment in social, occupational and other areas of functioning, as people who meet the full criteria for AN or BN (Smink, van Hoeken, & Hoek, 2012; Smink, van Hoeken, Oldehinkel, & Hoek, 2014; Thomas, Vartanian, & Brownell, 2009).

While many theories and models have been developed to attempt to explain the aetiology of eating disorders, no single cause has been determined. Eating disorders

involve complex interactions of biological, psychological, familial, social and cultural factors (Connan, Campbell, Katzman, Lightman, & Treasure, 2003; Keel & Haedt, 2008; Stice, 2001; Treasure & Schmidt, 2013). The main theoretical models available for understanding the presence and maintenance of eating disorders will be discussed in the following sections.

2.2 Theories

2.2.1 Biology and genetics

Advances in genetics and the use of neuroimaging in experiments have created an understanding of eating disorders from a neurodevelopmental perspective (DeSocio, 2013). Eating disorders can be understood as manifestations of complex interactions between genetically determined traits, underlying alterations in brain neurocircuits, and environmental events or experiences that intensify the expression of eating disorder symptoms (DeSocio, 2013). The estimated heritability of AN is between 58% and 75% (Bulik, Slof-Op't Landt, van Furth, & Sullivan, 2007; Thornton, Mazzeo, & Bulik, 2011; Dmitrzak-Weglarz et al., 2013; Zerwas & Bulik, 2011). Heritability estimates are weaker for BN, with corresponding estimates of between 35% and 30%.

Some personality traits that are typically associated with AN, such as harm avoidance, social introversion, task perseveration, cognitive inflexibility, rule-governed behaviour and perfectionism, are shared in families (Thornton et al., 2011). These personality traits are more prevalent in families at risk for AN, with heritability estimates ranging from 27% to 71% (Kaye, Wagner, Fudge, & Paulus, 2011; Lilenfeld, 2011; Thornton et al., 2011). It has been proposed that underlying altered monoamine neuronal modulation, or dorsal caudate function, leads to these traits. It may be that puberty-related hormones and brain changes exacerbate these difficulties. Abnormalities in the neurocircuits of the ventral cortico-striato-thalamo-cortical circuit and the

integrative functions of the insula underlie differences in personality traits and neuropsychological characteristics of individuals with AN and their family members (Agrawal & Lask, 2009). These traits and characteristics precede symptom onset, and persist after weight restoration (Agrawal & Lask, 2009; Kaye et al., 2011; Key, O'Brien, Gordon, Christie, & Lask, 2006). This research indicates that pre-existing neuropsychological differences are likely to play some role in the aetiology of eating disorders.

While there is substantial evidence for a genetic contribution to the aetiology of eating disorders, there are several problems with the current genetic and neurophysiological models. The specific genetic characteristics that influence the aetiology of eating disorders are not well understood. While genetically based differences in traits and neuropsychological characteristics appear to contribute to individual vulnerabilities to eating disorders, these differences alone are not enough to trigger symptom expression. Further research is required to identify environmental factors and quantify their interaction with biological factors (Bulik et al., 2005; Coulthard, Blissett, & Harris, 2004; Mazzeo, Zucker, Kerke, Mitchell, & Bulik, 2005; Steiner et al., 2003).

Current genetic and neurophysiological models also do not explain the increased occurrence of eating disorders in 15–19 year olds (Smink et al., 2013) or their higher prevalence rates in Western cultures (Keel & Klump, 2003). The increasing occurrence of eating disorders in non-Western countries has been linked with cultural transition and globalisation, including modernisation, urbanisation and exposure to the Western beauty ideal through media (Becker et al., 2011; Nasser, 2009; Pavlova, Uher, Dragomirecka, & Papezova, 2010). In addition, the majority of studies under this approach are

conducted during the acute or recovery phase of an eating disorder. During this time, physiological changes related to starvation may affect the findings of the studies.

2.2.2 Psychoanalytic theory

Psychoanalytic theories have focused on the unconscious and symbolic meanings of eating disorders, particularly AN. Perspectives within this field have focused on describing and understanding the function and symbolic meanings of symptoms, as well as the role of infancy and relationships developed in early childhood. In psychoanalytic theories eating disorder symptoms are understood as manifestations of a struggling sense of self (e.g. self-concept, self-esteem, self-control), and eating disorder symptoms are an expression of these underlying issues (Dancyger, Krakower & Fornari, 2013). Early theorists viewed AN as connected to melancholia, and saw it as an expression of an unconscious fantasy of oral pregnancy, an expression of sexual fear displaced on the body, and a resistance to growth and maturation (Berlin, Boatman, Sheimo, & Szurek, 1951; Caparrotta & Ghaffari, 2006; Waller, Kaufman, & Deutsch, 1940). Many early analysts saw ambivalence as a core theme in the psychopathology of eating disorders (Caparrotta & Ghaffari, 2006).

Hilde Bruch (1969, 1973) was one of the first to highlight the contribution of early relationship difficulties to eating disorders. Bruch focused on the mother–infant relationship, and considered distortion of body image, disturbances in perception and cognition about hunger, and a sense of ineffectiveness as the three main disturbances of ego development. Bruch hypothesised that children who were brought up in family environments high in intrusiveness, overprotection and control would feel ineffectual and may develop AN as a means to re-establish power. By being raised in a family where the child’s every need is met by a ‘perfect’ mother, Bruch argued, the child may not learn to identify their own needs or have an understanding of their internal states. As

a result, the child may use self-starvation as a defence mechanism against feelings of powerlessness and ineffectiveness, and as a means to communicate their protest and fight for autonomy (Bruch, 1982).

Selvini Palazzoli (1974) also viewed the mother–daughter relationship as highly significant in the development of eating disorders. She theorised that anorexic behaviour results from a distortion of mental representations of body, self and object, due to a confusing identification with an overprotective mother who cannot differentiate her child as a separate being. British psychoanalyst Birksted-Breen (1989) suggested that the female AN patient wants, yet fears, fusion with her mother, and one of the outcomes of this fusion is a lack of ‘transitional space’. She sees this as the cause of an observed inherent disturbance in symbolisation in AN patients. Lawrence (2002) also addresses lack of symbolisation, stating that symbolic aspects of the mother are concretely equated with food, and therefore rejected (Caparrotta & Ghaffari, 2006).

Object relations theory and *self psychology* both arose from consideration of the influence of the mother–infant relationship on intrapsychic development and organisation of self. Object relations theorists who have contributed to the understanding of eating disorders in adults include Mahler (1972), Kernberg (1976), Blatt (1974), Masterson (1978, 1985), Sours (1980), Sugarman (1991) and Patton (1992). Early object relations theorists such as Klein (1957) and Winnicott (1965) first proposed that the mother–infant relationship is a factor in the development of eating disorders (Caparrotta & Ghaffari, 2006). Object relations theories assert that experiences of early failures and conflicts in a child’s environment are central to understanding how eating disorders develop. In particular, experiences with parents that lead to the child avoiding separation and individuation are seen to be significant in eating disorders. This perspective suggests that parental narcissism leads to a need to

control their child's moods and actions, resulting in a blurring of boundaries so that the child experiences herself as an extension of one or both parents (Bornstein & Masling, 2002). This leads to the internalisation of self-object representations becoming blurred and diffused.

Self psychology theorist Heinz Kohut (Kochanska, Kim, & Kohut, 1978; Kohut, 1979) presented a version of the object relations theory. His main contribution was an elaboration of the concept of the self, including the way the self emerges, the person's experience of self and defences used to protect the integrity of self. Self psychology identifies *self objects* as necessary to maintain ideal functioning. Self objects can be in the form of an attuned reliable caregiver, or significant items that can evoke self-affirming experiences. When these self objects are absent or unreliable, parts of the self become fragmented, leading to psychopathology, including anxiety, depression and eating disorders.

Within the tradition of self psychology, the concept of *concretisation* has been applied to understand eating disorders (Atwood & Stolorow, 1984; Barth, 1988; Chessick, 1984–1985; Geist, 1985, 1989; Goodsitt, 1985, 1997; Miller, 1991). This concept suggests that people with vulnerable self-organisation, when threatened by the loss of their sense of self, try to reduce this sense of loss by expressing their inner turmoil through their body. In relation to eating disorders, the person with AN is seen to be experiencing a disorder of self, and the process of concretisation serves as an attempt to maintain the cohesion and stability of their sense of self.

Some psychoanalytic authors suggest that eating disorders are partly due to unstable identity formation at puberty, causing young women to feel a lack of control over their bodies. French psychoanalyst Chasseguet-Smirgel (1995) suggested that eating disorders are an enactment of pseudo-independence to avoid intense unconscious

dependency conflicts, especially in relation to the mother during adolescence. Laufer (1996) also suggested that the emergence of sexuality during adolescence creates conflict and vulnerabilities regarding being taken over by forces the developing adolescent cannot control. Cross (1993) theorised that female social and sexual development leads adolescent girls to feel alienated from their bodies. This alienation leads them to feel like passive victims to the changes in their bodies and emotions, and thus vulnerable to others who may have power to control them. Cross viewed the development of eating disorders as an effort to regain control over the body, and eating-disordered behaviours as attempts to turn a passive fear into something active.

While psychoanalytic theories add to the understanding of the aetiology of eating disorders, a limitation of these theories is that they do not take into account possible biological, cognitive, social, interpersonal and contextual factors that may also contribute to the onset and maintenance of eating disorders (Tasca & Balfour, 2014b).

Psychodynamic treatments for eating disorders are described in the literature (Robin et al., 1999; Bowers, Evans, & Van Cleve, 1996; Jeammet & Chabert, 1998). Some studies found that psychodynamic treatments of adult eating disorders were not as effective as Cognitive Behavioural Therapy (CBT) (Garner, Rockert, Davis, Garner, Olmsted, & Eagle, 1993; Poulsen et al., 2014); however, the psychodynamic therapies in these trials were required not to discuss eating disorder symptoms, which would have reduced the effectiveness of the interventions (Tasca & Balfour, 2014b). A large-scale study of psychodynamic therapy of AN that did address symptoms found it to be as effective as CBT at one year follow-up (Zipfel et al., 2014).

Dancyger et al. (2013) conducted a review of psychodynamically informed therapies for the treatment of eating disorders in children and adolescents. They identified that while psychodynamically informed therapies are used widely for

adolescents with eating disorder, there are very few controlled studies for psychodynamic approaches for eating disorders. They also noted that before psychological therapies can begin, medical evaluation and stabilisation must come first. Sometimes people with eating disorders are so unwell physically and cognitively from starvation, or experiencing severe depression or severe compulsive behaviours, that psychotherapy cannot take place. In such instances, starvation, immediate suicidal ideation, compulsive binge eating and purging or serious medical complications must be addressed before psychodynamic work can be effective (Dancyger et al., 2013). On the other hand, weight gain and cessation of bingeing and purging alone is not sufficient to allow for full recovery. For long term recovery to occur, the psychological underpinnings of the disorder must be addressed. Evaluation of the available evidence therefore suggests that the psychodynamic approach may best be used in conjunction with other approaches. While psychodynamic understanding and approach to treating eating disorders may be helpful, an approach that includes discussion of eating and weight related behaviours (such as CBT) may also be necessary.

2.2.3 Cognitive behavioural approaches

The CBT approach considers eating disorders as caused by distorted and dysfunctional attitudes, behaviours, and beliefs about food, weight and shape (Murphy, Straebl, Cooper, & Fairburn, 2010). CBT proposes that the restriction of food intake that occurs at the onset of an eating disorder begins for two reasons: a need to feel in control of life, which is displaced onto eating behaviour; and an over-evaluation of weight and shape (Fairburn & Harrison, 2003; Fairburn, Shafran, & Cooper, 1999). It is believed that personality vulnerabilities such as introversion, sensitivity, and a tendency towards interpersonal isolation (Waller et al., 2007) interact with life experiences to build beliefs about the self and the world, known as schemas. Through these schemas,

vulnerable individuals take on distorted ideas about themselves, the world and their future. In an attempt to gain control over their perceived unstable internal and external environments, people with AN engage in dietary restriction that becomes highly reinforcing (Fairburn & Harrison, 2003; Garner & Bemis, 1982). Rigid self-schemas can lead to a set of self-destructive core beliefs, attitudes and assumptions about body, weight, shape and competency (Waller et al., 2007). Continued weight loss or failure to grow can lead to criticism, which increases social isolation and reinforces distorted cognitions (Bowers & Ansher, 2000). Often, individuals with eating disorders have rigid and dichotomous cognitive styles. Foods may be classified as 'good' or 'bad' and body perceptions as 'fat' versus 'thin'. In addition, individuals with eating disorders place excessive value on physical attractiveness and thinness. These beliefs around the importance of thinness and the fear of becoming fat are perpetuated by the individual's distorted cognitions.

In the case of BN, failure to adhere to rigid and unrealistic rules about food intake can be experienced as a lack of control, and lead to an all-or-nothing reaction in which an individual gives up entirely on their strict efforts to control their eating, and binges. When extreme dieting and starvation lead to binge eating, this can exacerbate the sense of being out of control (Fairburn & Harrison, 2003). Compensatory behaviours such as vomiting or taking laxatives are used to avoid or reduce weight gain, allowing the binge-eating cycle to be maintained by reducing the impact of overeating. Binge eating, in turn, increases worry about eating, weight and shape, motivating greater dietary restraint. This pattern of behaviour is a vicious cycle that maintains the eating disorder.

The cognitive behavioural model articulates sound possible reasons for eating disorder onset and maintenance, but on its own does not acknowledge the biological

contributions, as well as the dynamic and developmental influences, that factor into the aetiology of eating disorders. Another weakness of the cognitive behavioural model is a lack of clarity regarding what leads individuals to develop the unhelpful schemas that make them vulnerable to developing the distorted ideas about themselves, the world and their future that in turn make them vulnerable to an eating disorder. In addition, although many clinical studies have focused on CBT treatment for eating disorders (Wilson & Fairburn, 2007), between 50% and 60% of participants who completed clinical trials did not benefit from current treatments for eating disorders (Cooper & Fairburn, 2011; Mitchell et al., 2007), suggesting that targeting these features alone is not sufficient to cure an eating disorder.

2.2.4 Family systems theory

Family systems theories consider the contribution of family dynamics to the presence and maintenance of eating disorders. A family systems model identifies that families are complex interconnected social systems—a system of relationships that provide the context in which eating disorders are embedded. The purpose of this model is not to suggest that families cause eating disorders, but to help explain how the disorders develop within and become part of family relationships (Eisler, 2005). In their influential work, Minuchin, Rosman and Baker (1978) applied a structural approach to theorising eating disorders. This model proposes three important factors in the development of a disorder: (1) the child is physiologically vulnerable; (2) the family has characteristics of enmeshment (including boundary-blurring between family members), overprotectiveness, rigidity and poor conflict resolution; and (3) the child is conflict-avoidant, which reinforces the eating disorder symptoms. The structural family therapy approach suggests that the symptoms of AN serve to maintain pathological family processes, such as avoidance of conflict and lack of conflict resolution, rigidity or

commitment to maintaining the status quo, overprotectiveness and enmeshment (Lock & le Grange, 2005).

Strategic family therapy does not assume that pathological family processes are present, but sees the eating disorder symptoms as adaptive responses within the family's particular social context, and maintained by the family's behaviours. Since Minuchin et al.'s (1978) contribution, and those of other family therapists such as the Milan Associates (Selvini Palazzoli, Prata, Cecchin, Boscolo, Stierlin and White), family therapy has been established as an important treatment approach for adolescent AN, supported by empirical research (le Grange & Eisler, 2009).

Evidence suggests that the family factors originally outlined by Minuchin et al. (1978) are not present in all families that have a child with AN (le Grange & Eisler, 2009). Research has established that families of adolescents with an eating disorder are a heterogeneous group when it comes to their relationships, emotional climate, and patterns of interaction. There is evidence, however, that family functioning and dynamics may influence the development and maintenance of eating disorders. Family relationships characterised by low paternal affection, poor parent–adolescent communication, low parental time, conflict, criticism and hostility, and low parental education are associated with AN during adolescence or early adulthood (e.g., Herzog, Kronmuller, Hartmann, Bergmann, & Kroeger, 2000; Lilenfeld et al., 2000; Rodriguez Martin, Novalbos Ruiz, Martinez Nieto, Escobar Jaminez, & Castro de Haro, 2005; Sim et al., 2009; Steiner et al., 2003). Similarly, low family cohesion, high conflict and high parental intrusiveness are observed in families with adolescents with BN (e.g., Leon, Fulkerson, Perry, & Dube, 1994; Rorty, Yager, Buckwalter, & Guthrie, 2000; Scalf-McIver & Thompson, 1989; Webster & Palmer, 2000).

Other studies have likewise found that families of adolescents with eating disorders are characterised by higher levels of conflict, more strained parent–child relationships, difficulty with intimacy and trust, and decreased harmony between the parents compared with control families (e.g., Latzer, Lavee, & Gal, 2009; Ma, 2011). Ma (2011) found that conflict between eating-disordered Chinese adolescents and their mothers centred on issues related to the eating disorder, in addition to the developmental issues typical of healthy adolescents, including maturity, fears of growing up, and striving for autonomy. Parents of adolescents with eating disorders tend to supervise them more strictly, limit their autonomy, and provide less encouragement for the process of separation and individuation (Dancyger, Fornari, Scionti, Wisotsky, & Mandel, 2003; Latzer et al., 2002; Mujtaba & Furnham, 2001; Solomon, Klump, McGue, Iacono, & Elkins, 2003).

One limitation of family systems theory is its potential to be perceived as blaming towards families. It is clear that eating disorders emerge in children and adolescents from various family backgrounds with various levels of family functioning, so this theory is not sufficient to account for all eating disorder presentations. In recent years, there has been a shift away from seeing the family as a source of the aetiology of an eating disorder, towards recognising that family dynamics may evolve in the context of the development of an eating disorder, in ways that may serve to maintain the disorder (Eisler, 2005; Treasure & Schmidt, 2013). The evidence that highlights that family functioning and dynamics may influence the development and maintenance of eating disorders however, should continue to be explored. Findings that demonstrate that parental and family relationships do contribute to the development and maintenance of eating disorders are not necessarily blaming, and can point to important areas of focus for prevention and treatment.

2.2.5 Socio-cultural theory

The socio-cultural model considers eating disorders within the broad social context and considers their aetiology and maintenance as expressions of social and cultural values. Socio-cultural models highlight that eating disorders are most prevalent in Western countries with high socio-economic development (Striegel-Moore & Cachelin, 2001). There has been an increase in the prevalence of eating disorders in some non-Western countries that are experiencing Westernisation (Becker et al., 2011; Levine & Smolak, 2010; Makino, Tsuboi, & Dennerstein, 2004; Nasser, 2009; Pavlova et al., 2010; Soh & Walter, 2013). Some perspectives suggest that eating disorders represent the anxieties and unresolved problems of a culture. For example, it is thought that the disparity between a traditional female gender role and the expectations placed on women in a modern society creates a conflict of identity. The conflict that arises from attempting to fulfil societal expectations results in stress and may lead to the development of an eating disorder.

The feminist model (e.g., Bordo, 1993; Chernin, 1985; Orbach, 1986) asserts that eating disorders result from gender role stereotypes, the over-valuation of beauty, pressure to be thin, and women's subordinate role in patriarchal society (Striegel-Moore & Cachelin, 2001). Some developed countries, particularly Western cultures, promote thinness as an inextricable part of beauty (NEDC, 2010). These socio-cultural pressures, reinforced by family, peers and the media, promote an internalisation of the 'thin ideal' (Stice, 1994). The high value placed on thinness in Western society, perpetuated by the fashion industry, places young women at greater risk of developing an eating disorder (e.g., Fouts & Burggraf, 1999; McCabe, Ricciardelli, Mellor, & Ball, 2005; Pinhas, Toner, Ali, Garfinkel, & Stuckless, 1999). During adolescence, psychological influences on development are powerful, and exposure to unrealistic ideals of feminine

beauty can increase the risk of eating disorders for vulnerable teenagers (Calado, Lameiras, Sepulveda, Rodriguez, & Carrera, 2010; Steiner et al., 2003; Stice, Rohde, Gau, & Shaw, 2009). The impact of Western culture was demonstrated by a prospective study of eating attitudes and behaviours in ethnic Fijian teenage girls following the introduction of television to their lives (Becker, Burwell, Gilman, Herzog, & Hamburg, 2002). Becker et al. observed that, following television exposure, key indicators of disordered eating were significantly more prevalent in the culture, which previously had an extremely low prevalence of eating disorders.

While societal expectations around culture and gender, including the idealisation of thinness, affect the aetiology of eating disorders, this pressure alone cannot completely account for the presence of eating disorders. For example, these theories do not explain the incidence of eating disorders in men or the occurrence of eating disorders in non-Westernised societies (Mumford, 1993). Further, the socio-cultural model does not address why one individual may experience an eating disorder, where another individual with a similar set of socio-cultural risk factors may be protected (Ward et al., 2000). A more complete explanatory model acknowledges that those with predisposing genetic, biological and personality risk factors are more likely to channel their dissatisfaction and distress towards a focus on body shape and size, providing an outlet for individual pathology (Polivy & Herman, 2002). While it is able to add to our knowledge, the socio-cultural perspective is narrow in that it leaves out the biological, psychological and developmental components of eating disorders.

2.3 Summary

This chapter has explored several main theories of the development and maintenance of eating disorders. The theoretical explanations outlined above suggest some potential pathways to developing an eating disorder, but any one of these aspects

alone cannot fully account for all of the underlying issues involved in such complex disorders (Orzolek-Kronner, 2002). Over time, the idea of a single, common developmental pathway to eating disorders has been dismissed. However, taken together, the various theoretical approaches demonstrate the complex interplay of risk factors and influences that contribute to the development and maintenance of an eating disorder. Attachment theory offers a perspective on the development of sense of self, interpersonal functioning, self-efficacy, self-esteem, and capacity to regulate affect and motivation that develops in the context of the parent–child relationship. Chapter 3 will explore attachment theory and consider its contribution to understanding the aetiology and maintenance of eating disorders.

Chapter 3: Attachment Theory and Implications for Adolescent Mental Health and Eating Disorders

Attachment theory was developed by John Bowlby (1969, 1973, 1980). He proposed a biologically based system through which infants signal the need for proximity and accessibility to their primary attachment figure via behaviours such as crying, smiling and clinging at times of threat and distress, thus leading to protection within the environment. This attachment system assists the infant to experience a sense of security, which in turn meets physical needs, regulates emotional experience (Sroufe, 1996), and allows for the development of a coherent and symbolising self (Fonagy, 2001). Attachment patterns, which develop from birth, are influenced by unique characteristics of the infant and parent, and the quality of their interactions (Tronick, 2003). Parental sensitivity to the child's needs, and capacity to respond to them appropriately, are key mechanisms in shaping brain development, particularly the formation of mental processes involved in cognitive functioning related to emotion regulation and communication (see Schore, 2001, for a review).

Within a secure attachment relationship, the infant learns that arousal in the presence of the caregiver will not be overwhelming, but that the infant will be understood and responded to by the caregiver, thus leading to emotional regulation. By the end of her first year, the infant's behaviour with her caregiver is based on expectations within the relationship. Her past experiences with the caregiver dictate her expectations about the availability of her caregiver to co-regulate her distress. Mary Ainsworth and colleagues (Ainsworth, Blehar, Waters, & Wall, 1978) developed the Strange Situation Procedure (Ainsworth et al., 1978) to measure an infant's attachment style. They identified that the quality of parental sensitivity and responsiveness to an infant's needs leads to a particular attachment organisation in the child. They found that

sensitivity of the mother during play, feeding, physical contact and episodes of distress predicted the quality of the mother–infant relationship in the last quarter of the infant’s first year. Through the Strange Situation Procedure, three main patterns of attachment were identified: secure, insecure-avoidant, and insecure-ambivalent (Ainsworth et al., 1978).

The secure pattern of attachment is typified by the infant exploring her environment with confidence, maintaining proximity to her caregiver by verbal, visual and physical means. The secure infant will engage in play and is wary of strangers when attempting to interact with them. Secure infants tend to protest when the caregiver leaves the room and seek comfort from the caregiver when they return; once comforted, they can resume their activities. This exemplifies a relationship where the caregiver is able to organise and stabilise the infant’s distressed emotions; the infant is able, therefore, to remain relatively organised in stressful situations. Approximately 65% of infants in community populations display secure patterns of attachment to their caregivers, and this rate of secure attachment is stable across cultures (Prior & Glaser, 2006).

Main and colleagues (Main, Kaplan, & Cassidy, 1985) identified two categories of ‘insecure’ attachment. The insecure-avoidant pattern of attachment is characterised by infants who tend to display less exploration than infants with a secure pattern of attachment, and who refer less to the primary caregiver during play. Infants with an insecure-avoidant pattern of attachment curb their distress during separations and avoid or ignore the caregiver’s attempts to re-establish contact after the short absence. Infants with this pattern of attachment may display this behaviour because they have experienced the caregiver as unavailable to organise their emotions when their attempts to communicate their needs have been met with rejection, or they may have been over-

aroused through intrusive parenting. Infants with an avoidant pattern of attachment consistently deactivate their attachment systems as a strategy to avoid experiences of not having their distress alleviated.

The insecure-ambivalent attachment pattern is characterised by infants who display anxiety that limits their exploration and play, even when their primary caregiver is present. An insecure-ambivalent infant tends to become either angry or passive when separated, and exhibits both comfort-seeking behaviour and anger when the caregiver tries to re-establish contact. These infants may have experienced inconsistent responses from their caregivers, where at times interactions are responsive and sensitive, and at times non-attending or intrusive. This leaves the infant with a tendency to underregulate her distress, and to demonstrate higher levels of distress than other infants, in an effort to ensure that her needs are met by her caregiver. When the infant's needs are met, however, this does not provide soothing, as the infant is not confident of a consistent response from her caregiver.

Further research into patterns of attachment led to the description by Main and Hesse (1990) of a fourth pattern of attachment organisation, called disorganised attachment. Main and Hesse described disorganised infants as displaying conflicted, inexplicable and dissociative behaviours. An infant with a disorganised pattern of attachment has been exposed to fear with no solution from her parents. The infant has therefore been unable to form stable expectations of the caregiver, and has not established strategies to consistently elicit the care required to foster autonomy or provide a sense of security (Lyons-Ruth & Jacobvitz, 1999). The infant may display an inconsistent or conflicted pattern of attachment behaviour, such as freezing, collapsing to the floor, approaching the caregiver backwards, or moving away from the caregiver (Main & Solomon, 1990). Disorganised attachment behaviour is associated with

elevated cortisol levels in the infant (e.g., Hertzgaard, Gunnar, Erickson, & Nachmias, 1995; Spangler & Grossmann, 1993), which signifies that the infant is experiencing high levels of stress during these interactions.

Microanalyses of dyadic interactions have demonstrated that disturbed infant–caregiver behaviours predict disorganised attachment from when infants are as young as four months old (Beebe et al., 2010; Beebe et al., 2012). Caregivers of children classified as having a disorganised pattern of attachment are more likely to respond to their infant’s cues in a non-contingent way, including being unavailable to respond to infant fear or distress, or engaging in frightened or frightening behaviour when interacting with the child (Lyons-Ruth & Jacobvitz, 2008). Disorganised attachment behaviour is associated with abuse, neglect or the loss of an attachment figure in early childhood (Cicchetti & Beeghly, 1987; Main & Hesse, 1990; Bakermans-Kranenburg & van IJzendoorn, 2009). However, the experience of stress, anxiety, fear and foreboding, even in the absence of overt abuse, may also lead to disorganised attachment strategies.

While disorganised attachment is common (almost 80%) in maltreated samples (Carlson, Cicchetti, Barnett, & Braunwald, 1989; Lyons-Ruth, 1996), it is also present in middle-class samples at low risk for maltreatment, at approximately 15–30% (Ainsworth & Eichberg, 1991; Main & Morgan, 1996), which suggests a complex origin. Other factors may include a genetic predisposition (Madigan et al., 2006) and factors related to the infant–caregiver dyadic system (Beebe, Lachmann, Markese, & Bahrack, 2012) as well as parental and ecological factors.

Recent behavioural-genetic twin studies of attachment in adolescence have also indicated that the attachment relationship between the child and parent is bi-directional, and may be influenced by the child’s genes and behaviour (Horwitz & Neiderhiser, 2011; Ulbricht et al., 2013). For example, parenting quality is influenced by the child’s

genes, which indicates that variations in parenting may occur in part in response to reactions evoked by the child (Horwitz & Neiderhiser, 2011). Therefore, as well as distal factors from early childhood, more proximal factors such as stress, loss or parental reactions prompted by the developmental unfolding of genetic effects may affect attachment patterns (Van Ryzin, Carlson, & Sroufe, 2011). Fearon, Shmueli-Goetz, Viding, Fonagy and Plomin (2014) investigated the roles of genes and environmental influences in variance in adolescent attachment. They found that, contrary to findings in infancy, attachment style in adolescence is greatly influenced by genes, with the remaining variance attributed to non-shared environmental factors. In a sample of 551 twin pairs, estimates of heritability for the two-way attachment classifications (e.g., secure versus insecure) were around 35%, with the remainder of the variance being attributed to non-shared environmental influences and measurement error. Fearon et al. (2014) summarised that attachment security in adolescence emerges from the interplay between genes and the caregiving environment.

3.1 Internal Working Models

Bowlby (1977) suggested that early attachment experiences with primary caregivers affect an individual's experiences throughout life, through the development of internal representations of the self and others. These 'internal working models' of relationships are central to the regulation of the attachment system (Zimmermann, 1999) by enabling the individual to interpret and predict attachment-related behaviour, thoughts and feelings, both their own and those of their attachment figures (Bretherton & Munholland, 1999). Internal working models develop initially through interactions with the caregiver, until the infant moves from *procedural organisation* of attachment relationships, in which the infant needs proximity to the caregiver for emotional regulation, to the point where they no longer require physical proximity, but can hold an

internalised representation of the availability of the caregiver. This forms a cognitive and emotional framework that influences an individual's core beliefs about relationships throughout life, affecting cognition, emotion and behaviour in attachment-related situations, including caregiver, family, peer and romantic relationships (Ainsworth et al., 1978; Bowlby, 1973, 1988; Bretherton, 1985; Collins, 1996; Mikulincer, 1995).

The understanding of internal working models has expanded to include the notion that they reflect an individual's abilities and typical strategies for managing positive and negative emotional arousal (Feeney, 1998; Kobak & Sceery, 1988b; Mikulincer, Shaver, & Pereg, 2003). These processes are collectively known as emotion regulation (e.g., Calkins, 1994; Cassidy, 1994; Gross, 1998; Porges, Doussard-Roosevelt, & Mati, 1994). The internal working model is activated automatically under situations in which emotional regulation is required; it allows individuals to access feelings of emotional security during times of emotional arousal and distress when their attachment figures are not physically present (Bowlby, 1973, 1988; Bretherton, 1985, 1992; Zimmermann, 1999).

Bowlby (1988) suggested that these internal working models largely exist outside of conscious processing, and that individuals unconsciously interpret events, evaluate outcomes and generate alternative interpretations based on their working model of attachment. The focus on the emotion regulation function of the internal working model is important when considering the influence of attachment styles on psychological functioning. Internal working models are considered to affect an individual's psychosocial functioning by influencing expectations, sense of self-efficacy or self-esteem, appraisal of affect, and a sense of expectations of the other in relationships—including whether others can be trusted and relied upon for comfort in times of distress (Bartholomew & Horowitz, 1991; Bowlby, 1980; Collins & Read,

1990; Guidano & Liotti, 1983; Heesacker & Newimyer, 1990; Lapsley, Varshney, & Aalsma, 2000; Main, Kaplan, & Cassidy, 1985).

An understanding of internal working models involves the consideration of their stability over time (Bretherton & Munholland, 1999; Main et al., 1985). Some studies have found that infant attachment patterns, identified by the Strange Situation Procedure during infancy, are significantly related to adolescent or adult attachment rated by the Adult Attachment Interview, a measure used to identify attachment styles in adults (Hamilton, 2000; Main, Hesse, & Kaplan, 2005; McConnell & Moss, 2011; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000). Other studies, however, have not found significant stability of attachment over time (Lewis, Feiring, & Rosenthal, 2000; Pinquart, Feußner, & Ahnert, 2013; Weinfield, Sroufe, & Egeland, 2000; Weinfield, Whaley, & Egeland, 2004).

A meta-analysis of 127 different studies, with 21,000 attachment relationships evaluated across various time intervals, found moderate stability of attachment (Pinquart et al., 2013). Securely attached individuals were found, on average, to be more likely to maintain their attachment patterns than insecurely attached individuals. Pinquart et al. also found a higher likelihood of moving from secure to insecure attachment patterns in children at social risk, such as those from low socio-economic backgrounds, compared to those without risk factors. Stressful life events, family risk and depression can lead to a change from secure to insecure or disorganised patterns of attachment (Allen, McElhaney, Kuperminc, & Jodl, 2004; Bar-Haim, Sutton, Fox, & Marvin, 2000; McConnell & Moss, 2011; Moss, Cyr, Bureau, Tarabulsky, & Dubois-Comtois, 2005).

Weinfield and colleagues (2000, 2004), investigating a high-risk sample, found that individuals classified as secure by the Strange Situation Procedure in infancy

moved to insecure attachment models in late adolescence. They found that factors such as maternal life stress, home environment and family functioning were related to attachment classification in late adolescence. Attachment patterns may also change as a result of significant life events, psychotherapy, or significantly positive relationships (Bakermans-Kranenburg & van IJzendoorn, 2009; Kirkpatrick & Hazan, 1994; Pinquart et al., 2013; Thompson, 2000; Travis, Bliwise, Binder, & Horne-Moyer, 2001).

3.2 Attachment During Adolescence

The period of adolescence is characterised by rapid developmental changes, including physical maturation, alterations in the neural and neurotransmitter systems underlying affect regulation, increasing dependence on peers and the influence of peer group (Sroufe, Egeland, Carlson, & Collins, 2005). Brain development and associated cognitive development during adolescence allows adolescents to form increasingly abstract representations of attachment relationships and other concepts, which are associated with re-evaluations of previous experiences (Moretti & Peled, 2004; Pinquart et al., 2013). Internal models of attachment are open to change, as the move to formal operational thinking provides an opportunity for internal working models to be revised and consolidated (Brown & Wright, 2001).

Attachment-related information integrates through an adolescent's developing relationship with their parents and establishment of other relationships outside of the family. During this time, new experiences will be assimilated into an individual's internal working model, leading to more complex representations of relationships (Crittenden, 1997). During this period, parents continue to play a very significant role in their children's adaptation and wellbeing, and the quality of the adolescent-parent attachment relationship is an important factor in predicting whether adolescents will experience behavioural or emotional difficulties (Allen & Miga, 2010). Specific

parenting behaviours that have been identified to play an important role in promoting attachment security in adolescence include psychological availability, warmth, active listening, behaviour monitoring, limit-setting, acceptance of individuality and negotiation of rules and responsibilities (Allen, Hauser & Borman-Spurrell, 1996; Allen, Moore, Kuperminc, & Bell, 1998). It has also been shown that parental support during stressful transitions predicts positive adolescent adjustment (Papini & Roggman, 1992).

Bowlby (1969) introduced the term 'goal-corrected partnership' to describe the joint give-and-take process that occurs between parent and child in relation to the child's sense of security (Obsuth et al., 2014). The parent's ability to maintain this goal-directed partnership is crucial during adolescence, especially during times of conflict, which increase during adolescence as parents apply appropriate boundaries and the adolescent negotiates increasing independence and responsibility (Allen, Hauser, Bell, & O'Connor, 1994; Galambos, Barker, & Almeida, 2003; Paikoff & Brooks-Gunn, 1991). If a goal-corrected partnership is established between parent and child during early life, flexible strategies for balancing the needs of self and others will be established and can guide negotiations around increased independence and autonomy in the transition through adolescence (Kobak, Cole, Ferenz-Gillies, Fleming, & Gamble, 1993).

Allen et al. (2004) suggested that adolescence is a time of potential for change in attachment patterns because increased emotional and behavioural autonomy from parents requires a renegotiation of parent-adolescent boundaries and roles. They suggested that if adolescents are able to make this transition while maintaining positive interactions with parents and continuing to value their attachment relationships, they are more likely to have secure attachment patterns in adulthood. Conversely, if the

transition involves high levels of parental or adolescent stress, it may strain the adolescent–parent relationship, and reduce the parents’ capacity to act as a secure base. This may lead to adolescents defensively pushing distressing emotions from their awareness, and over time may lead to insecure patterns of attachment (Van Ryzin et al., 2011). This is even more relevant if the parents themselves are the source of stress, or if they resist or limit the adolescent’s developing autonomy (Allen et al., 1996). Other sources of stress, such as illness (Feeney, 2000) and financial stress (Allen et al., 2004), and systemic factors such as marital dissatisfaction (Ulbricht et al., 2013) can also interfere with parent child relationships and may be associated with a move towards insecure attachment during adolescence. Major relationship disruptions, such as the loss of a caregiver (Bowlby, 1980) or parental divorce (Lewis et al., 2000), can also lead to insecure attachment patterns in children and adolescents.

Between childhood and adolescence, the attachment relationship between children and parents adjusts as the degree of emotional dependency decreases, autonomy and independence increase, and relationships with peers of both sexes deepen (Best, Hauser, & Allen, 1997; Doyle & Markiewicz, 2005; Liddle & Schwartz, 2002; Lieberman, Doyle & Markiewicz, 1999; Zeifman & Hazan, 2008). This transition is not successfully achieved via detachment from parents (Ryan, Deci, & Grolnick, 1995). Rather, healthy transition to autonomy and adulthood is assisted by secure attachment and emotional connection with parents (Paterson, Pryor, & Field, 1995).

As the role of the parent as primary attachment figure diminishes, a wider range of attachment relationships to peers and romantic partners develops (e.g., Fraley & Davis, 1997; Trinke & Bartholomew, 1997). Time spent with same-sex peers peaks at age 14, and reduces as older adolescents form romantic relationships (Doyle & Moretti, 2001). Research has found that children look to peers more than to their parents for

companionship from age 9, and for comfort when they are upset from age 12–13 (e.g., Fraley & Davis, 1997; Hazan & Zeifman, 1994). Patterns of parental attachment influence the development of close relationships with peers and romantic partners (Calamari & Pini, 2003; Chango, McElhaney, & Allen, 2009; Domini, Johnson, & Koch, 2000; West, Adam, Spreng, & Rose, 2001; Zimmermann, 2004). Although teenagers may look to peers and romantic relationships for companionship and comfort, parents, especially mothers, remain the main source of security (Fraley & Davis, 1997; Hazan & Zeifman, 1994; Trinke & Bartholomew, 1997).

Evidence is gathering that suggests that mothers and fathers may play different roles as attachment figures. The influence of mother–daughter relationships on psychological development and identity formation has been well researched (e.g., Bruch, 1973; Minuchin et al., 1978; Sevloni Palazzoli, 1974; Usmiani & Daniluk, 1997). Focusing on the mother–child attachment relationship is not sufficient, however, and researchers are identifying the need for an expanded understanding of the influences of multiple attachment relationships in a child’s life (Berlin, Cassidy, & Appleyard, 2008; Brumariu & Kerns, 2010; Fearon et al., 2010; Steele, Steele, & Fonagy, 1996).

Some studies on the social and emotional outcomes of attachment relationships have focused on attachment security with both parents (e.g., Al-Yagon, 2011; El-Sheikh & Buckhalt, 2003; Duschesne & Ratelle, 2014; Kerns, Tomich, Aspelmeier, & Contreras, 2000; Kochanska & Kim, 2013; Steele et al., 1996; Suess, Grossmann, & Sroufe, 1992; Williams & Kelly, 2005). Research on fathers as attachment figures is limited, but growing (Bretherton, 2010). Research suggests that adolescence is a particularly important time for the father–daughter attachment relationship in terms of identity and self-image (e.g., Doyle & Markiewicz, 2005; Grossmann, Grossmann, &

Zimmermann, 1999; Haudek, Rorty, & Henker, 1999; Lieberman et al., 1999; Ohannessian, Lerner, Lerner, & von Eye, 2000; Sharpe et al., 1998). A recent study by Sandhu (2014) investigated the impact of father attachment on the social and emotional wellbeing of adolescent girls aged 14–16. The study found significant correlations between the quality of attachment to the father and the girls' social competence, social problems and internalisation of problems.

While there is agreement that attachment is a useful concept for understanding adolescent development, empirical work has been hindered by a lack of available assessment measures (Brown & Wright, 2001; Scott, Briskman, Woolgar, Humayun, & O'Connor, 2011; Venta, Shmueli-Goetz, & Sharp, 2013). The most recent advances in attachment research have focused on understanding attachment experiences during adolescence and designing ways to measure attachment patterns suitable for this age group. Many of the existing measures of adolescent attachment were originally designed for use with either children or adults. Methods of assessing attachment styles during adolescence mainly fall into two categories: interview-based measures and self-report measures. These will be explored in the following section.

3.3 Measuring Attachment in Adolescence

Interview-based measures have been developed based on the understanding that representations of the attachment system can be revealed through examining the content and quality of discourse about relationships. The Adult Attachment Interview (AAI; George, Kaplan, & Main, 1985, 1996; Main & Goldwyn, 1984, 1998; Main, Goldwyn, & Hesse, 2002) is the first such interview. It was developed in the early 1980s to classify adult attachment by exploring representations of childhood attachment experiences. It is a semi-structured interview designed to elicit memories, emotions and beliefs about childhood experiences with parents. In the interview, individuals are asked

open-ended questions about their relationships with their attachment figures, and about experiences of loss, separation and rejection (George et al., 1985). They are also asked to evaluate the effect these childhood experiences have had on their development and current functioning. The questions are designed to surprise the unconscious and therefore generate indicators of the main underlying attachment strategies of the individual.

The AAI coding system developed by Main, Goldwyn and Hesse (2002; Version 7.1) rates the interview on both discourse style and content (Hesse, 2008). Analysis of the discourse classifies the overall coherence of an individual's description, integration, and evaluation of their own attachment-related experiences (Rosenstein & Horowitz, 1996). The coding system provides five classifications. The *secure-autonomous* classification describes adults who are securely attached, *insecure-dismissing* represents adults with avoidant attachments, and *insecure-preoccupied* describes adults with anxious attachments (George et al., 1996; Main et al., 1985). The fourth category, *unresolved-disorganised*, includes adults whose attachment states of mind are affected by trauma or loss (Main & Hesse, 1990; Slade, 1999; Shaver & Mikulincer, 2002). The fifth classification, *cannot classify*, is coded when an individual either demonstrates two completely contrasting attachment styles within the same interview, or their narrative does not indicate an organised position throughout the entire interview. This classification is uncommon in low-risk samples, but is prominent in individuals with mental health disorders, criminal and domestic violence histories, and individuals who have experienced early childhood trauma (Hesse, 1996). The AAI attachment patterns parallel the infant attachment classifications—secure, avoidant, ambivalent and disorganised—identifying similarity in internal working models, and in the defence strategies employed, across patterns (Rosenstein & Horowitz, 1996).

An individual coded as having a *secure* pattern of attachment values attachment relationships, can coherently integrate childhood attachment memories into a meaningful narrative and can consider these memories as valuable in terms of adaptation and functioning. These individuals may have experienced positive, negative or a mixture of childhood life events (Main, Goldwyn, & Hesse, 2002), but present a coherent narrative in their recollections.

Individuals who are coded as having *insecure* patterns of attachment demonstrate poor integration of memories of their experiences with the meaning of those experiences. Individuals coded as *insecure-dismissing* are not able to provide a coherent description of their childhood. They demonstrate avoidance by denying memories, idealising or devaluing their early relationships, and minimising the impact of negative events in their life. Individuals coded as *insecure-preoccupied* tend to present as confused, angry or passive in relation to their attachment figures. They will appear to be caught up in attachment relationships and provide either a long, passive and enmeshed narrative, or an angrily preoccupied narrative with signs of current, ongoing anger, often still complaining of difficulties during childhood. The *unresolved* category is coded in relation to the loss of and/or abuse from primary attachment figures. Individuals with unresolved attachment provide indications of significant disorganisation in their attachment relationship representation, through lapses in the monitoring of their discourse, or bizarre language when discussing losses or abuse.

The Dynamic-Maturational Model (DMM) of attachment (Crittenden, 2008) provides another means of coding the AAI based on self-protective strategies. The DMM places a focus on the impact of danger to elicit attachment behaviour which leads to the development of self-protective strategies. The coding of AAI discourse is not aimed to assess the patterns of attachment in relation to infants' patterns of attachment,

but rather at identifying the strategies that are used by individuals when faced with danger. This description of strategies allows for differentiation of strategies within clinical samples (Ringer & Crittenden, 2007).

The DMM is an outcome of a continuation of work that Crittenden began in Ainsworth's laboratory. At first, with Ainsworth's guidance, Crittenden added compulsive compliance and A/C combinations (Crittenden, 1985) to Ainsworth's ABC model. Both of these patterns were found to be associated with child abuse and neglect (Crittenden & Ainsworth, 1989). Later, the model was expanded to include more complex Type A+ and Type C+ self-protective strategies. Type A strategies are suggested to be based on limiting perception of threat to reduce the tendency to respond. Type C are suggested to be based on rising perception of threat to increase the tendency to respond. Both strategies can be adaptive and, under conditions that change, an A/C combination can be maximally protective (Crittenden & Newman, 2010).

The AAI is considered the gold standard measure in adult attachment research due to its ability to evoke evidence of defence strategies and internal working models that operate at the unconscious level (Ravitz et al., 2010). The AAI has excellent psychometric qualities, with high stability and discriminant and predictive validity in clinical and non-clinical populations (Ammaniti, Speranza, & Candelori, 1996; Bakermans-Kranenburg & van IJzendoorn, 1993).

The AAI's usefulness for the adolescent population is debated. While it has been used in research with adolescent participants with no reported difficulties (e.g., Dykas, Ziv, & Cassidy, 2008; Feeney, Cassidy, & Ramos-Marcuse, 2008), there are questions about the developmental appropriateness of the measure, particularly for younger adolescents (Doyle & Moretti, 2001). Ammaniti and colleagues (1990) have developed an adapted version of the AAI, the Attachment Interview for Childhood and

Adolescence, for young people aged 10–16 years. It modifies the AAI to cover topics relevant to attachment in adolescence, such as relationships not only with parents, but also with other caregivers and peers, in particular a best friend. The interview uses the same coding procedures as the AAI. An important methodological issue associated with the use of the AAI coding system to measure attachment in adolescents is that it underrepresents disorganised attachment styles and over represents dismissing attachment styles among younger adolescents (Ammaniti, van IJzendoorn, Speranza, & Tambelli, 2000). This is due to its reliance on coding around loss or abuse to rate disorganised attachment: if there is no serious loss or abuse to discuss, this cannot be rated on the AAI (Lyons-Ruth, Yellin, Melnick, & Atwood, 2005). Another means of assessing disorganisation on the AAI is to evaluate the presence of a pervasively unintegrated hostile-helpless state of mind in relation to attachment relationships (Lyons-Ruth, Melnick, Patrick, & Hobson, 2007; Lyons-Ruth et al., 2005). This additional coding system adds to the traditional coding to assess attachment disorganisation in adolescents.

The Child Attachment Interview (CAI; Shmueli-Goetz, Target, Fonagy, & Datta, 2008; Target, Fonagy, Shmueli-Goetz, Datta, & Schneider, 1999; Target, Fonagy, & Shmueli-Goetz, 2003) was developed due to the need for a child-appropriate attachment interview. It is a semi-structured interview designed for children and adolescents aged 8–16 years old that assesses the quality of the children's attachment to both parents. It is based on the AAI, and adapted for children by focusing on current attachment-related events and representations of relationships with parents, particularly in situations when the attachment system is activated, such as times of conflict, separation or loss. While this measure was originally designed to measure attachment in children, the CAI has been found to be a valuable tool to address the gap in

measurement in adolescent attachment (Scott, et al., 2011; Joseph, O'Connor, Briskman, Maughan, & Scott, 2014; Venta et al., 2013). It has been used with adolescent samples (e.g., Humfress, O'Connor, Slaughter, Target, & Fonagy, 2002; Scott et al., 2011; Venta & Sharp, 2014; Venta et al., 2013) and currently seems to represent the most developmentally appropriate interview measure for adolescents. This measure is described in further detail in the methodology chapter in Section 6.2.8.

A major limitation of using interview measures is the extensive training required and time involved in data collection, coding and transcription (Scott et al., 2011). The alternative method of assessment is via self-report measures. Self-report measures of attachment are based on the premise that individuals are able to consciously recount their experiences of separation, loss, dependence and trust, and can report how they behave in close relationships. There is therefore no attempt in these measures to access the working models that may be in operation outside the individual's awareness (Crowell et al., 2008). Several self-report measures have been developed for use with adolescents, each tapping into a different component of attachment: the Inventory of Parental and Peer Attachment (IPPA; Armsden & Greenberg, 1987), the Adolescent Attachment Questionnaire (West, Rose, Spreng, Sheldon-Keller, & Adam, 1998), the Parent as a Secure Base Scale (Cassidy & Woodhouse, 2003), the Relationship Questionnaire (Hazan & Shaver, 1987) and the Experiences in Close Relationship (Brennan, Clark, & Shaver, 1998) are all measures that can be used to assess attachment in adolescents. These measures tap into the individual's perceptions of current relationships with parents and peers. Advantages of using self-report measures are that they can be easily administered and scored, and are therefore a much faster means of assessing perceived attachment relationships.

Within the attachment field there are divergent perspectives around the optimal way to assess attachment. There is contention regarding whether self-report measures are reliable means of uncovering important aspects of intrapsychic processes and behaviours in attachment relationships. Self-report attachment measures assume that people can describe their thoughts, feelings and behaviours in relationships, and rely on the conscious processing of this information, so are more likely to pick up defensive distortions in individual responses (Ravitz et al., 2010). It is possible that individuals with dismissing attachment styles may minimise distress and overregulate their emotions, being less likely to acknowledge difficulties. This may make them more likely to report having a secure attachment style or to be classified as secure on the basis of their responses (Brown & Wright, 2001). Defensive minimising of levels of anxiety or lack of insight into difficulties could also lead to inaccurate reporting (Crowell, Fraley, & Shaver, 1999).

Despite these apparent limitations, self-report measures have been found useful in revealing important aspects of intrapsychic processes and behaviour in close relationships (Crowell et al., 1999). Some studies using both techniques have found agreement between the AAI and self-report measures (e.g., West et al., 1998), although in general they show very low agreement (Roisman et al., 2007). It is suggested that the results of self-report measures that target conscious processing should not be compared with results from measures that attempt to measure subconscious processing (Brown & Wright, 2003). While empirical evidence suggests that both measurement strategies are valuable, and have predictive validity regarding interpersonal functioning, they may be measuring different underlying constructs (Borelli, David, Crowley, & Mayes, 2010).

3.4 Attachment and Adolescent Mental Health

The importance of attachment organisation in predicting an adolescent's capacity for affect regulation and development of future relationships is at the core of attachment theory (Mikulincer & Shaver, 2007). Early attachment experiences affect the development of beliefs and competencies around interpersonal functioning, sense of self, self-efficacy, self-esteem, and capacity to regulate affect and motivation.

According to attachment theory, insecure attachment patterns interfere with the development of a secure, stable mental foundation, reduce resilience in coping with stressful life events, and predispose a person to psychological vulnerability in times of crisis (Bowlby, 1988). A pattern of insecure attachment does not necessarily imply psychopathology (Borelli et al., 2010). In fact, Fonagy and colleagues point out that insecure patterns of attachment are not only prevalent in clinical populations, but are also reasonably common in community populations as well (Fonagy, Target, Gergely, Allen, & Bateman, 2003). Rather, insecure attachment can be understood within a diathesis stress model as a vulnerability to psychopathology in the presence of other life stressors (Belsky & Fearon, 2002; Borelli et al., 2010). These other stressors include psychosocial and environmental factors such as genetically determined temperament, intelligence, stressful life events including abuse, low socio-economic status, chaotic home environment, physical health problems, turbulent interpersonal relationships and inconsistent, hostile or rejecting maternal behaviour (Allen et al., 1998; McElhaney et al., 2006; Mikulincer & Shaver, 2012). These factors are likely to converge with or amplify the effects of attachment experiences on the way to psychopathology.

Research does demonstrate a link between early attachment style and later social, emotional, behavioural and academic outcomes (e.g., Allen & Land, 1999; Brumariu & Kerns, 2010; Evans & Wertheim, 2005; Jacobsen & Hofmann, 1997;

Shorey & Snyder, 2006). Secure patterns of attachment have been found to be protective in adolescent development (Obsuth et al., 2014) in relation to the risk of difficulties in interpersonal relationships, ability to manage distress, and social and emotional functioning (Arcelus, Haslam, Farrow, & Meyer, 2013; Berlin et al., 2008). Adolescents with secure patterns of attachment negotiate the transition to high school more successfully and report more satisfying interpersonal relationships and more trust in others (Kenny & Donaldson, 1991; Larose & Bernier, 2001; Papini & Roggman, 1992). They also report less conflict with family members and peers compared to insecurely attached adolescents (Ducharme, Doyle, & Markiewicz, 2002; Kenny & Donaldson, 1991; Papini & Roggman, 1992).

Securely attached adolescents report less worry about loneliness and social rejection compared to insecurely attached adolescents, and display more adaptive coping strategies (Kerns & Stevens, 1996; Florian, Mikulincer, & Bucholtz, 1995). They also display a more positive, integrated view of self, are more likely to exhibit positive self-disclosure, and cope better with stressful situations (Mikulincer & Nachshon, 1991). Studies have found that securely attached adolescents are less likely to abuse substances or engage in antisocial, aggressive or risky sexual behaviour (Allen, Porter, McFarland, McElhaney, & Marsh, 2007; Kobak & Sceery, 1988; Cooper, Shaver, & Collins, 1998; Fonagy et al., 1997; Rosenstein & Horowitz, 1996; Voss, 1999). Secure attachment in female adolescents is related to fewer weight-related concerns (Sharpe et al., 1998), and protects adolescents from anxiety, depression and emotional distress (Armsden & Greenberg, 1987; see Brumariu & Kerns, 2010a, and DeKlyen & Greenberg, 2008, for reviews), and feelings of personal inadequacy (Kerns & Stevens, 1996; Kobak & Sceery, 1988; Raja, McGee, & Stanton, 1992; Lessard & Moretti, 1998; Paterson, Pryor, & Field, 1995). Kobak and colleagues found that secure

attachment patterns in adolescence are associated with fewer mental health problems, decreased high-risk behaviour, and less dysfunctional anger when engaged in problem-solving discussions with parents (Kobak & Ferenz-Gillies, 1995; Kobak et al., 1993).

Research has identified a consistent overrepresentation of insecure attachment in clinical samples (Bakermans-Kranenburg & van IJzendoorn, 2009; Broberg, Hjalmer, & Nevonen, 2001; Beijersbergen et al., 2008; Venta et al., 2013). For example, Venta et al. (2013) measured attachment in a clinical sample of 194 adolescents aged 12–17 years that were inpatients with severe psychiatric disorders. In this sample, 30% were classified as secure with their mother and 70% were classified as insecure (38.15% dismissing, 14.4% preoccupied and 17% disorganised). Adolescents hospitalised for mental health difficulties were found to have higher rates of insecure attachment style compared to a community sample, and substance abuse and delinquency were associated with dismissing attachment style (Allen et al., 1996).

Insecure patterns of attachment during adolescence were found to be associated with suicide-related behaviours (Adam, Sheldon-Keller, & West, 1996), need for inpatient mental health treatment (Allen, Hauser, & Borman-Spurrell, 1996; Rosenstein & Horowitz, 1996), and psychopathology, including internalising and externalising difficulties (DeKlyen & Greenberg, 2008; Allen, 2008). Findings from clinical samples showed that insecure attachment is associated with suicidality (Lessard & Moretti, 1998; Zeyrek, Gencoz, Bergman, & Lester, 2009), drug use (Schindler et al., 2007; Wray-Lake et al., 2012) and aggressive and delinquent behaviour (Moretti, DaSilva, & Holland, 2004; Moretti & Obsuth, 2011; Zimmermann, Mohr, & Spangler, 2009).

An ongoing area of research is whether or to what extent specific attachment patterns are related to particular disorders. Dismissing-avoidant attachment in adolescence is associated with psychological disorders that have an externalising focus

(Bakermans-Kranenburg & van IJzendoorn, 2009), reflecting strategies of emotional distancing in an attempt to minimise emotional stress (Dozier, Lomax, Tyrrell, & Lee, 2001). Psychopathology associated with dismissing styles includes aggression (Allen, Porter, McFarland, McElhaney, & Marsh, 2007; Renken, Egeland, Marvinney, Mangelsdorf, & Sroufe, 1989; Rosenstein & Horowitz, 1996), conduct disorder and substance abuse (Rosenstein & Horowitz, 1996), schizophrenia and schizoaffective disorders (Dozier & Tyrrell, 1997), first-episode psychosis (MacBeth, Gumley, Schwannauer, & Fisher, 2011), anxiety with externalising symptomatology (Dozier, Stovall-McCoughAlbus, 2008), comorbid conduct disorder and depression and antisocial personality disorder (Fonagy et al., 1996; Rosenstein & Horowitz, 1996). The relationship between dismissing-avoidant attachment styles and externalising disorders has been demonstrated for high-risk samples (Belsky & Fearon, 2002), while this relationship has not been found to be present in low-risk samples (see DeKlyen & Greenberg, 2008, for review). In clinical settings, difficulty trusting others, discomfort with interpersonal issues and avoidance of personal disclosure contribute to these adolescents' lower responsiveness to therapy (Dozier et al., 2001).

A preoccupied-ambivalent attachment style has been most closely linked to internalising problems in adolescents, including self-reports of depression, anxiety disorders, and internalising symptoms and stress during transitions (Bernier et al., 2005; Brumariu & Kerns, 2010; Cole-Detke & Kobak, 1996; Kobak, Sudler, & Gamble, 1991; Colonesi et al., 2011; Groh, Roisman, van IJzendoorn, Bakermans-Kranenburg, & Fearon, 2012; Larose & Bernier, 2001; Rosenstein & Horowitz, 1996). The preoccupied-ambivalent style has been associated with anxiety in adolescence or preadolescence in some studies (Bohlin, Hagekull, & Rydell, 2000; Brumariu & Kerns, 2008; Dallaire & Weinraub, 2005; Warren, Huston, Egeland, & Sroufe, 1997), but not

others (Bar-Haim, Dan, Eshel, & Sagi-Schwartz, 2007; Marsh, McFarland, Allen, McElhaney, & Land, 2003). Adolescents with preoccupied patterns of attachment also demonstrate a greater frequency of borderline personality disorder (BPD) than secure or other insecure categories (Cassidy, 1994; Rosenstein & Horowitz, 1996). Rosenstein and Horowitz found that adolescents classified with preoccupied attachment patterns met diagnostic criteria for a range of personality disorders, including obsessive-compulsive, histrionic, borderline, or schizotypal personality disorders, as well as mood disorders. It has been suggested that a preoccupied attachment style may increase the likelihood that the adolescent will express internalising symptoms strongly, as these symptoms function as attachment behaviours: for example, signalling an attempt to gain proximity to attachment figures (Dozier & Lee, 1995; Kobak & Cole, 1994).

The group of children found to have the poorest psychosocial outcomes, both in infancy and later in childhood and adolescence, is those who have been identified as having a disorganised attachment style (Macdonald et al., 2008). Disorganised attachment patterns may result from parenting that is confusing, frightening or abusive, or when there is a loss of an attachment figure, or unresolved loss or trauma in the parent (Tasca & Balfour, 2014).

Several longitudinal studies have examined the long-term outcomes of disorganised attachment, linking disorganised attachment in infancy with externalising behaviours during childhood (Lyons-Ruth, Easterbrooks, & Cibelli, 1997; Main & Cassidy, 1988; Shaw, Owens, Vondra, Keenan, & Winslow, 1996). Main and colleagues (Hesse & Main, 2000; Main & Cassidy, 1988) argue that behaviours related to early disorganised attachment change during childhood, from signs of disorientation, apprehension and helplessness in infancy, to controlling behaviours in early childhood. Thus, over time, the behavioural disorganisation that accompanies disorganised

attachment in infancy is replaced by a controlling style that is defined either by role-reversed behaviours or punitive behaviours towards the caregiver (Hesse & Main, 2000; Holmes, 2004; Marvin & Whelan, 2003).

During the toddler period and up to age 6, controlling behaviour is displayed as role reversal (Macfie, Fitzpatrick, Rivas, & Cox, 2008; Main, Kaplan, & Cassidy, 1985). Controlling behaviour in turn predicts problems with emotional and behavioural self-regulation in the preschool period (Macfie, Houts, McElwain, & Cox, 2008). In later childhood, controlling children actively attempt to control parent's attention and behaviour, attempt to organise and guide the parent, or offer support and encouragement in a reverse caregiver role (Main & Cassidy, 1988; Obsuth et al., 2014). Children with disorganised attachment may also display controlling-punitive behaviour that involves hostility towards the parent that is challenging, humiliating, cruel or defiant: for example, a child giving orders to a parent, or degrading them (Obsuth et al., 2014).

Parent-child dyads that display disorganised or controlling patterns of attachment demonstrate lower quality communication and reciprocity than secure and insecure-organised dyads (Moss, Cyr, & Dubois-Comtois, 2004; O'Connor, Bureau, McCartney & Lyons-Ruth 2011). Children with disorganised attachment patterns demonstrate high levels of teacher-reported disruptive and internalising symptoms (Fearon et al., 2010; Moss et al., 2004; O'Connor, Bureau, McCartney, & Lyons-Ruth, 2011). Controlling-punitive children are at greater risk for externalising symptoms (such as oppositional defiant disorder, conduct disorder and attention deficit hyperactive disorder; Lyons-Ruth et al., 1997), and internalising disorders (such as depression; Cyr, Euser, Bakermans-Kranenburg, & van IJzendoorn, 2010; Brumariu & Kerns, 2010; DeKlyen & Greenberg, 2008; Fearon et al., 2010; Graham & Easterbrooks, 2000; Lyons-Ruth & Jacobvitz, 2008). Controlling-caregiving children are at greater risk for

internalising symptoms (Fearon et al., 2010; Moss et al., 2004; O'Connor et al., 2011), including anxiety symptoms (Borelli et al., 2010; Brumariu & Kerns, 2010b; Brumariu, Kerns, & Seibert, 2012; Brumariu et al., 2013; Ivarsson, Granqvist, Gillberg, & Broberg, 2010; Moss et al., 2006).

Individuals with disorganised attachment patterns show disturbances in cognition and emotion surrounding loss or trauma, including absorption, guilt or dissociation (Steele, Steele, & Murphy, 2009). Adolescents with disorganised attachment patterns present as controlling, aggressive, unable to self-soothe when faced with emotional turmoil and loss, liable to dissociation, and have difficulty removing themselves from difficult relationships (Holmes, 2004).

Disorganised attachment style has been identified as a risk factor in the development of psychopathology in studies of adolescent clinical populations. A study of aggressive adolescents identified significantly more disorganised attachment patterns compared to a non-clinical control group (Taubner & Juen, 2010, cited in Taubner & Curth, 2013). Adam, Sheldon-Keller and West (1996) examined attachment classification (using the AAI) of 133 adolescents receiving psychiatric care, 69 with a history of suicidal behaviour (mean age 15.7 years) and 64 without (mean age 14.9 years). Both groups had similar levels of trauma, but 73% of those with suicidal behaviour presented with unresolved state of mind, compared to 44% of those without suicidal behaviour.

Allen et al. (1996) suggested that attachment disorganisation mediates the relationship between trauma and suicidal behaviour. A meta-analysis of attachment representations in clinical populations (Bakermans-Kranenburg & van IJzendoorn, 2009) found a strong association between disorganised attachment and mental health difficulties, including suicide and abuse. Disorganised attachment in infancy also

predicts dissociative symptoms in adolescence (Carlson, 1998; van IJzendoorn et al., 1999). Finally, children identified with disorganised attachment are at risk for developing BPD in their late adolescence and early adulthood (Nakash-Eisikovits, Dutra, & Westen, 2002; Rosenstein & Horowitz, 1996).

3.5 Attachment Theory and Eating Disorders

Researchers have only recently begun to consider the importance of attachment theory when considering the vulnerabilities that underlie the development and maintenance of eating disorders (Tasca et al., 2011). In terms of a risk-vulnerability model for psychopathology, attachment theory offers a basis for understanding why some young people may be particularly vulnerable to eating disorders (Tetley, Moghaddam, Dawson, & Rennoldson, 2014). Insecure attachment patterns may underlie processes identified in eating disorders such as distorted sense of self, interpersonal difficulties and dysfunctional patterns of emotional and behaviour regulation (Barone & Guiducci, 2009; Demidenko, Tasca, Kennedy, & Bissada, 2010; Evans & Wertheim, 2005; Gilboa-Schechtman et al., 2006; Harrison, Sullivan, Tchanturia, & Treasure, 2010 a,b; Tasca et al., 2011; Tetley et al., 2014).

Treasure and Schmidt (2013) proposed a cognitive-interpersonal maintenance model of AN (see Figure 3.1), in which they outline various cognitive, socio-emotional and interpersonal factors that both predispose an individual to AN, and also perpetuate the illness. In this model they describe how social processing traits, such as lack of sense of self-worth, interpersonal difficulties and insecure attachment styles, increase vulnerability to precipitating factors, and also perpetuate eating disorders. Treasure and Schmidt identify insecure attachment patterns as a core predisposing factor, and that people with AN are more likely to have experienced interpersonal difficulties, including

diminished social networks and social support, internalising symptoms, shyness and the feelings of inferiority that are linked with insecure attachment patterns.

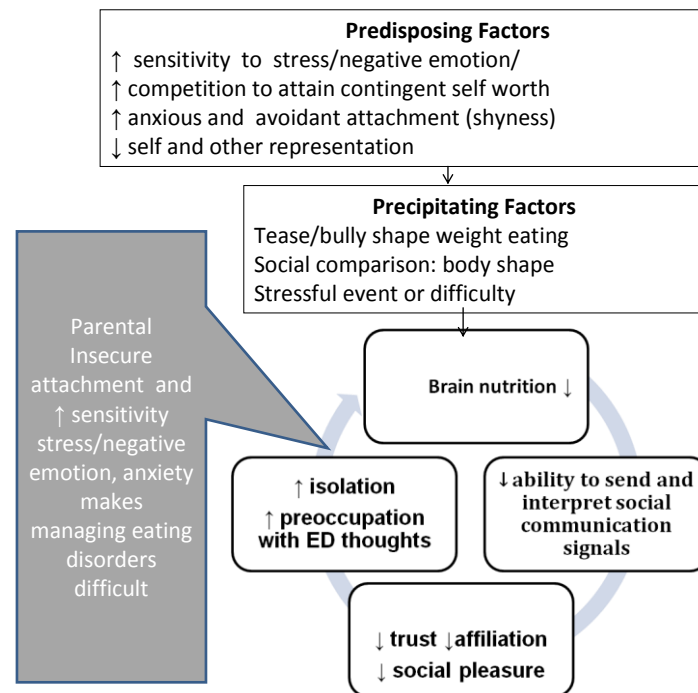


Figure 3.1. A diagrammatic formulation of Treasure and Schmidt's (2013) predisposing and perpetuating factors for the onset and maintenance of AN. The grey box indicates that shared familial traits may perpetuate the problem.

There are several ways in which attachment processes are seen to influence the onset and maintenance of eating disorders; these are outlined below.

3.5.1 Early childhood stress and trauma

Childhood trauma, abuse and loss have been found to occur at a high rate among individuals with eating disorders (Smolak & Murnen, 2002). In a cross-sectional study using self-reports, Tasca et al. (2013) found that retrospective reporting of childhood trauma was directly associated with core eating disorder psychopathology, with attachment avoidance and anxiety each independently and partly explaining this direct relationship. The authors argued that childhood adversity might lead to attachment insecurity, which in turn may lead to or maintain or a person's vulnerability to eating

disorder symptoms. In addition, Steiger et al. (2007) found that the interaction between childhood trauma and the short (S) allele of the serotonin transporter promoter polymorphism (5HTTLPR) accounts for greater attachment anxiety in women with BN (Steiger et al., 2007).

3.5.2 Sense of self and self-esteem

Cash, Thériault and Annis (2004) suggested that expectations of rejection and lack of self-esteem, which are typical of individuals with insecure attachment patterns, may result in feelings of body dissatisfaction that in turn may lead to eating disorder symptoms (Polivy & Herman, 2002). Insecure patterns of attachment are associated with higher body dissatisfaction and eating disorder symptoms in both non-clinical (Cash et al. 2004; Sharpe et al., 1998; Suldo & Sandberg, 2000) and clinical groups (Illing, Tasca, Balfour, & Bissada, 2010; Troisi, Massaroni, & Cuzzolaro, 2005). In addition, Tetley et al. (2014) proposed that troubled parental bonding (measured on domains of parental care or overprotection and control) may lead to unhelpful beliefs about self-esteem and efficacy, defectiveness, abandonment and vulnerability to harm, which in turn may contribute to eating disorder symptoms. Tetley et al. stated that this is consistent with the cognitive behavioural therapy approach, which postulates that negative childhood relationships lead to dysfunctional beliefs about self and others, which may lead to the development of an eating disorder (Cooper, Wells, & Todd, 2004; Fairburn, Cooper, & Shafran, 2003). Related to a poorly developed sense of self is the notion that eating disorders may be linked with a lack of attention to or inability to discriminate inner distress cues, and that a focus on body shape and dieting may be an effort to distract from these distressing cues (Cole-Detke & Kobak, 1996; Dozier, et al., 2008).

3.5.3 Emotion regulation

Emotion regulation refers to the way in which emotional experiences are evaluated, monitored, maintained and modified (Thompson, 1994). Emotion regulation difficulties have been associated with most psychological disorders (Gross & Levenson, 1993, 1997). Research suggests that poorly developed emotion regulation skills and strategies may lengthen or magnify negative affect, and are a risk factor for eating disorder onset and maintenance (Hughes & Gullone, 2011). For example, AN and BN have been linked to negative affect, alexithymia, suppressed emotion and decreased emotional awareness (Cochrane, Brewerton, Wilson, & Hodges 1993; Geller et al., 2000, Harrison et al., 2010; Legenbauer, Vocks, & Rüdell, 2008; Markey & Vander Wal, 2007; Nowakowski, McFarlane, & Cassin, 2013). Sufferers are reported by family members to have poor emotional regulation skills, and to be irritable, moody and prone to temper tantrums (Smith, 2003); eating disorder patients have been found to have poorer emotion regulation strategies compared to controls (Gilboa-Schechtman et al., 2006). Tasca et al. (2011) pointed out that emotion-focused coping (Perry, DiTommaso, Robinson, & Doiron, 2007), emotion deactivating strategies (Cole-Detke & Kobak, 1996), and general difficulty with emotion regulation characterise the cognitions, symptoms and behaviours of patients with eating disorders. They suggested that insecure attachment patterns may contribute to the development of maladaptive affect regulation strategies, which in turn may result in an eating disorder. Eating disorder behaviours can be understood to stem from an individual's inability to tolerate and manage undifferentiated emotions. Unable to manage distressing emotions, an individual with an eating disorder uses obsession around weight and shape and restriction or bingeing and purging to cope. These behaviours have also been identified

as attempts to contain and dissipate overwhelming feelings of negative affect, such as anxiety and depression, in patients with eating disorders (Bydlowski et al., 2005).

Tasca et al. (2009) found that the association between attachment anxiety and both eating disorder and depression symptoms was mediated by emotional reactivity, and that the association between attachment avoidance and depressive symptoms in patients with an eating disorder was moderated by cutting off of emotions. They surmised that individuals with an eating disorder and preoccupied attachment styles experience hyper activation of their emotions, which may lead to symptoms such as bingeing and purging as a way to cope. Conversely, they suggested that patients with dismissing attachment styles are cut off from their emotions, and that this may be enabled by the extreme restriction that characterises AN.

3.5.4 **Interpersonal difficulties**

Difficulties with interpersonal sensitivities may have originated in problems with autonomy and separation from parents, and may be factors in the aetiology and maintenance of eating disorders (Ringer & Crittenden, 2007). Many researchers have highlighted the link between interpersonal relationships and eating disorders (Bruch, 1978, 1982; Minuchin et al., 1978; Bulik, Sullivan, Wade, & Kendler, 2000; Guttman & Laporte, 2002; Bonne et al., 2003; Treasure & Schmidt, 2013).

Relational issues are highlighted in Treasure and Schmidt's (2013) cognitive-interpersonal maintenance model of AN. Treasure and Schmidt highlighted that individuals with AN have difficulty with accurate reading of the motivations and emotions of others and difficulty with theory of mind tasks. They point to evidence that people with eating disorders display difficulties with interpersonal interactions that reflect either avoidant or preoccupied attachment styles (Illing et al., 2010).

Teenagers with eating disorders often report difficulties with interpersonal relationships with their parents and peers. Such problems include difficulty relying on parents or others close to them as a secure base, feelings of social incompetence, lack of personal effectiveness, and general interpersonal problems related to issues of power, support, fear of abandonment, and problems with autonomy (Carter, Kelly, & Norwood, 2012; Sharpe et al. 1998; Broberg et al., 2001; Evans & Wertheim, 2005; Hartmann, Zeeck, & Barrett, 2010). This links with attachment theory, which suggests that individuals with an underdeveloped sense of self will also demonstrate a deficit in trust in the availability of others for security and support.

Preoccupied and dismissing attachment styles have been linked with negative schemas of self and others (Bartholomew & Horowitz, 1991). Individuals with eating disorders hold negative and maladaptive perceptions of other people in interpersonal relationships. For example, in a study conducted by Evans and Wertheim (1998) women with eating or body concerns reported more difficulties with intimate relationships, including decreased satisfaction with closeness, and discomfort in close intimate relationships. Women with eating disorders also have difficulties in their attachment relationships with their own children (Franzen & Gerlinghoff, 1997; Mazzeo et al., 2005; Woodside & Shekter-Wolfson, 1990; Runfola et al., 2014). It is hypothesised that anxious avoidance of affect, especially when sparked by social interaction, is a predisposing factor to experiencing an eating disorder (Treasure & Schmidt, 2013).

Interpersonal difficulties have been found to predate the onset of AN, and are frequently accentuated by the illness. Patients with AN are more likely than controls to report limited social networks, including no close friends, in childhood (Davies, 2004; Karwautz et al., 2001) and less social support (Kim, Heo, Kang, Song, & Treasure, 2010). Studies have found that in adolescent onset AN, social problems predate the

illness in 20% of cases and predict a poorer prognosis, in that those with social difficulties prior to onset of illness at age 15 were found to be impaired 18 years later at follow-up (Anckarsater et al., 2012; Wentz, Gillberg, Anckarsater, Gillberg, & Rastam, 2009). Patients with AN also report feelings of loneliness, inferiority and high levels of social anxiety (Swinbourne et al., 2012). Patients with AN have been found to have reduced social networks during the illness (Adenzato, Todisco, & Ardito, 2012; Tiller et al., 1997), and difficulty with interpersonal relationships persists even after recovery (Oldershaw et al., 2012).

3.5.5 Directing attention away from attachment-related concerns

Some researchers have asserted that an eating disorder may function to direct the adolescent's attention away from attachment-related concerns, such as low levels of psychological exploration, difficulty in trusting in relationships, and problems with identity exploration and formation, towards the more externally focused and attainable goal of body image (Cole-Detke & Kobak, 1996; Dozier et al., 2008; Hochdorf, Latzer, Canetti, & Bachar, 2005; O'Kearney, 1996; Orzolek-Kronner, 2002). A focus on body and shape may serve to promote a sense of certainty that is lacking in relationships, and to avoid the potential for rejection, criticism and hostility expected or perceived from others (Striegel-Moore, Silberstein, & Rodin, 1993).

It has also been suggested that eating disorder symptoms may be a maladaptive way of maintaining physical and emotional proximity to the attachment figure (O'Kearney, 1996; Orzolek-Kronner, 2002; Zachrisson & Skårderud, 2010). Cole-Detke and Kobak (1996) argued that eating disorders result from repetitive negative interactions with caregivers, leading to the eating disorder serving a function of turning attention away from the negative affect resulting from attachment-related concerns, onto more concrete, attainable goals of weight loss and appearance. This shift of attention

onto external goals constitutes an effort to avoid feelings of helplessness, insignificance and vulnerability (Mikulincer & Shaver, 2007). Some researchers have argued that eating disorders are an outcome of anxious or preoccupied attachment; for example, an individual with a preoccupied attachment style may resolve fears of separation and abandonment by avoiding physical maturity and maintaining a child-like body.

3.5.6 Parent or caregiver attachment concerns

Treasure and Schmidt (2013) also outlined how the predisposing vulnerabilities of parents or carers of adolescents with AN, including insecure attachment styles among caregivers, may lead to increased difficulties in managing their child's eating disorder. For example, heightened anxiety and distress in parents may contribute to relationship conflicts or difficulties and high expressed emotion or accommodation to eating disorder symptoms, which, in turn, act to maintain the eating disorder. This is depicted in Figure 3.2.

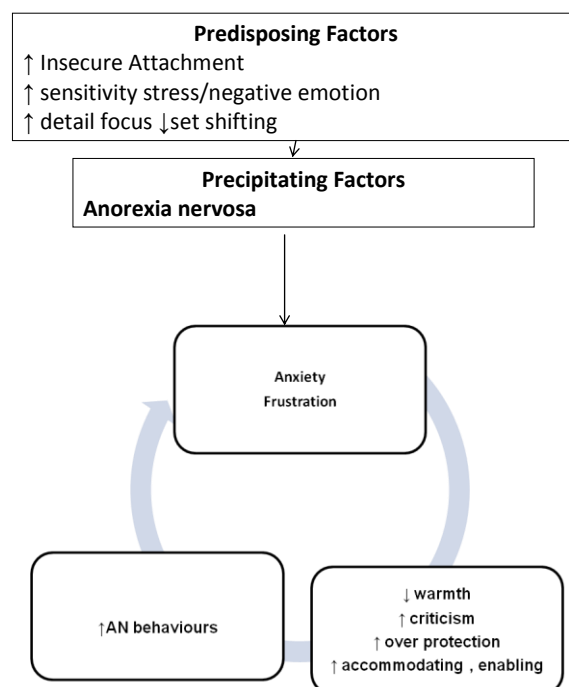


Figure 3.2. A diagrammatic formulation of carers' involvement within the maintenance of an eating disorder.

Apart from offering insight into potential contributing factors to eating disorders and approaches to treatment, understanding the attachment styles of individuals with eating disorders may be an important factor moderating responsiveness to various interventions. For example, attachment style has been identified as influencing response to various types of therapies for adolescent disorders, thus affecting treatment response (Illing, Tasca, Balfour, & Bissada, 2010, 2011; Scott et al., 2011).

3.6 Empirical Evidence on Attachment Styles and Eating Disorders

Most research in the field of attachment theory and eating disorders has been conducted on adult populations. As outlined above, the research to date indicates a strong relationship between insecure attachment styles and eating disorders (see O’Kearney, 1996, for review; Kuipers & Bekker, 2012; Soares & Dias, 2007; Ward, Ramsay, Turnbull, Benedettini, & Treasure, 2000; Zachrisson & Skårderud, 2010). Several studies have revealed a direct link between attachment insecurity and body dissatisfaction, which is known to be an important risk factor for eating disorders (Abbate-Daga, Gramaglia, Aminato, Marzola, & Fassino, 2010; Tasca et al., 2006; Troisi et al., 2006; Illing et al., 2010). Studies have also identified the need for approval (Abbate-Daga et al., 2010; Troisi et al., 2005) and fear of rejection (Troisi et al., 2006) in individuals with both AN and BN.

Following Armstrong and Roth’s (1989) seminal study, more than 20 studies have been conducted to investigate attachment styles with samples of patients with eating disorders. Many of the studies have categorised participants into specific attachment categories using self-report measures (Abbate-Daga et al., 2010; Broberg et al., 2001; Chassler, 1997; Dakanalis et al., 2014; Eggert, Levendosky, & Klump, 2007; Evans & Wertheim, 2005; Friedberg & Lyddon, 1996; Kenny & Hart, 1992; Kiang & Harter, 2006; Illing et al., 2010; Latzer, Hochdorf, Bachar & Canetti, 2002; Orzolek-

Kronner, 2002; Pierrehumbert et al., 2002; Sharpe et al., 1998; Tasca et al., 2006; Tasca, Taylor, Bissada, Ritchie, & Balfour, 2004; Troisi et al., 2005; Troisi et al., 2006; Ward et al., 2000). Fewer studies have utilised the AAI (Barone & Guiducci, 2009; Candelori & Ciocca, 1998; Dias, Soares, Klein, Cunha, & Roisman, 2011; Fonagy et al., 1996; Ramacciotti et al., 2001; Ringer & Crittenden, 2007; Rothschild-Yakar, Levy-Shiff, Fridman-Balaban, Gur, & Stein, 2010; Salzman, 1997; Ward et al., 2001; Zachrisson & Kulbotten, 2006).

Early studies in this field focused on identifying associations between insecure attachment style and eating disorders (Chassler, 1997; Friedberg & Lyddon, 1996; Kenny & Hart, 1992; Latzer et al., 2002; Orzolek-Kronner, 2002; Ramacciotti et al., 2001; Salzman, 1997; Tasca et al., 2006) and established that in adult populations, women with eating disorders display insecure attachment styles, with rates of insecure attachment ranging from 70% (Dias et al., 2011) to 100% (Ringer & Crittenden, 2007; Zachrisson & Kulbotten, 2006).

Of the 10 studies that utilised the AAI to measure attachment style, all identified higher prevalence of insecure attachment in clinical eating disorder samples compared to non-clinical populations. Only four of those studies utilised a control group; the others compared percentages of insecure attachment found in their clinical samples to normal population rates of insecure attachment, reported as 44.8% in adults (van IJzendoorn & Bakermans-Kranenburg, 2008). In the studies that utilised a control group (Barone & Guiducci, 2009; Cole-Detke, 1996; Fonagy, 1996; Rothschild-Yakar et al., 2010), the relative risk of insecure attachment in eating disorder patients compared to controls ranged from 1.7 to 2.1 (Kuipers & Bekker, 2012).

Fonagy et al. (1996) compared the subscales of the AAI of patients with different psychiatric diagnoses, including 14 patients with eating disorders, and found

that 4 of the 14 were categorised as dismissive, 9 as preoccupied, and 1 as secure, suggesting that women with eating disorders were more likely to display a preoccupied attachment style. In addition, they found that 13 of the 14 participants scored as unresolved with respect to abuse or loss. Those patients had comorbid Axis II diagnoses, which may explain the presence of disorganised attachment patterns (Ward et al., 2000). In the study, Fonagy et al. revealed that the relative risk of insecure attachment was 1.1 for eating disorder patients compared to other psychiatric patients, which suggests that insecure attachment is marginally more associated with eating disorders compared to other mental health disorders. The researchers also found that idealisation of parents, related to the dismissing attachment pattern, was positively associated with eating disorders. A limitation of this study is the fact that Fonagy et al. did not specify the eating disorder diagnosis or diagnoses, so it is not clear what proportion of the sample had either AN-R, AN-BP or BN; therefore, the authors were not able to comment on specific attachment patterns related to different eating disorder diagnoses.

Barone and Guiducci (2009) examined attachment patterns in 30 adults with eating disorders and 30 controls and found higher rates of insecure attachment in the eating disorder sample. Eating disorder patients were rated 10% secure, 47% dismissing, 17% preoccupied and approximately 26% disorganised. They found that the eating disordered sample demonstrated a tendency towards either idealisation or anger towards their mother. Interestingly, only participants diagnosed with BN and binge eating were rated with disorganised attachment patterns, while those with AN were not. Another study that found a higher prevalence of dismissing and preoccupied attachment patterns was conducted by Ramacciotti et al. (2001), who examined the attachment styles of six men and seven women with AN. They identified mainly insecure

attachment (dismissing and preoccupied) styles in their sample. A unique feature of this study is that it included male participants, and the researchers found that there was a greater proportion of insecure attachment in males than in females.

In some studies, eating disorder participants were more likely to demonstrate insecure-dismissing patterns (e.g., Cole-Detke & Kobak, 1996; Latzer et al., 2002; Ward et al., 2001; Ramacciotti et al., 2001). In other studies, the main attachment style identified was an insecure-preoccupied pattern (Fonagy et al., 1996; Friedberg & Lyddon, 1996; Pierrehumbert et al., 2002; Salzman, 1997; Tereno et al., 2008; Troisi et al., 2005). In studies that assessed attachment via self-report scales of romantic attachment, mixed patterns were found (Broberg et al., 2001; Evans & Wertheim, 2005; Ward et al., 2000).

While all studies reviewed concluded that eating disorder populations present with higher prevalence of insecure attachment patterns compared to non-clinical controls, researchers have also attempted to ascertain whether a particular attachment pattern is related to eating disorder diagnosis. So far, such studies (e.g., Broberg et al., 2001; Candelori & Ciocca, 1998; Ringer & Crittenden, 2007; Tereno, Soares, Martins, Celani, & Sampaio, 2008; Troisi et al., 2005) have not been conclusive.

Only a few studies that have used the AAI have compared the different diagnostic groups of eating disorders (e.g., Barone & Guiducci, 2009; Candelori & Ciocca, 1998; Ward et al., 2001; Zachrisson & Kulbotten, 2006). Studies that utilised the AAI would be the most valid to detect differences in attachment style according to diagnosis due to the ability to identify unresolved and disorganised attachment patterns. Ward et al. (2001) assessed 20 female inpatients diagnosed as AN-BP (14 patients) and AN-R (4 patients) with the AAI. They reported that 15 participants were dismissive (avoidant), 4 were preoccupied (anxious), and 1 was rated as secure, but failed to find

an association between the AAI attachment classification and subtype of AN (AN-R versus AN-BP). The authors also found that patients presented with high rates of unresolved trauma and loss, and that disorganised attachment patterns were highly prevalent among their mothers. This finding suggests possible intergenerational transmission of disorganised mental states in patients with AN, which could add to risk for AN (Tasca & Balfour, 2014a).

Zachrisson and Kulbotten (2006) also failed to find specific associations between eating disorder subtypes and attachment style in their sample of 20 women with AN. These authors analysed the AAI results using Crittenden's Dynamic-Maturational Model (DMM) for coding (most other studies have used Main and Goldwyn's [1984] coding system) in an attempt to reveal whether there was a more precise fit to the attachment styles in clinical groups. Similar to previous research, however, although all participants demonstrated insecure attachment styles, there was no evidence that eating disorder subtypes were related to specific attachment styles.

In Barone and Guiducci's (2009) study, preoccupied attachment style was dominant in patients with AN (40%) and dismissing or avoidant attachment style was high in patients with BN (50%) or binge eating disorder (70%). Ringer and Crittenden (2007) studied 62 women with AN ($n = 19$), BN ($n = 26$) and AN-BP ($n = 17$) using the AAI coded by the DMM. They confirmed previous findings of a high rate of insecure attachment, with 100% of the sample classified as insecure. When rated by the Main and Goldwyn classification system, they reported that 95% of patients were rated as insecurely attached. Ringer and Crittenden's findings differed from the studies described above in that they found that an equal number of women with AN-R were coded with dismissing and disorganised attachment styles, with a very low proportion of AN participants classified with a preoccupied attachment style. One third of their

sample was coded as unresolved. In their study, 65% of the women with BN scored as preoccupied, and although AN-binge purge patients were more likely to display dismissive attachment styles, there was considerable overlap between diagnostic groups. A limitation of this study was its lack of control group. Ringer and Crittenden also identified links between unresolved trauma and loss among the mothers of the patients with eating disorders.

Dias et al. (2011) detected higher rates of preoccupied attachment styles using the AAI to code attachment in a sample of 47 women, average age 21 years, composed of AN-R ($n = 21$), AN-BP ($n = 7$), BN purging type ($n = 14$) and BN non-purging type ($n = 1$). Of the women with eating disorders in this study, 70% were classified as insecurely attached, with 48.9% displaying a preoccupied attachment style. They found that patients in the purging groups showed significantly higher levels of hyperactivation (preoccupied) attachment behaviour strategies.

Thus, to date, consensus has not been reached as to whether particular attachment patterns separately underlie the different eating disorder diagnoses. This may be due to the variety of attachment measures used, and also the fact that many of the studies conducted did not use the AAI, which is more sensitive, particularly in relation to identifying unresolved and disorganised attachment styles. Some studies have found that the separate diagnostic groups do not differ in terms of attachment styles, and have suggested that the severity of the eating disorder may be more important than the diagnosis in predicting attachment style (Broberg et al., 2001; Troisi et al., 2005; Zachrisson & Kulbotten, 2006).

It is also possible that a pattern does not exist among the diagnostic subtypes. Some authors argue that eating disorders share a common underlying psychopathology, with differences only in the externally manifesting symptoms (Latzer et al., 2002).

Supporting this, many people who suffer from an eating disorder frequently transition from one diagnosis to another; approximately 50% of patients who initially meet diagnostic criteria for AN later fit the criteria for BN, and about a third of BN patients have had a previous episode of AN (Schmidt, 2003). It is reasonable, therefore, to assume that the psychopathology underlying the disorders is similar, and that perhaps either type of insecure attachment pattern places a person at risk of an eating disorder, with other factors underlying whether the symptoms manifest as AN or BN. This is known as the *transtheoretical model* of eating disorders (Fairburn et al., 2003), which recognises a common feature of all forms of eating disorder (over-valuation of shape and weight), and includes other variables that potentially maintain symptoms, including interpersonal distress, perfectionism, core low self-esteem and mood intolerance (Tasca & Balfour, 2014a). These maintaining variables and the impact they have on an individual's behaviour overlap with and can be understood via attachment theory (Tasca et al., 2011; Tasca & Balfour, 2014). These factors are found to influence the onset, symptom expression, maintenance and remission of eating disorders (Cooper & Fairburn, 2011; Fairburn et al., 2009; Schmidt & Treasure, 2006; Stice, 2002).

More recently, studies in the field of attachment and eating disorders have begun to focus on the impact of attachment style on the outcome of eating disorder treatment. Illing et al. (2010) investigated attachment insecurity, eating disorders and response to treatment, and found that eating disorder patients had higher rates of insecure attachment than controls. They also found that higher attachment anxiety, measured by self-report, in patients with AN-R and BN was related to greater symptom severity and poorer treatment outcome. The authors concluded that identifying a patient's attachment style can offer additional information to an eating disorder diagnosis, by helping to

predict treatment outcome. In addition, higher attachment avoidance is associated with dropping out of day treatment for patients with AN (Tasca et al., 2004).

Very few studies have examined attachment styles and eating disorders in samples of adolescents. The research that has been conducted, however, indicates a similar association between insecure attachment patterns and eating disorders in preadolescent and adolescent girls to that found in adult populations. Haudek et al. (1999) investigated the relationship between parental bonding, eating problems and body satisfaction in a group of college students. They found that the quality of parent–child relations, particularly mother–daughter relationships, predicted body dissatisfaction and eating disturbances. Sharpe et al. (1998) found an association between insecure attachment styles, rated by the Hazan and Shaver (1987) attachment scale, and weight concerns in 9–12-year-old girls; they concluded that this suggested that attachment style was a major risk factor for the development of eating disorders. In addition, they found that adolescent girls with insecure attachment patterns were characterised by a lower sense of self-worth, lower self-esteem and a heightened sense of rejection by others compared to controls.

In a clinical sample of adolescents, Orzolek-Kronner (2002) examined the relationships between attachment, proximity-seeking behaviours and eating disorders in 44 patients with eating disorders, 28 clinical controls (other psychiatric diagnoses) and 36 non-clinical controls (mean age = 16.5 years). Attachment style was measured with the IPPA (Armsden & Greenberg, 1987). As the author was primarily interested in parental attachment, she did not include the ‘peer’ subscales of the IPPA. Both clinical groups demonstrated higher rates of insecure attachment compared to the non-clinical group. Interestingly, adolescents with eating disorders reported feeling more alienated from their fathers compared to both the clinical and non-clinical control groups.

Cunha, Relvas and Soares (2009) also utilised the IPPA to investigate attachment and family functioning in a sample of 34 adolescent patients (mean age = 17.26, $SD = 2.71$) including AN-R ($n = 28$) and AN-BP ($n = 6$) subtypes. Eating disorder patients scored significantly lower on mother and peer total scales, indicating that the eating disorder patients reported lower trust in their mothers and peers compared to controls, and more alienation and detachment (avoidance) from mothers, fathers and peers compared to controls.

Only a few studies have utilised interview methods for assessing attachment patterns of adolescents with eating disorders. Cole-Detke and Kobak (1996) administered the AAI to 31 adolescents (mean age 18.6 years) with BN and depression. The participants were selected from a female college sample based on elevated pretest scores from the Beck Depression Inventory and the Eating Disorders Inventory. In their sample, most (66%) of the participants with BN ($n = 12$) had a dismissing attachment model, 25% were coded as secure, and less than 1% as preoccupied. Cole-Detke and Kobak found an association between eating disorder psychopathology and the denial or minimisation of anger towards parents and devaluation of attachment relationships, and suggested that adolescents with BN tend to use 'deactivating' avoidance strategies defined by low expectations of parental availability and nurturing. They also noted that eating disorders were uniquely associated with ratings of very poor relationships with fathers, who were presented as emotionally unavailable and very critical of their daughters. In this study, for the BN participants who had comorbid depression ($n = 19$), 61% had attachment styles characterised by 'hyperactivating' strategies similar to the preoccupied style associated with infant attachment. Cole-Detke and Kobak suggested that the dismissing (avoidant) attachment style is related to BN, whereas the preoccupied attachment style is related to the presence of comorbid depression.

The results of Cole-Detke and Kobak's study differ from those of Fonagy et al (1996) who found a higher prevalence of preoccupied and unresolved (disorganised) attachment styles. Fonagy's patients were adults, and also had high levels of comorbidity. Both studies identified that patients with comorbid depression, or other Axis I pathology, presented with a preoccupied attachment style and suffered from worse symptoms. Comorbidity, therefore, could influence the distribution of attachment models, and could explain the prevalence of preoccupied attachment models and unresolved attachment style, while a dismissing attachment style may be prevalent in eating disorder patients without comorbidity (Dozier et al., 2008).

Salzman (1997) also found high rates of preoccupied attachment using the Adolescent Attachment Interview in a sample of 28 older adolescents (aged 18–22 years). Of the 11 college women who were coded as having ambivalent (preoccupied) attachment style, 7 (64%) had experienced AN. None of the secure or avoidant style participants had suffered AN in adolescence. Salzman argued that these results suggest that AN would more likely be related to an ambivalent (preoccupied) attachment style.

In contrast, Candelori and Ciocca (1998) studied 36 adolescent inpatients with AN and BN (aged 13–24 years) using the AAI and found that 83% of the patients rated as insecure. Further, AN-R patients tended to present with a dismissing (avoidant) pattern of attachment, whereas both BN and AN-BP patients tended to be preoccupied (anxious), supporting the findings of Cole-Detke and Kobak (1996) who used the AAI with women with eating disorders.

A recent study conducted by Zavattini (n.d.) also found higher rates of dismissing attachment style. This study investigated attachment style and RF in a group of 31 adolescent girls with AN (aged 13–16 years; mean age = 14.9 years) and their parents. The study does not mention whether the sample included patients with AN-BP

or atypical AN. The parents' attachment style was assessed using the AAI and also coded for RF using the RF scale. The adolescents' attachment style and RF were coded using the Attachment Interview in Childhood and Adolescence (Italian Version), which is a modified version of the AAI. Zavattini also utilised the Parent Bonding Instrument (PBI; Parker, Tupling & Brown, 1979) to measure parental bonding. The study did not have a control group. Results indicated that 35% of the girls with AN displayed secure patterns of attachment and 64.4% a dismissing attachment pattern. In this sample, none of the patients had preoccupied or unresolved (disorganised) attachment styles. It is an interesting finding that none of the participants were rated as disorganised in this sample, given that it is a clinical sample and there is an established link between disorganised attachment and various other mental health conditions. It is noted that it is a limitation of using the Adult Attachment Interview to assess attachment with adolescents is that they may not have an experience/ example of loss or trauma to code for unresolved attachment (Ensink, Normandin, Sabourin, Fonagy, & Target, in press).

These findings of Zavattini's study are in agreement with those of Candelori and Ciocca (1998), who found that adolescents with AN tended to present with a dismissive attachment style. Candelori and Ciocca suggested that the prevalence of dismissing attachment styles in their sample supports the notion that symptoms of AN are the expression of a strategy of deactivation of attachment needs in the context of a relationship where the caregiver is not emotionally available (Cole-Detke & Kobak, 1996). They suggest that patients with AN without depression focus their attention on body and appearance in an effort to divert attention away from their attachment relationship that is not providing a source of comfort or empathy. This study also investigated the attachment styles of mothers and fathers, and found that 32.2% of the mothers displayed secure patterns of attachment, 22.6% dismissing, 22.6% preoccupied

and 16.1% unresolved with respect to loss. The authors compared these rates to the distribution of attachment models in non-clinical samples (van IJzendoorn & Bakermans-Kranenburg, 1996, 2008) and concluded that there were overrepresentations of insecure patterns of attachment in the daughters, of unresolved attachment patterns in the mothers, and of insecure attachment patterns (both dismissing and preoccupied) in the fathers. A strength of this study is that it utilised an interview-based measure of adolescent attachment, although the authors chose to use the Attachment Interview in Childhood and Adolescence, a derivative of the AAI, rather than the CAI.

3.6.1 Attachment to father

Hooper and Dallos (2012) contributed to the literature on fathers of adolescents with eating disorders and attachment with a qualitative study that examined transcripts of interviews of fathers talking about their relationships with their daughters from an attachment perspective. Qualitative analysis found that these fathers expressed attempts to be closer and warmer with their daughters compared to their own early childhood experiences. They found, however, in the face of their daughters' distress resulting from the eating disorder, that they lacked trust in their capacity to manage this, especially since they had not had positive emotional experiences from their own parents to draw on. The authors noted that this led to the fathers resorting to a medical model of management in order to contain their own distress. In this study, the fathers displayed dismissing attachment patterns, frequently minimising distress; in turn, their daughters with eating disorders appeared not to respond to their fathers' attempts to connect, possibly distancing themselves from emotional pain, and also displaying deactivating patterns of attachment. Hooper and Dallos concluded that the dismissing and deactivating of emotional distress between father and daughter may lead to the

emotional distress being displayed via other means; in this case, though the forms of control and restriction of food.

Another study that made observations about attachment patterns was recently conducted by Rothschild-Yakar, Waniel and Stein (2013), who investigated the link between patterns of attachment and mentalising with 71 adolescent inpatients with eating disorders (AN-R, $n = 31$; AN-BP, $n = 18$; and BN, $n = 22$), aged 14–19 years, and 45 controls without eating disorders, also aged 14–19 years. They used the Object Relations Inventory (ORI; Blatt, Chevron, Quinlan, Schaffer, & Wein, 1992). and self-report measures assessing emotional distress and eating disorder symptoms. Results found that patients with eating disorders had significantly more negative working models of attachment with their parents compared to non-clinical controls. More positive representations of parents, particularly of the father, along with higher mentalising abilities were found to indirectly predict lower eating disorder symptoms via lower distress levels. The authors interpreted these results to indicate that adequate mentalising capacity and positive working models of attachment to parents may serve as protective factors against high levels of eating disorder symptoms. The authors suggested that female adolescents undergo the developmental processes of separation-individuation and integration of identity, which are commonly associated with conflicting relationships, mostly with the mother; in this context, they surmised that for female eating disorder patients, a secure father–child relationship is protective against distress in adolescence, and may indirectly reduce the severity of eating disorder symptoms. They stated that insecure attachment patterns with the father—if the father is seen as ignoring or responding negatively to the communication of negative emotions—may be a factor leading to the development of an eating disorder, with emotional distress intolerance as a mediating factor (Rothschild-Yakar et al., 2013).

A limitation of much of the attachment research in the field of eating disorders is that it has focused only on the mother–daughter relationship (e.g. Bruch, 1978; Canetti et al., 2008; Bachar et al., 2008; Ogden & Steward, 2000) with little focusing on this crucial father–daughter relationship. The small amount of research that currently exists investigating father–daughter attachment relationships in the context of eating disorders has found that women with eating disorders perceive their relationships with their fathers as less friendly, less caring, and more rejecting compared to controls (e.g., Domini et al., 2000; Humphrey, 1989; Palmer et al., 1988). Rowa et al. (2001) found that women suffering from AN rated their relationships with their fathers as being more intrusive, displaying more role-reversal caregiving, enmeshment and spousification (treating their daughter as they would their spouse) than a control group. Rowa et al. also found that these women reported that their fathers were more intrusive or overprotective, and that they turned to their daughters more often for nurturing and support, which often led to excessively close relationships with their fathers. Evans and Wertheim (1995) found a contradiction between involved but effective fathers, and preoccupied attachment patterns in their daughters, which can lead to complications such as feelings of abandonment, defectiveness, shame and vulnerability on the side of the daughter (Jones et al., 2006; Fitzgerald & Lane, 2000). As previously described, Rothschild-Yakar et al. (2013) also identified the important role of fathers, revealing that for adolescents with eating disorders and controls alike, a secure attachment with father, but not mother, correlated negatively with emotional distress and eating disorder symptoms.

3.7 Summary

Adolescents in eating disorder treatment settings frequently present with troubled relationships with their parents, siblings and peers, as well as difficulties with

communication and regulating affect, and a lack of sense of identity and self.

Relationship difficulties may include the adolescent being especially detached or dismissing, inconsistent, clingy and insecure, and experiencing difficulty understanding others and feeling understood. Families of adolescents with eating disorders frequently present with difficulties communicating, feeling understood and managing strong emotions. Even if functioning well prior to the onset of the eating disorder, family relationships often become distorted as a result of the illness. The impact of an illness on attachment processes at this crucial time of development may distort relationships and hamper the process of individuation and autonomy for the adolescent, due to parental anxiety and helplessness leading to overprotection or control (Ødegård, 2005). The extreme stress that eating disorders place on the adolescent patient and their parents (Treasure et al., 2001) may further emphasise the negative impact of pre-existing insecure attachment patterns.

Attachment theory offers a basis for understanding why some young people may be particularly vulnerable to eating disorders, and factors that may maintain the symptoms of an eating disorder. Insecure attachment patterns may underlie processes identified in eating disorders, or may develop secondarily to the development of eating disorders and are not necessarily aetiological (Lis, Mazzeschi, Di Riso, & Salcuni, 2011). The development of measures for assessing attachment in adolescence has allowed researchers to explore how attachment styles relate to psychological functioning in adolescence.

Eating disorders present a complex pathology, and current treatments are only partially successful (Treasure & Schmidt, 2013). The application of attachment theory to this field of work could guide new approaches that also take into account the interplay between identified biopsychosocial factors (Garner & Garfinkel, 1997;

Fairburn et al., 1999; Steiner et al., 2003; Treasure & Schmidt, 2013). Empirical evidence of clinical samples supports the link between insecure attachment patterns and eating disorders in adults, with limited evidence yet available to support this link in samples of adolescents with eating disorders. Research findings are not conclusive as to whether a particular pattern of attachment is related to a particular eating disorder diagnosis, although adolescent studies seem to indicate that patients with AN are more likely to present with a dismissing attachment pattern, while patients with binge-purge presentation or a comorbid Axis I diagnosis are more likely to present with a preoccupied attachment style.

The possible attachment mechanism underlying AN is that the young person with a dismissing attachment pattern shuts down their attachment needs and focuses their attention on their body and appearance in an effort to divert attention away from their attachment relationship that is not providing a source of comfort or empathy. This shutting down of emotions may be assisted by the extreme restriction characterised by AN. A proposed mechanism underlying BN and AN-BP is that young people with preoccupied attachment styles experience hyperactivation of their emotions, which may lead to symptoms such as bingeing and purging as a way to cope. Although there is strong evidence of the connection between disorganised attachment and psychopathology, perhaps because of the use of self-report measures, few studies have reported on the presence of disorganised attachment styles in relation to eating disorders. Applying an attachment framework to consider adolescent eating disorders can highlight a different aetiological perspective on the development and maintenance of symptoms, and, importantly, provide insight and direction for clinical interventions.

Theorists have questioned the process by which attachment style affects the developing sense of self and affect regulation. Mentalising capacity, which develops

within the attachment relationship, has been identified as an important mediator of this function. Chapter 4 will introduce the concept of mentalising and the theory behind mentalising and eating disorders, and present the evidence around the links between mentalising and psychopathology, including eating disorders.

Chapter 4: Mentalising Theory and Implications for Adolescent Mental Health and Eating Disorders

4.1 Defining Mentalising

The concept of mentalising developed out of the fields of attachment and developmental psychology. Fonagy and colleagues coined the term *mentalisation* (Fonagy, Gergely, Jurist, & Target, 2002; Fonagy & Target, 1996), which is defined as the capacity to make sense of behaviour in the self and others in terms of mental states. Mentalising ability is usually an automatic mental activity that involves perceiving and interpreting human behaviour in terms of mental states. It allows an individual to understand and predict behaviours and develop the capacity to recognise their own internal states, as well as the states of others, in order to give meaning to experiences. It is how humans make sense of their social world, by imagining the various mental states that govern interpersonal interactions (Choi-Kain & Gunderson, 2008). This capacity assists an individual to tolerate and regulate affective experiences, self-monitor and control impulses, and provides a sense of self-agency (Fonagy & Target, 1997). It also allows an individual to engage in reciprocal, sustained and effective interactions with others (Bleiberg, 2013). Parental mentalisation has been operationalised as *parental reflective functioning*, and refers to the quality of mentalisation in the context of attachment relationships, and the capacity of the parent to think about mental states and their relation to their own and their child's behaviour.

Mentalising theory asserts that accurate, well-functioning mentalising in individuals and families facilitates strong relationships, reduces the negative impact of misunderstandings, and allows for more effective meta-cognitive abilities within the individual (Sharp & Fonagy, 2008). Bateman and Fonagy (2004) outline the features of effective mentalisation: a curiosity about the mental states of self and others; an

awareness of the impact of one's own mental state on others; awareness that mental states can be opaque—that is, they can be hidden from others; an acknowledgement that people can hold different perspectives; and a non-paranoid attitude. A person with well-developed mentalising capacity is able to be flexible rather than getting stuck in one point of view. Such a person can be playful and use humour in a positive way to engage with others, can solve problems using give and take between different people's views, and can differentiate between their own experiences and those of others. They are able to take responsibility for their own behaviour. The ability to mentalise allows individuals to reflect on and understand how they think about themselves and others, and how that affects behaviours.

A parent with established mentalising capacity demonstrates an awareness of the presence of mental states in their child, and makes active attempts to understand what is going on in their mind that may be influencing their behaviour (Fonagy et al., 2002; Rosenblum, McDonough, Sameroff, & Muzik, 2008). A parent with good RF is able to anticipate and respond in a sensitive manner to their child's cues, especially in moments of heightened affect, by standing back from their own affective experience and focusing on the child's inner experience (Stacks et al., 2014). A parent with high RF is less likely to perceive their child's behaviour as problematic, and more likely to identify possible reasons underlying the child's behaviour. They are able to be both emotionally involved and in control when the child is distressed, ready to assist the child with emotional regulation, and have a secure pattern of attachment with the child (Fonagy, Target, Steele, & Steele, 1998; Slade, Grienenberger, Bernbach, Levy, & Locker, 2005).

Parents with limited RF seem unaware of their own or their child's thoughts and feelings, and deny the emotional experiences that are associated with parenting (Stacks et al., 2014). A parent with low RF is more likely to withdraw from their child, focus on

their own needs rather than those of the child, reverse the child–caregiver roles, have difficulty reading the child’s cues, misinterpret or override them, misinterpret the child’s outer and inner world, or become antagonistic towards the child (Lyons-Ruth, Bronfman, & Atwood, 1999; Slade et al., 2005).

The hallmarks of a family with sound mentalising capacity include the use of language that is tentative, respectful and does not claim inside knowledge of another’s mental state. Family members show curiosity about each other’s attitudes and point of view, and show attitudes of expectation that understanding can be elaborated in relation to what is on another’s mind. Mentalising families are flexible in their thinking, not stuck on one point of view, and demonstrate playful, gentle humour that is not cruel, manipulative or degrading, and enact give-and-take when problem solving (Asen & Fonagy, 2012).

4.2 Four Dimensions of Mentalising

Brain imaging research indicates that mentalising is a dynamic skill that is affected by stress and arousal, especially in the context of attachment relationships (Luyten, Fonagy, Lowyck, & Vermote, 2012). It is also a multifaceted capacity that requires a flexible balance between four dimensions of mentalising processing (Fonagy & Luyten, 2009). The four dimensions are: (1) automatic–controlled (implicit–explicit), (2) internally focused–externally focused, (3) self-oriented–other-oriented, and (4) cognitive–affective. Individuals with impaired mentalising may demonstrate impairments in some of these dimensions but not others (Fonagy & Luyten, 2009). Empirical evidence supports the idea that these four dimensions of mentalising involve different neural processes (e.g., Keysers & Gazzola, 2007; Lieberman, 2007, 2008; Lombardo et al., 2009; Mayes, 2006; Sabbagh, 2004; Satpute & Lieberman, 2006; Dimaggio et al., 2008; Shamay-Tsoory & Aharon-Peretz, 2007; Uddin et al., 2007).

The *controlled* or *explicit* mentalising dimension is the primary dimension of mentalising (Lieberman, 2007; Satpute & Lieberman, 2006). It involves a serial and slow processing that is usually verbal, and requires attention, reflection, intention, awareness and effort (Allen et al., 2008; Fonagy & Luyten, 2009). *Automatic* mentalising (Satpute & Lieberman, 2006) is a fast, unreflective parallel process that is activated by specific cues and requires little attention, effort or awareness. This form of processing is non-verbal and is laid down as implicit memories. Activation of these memories generates procedural patterns of physiology, movement, perception and affect (Bleiberg, 2013). In everyday interactions, mentalising is usually implicit and automatic, when events are proceeding as usual. Especially in the context of secure attachment relationships, automatic mentalising is usually sufficient, as more reflective processing is not necessary (Fonagy & Bateman, 2006). Increased levels of emotional arousal may suppress the mechanisms underlying controlled mentalisation, and facilitate the neural mechanisms underlying automatic mentalisation (Mayes, 2006). In everyday situations, controlled mentalising would only slow down interactions, and hypermentalising (unnecessarily detailed and inaccurate mentalising) would be counterproductive in most social situations, especially with attachment figures (Fonagy, Bateman, & Luyten, 2012). Effective mentalising involves being able to switch flexibly between automatic and more controlled mentalising, this shift being guided by an awareness of ones' own and others' mental states (Bleiberg, 2013). Difficulties arise if mentalising relies only on automatic assumptions about self and others that are too simple or distorted; they may also arise when it is difficult to move flexibly between automatic and conscious thinking, or to challenge simplistic or distorted assumptions (Fonagy et al., 2012).

Internally focused mentalising refers to processes that focus on one's own internal, non-observable subjective experience (thoughts, feelings and experiences).

Externally focused mentalising refers to mental processes that require observation of physical and visible features of one's own or another's actions. These dimensions are important because some individuals have difficulty understanding the unseen, inner processes of others, but are hypersensitive to emotions resulting from observable behaviours such as facial expressions or body posture (Fonagy, Bateman, & Luyten, 2012).

Mentalising also involves a balance between a focus on one's own mental states (*self-oriented*) and a focus on the mental states of others (*other-oriented*) (Bleiberg, 2013). Individuals may present with imbalances in their capacities to mentalise about themselves and others (Fonagy et al., 2012). For example, some people may be excellent at understanding the minds of others, but lack any understanding of their own inner world (Bateman & Fonagy, 2006, 2008). In a similar way, some people may demonstrate excessive concern about their own inner state (hypermentalising related to self) but show less ability to understand the mental states of others (Dimaggio et al., 2008).

Optimal mentalisation also involves the integration of *cognition* and *affect*. Ideally, mentalisation integrates the cognitive aspects of perspective-taking and belief-desire reasoning identified by research into theory of mind, and the affective part of this reasoning highlighted by research on affective empathy (Fonagy et al., 2002; Jurist, 2005). It is hypothesised that different types of psychopathology may differ in terms of the inhibition, deactivation or dysfunction of either the cognitive or affective mentalising systems, which may lead to dissociations between the two systems and

difficulties with integrating the cognitive and affective aspects of mentalisation (Fonagy, Bateman, & Luyten, 2012).

4.3 Acquisition of Mentalising Capacity

Mentalising capacity emerges over time according to normative developmental milestones and the particular characteristics and circumstances of the child (Fonagy & Target, 1996). Between the ages of 2 and 3 years, a child's immature, teleological understanding of action changes into a mentalising one. Teleological understanding refers to an infant's understanding of their own and others' actions as being limited to the physical world rather than the mental world (Fonagy et al., 2004). At this stage, interactions between infant and caregiver are presymbolic; the infant does not mentalise the thoughts or feelings of the caregiver (Fonagy et al., 2004). An infant is able to discriminate between rational and non-rational actions by the time they are 9 months old (Gergely, Nadasdy, Csibra, & Biro, 1995); by 18 months of age, infants demonstrate a mentalising understanding of desire that indicates they understand that a person's actions may be driven by desires that are not their own (Meltzoff, 1995; Repacholi & Gopnik, 1997). Around the same age, a young child is able to deduce other people's meanings when they use new words to label objects unfamiliar to the child (Baldwin & Moses, 1996; Tomasello, Strosberg, & Akhtar, 1996). From the age of 2 years, children talk about states of desire in self and other people, and from 3 years, the ability to talk about beliefs emerges (Bartsch & Wellman, 1995). A key indicator that a child has developed an understanding that behaviour can be caused by mental states that can be true or false according to outside reality (Fonagy et al., 2004)—that is, that behaviour may be based on mistaken belief—is the demonstration of a skill that developmental psychologists call 'theory of mind'. This skill is usually present around the age of 3 or 4 years (Perner, 1991).

Fonagy and Target (1996) describe the developmental integration of two modes of psychic reality—*psychic equivalence* and *pretend mode*—as an important sequence in the development of mentalising. These two modes differ in the way the relationship between internal and external is experienced. As children develop, they move from an experience of psychic reality in which mental states are not understood as representations, to an increasingly complex understanding of the internal world, which culminates in the ability to mentalise. During infancy and early childhood, both types of experienced realities become gradually more integrated, and in typically developing children the process is complete by the time a child has reached an age of 4 or 5 years.

Psychic equivalence mode is when the young child feels that inner experience is the same as outer reality, rather than recognising inner experience as an internal, subjective state. Until approximately 3 years of age, a child feels that one's own thoughts are a mirror of the real world; therefore, the child does not yet have the capacity to appreciate what is real and what is not. For example, a child who thinks there is a monster under the bed will act as if there is a monster under the bed. Equating internal and external is seen to be a two-way process; the small child will attempt to equate appearance with reality, and also project internal representations onto external reality.

In the course of development, the young child becomes gradually more able to engage in the pretend mode. In this stage, children are able to symbolise their own inner states and can distinguish internal from external reality, but only when the inner and the outer world are completely separated. In pretend mode, the child experiences feelings and thoughts as completely symbolic, as if they have no influence on the outside world. At the age of 2, the mode of psychic reality dominates, so a child's pretend play is strictly separated from external reality (Gopnik & Slaughter, 1991), and thus pretend

play on its own cannot form a bridge between inner and outer reality. For example, a child at this age can pretend to be driving a car on a racetrack, while sitting in a cardboard box at home.

Fonagy and Target (1996) note that a child's capacity to pretend is at its best during play. They point out the importance of role play in the development of a child's understanding of the mental world. It takes the close involvement of another mind to hold together the child's pretend and real perspectives, and to gradually integrate the two modes to give rise to a psychic reality in which feelings and ideas are understood to be internal, but closely linked to what is external (Dunn, 1996).

Usually, these two alternative modes are integrated to arrive at mentalisation or reflective mode, where mental states can be experienced as representations. In this mode, inner and outer reality are separate, yet related, and are no longer either equated or dissociated from each other (Gopnik, 1993). This integration of the two modes occurs by age 4 or 5 years, making the way for further development of reflective capacity, where the child is able to understand that his or her own perspective is different from that of others, and that others have mental states, such as wishes, desires, hopes and beliefs. The child is also able to recognise that mental states may be faulty or open to change, because they are based on a variety of perspectives (Fonagy & Target, 1996). The behaviour of self and others begins to make sense, as the child sees that they are dictated by mental states (Kriss, Steele, & Steele, 2012).

The quality of the reflective mode is linked to the extent of integration that has occurred; the more extensive the integration across a broad context of affect states, the higher the level of reflective capacity. This integration allows an individual to organise and understand self-representation, which leads to a coherent strategy for predicting the behaviours of self and others via mental states. This indicates the capacity for more

nuanced, flexible and abstract perspectives on self, others and behaviour, which continue to develop as the child develops (Kriss, et al., 2012).

Several factors contribute to the development of mentalising capacity (Fonagy & Target, 1997), including parent-child interactions and conversations relating to feelings and other mental states (Brown, Donelan-McCall, & Dunn, 1996; Ruffman, Slade, & Crowe, 2002). These conversations assist children to learn about their own mental states and take on multiple perspectives. In addition, interactions and communication with siblings facilitates mentalisation (Dunn, Brown, & Beardsall, 1991; Ruffman et al., 1998).

Early play experiences also contribute to the development of mentalising. Children who engage in pretend play and role play are found to have enhanced emotional comprehension and better-developed mentalising skills (Youngblade & Dunn, 1995; Perner, 1991; Ruffman et al., 1998). Fonagy and colleagues (1991, 1998, 2004) conceptualise the acquisition of mentalising as originating from the intersubjective processes and attachment relationships between infant and caregivers. The contribution of the attachment relationship to the acquisition of mentalising will be explored below.

4.4 Attachment and the Development of Mentalising

Fonagy and colleagues (Fonagy et al., 1991; Fonagy & Target, 1996) drew on and synthesised psychoanalytic ideas of containment (Bion, 1962a, 1962b; Kohut, 1979; Stern, 1985), mirroring (Winnicott, 1965) and internal representations (Sandler, 1978; Loewald, 1980) to conceptualise the development of mentalising capacity. Attachment theory and psychoanalytic theory share common conceptualisations about how the self develops out of the experience of the caregiver–infant relationship. Both perspectives

see the caregiver's attunement to the infant as central to healthy self-development and affect regulation.

Fonagy et al. (2004) asserted that the quality and nature of the attachment relationship, in interaction with genetically determined and temperamental factors, influence the successful development of mentalising capacity. Through co-regulation between caregiver and infant, emotion regulation strategies are developed, and mental states are acknowledged and linked to the regulation and organisation of sense of self and emotion. Through this process, the infant recognises his or her own mind as represented in the mind of the caregiver, and thus develops a sense of self as a social agent; this forms the basis of understanding the minds of others.

The parent's capacity to recognise the infant as an intentional being, and observe and respond to the moment-to-moment changes in the child's mental state, is the basis of sensitive caregiving, which is viewed by attachment theorists as the primary source of secure attachment (e.g., Ainsworth et al., 1978; Grossmann, Grossmann, Spangler, Suess, & Unzner, 1985; Belsky, Fish, & Isabella, 1991; Stern, 1985; Tronick, 1989). The parent's sensitivity and attunement allows the parent to mentally contain the affect state of the infant and respond in a manner that acknowledges the infant's mental state and serves to modulate the unmanageable feelings; this, in turn, fosters the child's development of a sense of self. When the infant experiences stress and arousal, the caregiver monitors this arousal and responds through contingent marked mirroring, which helps the child learn to differentiate and represent affect states, and internalise the soothing process as a basis for affect regulation and impulse control (Fonagy & Target, 1997). This mirroring is innate and generally unconscious on the part of the caregiver (Meltzoff, 1990, Meltzoff & Gopnick, 1993).

4.5 Parental Reflective Functioning

Mary Main and colleagues identified a connection between a mother's attachment style, as reflected in the AAI, and the quality of the mother's attachment to her infant at 12 months (Main et al., 1985). Numerous further studies have validated this relationship (see reviews by Carlson & Sroufe, 1995; Main, 1996; van IJzendoorn, 1995), which supports a theory of intergenerational transmission of attachment. While studies have demonstrated that attachment patterns are passed from caregiver to child, the underlying mechanisms of the transmission were long unclear—a problem that van IJzendoorn (1995) labelled the 'transmission gap'.

Reflective functioning has been identified more recently as one of the main mediating factors in how attachment is transmitted from parent to child. To date, the literature related to the relationship between RF and attachment style focuses on the notion that caregiver RF determines the formation of infant internal working models of attachment. The assumption is that secure attachment patterns develop in response to the caregiver's sensitivity and understanding of the child, a psychological attunement that requires RF (Steele & Steele, 2007).

Grienenberger, Kelly and Slade (2005) and Slade et al. (2005) have suggested that maternal RF mediates the relationship between parental attachment patterns (measured on the AAI) and infant attachment. The caregiver's capacity to acknowledge and be curious about the mind of the child is the way through which the caregiver's attachment organisation affects the child's development of self and sense of belonging (Grienenberger et al., 2005; Slade et al., 2005).

Fonagy and colleagues (1995) suggested that parents' capacity to hold their own complex mental states in mind is what allows them to hold their child's internal affective experience in mind. Parents' capacity to regulate and organise their own

thoughts and feelings about relationships with primary caregivers is linked to the capacity to regulate, organise, and sensitively respond to the need for comfort, proximity and safety in children (Main, 1996, 2000; Slade, 2005). A parent with high RF is able to be more sensitive to an infant's inner states, and so is able to respond to the child's attachment signals in an empathic and accurate way that meets the child's needs, regardless of the parent's own early attachment experiences. The parent's capacity for RF may be a protective mechanism within the attachment relationship that buffers the transmission of insecure attachment representations from one generation to the next (Gabbard, 2004).

A number of studies have found that higher levels of maternal RF predict infant security (Arnott & Meins, 2007; Fonagy et al., 1998; Fonagy, Redfern, & Charman, 1997; Fonagy, et al., 1991; Meins, Fernyhough, Fradley, & Tuckey, 2001; Meins, Fernyhough, Russell, & Clark-Carter, 1998; Slade et al., 2005). Fonagy et al. (1991) found that mothers and fathers who rated highly in mentalising were three or four times more likely to have children that were securely attached to them, compared to those parents with poor RF capacity. In a study examining the role of parental mentalising skills and their relationship to infant attachment style, Fonagy et al. (1995) found that RF mediated the relationship between parental attachment security and infant attachment security in the Strange Situation Procedure (Ainsworth et al., 1978) at 1 year and at 18 months. They found that parents with insecure patterns of attachment, with a history of an adverse childhood, but with high RF, were more likely to have babies securely attached to them than parents with similar insecure attachment and adverse history, but with low RF. Similarly, Slade et al. (2005) found that a mother's RF mediated the relationship between atypical maternal behaviours (e.g., affective

communication errors, role or boundary confusion, intrusiveness) and attachment security in her infant.

Not only are parents with high RF more likely to promote secure attachment patterns in their children, but secure attachment is also key in facilitating mentalising capacity in children (Fonagy et al., 1995; Fonagy, 2000). A mother's ability to consider the perspective of her child, including maternal mind-mindedness and RF observed in either interaction with or descriptions of the child, influences emotional understanding and theory of mind in children (e.g., de Rosnay & Harris, 2002; Fonagy & Target, 1997; Meins et al., 2002; Peterson & Slaughter, 2003). Infants who develop in the context of a secure attachment relationship have confidence to make attributions of mental states to account for the behaviour of the caregiver and others (Bouchard et al., 2008).

Fonagy et al. conducted a longitudinal study of 92 children and found that, in the group that passed a false belief task, there were twice as many children with secure attachment compared to the group that failed the task. In this study, mothers' RF was also associated with the children's success: 85% of children whose mothers had above-average RF succeeded in the theory of mind task, whereas only 56% of those whose mothers had poor RF did. The caregivers' RF predicted their children's attachment security, which in turn predicted the children's acquisition of theory of mind. A secure attachment between the children and their fathers also contributed to acquisition of theory of mind. In addition, on a test of second-order mentalising skills, where the child was required to predict the behaviour of a person based on that person's beliefs about a third person's false beliefs, the children with secure attachments with both parents were more likely to succeed, whereas the children with insecure attachments with both parents were the least likely to succeed. Fonagy et al. state that these results suggest that

the parents' capacity to mentalise facilitates the child's general understanding of others' minds, through the mediation of secure attachment.

Most research on parental RF to date has focused on mothers of infants and young children. Reflective functioning may be just as important for parenting children during adolescence, and may be either aided or impeded by people and experiences, including caregiver interactions, into early adolescence (Steele, Steele, & Johansson, 2002). Sound RF capacity may assist parents to understand the changes their adolescent children are going through, as well as their own thoughts and feelings related to these changes (Benbassat & Priel, 2012). Parental and adolescent RF skills combined may facilitate communication and coping with conflict and negative emotions during adolescence.

Vrouva and Fonagy (2009) conducted a study on attachment and mentalising with an adolescent population—a large community sample of 1,141 high school students. In relation to mentalisation and attachment, they found that the adolescents' patterns of attachment were closely correlated to their capacity for mentalisation. Positive correlations were found between mentalisation measured by the Empathy Quotient measure and peer attachment measured on the IPPA scale (Armsden & Greenberg, 1987), and correlations between total peer attachment and mentalising on the Reflective Function Questionnaire (Fonagy & Ghinai, 2007). They also found that the females in her sample performed better in mentalising tasks than the males. This accords with other studies that have reported superior mentalising in females (e.g., Abu-Akel & Bo, 2013; Baron-Cohen & Wheelwright, 2004; Campbell, Lawrence, Mandy, Mitra, Jeyakuma, & Skuse, 2006). In the same study, Vrouva also found a negligible relationship between IQ and attachment, but modest correlations between most

mentalising ability measures, verbal ability and performance IQ. This suggests that mentalising ability may be affected by verbal ability and intelligence.

4.6 Mentalising in Adolescence

Although mentalising capacity begins to develop in childhood, this development continues well into adolescence and adulthood (Dumontheil, Apperly, & Blakemore, 2010). Neuroscience research has identified the brain structures involved in mentalising, which form part of the 'social brain' (Blakemore, 2008). A network of brain regions, including the dorsomedial prefrontal cortex, medial prefrontal cortex, precuneus/posterior cingulate cortex, temporoparietal junction and posterior superior temporal sulcus are activated during tasks that require mentalising (Frith & Frith, 2006; Lieberman, 2010; Mitchell, 2009; Muscatell et al. 2012).

During development from childhood to adolescence, extensive changes occur in the regions of the brain involved in mentalising (Burnett, Bird, Moll, Frith, & Blakemore, 2009; Keulers, Evers, Stiers, & Jolles, 2010; Klapwijk et al., 2013; for reviews, see Blakemore & Choudhury, 2006; Blakemore, 2008). During adolescence, the same areas involved in social cognition and mentalising undergo significant change, including decrease of pruning in grey matter volume (Mills, Lalonde, Clasen, Giedd, & Blakemore, 2014; Toga, Thompson, & Sowell, 2006; Blakemore & Choudhury, 2006; Blakemore, 2008). In the lead-up to puberty, these structures steadily increase in volume then rapidly decline. As pruning occurs, connectivity between grey matter centres is enhanced, with an associated increase in white matter (myelin) density in the axons linking grey matter centres that are not undergoing pruning (Blakemore, den Ouden, Choudhury, & Frith, 2007; Burnett et al., 2009; Gogtay et al., 2004).

Behavioural and neuroimaging studies have demonstrated that, during this period of changes to grey matter, adolescents experience declines in executive

functioning ability, response inhibition, effortful control of attention, emotional self-control, and capacity to integrate and balance mentalising abilities (Bleiberg, 2013; Nelson, Leibenluft, McClure, & Pine, 2005). Fonagy, Gergely, Jurist and Target (2006) suggested that adolescents are hypersensitive both to their own mental states and to those of those around them. They proposed that this is partly due to changes in cognitive development during this period, when adolescents are beginning to integrate knowledge about mental states and are more able to refer overtly to mental states using mental state language. However, as this is a developing capacity, if the integration becomes too demanding, impairments in mentalising may become apparent. This difficulty in integration may occur as a result of the increased complexity of cognitions related to the mental states of self and others, possibly highlighted by insufficient language capacity necessary for explicit mentalisation (Rutherford et al., 2012). In addition, in adolescence, the limbic affective system matures before the cognitive prefrontal cortex, where maturation occurs later (Casey et al., 2008; Somerville et al., 2010). The lateral temporal cortex, amygdala and ventromedial prefrontal cortex, proposed by Fonagy and Luyten (2009) as important to explicit mentalisation are likely to be underdeveloped during adolescence, furthering the potential for difficulties in integrating mental state knowledge and language.

The changes that occur in mentalising-associated areas of the brain during adolescence suggest that it may be a critical period in the development of mentalising and social cognition (Bleiberg, 2013; Nelson et al., 2005). During adolescence, maturation occurs of the abilities to assign emotional significance to social cues, regulate emotional reactions, and inhibit automatic, defensive reactions in social situations, as more rapid and efficient connections are formed between specialised brain centres (Spear, 2007; Nelson et al., 2005; New et al., 2007). As well as experiencing

changes in the neural architecture of mentalising regions, changes in sense of self and social relationships, which require advanced mentalising capacity, present significant challenges to adolescents (Vrouva, Target, & Ensink, 2012).

A developmental understanding of mentalisation is important, because limitations in this capacity may lay the foundation for present and future psychopathology (Bleiberg, 2013). As children develop into adolescents, they gradually internalise an increasing ability to reflect on their own feeling states and those of others (Ostler, Bahar, & Jessee, 2010). The development of concrete and formal operational thought in middle childhood and adolescence further allows young people to reflect on more complex feeling states in more sophisticated ways (Steele & Steele, 2008). This brings about the capacity to deal with more complex emotions and cognitions (Fonagy et al., 2004).

Malberg (2013) suggested that during adolescence, reflective capacity may be blocked defensively in order to manage the developmental upheaval of this phase. While even typically developing adolescents may demonstrate difficulties with mentalising, the potential exists for adolescents with even greater difficulties with mentalising to be vulnerable in stressful situations, and follow a trajectory into psychopathology (Bleiberg, 2013; Rutherford et al., 2012). Adolescence has been identified as a period of vulnerability to psychiatric difficulties, with epidemiological studies indicating that the rate of psychiatric disorders increases during adolescence, with rises in the presentation of both internalising and externalising problems (Bleiberg, 2013). In the case of eating disorders, the onset of adolescence appears to play a role in their emergence. Evidence suggests that disruptions in mentalising are central to adolescents' increased vulnerability to psychopathology.

4.7 Impaired Mentalising

Bateman and Fonagy (2010) described possible origins of impaired mentalising. They suggested that constitutional vulnerability stemming from genetic or temperamental factors, when combined with experience of psychological trauma, can undermine the development of the social or cognitive capacities needed for mentalisation through disruption in the attachment relationship (Battle, Shea, & Johnson, 2004), especially when the contingency between the individual's emotional experience and the caregiver's mirroring is non-congruent (Crandell, Patrick, & Hobson, 2003). This history may lead to a hypersensitive attachment system, which then leads to the development of a reduced capacity to represent affect and consciously control attentional capacity (Posner & Rothbart, 2002).

Because the capacity for mentalisation is acquired in the context of early attachment relationships, disturbances in attachment relationships will disrupt the normal development of the crucial intrapersonal and interpersonal relationship capacities, leading to vulnerabilities in the context of social relationships (Fonagy, Target, & Bateman, 2010). The normal developmental process of acquiring mentalising capacity is severely disrupted in environments of neglect, emotional abuse, or physical or sexual maltreatment during childhood. Aspects of a family environment that can undermine the development of a child's mentalisation capacity include chaotic family relationships, disrupted attachments, multiple caregivers, parental neglect, alcoholism, and affective instability among family members. This kind of family environment, even in the absence of maltreatment, can undermine the development of mentalisation, in that such an environment may lack coherent discourse around mental states (Fonagy & Bateman, 2007). This may be present in families that are characterised by neglect, low

parental involvement and emotional maltreatment, rather than the presence of physical or sexual abuse (Fonagy & Bateman, 2007).

Attachment-related stress adversely affects activation patterns in the brain areas related to mentalising (Nolte et al., 2013). Fonagy and Bateman (2004) drew on Schore's (2003) work and reviewed evidence regarding the neurological underpinnings of mentalisation, and the impact of trauma upon them. They highlighted the role of the prefrontal cortex in executive functions that are important for social cooperation and regulating interpersonal relationships. They pointed out that the prefrontal cortex and anterior cingulated gyrus, which are activated in mentalising tasks, are vulnerable to levels of arousal. Once above a certain level of arousal, a switch occurs from prefrontal executive mode—flexible, reflective responding—to more primitive posterior cortical and subcortical arousal, with amygdala-mediated memory encoding, hypervigilance, and fight-or-flight mode action-centred responding (Arnsten, 1998). Fonagy and Bateman (2004) suggested that those with insecure or disorganised attachment patterns are highly sensitised to interpersonal interactions, and easily triggered to high arousal with a corresponding shift in brain functioning.

A disruption in the process of development of mentalising may mean that, although not absent, mentalising capacity is vulnerable to break down during stressful situations, negative life events or emotive interpersonal exchanges. If an individual has not achieved the integration of psychic equivalence and pretend modes, they are more likely to distort their subjective experience, which may lead to non-mentalising strategies.

As an individual experiences stress, it appears that mentalising ability switches from controlled modes to more automatic modes (Taubner & Curth, 2013). Individual coping strategies influence the activation of the attachment system (Mikulincer &

Shaver, 2007), which affects three key parameters: the threshold of the switch, the strength of the relationship between attachment stress and controlled or automatic mentalising, and the time it takes to recover from the stress back into a controlled mode of mentalising (Luyten et al., 2012). This means that mentalising capacity is determined by the individual's pre-existing history, as well as the current situation. An individual's mentalising capacity may therefore fluctuate depending on the interpersonal context, including whether it is associated with attachment-related distress (Fonagy & Target, 2005; Grienenberger et al., 2005; Luyten et al., 2012; Nolte et al., 2013).

4.8 Measuring Mentalising

Advances in the field of mentalising have generated several measures of mentalising capacity. It is a difficult construct to characterise and measure, due to the fact that it draws on several overlapping skills, including mental flexibility, emotional recognition and vocabulary, attention and learning. It is also challenging to fully measure because it is a multidimensional construct that captures a process occurring in multiple domains, including different levels of consciousness (both the implicit and explicit), different subjects of mentalising (the self and others), and different aspects of mentalising (cognition and affect) (Choi-Kain & Gunderson, 2008; Fonagy & Luyten, 2009). It is also a capacity that fluctuates in all individuals, often at its lowest in times of heightened emotional arousal. It is difficult to capture this using psychometric measures. Several measures have been developed to assess RF in adults and adolescents (Luyten et al., 2012). Other measures have been designed to measure parental RF.

4.8.1 Measuring adult reflective functioning

The Adult Reflective Function Scale (ARFS) was developed by Fonagy et al. (1998), and is coded from transcripts of the AAI (Main & Goldwyn, 1985–1995). The RF scale examines, through the individual's narrative, the ability to think about one's

own and others' beliefs and desires in the present, in the past, and in the imagined future (Fonagy et al., 1998). Scores on the RF scale range from -1 to 9, with -1 indicating negative mentalising abilities, and 9 indicating exceptionally sophisticated mentalising abilities. Speakers with low RF (< 3) do not elicit enough evidence to demonstrate that they consider the motives that may have shaped their parents' behaviour towards them, or their own motives and behaviours. Mean RF ratings for psychiatric groups, including those with personality disorders, have been shown to fall within this range (Fonagy et al., 1996). In general, individuals who score moderate to high RF demonstrate an awareness of the nature of mental states, an effort to think about the mental states that underlie specific behaviours, recognition of the developmental aspects of mental states, or recognition of mental states in relation to the interviewer. Ratings of RF have been shown to have the greatest influence on the coder's appraisal of secure attachment, and explain over half of the variance in the distinction between secure and insecure AAI transcripts (Fonagy et al., 1998). Since the RF scale was originally developed, it has been operationalised into two different but related measurement constructs: adult and parental RF (Katznelson, 2014).

Adult RF is mainly rated on the AAI and focuses on an individual's capacity to reflect on their childhood experiences with their parents. A 46-item self-report measure, the Reflective Function Questionnaire, was developed by Fonagy and Ghinai (2007) to assess mentalising capacity in adults. Preliminary reports demonstrate promising psychometric properties with good reliability and validity for this measure (Ha, Sharp, Ensink, Fonagy, & Cirino, 2013).

Researchers have also begun to evaluate individuals' RF capacities by considering not only their early childhood attachment relationships, but the currently unfolding relationships with their children. Parental RF focuses on parents' capacity to

mentalise about and reflect upon their relationships with their children (Slade, 2005). To that end, researchers have developed measures and coding systems to investigate parents' representations of their children (Slade & Aber, 1992; Slade, Bernbach, Grienenberger, Levy, & Locker, 2004; Slade & Crnic, 1999; Slade, Belsky, Aber, & Phelps, 1999; Benoit, Zeanah, Parker, Nicholson, & Coolbear, 1997; Zeanah, Benoit, Hirshberg, Barton, & Regan, 1994; George & Solomon, 1993, 1996, 2002, 2008). These measures are interview-based and aim to evaluate a narrative of the parent's internal representations of the child. Examples include the Working Model of the Child Interview (Zeanah et al., 1994), the Experience of Caregiver Interview (George & Solomon, 1996), and the Parent Development Interview (PDI; Aber et al., 1985), for which the RF scale has been adapted (Slade et al., 2004). More detail about the PDI will be provided in the Section 6.3.2 of this thesis.

4.8.2 Measuring childhood and adolescent reflective functioning

Measuring mentalising capacity in adolescence has been hindered by the lack of an age-appropriate measure able to take into account the particular developmental characteristics of this age group. These characteristics include increasing verbal abilities, progressively more complex interactions with adults, reduced reliance on physical proximity to parents, the importance of present over past relationships, the need to discriminate developmental limitations in narrative ability compared to attachment-related dysfunctional strategies, and the role of non-verbal behaviour as indicators of attachment styles (Shmueli-Goetz et al., 2008).

The Child Reflective Functioning Scale (CRFS) was developed by Target, Oandasan and Ensink (2001), based on the Reflective Functioning Scale, to rate transcriptions of the CAI (Shmueli-Goetz et al., 2008; Target, Fonagy, Shmueli-Goetz, Datta, & Schneider, 1999). Good inter-rater reliability for the RF items has been

reported, with intraclass coefficients (ICCs) ranging from 0.6 to 1.00 (Ensink, 2004). Although it has good psychometric properties, limitations of the CRFS include the fact that it is time consuming and expensive to conduct the CAI and transcribe the interview; it also requires substantial coding resources (Ha et al., 2013).

The Reflective Function Questionnaire for Youths (Sharp et al., 2009) is a 46-item self-report measure that was adapted from the adult version (Fonagy & Ghinai, 2007) by rewording several items to a more appropriate developmental level. Reported internal reliability of this scale is not high, and further work is required on its internal construct validity (Ha et al., 2013).

The Child's Eyes Test (Baron-Cohen, Wheelwright, Hill, Raste, & Plumb, 2001) was developed to assess explicit-controlled mentalising (Sharp et al., 2013). Adolescents are presented with 28 pictures of the eye region of the face and instructed to examine each photo to determine which of four words (e.g., jealous, scared, relaxed, hate) best fits with what the person in the photo seems to be thinking or feeling. A total score is derived from a sum of the correct items. This measure demonstrates adequate psychometrics (Baron-Cohen et al., 2001).

The Movie for the Assessment of Social Cognition (Dziobek et al., 2006) is a video-based assessment used to assess implicit mentalising in typical social situations involving peer and romantic relationships. Respondents are required to attribute mental states to characters in the movie. Adequate psychometric properties have been established for the Movie and it has been shown to be sensitive in discriminating patients with BPD from individuals without the disorder (Preißler, Dziobek, Ritter, Heekeren, & Roepke, 2010; Sharp et al., 2011, 2013). Recently, the measure has been used to identify impaired mentalising in adolescent patients with BPD (e.g., Sharp et al., 2011, 2013).

The How I Feel (HIF; Sandell et al., 2008) uses brief vignettes where the protagonist is described in situations of intrapersonal or interpersonal dilemma. Respondents are required to identify how the protagonist feels and why. Vrouva and Fonagy (2009) found Cronbach's alpha for this test to be between .60 and .74 for the two subscales and total scale.

The Mentalising Stories Test for Adolescents (MSTA; Vrouva & Fonagy, 2009) is a self-administered written measure that requires participants to read vignettes in which the main character interacts with another person. The participants are required to make judgments about the mental state of the characters. Good psychometric properties have been reported, with a Cronbach's alpha of 0.76 (Vrouva, Target, & Ensink, 2012). More detail about this measure will be provided in Section 6.2.10 of this thesis.

4.9 Mentalising and Mental Health in Adolescence

Robust mentalising capacity plays an important role in enhancing emotional resilience and wellbeing (Allen et al., 2008; Bion, 1962a, 1962b; Fonagy, Target, Steele, & Steele, 1998; Slade, 2005). It is considered to be a core element of emotional health, as it facilitates an individual's ability to regulate feelings, cope with frustration, and consider contexts wider than just the present (Allen et al., 2008). Robust RF capacity may help adolescents to cope with the developmental changes of adolescence, and with the development of social competence (Benbassat & Priel, 2012; Bleiberg, 2013). In regard to mental health, sound mentalising capacity is considered to buffer an individual against the negative impacts of trauma (Allen et al., 2008). Because it involves regulation of affect, individuals with sound mentalising capacity may be more resilient and better equipped to tolerate feelings of anger, shame or anxiety that may arise from adversity and trauma (Ostler et al., 2010). As mentalising capacity involves attunement to the mental states of self and others and an understanding of emotions, it

may promote social capacity, assist interpersonal relationships and interactions, and enhance an individual's capacity to seek and maintain social support (Allen et al., 2008; Nolte et al., 2013; Ostler et al., 2010). Sound mentalising capacity may therefore be a significant protective factor for psychosocial functioning during adolescence (Benbassat & Priel, 2012). The perspective-taking inherent in mentalising is associated with the ability to regulate affect during times of distress (Fonagy et al., 2004), and therefore RF may be an essential coping mechanism throughout the challenges of adolescence.

The breakdown of mentalising capacity has been linked to a possible developmental pathway towards psychopathology via the disruption of behavioural and emotional regulation (Sharp et al., 2009). Difficulties with mentalising are considered central to a number of mental health diagnoses, such as depression (Allen, Haslam-Hopwood, & Strauss, 2003; Fischer-Kern et al., 2013; Taubner, Kessler, Buchheim, Kächele, & Staun, 2011), posttraumatic stress disorder and other trauma-related disorders (Schottenbauer, Glass, Arnkoff, & Gray, 2008; Seligman, 2007), psychopathic traits and aggression in adolescence (Taubner, White, Zimmermann, Fonagy, & Nolte, 2013) and BPD (Bateman & Fonagy, 2009). With regard to this connection, the most researched disorder to date is BPD. It is important to review the BPD field briefly for the purposes of this thesis, as some adolescents with eating disorders present with features of BPD.

4.9.1 Mentalising and borderline personality traits

Research on eating disorders has increasingly focused on the role of personality traits (Godt, 2008; Millon et al., 1993; Vitousek & Manke, 1994; Vitousek & Stumpf, 2005). Almost 30% of patients with eating disorders meet criteria for a personality disorder (Godt, 2008). Research into personality pathology in adolescents with eating disorders has recognised four main subtypes of personality pathology: a *high-*

functioning or *perfectionist* subtype, with minimal personality pathology; an *emotionally dysregulated* subtype with borderline and histrionic tendencies; an *avoidant-insecure* subtype with anxious, depressed and socially avoidant tendencies; and a *constricted-obsessional* subtype with obsessional, compulsive and rigid tendencies (e.g., Espelage, Mazzeo, Sherman, & Thompson, 2002; Gazzillo et al., 2013; Magallón-Neri et al., 2014; Sansone, Levitt, & Sansone, 2004; Sansone & Sansone, 2011; Thompson-Brenner, Eddy, Satir, Boissueau, & Westen, 2008).

Borderline traits are well reported in patients with eating disorders, particularly those with binge-purge symptoms (Kleifield, Sunday, Hurt, & Halmi, 1994; Lilenfeld et al., 2000; Nagata et al., 2013; Sansone, Chu, Wiederman, & Lam, 2011). Individuals with BN have higher-than-normal comorbidity of Cluster B personality disorders, including BPD (Sansone & Sansone, 2011; Rowe et al., 2008; Selby et al., 2012). Sansone et al. (2005) conducted a meta-analysis and found that BPD was the most frequent comorbid personality disorder among both AN-BP (25%) and BN (28%) sufferers. Among outpatients with BN, BPD is associated with more generalised psychiatric symptoms (Steiger & Stotland, 1996). The presence of BPD traits in patients with eating disorders complicates their clinical presentation, and presents unique challenges for treatment (Robinson et al., 2014). These patients present with weight loss, bulimia, self-harm, emotional lability and impulsive behaviours. In a treatment trial, this group remained more clinically severe during and after treatment compared to controls without borderline traits, and held more maladaptive attitudes and a stronger drive for thinness throughout treatment (Steiger & Stotland, 1996).

Within an attachment paradigm, the mentalising model of BPD (Fonagy & Bateman, 2004; Fonagy & Luyten, 2009; Sharp & Fonagy, 2008) proposes that failures in attachment lead to the unstable or reduced mentalisation that is characteristic of BPD.

BPD is a psychiatric condition that involves instability of affect and identity, impaired interpersonal relationships, and self-injurious behaviour (Sharp, Kalpakci, Mellick, Venta, & Temple, 2014). Originally considered limited to adults, recent longitudinal and genetic studies have established that BPD is a valid diagnosis for adolescents (Bornovalova, Hicks, Iacono, & McGue, 2009; Miller, Muehlenkamp, & Jacobson, 2008). There has been a recent move towards studying borderline as personality traits rather than a diagnostic status, particularly in adolescent research (Sharp et al., 2014). Borderline tendencies include impulsivity, sensation-seeking, interpersonal sensitivity, affective dysregulation, stress reactivity, passive disengagement, self-harm and suicidal thoughts (Kleifield et al., 1994; Lilenfeld et al., 2000; Millon et al., 1993; Sadeh et al., 2014; von Lojewski, Fisher & Abraham, 2013). Fonagy and Bateman suggested that not only is a lack of mentalisation one of the hallmarks of BPD, but that the self-harm associated with BPD is a symptom of reduced mentalising capacity.

Research on the mentalising capacities of patients with BPD has revealed mixed results. Fertuck et al. (2009) found that adults with BPD scored higher on a mentalising test measured by the Reading the Mind in the Eyes task (Baron-Cohen et al., 2001). The authors suggested that patients with BPD may have an enhanced sensitivity to the mental states of others, and this may contribute to social difficulties in patients with BPD. Preißler et al. (2010) used the Reading the Mind in the Eyes Task to test explicit mentalising, and the Movie for the Assessment of Social Cognition (Dziobek et al., 2006) to test implicit mentalising abilities of adults with BPD. The study found no difference between healthy controls and participants with BPD on the Eyes task, but participants with BPD demonstrated significant impairments in mentalising on the Movie for the Assessment of Social Cognition. These results indicate that patients with BPD may display deficits in implicit mentalising, while displaying superior explicit

mentalising. In a similar vein, patients with BPD have been found to display a difference in mentalising capacity between affective and cognitive mentalising. Unlike healthy controls, people with BPD display higher affective mentalising abilities compared to cognitive mentalising abilities (Harari, Shamay-Tsoory, Ravid, & Levkovitz, 2010).

In line with the available evidence on mentalising deficits in adults with BPD, there is evidence that adolescents presenting with BPD features also display deficits in mentalising capacity, specifically excessive mentalising, rather than under-mentalising. Bleiberg (2013) offered a description of the clinical presentation of adolescents who hypermentalise. He reported that adolescents, particularly those with emerging BPD, may present with unreflective, rigid, automatic assumptions that are maintained with certainty about the states of mind of themselves or others. Such adolescents frequently place a large emphasis on overwhelming affective states. Bleiberg stated that this presentation is most often seen in the context of stress related to attachment, which can be quickly hyperactivated, creating a situation where they may engage in hypermentalising (excessive and usually inaccurate attempts to interpret other people's mental states).

Sharp et al. (2011) investigated mentalising and emotion regulation in adolescent inpatients diagnosed with BPD. Mentalising was measured using the Movie for the Assessment of Social Cognition (Dziobek et al., 2006). Results identified that, rather than decreased mentalising abilities, these adolescents displayed hypermentalising. The study found that adolescents who met criteria for BPD had a higher frequency of over-mentalising responses: they made assumptions about other people's mental states that went beyond observable information provided. This indicates an over-attribution of mental states to others, and likely their misinterpretation (Sharp et

al., 2013). The study also found that hypermentalising interacted with emotional regulation; as these adolescents misunderstood other people's minds, it led to distress and difficulty regulating emotions, which increased symptoms.

Sharp et al. (2013) examined whether inpatient-based mentalising interventions would serve to decrease hypermentalising in a sample of adolescents diagnosed with BPD, compared to a sample of psychiatric controls. This study confirmed a relationship between borderline traits and symptoms and hypermentalising. Hypermentalising was measured by the Movie for the Assessment of Social Cognition, as well as the Child Eyes Test, Basic Empathy Scale and the MSTA. After the intervention, results indicated that hypermentalising was significantly reduced between admission and discharge for both BPD and non-BPD groups. The correlation between the change in hypermentalising score and the change in borderline symptoms was highly significant, indicating that hypermentalising was associated with a change in borderline symptoms.

While the study did not find a significant improvement in hypermentalising measured by the MSTA, it did find a significant relationship between hypermentalising measured by the MSTA and measured by the MASC, indicating that hypermentalising measured by the MSTA may be tapping a similar construct as hypermentalising on the MASC (Sharp et al., 2013). In support of these findings, Rossouw (2013b) found in a cross-sectional study of self-harming adolescents that patients with borderline symptoms displayed decreased mentalising capacity using the HIF measure (Sandell et al., 2008) compared to non-clinical controls, but not compared to clinical controls of adolescents with other mental health difficulties. Although those in the self-harming group were significantly more depressed, Rossouw did not control for depression in her analysis.

4.9.2 Mentalising and eating disorders

Mentalising theory is of particular relevance to the field of eating disorders, as it identifies mentalising capacity as a vital requirement for self-organisation, affect regulation, impulse control, self-monitoring and self-agency (Fonagy, 1999; Fonagy & Target, 1997; Fonagy et al., 2002; Fonagy et al., 1998; Fonagy & Bateman, 2008). Several theories of eating disorders identify difficulty with self-organisation and recognition and regulation of affect as core features of the disorder (Burns, Fischer, Jackson, & Harding, 2012; Corstorphine, Mountford, Tomlinson, Waller, & Meyer, 2007; Pedersen, Lunn, Katznelson, & Poulsen, 2012; Racine & Wildes, 2013; Spence & Courbasson, 2012; Svaldi, Griepenstroh, Tuschen-Caffier, & Ehring, 2012; Ty & Francis, 2013). The impact of mood intolerance on eating disorder symptoms is highlighted in models of treatment such as enhanced cognitive behavioural therapy (Fairburn et al., 2009) and dialectical behaviour therapy for BN (Kroger et al., 2010; Wisner & Telch, 1999; Palmer et al., 2003). As previously outlined, eating disorder behaviours such as restricting and bingeing-purging are considered to serve a regulatory function for dysregulated affect. Several studies have provided evidence for the presence of emotional deficits in eating disorder patients, and there are differences in emotional regulation between individuals who restrict and those who binge and purge. Individuals with AN-R have been found to have difficulty both recognising and regulating emotions compared to controls (Harrison, Sullivan, Tchanturia, & Treasure, 2009). Individuals with BN have been found to use bulimic symptoms as a means of avoiding unpleasant emotions (Steinberg, Tobin, & Johnson, 1990).

Treasure and Schmidt's (2013) cognitive-interpersonal model of AN outlines various cognitive, socio-emotional and interpersonal factors that both predispose to and perpetuate AN. In this model, they point out that individuals with AN display difficulty

with accurate reading of the motivations and emotions of others, as well as difficulty with theory of mind tasks and social perception, which are theoretically linked to mentalising. The authors also assert that individuals with AN demonstrate disturbed perception and understanding of self, and refer to a large body of work revealing that people with AN display alexithymia.

Alexithymia refers to difficulty with identifying and distinguishing between emotions and bodily sensations of emotional arousal; again, this is conceptually linked to mentalising. These individuals may have difficulty integrating cognitive interpretations of emotions and bodily sensations related to these experiences (Bermond, Vorst, & Moormann, 2006). This perspective aligns with psychoanalytic perspectives on eating disorders that suggest that patients with eating disorders are alexithymic and demonstrate impaired symbolisation abilities.

Some authors propose that deficits in the processing of subjective experience and perception of the self are the core difficulties of eating disorders (Corcos et al., 2000; De Groot & Rodin, 1994). For example, eating disorder symptoms have been conceptualised as concrete, bodily focused strategies for managing affect, especially negative affect (Clinton, 2006; Skårderud, 2007a). Substantial evidence exists for a link between eating disorders and alexithymia (Carano et al., 2006; Keating, Tasca, & Hill, 2013; Montebanocci et al., 2006). Young AN patients have been found to be more alexithymic than controls, and alexithymia is also reported to be equally common in adolescents as in adult AN patients (Berger et al., 2013; Karukivi, Hautala, Korpelainen, et al., 2010).

Individuals with eating disorders appear to have reduced capacity to access and regulate their affect (Bruch, 1962). Limited knowledge and connection with one's own emotions can also lead to a lack of ability to represent another person's emotional

experience (Bydlowski et al., 2005). The ability to discern one's own emotions is partially dictated by the ability to tolerate a variety of emotions, and a lack of differentiation and integration of emotion can result in a limited ability to use emotion to guide behaviour. These difficulties with emotion processing lead to intense, often uncontrolled emotional reactions (Bydlowski et al., 2005). The behaviours related to control, food restriction and weight loss are conceptualised as resulting from a lack of capacity to control distressing emotions.

Modern psychoanalytic theory suggests that a failure to mentalise contributes to the aetiology and maintenance of eating disorders (Skårderud & Fonagy, 2012). Eating disorders are seen as outcomes of a lack of mentalising capacity and the resulting presence of pre-mentalised modes of representing mental states. Individuals with poorly integrated psychic realities are seen to use their bodies as a way to maintain a continuity of the self. These individuals do not have a clear sense of themselves; therefore they maintain a sense of the self by focusing on the physical rather than psychological being (Fonagy et al., 2002). Difficulty recognising and understanding mental states leads to an adolescent's emotional experiences being confusing and unlabelled; thus the adolescent channels this inner conflict into a bodily expression (Fonagy, 2005; McDougall, 1989; Skårderud, 2007a; Zerbe, 1993). The body is used as a primitive or concrete form of representing conflict, and a maladaptive coping mechanism (Skårderud, 2007a; Zerbe, 1993).

Figure 4.1 below outlines how Fonagy (2005) conceptualised eating disorders in relation to mentalising. In the context of early childhood experiences, environmental contributions, the attachment relationship, development, and adverse experiences, a young person may present with decreased mentalising, as demonstrated by the presence of pre-mentalising modes of psychic equivalence, pretend mode and teleological

thinking. A deficit in mentalising capacity highlights discontinuities in the structure of the self. This occurs in the context of insecure attachment patterns, particularly disorganised attachment, and may be amplified by trauma. Stress is known to decrease mentalising capacity, and research has identified that, during adolescence, there is increased vulnerability to chronic stress and susceptibility of the HPA axis to dysregulation. These vulnerabilities can be exacerbated by biological and psychosocial changes associated with puberty, especially in females. For example, exposure to a significant stressor at this critical time can trigger a dysregulated hypothalamic–pituitary–adrenal axis response that is known to be present in adolescents with AN (Connan et al., 2003). The difficulty in depicting thoughts and feelings in oneself and others can limit the ability of a patient with an eating disorder to engage in intimate relationships and to make use of psychotherapy (Tasca et al., 2011).

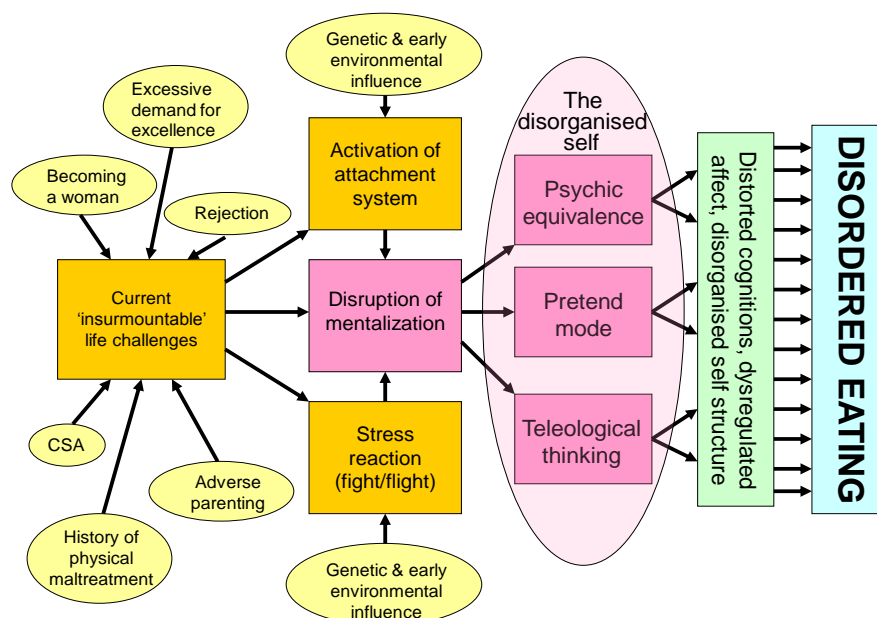


Figure 4.1. A model of mentalising difficulties in patients with eating disorders (Fonagy, 2005).

4.9.3 Categories of non-mentalising in adolescents with eating disorders

When an individual's mentalising falters or fails, they revert to more primitive modes of thinking, including teleological thinking, psychic equivalence, and pretend mode (Bleiberg, 2013). This section outlines the various observable forms of non-mentalising developed and described by Bateman and Fonagy (2004, 2006).

Concrete mentalising refers to lack of ability to understand mental states beyond concrete terms. When in this state, individuals may misrepresent their own or others' minds as less complex and less differentiated (Baker, Silk, Westen, Nigg, & Lohr, 1992). Individuals functioning in concrete mode struggle to see alternative perspectives, and feel that their heightened reactions indicate the seriousness of a given situation. An indication of concrete thinking is when a person is not able to grasp the relationship between thoughts, feelings and actions in self or others. This may be demonstrated by an inability to see one's impact on others and a difficulty in seeing how one thing leads to another (Bleiberg et al., 2012). Concrete thinking limits a person's ability to cope with reality, as it limits ability to appraise reality. A hallmark of concrete mentalising is the absence of flexibility and the overuse of generalisations. In adolescents with eating disorders, examples include constant blame or self-blame, and statements such as: 'I am fat'; 'If I don't exercise I will get fat'; 'She always makes me eat too much'; 'She never understands'. The main forms of concrete thinking are *psychic equivalence* and *teleological thinking*.

Psychic equivalence is a state of mind in which internal state is equated with external reality; that is, where thoughts or feelings are experienced as facts. Psychic equivalence mode is characterised by difficulties in differentiating or regulating emotions. Instead, the individual is stuck in the immediate here and now of basic emotions, and may attempt to regulate inner states through various forms of

externalisation, projection, projective identification and self-harm (Fonagy et al., 2002). Skårderud (2007a) articulated how this is observed in patients with eating disorders. He describes how in patients with AN, bodily sensations and qualities such as hunger, size, weight and shape—physical signs—represent mental state. Skårderud described this as a concretisation of mental states; that is, inner emotional states such as low self-esteem, insecurity, confused identity, affect dysregulation and ambivalence are expressed through the body. In his qualitative study, Skårderud (2007a, 2007b, 2007c) found that patients with eating disorders described a clear connection between their physical and psychological realities. An example of this is when restrictive control of food represents psychological self-control. Another example is when an adolescent with AN thinks and feels that she is fat. This thought is experienced as a fact, and brings about behaviours as if the fact were true, such as efforts to lose weight even though the individual is already extremely underweight. Skårderud pointed out that this phenomenon may be key in understanding body image disturbance in patients with AN, as body image disturbance is contextually determined by affective state. Most often when experiencing a negative state, an anorexic young person will describe ‘feeling fat’, and therefore equates this to being fat.

The eating disorders literature supports this notion, with evidence pointing to a connection between emotional regulation difficulties, body image concerns and disordered eating in adolescents in community and eating disorder samples. For example, AN and BN have been related to negative affect, alexithymia, suppressed emotion and poor emotional awareness (Cochrane et al., 1993; Geller et al., 2000; Hughes & Gullone, 2011; Legenbauer et al., 2008; Markey & Vander Wal, 2007). In relation to emotion regulation and body image, greater use of avoidance strategies and appearance fixing or checking, and less use of positive acceptance strategies were found

to be associated with increased body dissatisfaction, eating disorder symptoms, and lower self-esteem and social support in an eating disorders sample (Cash, Santos, & Williams, 2005).

A clinical example of psychic equivalence is a 16-year-old with AN and comorbid complex Post Traumatic Stress Disorder (with a known history of physical and emotional trauma) who regularly talked about a belief that she was 'foul, disgusting and toxic', because she felt 'foul, disgusting and toxic'. This young girl produced graphic art depicting a disfigured, decayed self oozing foul substances. She also equated her 'feeling fat' as being fat (even when extremely underweight). Another example is when eating disorder patients interpret a decrease in their prescribed meal plan as proof that they are 'fat'.

The teleological stance refers to an understanding of the organisation of the self and others that is restricted to the physical world. This involves a focus on understanding actions in terms of physical rather than mental outcomes. In teleological mode, only overt physical actions are accepted as true indications of feelings and intentions. Needs and emotions are expressed with actions rather than thoughts or words. Examples of this mode in adolescents with eating disorders are behaviours such as restricting, bingeing or purging, compulsive exercise, or treatment refusal as a response to distress. The adolescents attempt to change their internal experience via an external mode, such as weight loss, restricting, bingeing or purging. Some adolescents with eating disorders also deliberately self-harm (via cutting, burning, head banging, etc.) as a means of expressing inner distress. Sometimes patient behaviours will escalate in response to an apprehended sense that clinical staff or family members consider that they are 'recovering'. An escalation of symptoms can be seen as a signal that the young person is afraid that people will think that they are recovered (no longer experiencing

distress) unless they see a physical demonstration of their distress. Sometimes patients will increase binge-purge behaviour when distressed, or when feeling alone or 'abandoned'. Individuals functioning in teleological mode may also have difficulty accepting a change in the intentions of another person unless they see a physical sign.

Pseudomentalising is linked with *pretend mode* functioning. This describes a state of mind where the experience and expression of mental states is disconnected from reality. In pretend mode, the individual is able to symbolise her own inner states, and can distinguish internal from external reality, but only when the inner and the outer worlds are completely separated (Fonagy et al., 2002). Being unable to symbolise or accurately sense what they really feel, patients functioning in pretend mode often have problems identifying, expressing and regulating affect. A person operating in pretend mode may also experience feelings of emptiness that arise from the poor connection between representations of inner states and the basic emotions present (Fonagy et al., 2002). This may be experienced in a therapeutic relationship, in which a therapist and a patient may have lengthy discussions around inner states and behaviour, but if the patient is functioning in pretend mode, the words will have no impact (Bateman & Fonagy, 2004).

Common forms of pseudomentalising include *intrusive mentalising* and *hypermentalising*. Intrusive mentalising comes about when an individual does not acknowledge the separateness or opaqueness of minds. It is often characterised by a certainty about the thoughts and feelings of others. Intrusive mentalising is commonly observed in family dynamics, for example, when parents incorrectly ascribe mental states to their children's behaviour without any attempt to try to understand what a child is actually feeling. This can be seen in family therapy sessions when either an adolescent patient or family member insists that they know the thoughts of the other

without taking the time to stop and test their assumption. An example of this is parents who insist that their child's eating disorder behaviours are manipulations or attention seeking. For example, a 15-year-old girl suffered from AN with extreme compulsive exercise so severe that she continued to pace even when she had macerated blisters on her feet from pacing 16 hours a day. Her parents reported that they believed their daughter was deliberately continuing this behaviour in order to 'punish' them and that she did not have a mental illness at all.

Hypermentalising is a form of pseudomentalising that involves an individual being excessively concerned with trying to understand what people think and feel without a connection to the true state of the person in question. It is characterised by excessive explanations without the presence of real affect, or by limited connections with reality. At first, such individuals may appear to have exceptional mentalising abilities, but appear to find it difficult to relate to the feeling that underpins their mentalising efforts (Allen et al., 2008). Because they do not connect with real feelings or emotional experiences, such individuals can misuse their cognitive capacity in self-serving ways, such as getting others to care or have compassion for them, or to control or coerce others (Fonagy et al., 2012). Adolescents with eating disorders can sometimes present with intense focus and concern about what is in the mind of their parents or their therapist, and this can sometimes be expressed as caretaking or role reversal. In addition, adolescents with eating disorders may be excessively concerned with monitoring the thoughts and feelings of other patients, which can lead to a competitive dynamic, or concern about the wellbeing of others to the detriment of their own.

Sometimes parents of adolescents with eating disorders can present with hypermentalising, particularly those who present as highly intellectual in their approach. Such parents may participate in what appear to be insightful conversations about their

experience with their child, but then demonstrate no change in the way that they respond or interact with their child.

The misuse of mentalising can occur when someone has an accurate understanding of another's mental state, but exploit this understanding for their own gain. This type of mentalising can sometimes be seen in group or inpatient settings, when an adolescent with an eating disorder may sabotage a peer's attempt to avoid weight gain in order to help manage their own fears of weight gain. This can be seen in a dynamic of comparison and competition in an inpatient treatment setting.

4.9.4 Mentalising problems between adolescents and their caregivers

Bleiberg (2013) described a typical cycle that he observed in the clinical context between adolescents with mentalising difficulties and their caregivers (see Figure 4.2). He described how, faced with an adolescent with reduced mentalising capacity who is exhibiting externalising behaviours and dysregulated affect, parents may feel more and more anxious and out of control, and lose their own capacities to mentalise (Diamond & Liddle, 1999; Solomon, George, & De Jong, 1995). As a reaction to their child's breakdown of mentalising capacity, parents may attempt to exert more control to make them cease problematic behaviours, which reinforces the adolescent's shutting down from mentalising. Thus, a self-perpetuating sequence evolves, where families find themselves stuck and with resulting feelings of frustration, distress and maladjustment. Caught in such a vicious cycle, parents can find themselves feeling angry, ashamed or helpless, and are more likely to punish, criticise, reject or disengage from their child, rather than attempt to understand, offer empathic support, provide effective limits, and model how to make connections between thoughts and feelings and manage emotional arousal without shutting down mentalising (Bleiberg, 2013).

In the clinical setting, a similar pattern is demonstrated in families of adolescents with eating disorders. Parents of adolescents with eating disorders find themselves feeling at a loss about how to help their child, and may resort to attempts to coerce or convince their child to eat out of desperation; they may then reject, become punitive, or disengage if the child resists or refuses. In families of adolescents with eating disorders, typical sequences of non-mentalising may revolve around negotiations regarding types of foods eaten, food intake or exercise regimes. This same dynamic can also be experienced in the clinical setting where a patient's eating disorder behaviour can arouse intense emotions in nurses and clinicians who experience a sense of lack of control, anxiety, anger and frustration, which in turn limits their capacity to mentalise. In these scenarios, the adolescent with an eating disorder finds herself without a person who is able to co-regulate her emotions and model effective ways to cope with the emotions and behaviours produced by the eating disorder.

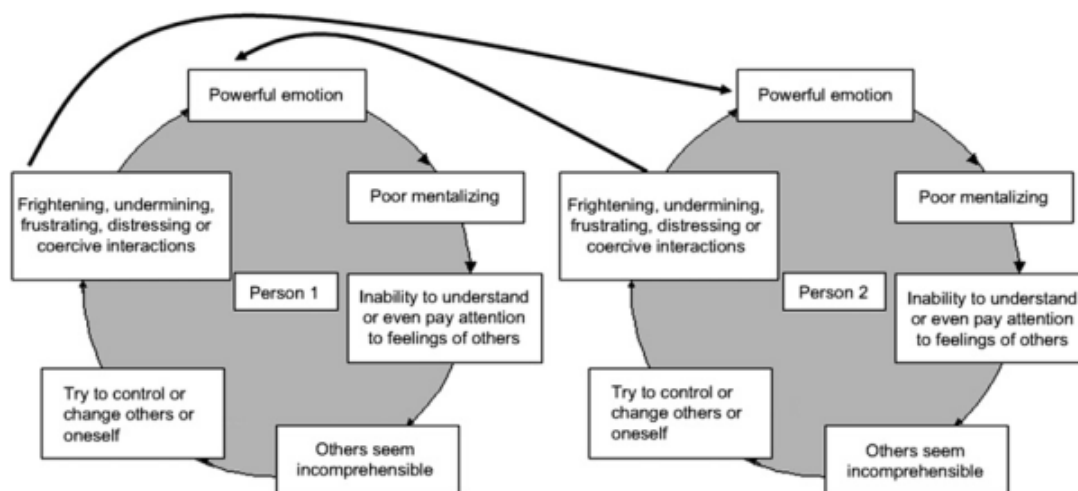


Figure 4.2. Vicious cycle of mentalising problems within the family (Bleiberg, 2013).

4.10 Empirical Evidence on Mentalising and Eating Disorders

Empirical evidence on the relationship between eating disorders and impaired mentalising is in its early stages. Studies conducted in this field so far have indicated that patients with eating disorders do display deficits in RF. Two studies have

investigated the RF of psychiatric inpatients, including patients with eating disorders. Fonagy et al. (1996) studied 82 psychiatric patients diagnosed with depression, anxiety, substance use, eating disorders, BPD, antisocial or paranoid disorder, and other personality disorders. Along with the patients diagnosed with BPD, the eating disorder patients scored lowest on RF, which was scored from the AAI. Fourteen eating disorder patients were found to have low mentalising abilities ($M = 2.8$; $SD = 1.7$), which was fewer than the other psychiatric patients in the sample with low mentalising abilities. Fonagy et al. suggested that patients with AN have difficulty with interpreting and regulating emotions, as well as discerning the stimuli within their own body. They also suggested that eating disorder patients often experience misunderstandings and interpersonal conflict, which in turn lead to a further sense of insecurity and reduction in mentalising abilities (Zavattini, n.d.). In this context, AN symptoms are seen to be a means of gaining control and predictability.

In a similar study, Müller, Kaufhold, Overbeck and Grabhorn (2006) investigated RF on 24 psychiatric inpatients (aged 18–55; mean age 28). Of these patients, 16 met *DSM-4* criteria for eating disorders (8 AN and 8 BN) and 8 for depressive disorders. The participants mean RF score was low ($M = 3.0$; SD : none reported). Scores varied between 1 (absent RF) and 5 (ordinary RF); no participants demonstrated scores indicating distinct RF (scores of 6 or above). Separate mean scores for eating disorders and depression were not reported. Neither of these studies utilised a control group, but instead relied on normative data that scores of 3 and below correspond to questionable or low RF.

One study (Skårderud, 2007a) investigated themes of mentalising and AN via a qualitative study. Skårderud interviewed 10 female patients (aged 16–35) about the nature and history of their eating disorders. He identified examples of psychic

equivalence mode, which he identified as the patients expressing their internal affect as concretised metaphors, that is, expressing internal affect through physical means. In the transcripts, the women used body sensations and qualities such as weight, shape and hunger to represent psychological processes. This tendency represents difficulty discriminating physical reality from psychological reality and a use of the body or food as symbolic tools for controlling and representing inner experiences.

Examples of pretend mode were also identified, as patients talked about themselves using words that did not connect with real experiences. Skårderud identified patients operating in teleological mode, as they attempted to change their feelings of ineffectiveness and social acceptance by directing their energy towards altering their physical bodies. Skårderud surmised that the symptoms of an eating disorder help provide a coherent sense of self and a maladaptive mode of communication of a patient's inner experiences. Although the study was of a very small sample, it provided qualitative evidence of the concretisation that Skårderud described.

Some studies in the field of eating disorders have investigated the conceptual link between attachment theory and mentalising, taking into account intergenerational transmission of attachment. Evidence for the intergenerational transmission of insecure attachment models and unresolved states of mind was demonstrated by Ward et al. (2001), who investigated RF in the attachment relationship between mothers and their adolescent or adult children (aged 15–46; $n = 20$) with AN. The study found that inpatients with a diagnosis of AN demonstrated low RF ($M = 2.4$; $SD = 1.6$) compared to published norms. This study also undertook a transgenerational perspective on attachment. While no association of attachment classification was found between the women with AN and their mothers, both mothers and their daughters scored low on RF (mean 2.4), and the majority of the mothers were classified as unresolved with respect

to loss using the AAI. This suggests that the mothers' dysregulated affect, typical of the unresolved state of mind, may have had an impact on their daughters' psychological functioning, leading them to use minimising and idealising strategies as defences to help them avoid the emotional impact of their mothers' negative affect. This idealising-dismissing strategy perhaps results in a poorly developed ability to recognise and express emotions that is a typical characteristic of patients with AN (Zavattini, n.d.). A significant limitation of this study is the absence of a comparison group. Further, it is important to note that the groups of eating disorder patients in the Fonagy and Ward studies were suffering from eating disorders significant enough to be treated in an inpatient setting. This limits the generalisability of the findings, considering that most individuals suffering from eating disorders are treated as outpatients (Katzman, Kanbur, & Steinegger, 2010). Another possible limitation of Ward et al.'s study is the question of whether the RF scale on the AAI is a reliable measure of RF in adolescents.

Rothschild-Yakar et al. (2010) also compared RF scores (measured with AAI) across 34 female inpatients with AN-BP, ranging in age from adolescence to adulthood (mean age 18.2 years; $SD = 2.7$) and 35 non-eating-disordered controls (mean age 17.8 years; $SD = 2.31$). This study investigated the influence of RF on eating disorder symptoms, and also its interaction with the perceived quality of their relationship with parents. They found that the patients with eating disorders presented with higher RF scores ($M = 3.8$; $SD = 1.8$) than those reported in Ward et al. (2001); however, this mean RF of the eating disordered group was significantly lower than that of normal control group ($M = 5.77$; $SD = 1.46$; $F(1, 67) = 24.48$, $p < .001$). They also found that high RF correlated with lower eating disorder symptomatology as measured by the Eating Disorders Inventory. Higher RF in the patient group correlated positively with bulimic symptoms. When the eating disorder group was split into subcategories

according to 'drive for thinness' and 'bulimia', the bulimia subscale was significantly correlated to higher RF scores ($r = 0.36, p < 0.05$). Bulimia symptomatology has been associated with the preoccupied attachment style (Candelori & Ciocca, 1998), which involves a higher awareness of one's own internal states and therefore increased tendency to reflect on them in the AAI, resulting in a higher RF score. This link could account for Rothschild-Yakar et al.'s finding, though it also needs to be kept in mind that the mean RF for this bulimia group still represented questionable or low RF according to the RF rating scale. In the control group for this study, higher RF score correlated negatively with drive for thinness. A methodological strength of this study is that it included a control group, and the sample consisted only of eating disorder patients. It is important to note that all patients were inpatients at the time of recruitment, and all met full criteria for AN-BP. While all patients were deemed medically stable, they were receiving inpatient treatment and may therefore have been at the severe end of the spectrum for the disease. In addition, 61.8% of the patient group were diagnosed with comorbid depressive disorder, and 26.5% were diagnosed with a comorbid obsessive-compulsive disorder. The researchers did not control for symptoms of anxiety or depression in the analysis.

Rothschild-Yakar et al. (2013) investigated mentalising and attachment patterns of 71 female adolescent inpatients with eating disorders (AN-R, $n = 31$; AN-BP, $n = 18$; and BN, $n = 22$) and 45 controls without eating disorders (both groups aged 14–19) using the Object Relations Inventory and self-report measures assessing emotional distress and eating disorder symptoms. They found that patients with eating disorders had significantly lower mentalising capacity compared to the non-clinical controls. Higher mentalising abilities were found to indirectly predict lower eating disorder symptoms via lower distress levels. The authors suggested that adequate mentalising

capacity and positive working models of attachment to parents may serve as protective factors against severity of eating disorder symptoms.

These findings were corroborated by Zavattini's (n.d.) recent study; as previously described, this study focused on attachment style and RF in a group of 31 adolescent girls with AN (aged 13–16; mean age = 14.9) and their parents. All patients met *DSM-4* criteria for AN, did not have comorbid mental health disorders, and had not previously engaged in psychotherapy. Parents' RF was assessed using the RF scale on the AAI, and the adolescents' RF was coded from the Attachment Interview in Childhood and Adolescence (Italian Version). The study reported that 54.8% of the daughters with AN scored 3 on the RF scale, as well as 29% of the mothers and 38.7% of the fathers. Of the mothers, 16% scored negatively (-1), indicating rejection of RF, and 51.1% scored equal or less than 2, indicating limited RF. The study found a significant correlation between the mothers' and daughters' RF scores (Spearman's $\rho = .290, p = .026$). No correlation was found between fathers' and daughters' RF scores. Zavattini (n.d.) suggested this indicated that a mother's RF is more central to the development of her daughter's RF than a father's.

Zavattini (n.d.) also suggested that these results indicate that a deficit in mentalising capacity is a characteristic of patients with AN. Zavattini argues that this supports the notion of adolescents with AN expressing their psychological needs via their body as a concrete means of communicating their emotional needs. As mentioned previously, a significant limitation of Zavattini's study is its lack of a control group. Considering the lack of studies published that have used the RF scale on interview measures for adolescents, it is unclear to date what a typical adolescent RF score is. Zavattini's method assumes that typical RF scores are the same for adolescents and adults.

Only one study to date has focused solely on adult outpatients with BN.

Pedersen et al. (2012) investigated mentalising capacity of adult BN outpatients (mean age = 25.8; $SD = 4.8$). They rated RF on the AAI and found that BN patients did not have significantly lower RF scores ($M = 4.11$, $n = 70$) compared to a group of normal controls ($M = 4.25$, $n = 20$). The mean RF in this patient group was higher than in earlier studies on eating disorders (e.g., Fonagy et al., 1996; Müller et al., 2006; Rothschild-Yakar et al., 2010; Ward et al., 2001) and also somewhat higher than in studies of RF in various other clinical samples (e.g., Fonagy et al., 1996; Levy et al., 2006). Finally, in contrast to prior studies on BPD and RF, this study found no significant difference between the RF scores of patients with a comorbid BPD diagnosis ($M = 4.38$; $SD = 1.85$; $n = 8$) and without a comorbid BPD diagnosis ($M = 4.11$; $SD = 1.80$; $n = 61$; $p = .70$). One interesting finding in the clinical group was that, although on average RF scores were similar to control, they were polarised as either high or low, with fewer patients scoring in the mid-range. This suggests more heterogeneous mentalising abilities in patients with eating disorders; poor reflective abilities appear to be a part of the clinical picture for some patients with BN, but not all. However, for some patients, BN can develop and persist despite good mentalising skills, indicating a complex interaction between symptoms and mentalisation.

4.11 Summary

Mentalising theory offers a means of understanding connections between attachment and development of sense of self, emotion regulation, coping strategies, personality and social-emotional functioning. The development of measures for assessing mentalisation in adults, parents and adolescents has allowed researchers to explore how mentalisation and the intergenerational transmission of RF relate to psychological functioning in adolescence. Deficits in mentalising have been found to be

associated with mental health outcomes, including depression, personality disorders and self-harm. Mentalising theory offers a contribution to the understanding of risk for eating disorders, and may guide new approaches that take into account the interplay of biopsychosocial factors involved (Skårderud, 2007b; Skårderud & Fonagy, 2012). The few studies that have investigated RF in clinical samples of patients with eating disorders to date support the presence of impaired mentalising in adults and adolescents with eating disorders. The two studies on parents of patients with eating disorders also indicate that these parents tend to have low RF, indicating a link between parental RF and eating disorders in their children. The following chapter outlines the rationale for the present study, including its aims and an overview of the multi-method research design.

Chapter 5: Study Rationale and Aims

As previously outlined, eating disorders suffered during adolescence cause considerable psychosocial and physical consequences that adversely affect quality of life for many young people and their families. It is therefore important that treatment approaches are based upon a sophisticated understanding of predisposing, precipitating and maintaining factors. An attachment- and mentalisation-theoretical perspective offers a framework for understanding risk factors for the development and maintenance of eating disorders by providing a readily accessible, logical and easily understandable framework for interventions, and a position from which to develop and guide clinical work.

Emerging evidence suggests that disruptions in attachment and mentalising may play a part in increased adolescent vulnerability to an eating disorder, as well as in maintenance of eating disorder symptoms. In this model, insecure attachment leads to mentalising difficulties, which lead to vulnerability to eating disorders (Skårderud & Fonagy, 2012). There is substantial evidence linking insecure attachment in adults with eating disorders, though only a few studies that support the presence of insecure attachment patterns in adolescents with eating disorders. The present study aims to confirm results from previous studies that have identified insecure attachment styles in adolescents with eating disorders, utilising an interview measure. It also aims to identify whether a particular attachment style is associated with a specific eating disorder diagnosis, as previous studies on adolescent populations have been inconclusive.

There is growing theoretical and clinical agreement that mentalisation—or RF—actively contributes to the regulation of affect, cognition and behaviours in adolescents (Choi-Kain & Gunderson, 2008; Fonagy & Luyten, 2009), and is associated with eating disorders. The rationale for investigating adolescent mentalising is to build on the

theory of impaired mentalising underlying eating disorders, and to add to the little empirical data available on the mentalising capacities of adolescents with eating disorders. Theoretically, limited mentalising capacity will leave an adolescent vulnerable while negotiating the demands of adolescence and increase risks of psychopathology. By investigating attachment and reflective capacity, this study aims to identify a relationship between attachment coherence and RF of adolescents. Based on mentalising theory, it is expected that an adolescent with a secure working model of attachment (high attachment coherence) will also display a good capacity for thinking about relationships in terms of mental states.

An understanding of parents' RF can offer an understanding of the relational context in which an eating disorder has developed and is maintained, as well as offering clinically relevant information on the parents' capacity to assist their child with affect regulation and managing the emotions and behaviours related to the disorder. As mentioned previously, there have been few studies on adolescent attachment patterns, but even fewer focusing on mentalising capacity in adolescent patients with eating disorders, or in their parents. Moreover, few studies have considered an intergenerational perspective on parents' and children's reflective capacities. While the early childhood literature demonstrates that RF in the caregiver is strongly connected with attachment patterns in the child, less is known as to whether that relationship exists for an adolescent child, and to what extent that relationship may render an adolescent vulnerable to psychopathology, or contribute to the maintenance of psychopathological symptoms.

Conceptually, there is a clear association between RF and parenting. A parent who is able to understand a child's behaviours and cues and is connected to the child's underlying mental states should be better able to respond sensitively to those cues

(Slade, 2005). Reflective functioning capacity involves both cognitive and emotional resources (Sharp & Fonagy, 2008): parents must be able to cognitively appreciate the child's perspective and also tolerate the child's affect. Parents with strong RF are able to recognise their child as a psychological agent with thoughts and feelings that may differ from their own (Fonagy & Target, 1997; Sharp & Fonagy, 2008; Slade, 2005), and that the child's behaviours are a result of underlying emotional states, goals, and intentions (Grienenberger et al., 2005). They are therefore able to respond to their child's internal experiences rather than simply responding to observable behaviours (Fonagy & Target, 1997; Slade, 2005).

To date, research on parental RF has focused mostly on mothers of infants and young children. Parental RF may also be important during adolescence. Strong RF may assist parents to understand the changes that adolescent children are experiencing, as well as their own thoughts, feelings and behaviours in relation to these (Benbassat & Priel, 2012). Levels of parental and adolescent RF may affect communication and coping with conflict and negative emotions (Benbassat & Priel, 2012). In addition, parental RF may be an important factor in the relationship between certain parenting behaviours, such as parental control, and adolescent outcomes. It is possible that parenting behaviour may be associated with different adolescent outcomes when applied by parents with either low or high RF (Benbassat & Priel, 2012). Parental RF may be particularly important for the fine balance that parents must maintain in managing the behaviour of their adolescent children (Koepke & Denissen, 2012; Smetana, 2000).

For adolescents with eating disorders, their parents' RF capacity is relevant for two reasons. First, in terms of the intergenerational transmission of attachment and RF capacity, it is possible that a parent with low RF has not been able to facilitate the

child's developing RF capacity, resulting in a reduced capacity in the child to deal with the developmental challenges of adolescence. Second, in the case of a child with an eating disorder, a parent with low RF may find it more difficult to respond sensitively to their child's behaviours (i.e. restricting, bingeing, secretiveness) and distress related to the disorder, and therefore may respond in a way that maintains the eating disorder symptoms. For this reason, it is important to determine whether parents of adolescents with eating disorders have limitations in RF in the context of their relationship with their child. The rationale for investigating parents' RF is therefore to determine the possible contribution of a limited mentalising capacity in the parent to the presence of and maintenance of an eating disorder in the child, as well as the possible correlation between parental RF and child RF and attachment.

Research has found that mothers with a higher capacity for RF are more likely to be categorised as securely attached, and are also more likely to have securely attached infants and toddlers (Fonagy et al., 1991; Fonagy et al., 1997; Slade et al., 2005). This study aims to determine whether this association is present between mothers and adolescent daughters. Theoretically, if mothers' RF is one of the most salient factors in determining a secure attachment representation in a child (Main, Hesse, & Goldwyn, 2008), and caregivers with high RF are thought to promote security in children, mothers' RF and adolescents' coherence will be related.

This study builds upon previous work in attachment theory and mentalising to investigate attachment styles, mentalising and RF in a group of adolescent girls with eating disorders and their parents, compared to an age-matched non-eating disorder control group. It also aims to explore the potential impact of attachment styles and mentalising capacity on the lived experience of parent-daughter relationships in families with adolescents with eating disorders.

5.1 Thesis Aims and Objectives

The overall aim of this research is to investigate the attachment patterns and mentalising capacity of adolescents with eating disorders (AN, BN and atypical AN) and the RF of their mothers. It also aims to explore the lived experience of mother–daughter relationships in families with an adolescent with an eating disorder. More specifically, the study aims to:

1. Investigate whether adolescents with eating disorders report higher levels of depression and anxiety symptoms compared to non-clinical controls;
2. Investigate whether insecure attachment style to mother and father predicts the presence of an eating disorder in adolescent girls, and to determine what the different profiles of maternal and paternal attachment styles look like among adolescents with eating disorders;
3. Investigate whether RF and/or mentalising capacity (either undermentalising, hypermentalising or avoidance of mentalising) predicts eating disorders in adolescent girls, and to determine whether RF capacity is correlated with attachment security in adolescent girls;
4. Investigate whether adolescent girls with eating disorders have higher levels of borderline personality traits compared to non-clinical adolescent girls, and whether the presence of borderline traits predicts mentalising deficits in adolescent girls;
5. Investigate the presence of possible differences in self-reported levels of stress, anxiety and depression in mothers of daughters with eating disorders compared to mothers of non-clinical adolescent girls;
6. Investigate whether low maternal RF predicts eating disorders in adolescent girls, and whether there is a relationship between mothers' RF and daughters' RF, and between mothers' RF and daughters' attachment coherence;
7. Examine the self-reported lived experience of mother–daughter relationships in dyads with an adolescent with an eating disorder compared to dyads with an adolescent without an eating disorder.

Three studies are conducted in order to address these aims. Study 1 investigates the attachment patterns to both mother and father of adolescent girls with eating disorders compared to a non-clinical sample. This study builds upon the growing evidence around the association between attachment patterns and eating disorders. It aims to confirm the presence of insecure attachment patterns in adolescents with eating disorders. It makes an important contribution by studying a clinical group of adolescents

with eating disorders, a population on which few studies have been conducted to date. The use of a control group is also important, as currently used population norms for attachment patterns have been gathered from United States and United Kingdom populations; to the author's knowledge, this study is the first time the CAI has been utilised to assess attachment patterns in Australian adolescents. The use of an interview-based measure of attachment allows for a close examination of the qualities of attachment relationships between adolescents and their parents, and allows for the coding of disorganised attachment patterns.

The second study investigates adolescents' mentalising capacities, comparing clinical and control groups, including whether the presence of borderline tendencies mediates the relationship between eating disorders and RF. Like Study 1, Study 2 contributes to the limited existing literature on mentalising in a clinical sample of adolescents with eating disorders. As adolescence is a time of transformation and development of mentalising capacity, it is imperative that data be gathered and understood for this stage. Again, the use of a control group is important, as previous studies have largely compared data to norms gained from large community samples of women. As mentalising capacity is still developing during adolescence, there is no way to ascertain whether a young person's RF is low without comparing it to an age- and gender-matched non-clinical sample; there are currently no population norms available for Australian teenagers' RF that could act as such a comparison.

Given existing evidence on associations between personality features and mentalising, Study 2 aims to determine whether these associations are present for the portion of this sample that have comorbid eating disorders and BPD tendencies. It also seeks to determine whether adolescent attachment is correlated with RF. To the author's knowledge, this is the first time that the Reflective Functioning Scale on the CAI has

been used with an Australian adolescent sample, and the first time the Mentalising Stories Assessment has been used in a clinical sample of adolescents with eating disorders, or of Australian adolescents.

Study 2 also explores the mentalising capacity of mothers of adolescents with eating disorders. It investigates the correlation between mother RF and daughter RF, and attachment coherence between mother–daughter dyads.

Study 3 involves qualitative analysis of the transcripts of the PDIs and CAIs of mother–daughter dyads of families with eating disorders, comparing these with mother–daughter dyads in the control group. It seeks to gain insight into the potential impact of attachment styles and mentalising capacity on the lived experience of family relationships in families of adolescents with eating disorders compared to control families.

5.2 Methodological Rationale

To achieve the research objectives, a mixed methods design (Creswell & Plano-Clark, 2011) was used. Fundamental to the mixed methods approach is the collection and merging of both quantitative and qualitative data, in order to provide a more comprehensive analysis of the issue at hand (Creswell & Plano-Clark, 2011). A convergence triangulation model was followed when collecting and analysing the different forms of data (Creswell & Plano-Clark, 2011). Figure 5.1 outlines the convergent design, showing the concurrent and separate collection of quantitative and qualitative data.

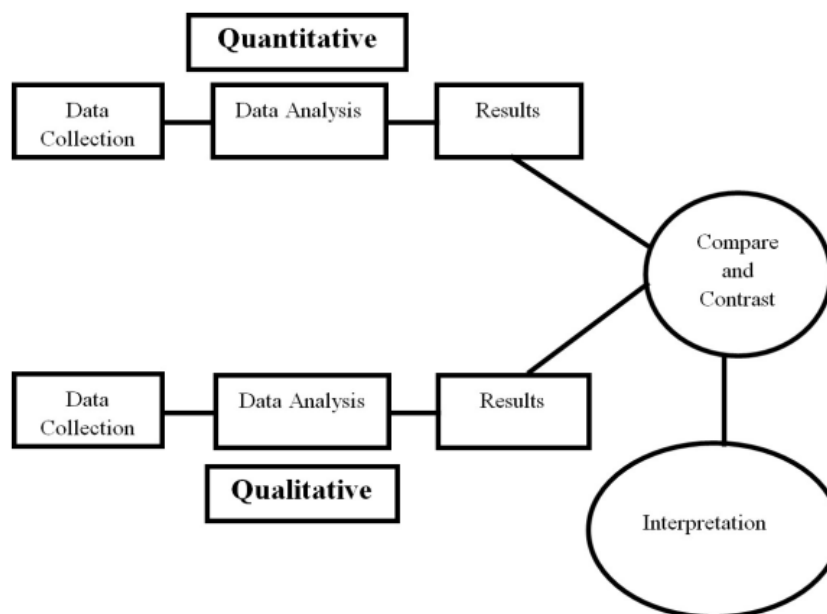


Figure 5.1. Congruent mixed methods adopted from Creswell (2012).

Several methodological issues have arisen from previous research conducted in the area of adolescent attachment, mentalising and family relationships. This study addresses these issues, which are outlined in the following sections.

5.2.1 Choice of measures

5.2.1.1 Measuring attachment style

Previous studies on attachment have largely used self-report questionnaire measures of attachment style. Many early studies used the PBI, which examines childhood experiences with parents, but is not designed to assess current attachment styles (Troisi et al., 2005). As previously discussed, contention exists regarding whether self-report measures are a reliable means of assessing attachment, as they assume that people can accurately describe their thoughts, feelings and behaviours in relationships, relying on the conscious processing of this information; this makes them more likely to pick up defensive distortions in responses (Ravitz et al., 2010). Minimising levels of anxiety, or lack of insight into difficulties, could also lead to inaccurate reporting (Crowell, Fraley, & Shaver, 1999). In particular, it is possible that individuals with

dismissing attachment styles may minimise distress and overregulate their emotions, making them less likely to acknowledge difficulties. This may lead them to report a secure attachment style or be classified inaccurately as secure from their responses (Brown & Wright, 2001). Some authors (e.g., Kuipers & Bekker, 2012, Zachrisson & Skårderud, 2010) have suggested that attachment studies should only utilise interview measures such as the AAI, as these are closely linked with the Bowlby tradition of attachment theory. Interview measures are able to offer increased depth of information and tap into unconscious processes around attachment relationships.

In order to explore the relationship between attachment and eating disorders, it is important to establish the nature of attachment among adolescents using a valid and reliable attachment interview that is suitable for use with this age group. In addition, research suggests that an individual's working model of attachment is made up of representations of different attachment relationships that are organised hierarchically (Crittenden, 1997; Doyle & Moretti, 2001). Therefore, studies should investigate not only maternal, but also paternal attachment.

In order to address these issues, the CAI was utilised to measure the attachment styles of the adolescents in this study. Evidence demonstrates that narrative-based assessments of attachment have similar validity in childhood as they do in adulthood (Borelli et al., 2010; Shmueli-Goetz et al., 2008). The CAI has been used previously with adolescent samples (e.g., Humfress, O'Connor, Slaughter, Target, & Fonagy, 2002; Scott, Briskman, Woolgar, Humayun, & O'Connor, 2011; Venta & Sharp, 2014; Venta et al., 2013) and currently seems to represent the most developmentally appropriate interview measure for adolescents. This measure allows for assessment of attachment to mother and father (or other primary caregivers, such as step-parents). Unlike the AAI, the CAI takes into account aspects of attachment narratives around

structure and time-related recounts from adolescents in order to take into account the potential for inappropriately coding developmental immaturity as preoccupied or disorganised attachment patterns (Shmueli-Goetz, 2014). In addition, self-report measures of attachment do not tap into disorganised attachment; as this study was conducted with a clinical sample, it was deemed important to identify the presence of disorganised attachment styles in the sample. It was hypothesised that there would be a proportion of eating-disordered participants who would present with disorganised attachment styles in this sample, so the CAI provided a means to examine more closely the attachment styles of adolescents with eating disorders.

Royston et al. (2005) highlighted the importance of measuring attachment dimensionally, as well as categorically. They argued that using categorical as opposed to continuous variables to measure attachment limits variability between groups, and causes loss of information and power. Although continuous measures of attachment in adolescence exist (Armsden & Greenberg, 1987; Kerns, Schlegelmilch, Morgan, & Abraham, 2005), their results remain inconsistent with regard to their concurrent validity with traditional measures of attachment, such as the Strange Situation Procedure and the AAI (Shmueli-Goetz et al., 2008). These continuous measures are based on questionnaires that are not as in-depth as interviews. The attachment coherence scale of the CAI, defined as measuring 'reflectiveness, spontaneity and flexibility in discourse' (Shmueli-Goetz et al., 2004), was chosen as a continuous measure of attachment in this study, as earlier studies using the AAI have found that coherence was the dimension with the strongest relationship to overall attachment categories (Main et al., 1985; Fonagy et al., 1998). Coherence scores on the CAI, recorded continuously, have been shown to be highly consistent across two testings one year apart (Shmueli-Goetz et al., 2008). In light of these considerations, the CAI was

chosen to measure adolescent attachment, as it provides both a categorical approach—providing broad attachment classifications—and a continuous approach through the attachment dimensions, via its subscale of attachment coherence.

This study is, to the best of the author's knowledge, the first to administer the CAI on a sample of adolescents with eating disorders, and as such, the nature of attachment in this sample was explored in detail. It is also one of only a few that considers attachment relationships of girls with eating disorders and both their mother and their father. Close reading of the interview transcripts allowed greater insight into how narratives vary depending on attachment experiences, and also into the attachment relationship between mother and father and daughter. Limitations associated with using the CAI include the training, time and expense involved in data collection, transcription and coding (Scott et al., 2011).

5.2.1.2 Measuring reflective functioning

The choice of tools for measuring adolescent RF was important to the methodology of this study. Reflective functioning is difficult to fully measure, as it is a construct that captures a process that occurs in multiple dimensions: (1) implicit or explicit, (2) in relation to self or other, and (3) in cognitive or affective aspects (Choi-Kain & Gunderson, 2008; Fonagy & Luyten, 2009). Similarly to measurement of attachment, scoring RF on an attachment interview is seen as the most thorough means of evaluating reflective capacity when thinking about attachment relationships.

The attachment interview used to code RF for the adolescent participants was, again, the CAI. This interview likely tapped into implicit mentalising. Mentalisation is a capacity that is theoretically more likely to falter in vulnerable individuals during times of emotional arousal in the context of attachment relationships (Fonagy & Luyten, 2009). The CAI provides a situation that could potentially elicit a stress response, as it

requires the interviewees to reflect on and discuss their relationship with their parents (Taubner et al., 2013). Studies of the AAI have demonstrated that it does indeed elicit a stress response, even when individuals appear unaffected during their responses, as measured by elevated psychophysiological markers (e.g., Dozier & Kobak, 1992; Roisman, Tsai, & Chiang, 2004). Thus, scoring RF on the CAI assessed the adolescents' capacities to mentalise about their attachment-related experiences in terms of mental states during a time of emotional arousal (Fonagy et al., 1998).

Ensink et al. (2014) suggested that the CAI should be conducted using active probing, challenging automatic assumptions about self and others, and pointing out defensive attempts to avoid more controlled mentalisation. Scoring RF on the CAI may involve taking note of defensive attempts to regulate stress by avoiding difficult questions (by talking off-topic, or talking in a highly abstract, impersonal way). It may also involve taking note of mentalising in relation to the relationship with the interviewer (e.g., 'I imagine that you might find what I am saying really strange'), which is a positive indication of mentalising; or when a participant is overtly defensive (e.g., 'Why do you want to know this? That really doesn't matter'). The CAI provides opportunities to examine mentalising skills in this manner, and has been identified as an appropriate measure of attachment relationships as well as mentalising (Shmueli-Goetz et al., 2008; Humfress et al., 2002; Ensink, 2004; Ensink et al., 2014).

A benefit of using the CAI in this study is that it was possible to simultaneously code the interviews for attachment style, coherence and RF. Two subscales were used to measure reflective capacity in adolescents: the attachment coherence scale, and the RF score, based on a combination of the Adult RF scale and the Child RF Scale.

The coherence subscale on the CAI relates to the way in which the adolescent is able to discuss their parental attachment relationships in terms of fresh speech,

reflectiveness, spontaneity, consistency and comprehensibility. Adolescents who score highly on this scale show an ability to make sense of the situation they are discussing, and can reflect on this with an appreciation of different perspectives (e.g., discussing a diverging point of view between themselves and a parent). Narratives of high-scoring adolescents are understandable, with limited prompts required from the interviewer, and there are no contradictions between episodes or descriptions. The coherence scale also measures the degree to which an adolescent is emotionally open and can describe feelings, both their own and others'. In addition, coherence considers how well the adolescent can monitor their narrative, in terms of the consistency and plausibility of the account, or how 'fresh' or rehearsed the story feels. High coherence on an attachment interview narrative reflects a capacity to understand and contain both positive and traumatic experiences (Fonagy et al., 1991), and markers of coherence indicate an effort to maintain a good relationship with the attachment figure despite current negative situations (Fonagy et al., 1998). Individuals with high attachment coherence are able to identify their own feelings; consider the potential reactions, feelings and needs of others; and consider the possible causes and effects of these (Tasca et al., 2011).

The capacity to manage these processes is also necessary for RF (Allen, 2008; Crittenden, 2006); there are, therefore, elements of mentalising capacity within coherence (Yael Shmueli-Goetz, personal communication). The second measure of adolescent RF on the CAI used in this study is a combination of the CRFS (Ensink, 2004) and the ARFS (Fonagy et al., 1998), as there is currently no available RF scale that has been validated for use with adolescents.

In order to assess other aspects of mentalising capacity, a third measure of mentalising, the Mentalising Stories Test for Adolescents (MSTA-6; Vrouva & Fonagy, 2009) was utilised. The items on the MSTA assess mentalising that is controlled-

explicit—in other words, that is conscious and verbal, and requires attention, awareness and effort (Vrouva, Target, & Ensink, 2012). This type of mentalising involves envisioning the mind of another (the protagonist in each story) and focusing on mental interiors (internally based), directly considering feelings, thoughts and experiences rather than visible physical features. The MSTA captures elements of both affective and cognitive mentalisation, which only in combination generate genuine social understanding—what has been termed *mentalised affectivity*, or ‘the feeling of feeling’ (Fonagy et al., 2002).

While the RF scale on the CAI focuses on adolescents’ capacities to reflect on their attachment relationships with their parents, the MSTA measures the capacity for an adolescent to mentalise about everyday social scenarios, like the ones they are likely to encounter with their peers, siblings and extended family members. Strengths of the MSTA include that it contextualises mentalising processes in the daily life of adolescents, and does not require large amounts of time or economic resources to administer. It assesses adolescents’ capacities to mentalise by providing them with examples and scenarios that are relevant to their cultural setting in a user-friendly, cost-effective form. To the author’s knowledge, this is the first time the MSTA has been used with a sample of Australian adolescents with eating disorders. The choice of three separate measures of RF for the adolescent participants represents an effort to capture diverse dimensions of mentalising.

5.2.1.3 Measuring borderline tendencies

Another limitation of previous studies on eating disorders and RF is that none of the studies have examined links between personality pathology, eating disorders and mentalising in a sample of adolescents. The addition of a measure of borderline tendencies provides an opportunity to determine whether the presence of borderline

symptoms mediates mentalising deficits and eating disorders. The Millon Adolescent Clinical Inventory (MACI; Millon et al., 1993) was used to measure the presence of borderline traits across the clinical and non-clinical samples. There has been a recent move towards studying borderline personality traits rather than diagnostic categories among community-based and clinical samples of adolescents (Sharp et al., 2014). A dimensional, trait-based approach suggests that BPD traits may be distributed continuously within the community population and may represent psychopathology only at the severe end of the scale (Sharp et al., 2014). Using this dimensional approach allowed for the examination of borderline personality traits and their relation to the presence of eating disorders and mentalising across the sample of clinical and control adolescents.

5.2.2 Choice of parent measures

To measure the RF of the parents of eating-disordered adolescents, the PDI (Aber et al., 1985) was used to elicit parental representations of their daughters, which were then coded using the RF scale. Like the other interviews designed to assess parental representations of their children, the PDI was originally developed to assess mothers' representations of their infant or preschool-aged children, and a majority of research using this interview has been conducted on this group (e.g., Grienberger et al., 2005; Slade et al., 2005; Suchman, DeCoste, Leigh, & Borelli, 2010; Schechter et al., 2005; Sled, Baradon, & Fonagy, 2013). The PDI has recently been used to assess parent's representations of preterm infants (Sidhu, 2011), parents' representations of school-aged children with Attention Deficit Hyperactivity Disorder (Ekert Rothstein, 2013), BPD parents' representations of their adolescent children (Fitzpatrick, 2010), and a community sample of parents' representations of Israeli adolescents (Benbassat & Priel, 2012). The PDI is currently being utilised to measure parental RF in a large

sample of parents of adolescent twins in the Twin Early Development Study (Fearon et al., in press; Tohme, 2014).

To the author's knowledge, this is the first time that the PDI has been used to assess the RF of mothers of Australian adolescents. The information provided by the PDI, focusing on the attachment relationships between adolescents and their mothers, was more extensive than that offered by the AAI, which considers the parent's own attachment history. Measuring mothers' RF made it possible to investigate the possible intergenerational transmission of mentalising capacity, and the influence of mothers' RF on attachment coherence and RF in their children. The addition of an age- and gender-matched control group allowed for a comparison group of attachment patterns and RF in a non-clinical Australian population of mothers and adolescents, as there are no published norms for this population to date.

5.2.2 Controlling for anxiety and depression

Clinical and population-based studies have consistently revealed that depression and anxiety comorbidities are common among patients with eating disorders (Blinder, Cumella, & Sanathara, 2006; Braun, Sunday, & Halmi, 1994; von Lojewski, Boyd, Abraham, & Russell, 2012). Lifetime anxiety has been reported in over 50% of women with AN and BN (Bulik, 2002). The most common anxiety disorders within this group are generalised anxiety disorder, obsessive-compulsive disorder and social phobia. Among women with BN only, social phobia and generalised anxiety disorder are the most common. In the majority of cases, anxiety disorders precede the onset of an eating disorder (Bulik, 2002). Various diagnostic instruments have also indicated that comorbid depression ranges between 20% and 80% for women with AN (Bulik, 2002). These patients experience feelings of hopelessness, guilt, worthlessness, flat affect, disabling low self-esteem, irritability and suicidal ideation and attempts. A moderate

genetic correlation between depression and eating disorders has been proposed, with many patients continuing to experience symptoms after recovery (Bulik, 2002).

Depression and anxiety are known to be common among adolescents with eating disorders, and adolescence marks an increase in rates of depression and anxiety among girls in general (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003; Watson, Hoiles, Egan, & Limburg, 2014; Watson, Egan, Limburg, & Hoiles, 2014). Apart from their strong association with eating disorders, anxiety and depression are linked to certain personality features, including alexithymia and BPD (see Bardone-Cone et al., 2007; Beales & Dolton, 2000; James, Berelowitz, & Vereker, 1996; Karukivi, Hautala, Kaleva, et al., 2010). Studies have found relationships between attachment and adolescent anxiety and depression (Delhaye, Kempnaers, Stroobants, Goossens, & Linkowski, 2013; Kobak, Sudler, & Gamble, 1991) and depression and mentalising (Fischer-Kern et al., 2013). Given the high rates of depression and anxiety reported among patients with eating disorders, this issue has particular relevance for the assessment of attachment, mentalising and personality, and for differentiating whether attachment, mentalising and personality characteristics are specifically associated with eating disorder psychopathology or, by proxy, with the comorbid states. Consequently, attachment states and mentalising deficits in patients may be exaggerated in the presence of current states of depression and anxiety, and these should be controlled for in studies on this area (Kleifield et al., 1994). For this reason, the Child Depression Inventory Short form (CDI-S; Kovacs, 1992) and the Multidimensional Anxiety Scale for Children (March, Parker, Sullivan, Stallings, & Conners, 1997), which are reliable and valid measures of depression and anxiety for young people, were incorporated in the study to measure these constructs. In order to reduce the number of variables

included in analysis, the two measures were combined to provide a total score of affective symptomatology.

A major limitation of previous research involving the assessment of attachment and personality is that eating disorder patients are often assessed during a state of starvation, chronic malnutrition, or repeated binge-purge cycles (Lilenfeld et al., 2000; Vitousek & Manke, 1994). Studies of the effects of starvation have identified that a state of starvation has a dramatic impact on psychological state (Katzman, Christensen, Young, & Zipursky, 2001; Keys, Brozek, Henschel, Mickelsen, & Taylor, 1950). Starvation is related to emotional lability, mood swings, irritability and angry outbursts, as well as anxiety, rigidity, obsessiveness and social withdrawal (Garner, Vitousek, & Pike, 1997; Keys et al., 1950). Due to these known effects of malnutrition on cognitive status, patients malnourished to the point of requiring inpatient admission for medical reasons were not included in the study.

5.2.3 Controlling for demographic factors

Diversity among different study samples is another issue to consider when weighing up existing evidence on eating disorders, attachment and mentalising. Some previous studies have included participants with comorbid psychological disorders such as depression, anxiety, personality disorders and substance abuse; others have not controlled for gender and age, or inpatient versus outpatient status. The latter is an important factor, as patients requiring inpatient admissions represent a population with more severe and enduring eating disorder symptoms, and may create samples with more attachment-related difficulties. Other studies have referred simply to ‘eating disorder samples’, and not distinguished between AN, BN, atypical AN, or their subtypes.

Other possible confounding variables in the assessment of attachment style, mentalising and eating disorders are socio-demographic variables such as age, socio-

economic status and parental education, which have known links to eating disorder diagnoses (Troisi et al., 2005). Reflective functioning has been found to be higher in adults of higher socio-economic status (Bouchard et al., 2008; Fonagy et al., 1998; Steele & Steele, 2008) and higher parental education (Benbassat & Priel, 2012).

This study, therefore, controlled for gender, age, socio-economic status and maternal education. A further limitation of previous research is that many studies have focused on late adolescent and early adult populations, but have compared the data from adolescents to a control group of adults. This has possibly confounded the findings of these studies, as attachment issues in adolescence differ from those in adulthood, and chronicity of eating disorder symptoms is linked with age, and may indicate different underlying attachment problems (Ward et al., 2000).

5.2.4 Focusing on adolescents

As mentioned previously, very little research on eating disorders and attachment has focused on eating disorders in adolescence. This is an important gap in the literature, given that the most common age of presentation with an eating disorder is during the adolescent years. Adults with eating disorders are likely to have suffered from an eating disorder for a longer period of time, which may mean they are at the more severe end of the spectrum of symptoms; evidence suggests that the typical course of an eating disorder is 2–7 years. Adolescents with eating disorders may represent a group with less entrenched symptoms, and therefore may have lower incidences of insecure attachment compared to adults with eating disorders. Part of the reason for the gap in the literature on adolescents with eating disorders is the previous lack of reliable measures of adolescent attachment and mentalising, especially those conceptually aligned with interview-based methods. It is not known whether findings from adult

attachment and mentalising studies are generalisable to adolescents who meet criteria for AN, BN or atypical AN.

5.2.5 Qualitative analysis of interview discourse

For this project, the use of the PDI and the CAI resulted in large amounts of rich qualitative data, including self-reported descriptions of adolescents' attachment relationships with their parents, and of mothers' attachment relationships with their daughters. Analysing what mothers and daughters had to say about their relationships and family functioning allowed for a close inspection of the lived experiences of families of adolescents with eating disorders compared to non-disordered families. Adolescents' experiences can be effectively assessed by qualitative methods such as interviews, which can elicit important perceptions, beliefs and meanings (Nelson & Quintana, 2005). The inclusion of this qualitative component in the present study is in line with recent tradition in related eating disorders research, which has explored RF in eating disorder patients (Skårderud, 2007a) and individuals' and families' experiences of eating disorders (Bezance & Holliday, 2013; Vann, Strodl, & Anderson, 2014; Whitney et al., 2005). To the author's knowledge, it is the first study to incorporate qualitative analysis in a study of attachment and RF in a sample of adolescents with eating disorders.

Chapter 6 will detail the present study's methodology.

Chapter 6: Study Methodology

6.1 Participants

The clinical sample was comprised of 32 female adolescent (12–17 years) outpatients and partial hospitalisation (i.e. day program) patients from a specialist public eating disorder programme at the Child and Adolescent Health Service (CAHS) Specialised Child and Adolescent Mental Health Service (CAHMS) Eating Disorders Program, at Princess Margaret Hospital for Children in Perth, Western Australia. Participants had a primary *DSM-5* (APA, 2013) eating disorder diagnosis. Only female patients were invited to participate in this study, as research findings have repeatedly indicated that the sex distribution of AN is 90–95% female (Bugola, 1995; Garfinkel, 1995; Garfinkel & Garner, 1982; Garfinkel et al., 1995; Polivy, Coleman & Herman, 2005). Because AN occurs infrequently in males, and because males formed an extremely small proportion of patients receiving treatment in the clinical setting, adolescent boys were not included in the study sample. Patients who were hospitalised at the time of data collection were excluded from the study, due to the possibility of limited cognitive capacity as a consequence of their state of starvation; however, participants who had had a previous hospital admission were not excluded. Other exclusion criteria, for both the clinical and non-clinical groups, included presence of a comorbid developmental disability, and lack of proficiency in the English language.

The diagnostic categories of the clinical group are reported in Table 6.1. The clinical group was composed of patients with AN-R (48%, $n = 16$), AN-BP (10%, $n = 3$), BN (10%, $n = 3$) and atypical AN (34%, $n = 11$). The clinical sample mean age was 15.1 years ($SD = 1.34$); 58% lived in a family with both biological parents, and 94% were born in Australia.

Table 6.1

Distribution of Eating Disorder Participants by Eating Disorder Diagnosis (n = 32)

Eating Disorder Diagnosis	Number of Participants
Anorexia Nervosa – Restricting	16 (48%)
Anorexia Nervosa – Binge-purge	3 (10%)
Bulimia Nervosa	2 (7%)
Atypical Anorexia Nervosa	11(34%)

The non-clinical control group was recruited from the community via ‘snowball’ sampling, which entailed word-of-mouth communication and email, with initial invitations to participate being extended to acquaintances of the researchers. Inclusion criteria were females, age 12–17, English-speaking and Australian residents. An exclusion criterion was a score of above 20 on the EAT-26. Recruitment aimed to target a comparably aged and sized sample to the clinical group. The resulting control sample comprised 25 female adolescents with a mean age of 15.0 ($SD = 1.2$), of whom 72% lived in a family with both biological parents and 96% were born in Australia. For the mothers group, 26 participants were recruited. One of the control daughters’ data was not able to be used due to error in data collection, leaving a final sample of 25 mother–daughter pairs.

6.1.1 Response rate

Recruitment for the study took place between April 2011 and June 2013. In total, 135 families were invited to participate in the study, including the adolescent patients who met criteria for an eating disorder and both of their parents. Of the 135 families approached, 100 declined to participate; one adolescent agreed to participate but her mother dissented. A further two adolescents declined after initially agreeing. In one family the father was deceased; only three fathers agreed to participate. Their data was collected, but not included in the study, due to the low participation rate of fathers.

Due to low participation rates, mother and daughter dyads, or mothers alone or girls alone who consented to participate, were included in the study. 32 adolescent patients (4.25% of those approached) and 33 mothers participated in the study, the final clinical sample included 25 mother-daughter pairs.

6.1.2 Descriptive characteristics of participants

Demographic information by group is presented in Table 6.2. As shown, groups did not differ significantly in terms of age, household structure, Socio-Economic Indexes for Areas (SEIFA) score, country of birth, mother's education level or mother's employment status (all $p > .05$).

Table 6.2

Demographic Characteristics and Scores for Study Variables Presented by Subgroup

Variable	Description	Eating Disorder <i>n</i> = 32	Control <i>n</i> = 25	Chi-square and <i>t</i> -values	<i>df</i>	<i>p</i> -value
Age	Mean (<i>SD</i>)	15.1 (1.3)	15.0 (1.2)	<i>t</i> = -0.48	55	<i>p</i> = .632
	12 years (%)	1 (3%)	0 (0%)	$\chi^2 = 1.99$	5	<i>p</i> = .851
	13 years (%)	2 (6%)	3 (12%)			
	14 years (%)	8 (25%)	6 (24%)			
	15 years (%)	8 (25%)	8 (32%)			
	16 years (%)	7 (22%)	5 (20%)			
	17 years (%)	6 (19%)	3 (12%)			
Household Structure	Both biological parents (%)	19 (59%)	18 (72%)	$\chi^2 = 2.88$	3	<i>p</i> = .411
	Mother only (%)	10 (31%)	5 (20%)			
	Father only (%)	0 (0%)	1 (4%)			
	One biological, one step-parent (%)	3 (9%)	1 (4%)			
SIEFA Score	Mean (<i>SD</i>)	8.7 (1.5)	9.1 (2.1)	<i>t</i> = 0.90	55	<i>p</i> = .371
Country of Birth	Australia (%)	28 (87%)	24 (96%)	$\chi^2 = 0.67$	1	<i>p</i> = .412
	Others (%)	3 (9%)	1 (4%)			
Mother's Education	High school Yr 8–10 (%)	2 (6%)	1 (4%)	$\chi^2 = 6.14$	4	<i>p</i> = .189
	High school Yr 11–12 (%)	7 (22%)	1 (4%)			
	Trade qualification (%)	0 (0%)	2 (8%)			
	Certificate/diploma (%)	9 (28%)	8 (32%)			
	Degree or higher (%)	13 (41%)	12 (48%)			
Mother Currently Employed	Yes (%)	25 (78%)	21 (84%)	$\chi^2 = 0.82$	1	<i>p</i> = .365
	No (%)	7 (22%)	3 (12%)			
	Data not available (%)	0 (0%)	1 (4%)			

6.2 Measures

6.2.1 Demographic variables

Information was collected on date of birth, postcode of residence, members of household, country of birth, highest level of education completed by mother, and mother's occupation. Participants' socio-economic status was determined by accessing the Australian Bureau of Statistics' Socio-Economic Indexes for Areas (SEIFA). The SEIFA Index of Economic Resources is a continuous measure of relative socio-economic advantage and disadvantage; scores range from 1–10, with higher scores indicating greater access to resources (Pink, 2011; Schindeler et al., 2006).

6.2.2 Diagnostic interview

All clinical participants were administered the child version of the Eating Disorders Examination (EDE; Bryant-Waugh et al., 1996), and parents completed the parent version (Princess Margaret Hospital for Children, 1996); both versions are based on the original adult version (Fairburn & Cooper, 1993). The tests were administered by trained clinicians who specialise in the area of eating disorders. The EDE is one of the most widely used assessment measures for reliable eating disorder diagnosis, and is considered to be the 'gold standard' in the field. The semi-structured interview contains four subscales (*restraint, eating concern, shape concern* and *weight concern*), yields a global score, and assesses frequency of behavioural symptoms of eating disorders (i.e. binge eating, purging, laxative misuse and excessive exercise). The child EDE has high internal consistency, inter-rater reliability (0.91–1.00) and good discriminant validity (Watkins, Frampton, Lask, & Bryant-Waugh, 2005). The parent version has not yet been validated. Eating disorder diagnosis was retrospectively analysed according to *DSM-5* criteria.

6.2.3 EAT-26 (Garner, Olmsted, Bohr, & Garfinkel, 1982)

The EAT-26 was used to screen for eating disorders in the control group. It is one of the most commonly used standardised methods of measuring symptoms and characteristics of eating disorders (Garner & Garfinkel, 1997). This 26-item self-report measure consists of three subscales: *diet, bulimia and food preoccupation*, and *oral control*. The diet factor (13 questions) describes the avoidance of fattening foods and preoccupation with losing weight (e.g., ‘I am aware of the calorie content of foods I eat’; ‘I engage in dieting behaviour’). The bulimia and food preoccupation factor (6 questions) includes questions that describe persistent thoughts regarding food (e.g., ‘I feel that food controls my life’). The part of this subscale that describes bulimia includes statements such as, ‘I have the impulse to vomit after meals.’ The third factor, oral control (7 questions), refers to (a) successfully controlling food intake and (b) the perceived pressure from others to eat more (e.g., ‘I avoid eating when I am hungry’; ‘I feel that others pressure me to eat’). The participants are asked to describe the degree to which they agree with these statements in a 6-point Likert scale (Always, Usually, Often, Sometimes, Rarely and Never). A high score on EAT-26 suggests disturbed eating behaviour. The EAT-26 does not in itself yield an eating disorder diagnosis, however the critical value of 20 has been suggested by the developers (Garner, Olmsted, Bohr, & Garfinkel, 1982) as the threshold indicating the symptomatology of a clinically identifiable disorder. For this reason, the EAT-26 was administered to the control group participants, and only participants with scores ≥ 20 were excluded from the study.

6.2.4 Child Depression Inventory—Short form (Kovacs, 1992)

Depression was measured by the CDI-S (Kovacs, 1992). The CDI-S contains 10 key items from the lengthier 27-item self-report measure, which assesses symptoms related to the cognitive, affective and behavioural features of depression in children

aged 7–17 years. Each item has three response options, scored 0, 1 or 2, with higher scores indicating increased severity. Participants choose one of three statements that best describes their symptoms over the past two weeks (e.g., ‘I am sad once in a while,’ ‘I am sad many times,’ ‘I am sad all the time’). The CDI is widely used in studies of clinically referred and non-referred children and adolescents. The long and short forms yield comparable results (Kovacs, 1992); the internal consistency of the overall scale is good (.80), and the scale has good test-retest reliability (.74–.77; Smucker, Craighead, Craighead, & Green, 1986). An examination of the psychometric properties of the CDI (Saylor, Finch, Spirito, & Bennett, 1984) found a 1-week test-retest reliability of .87 for clinical children, but only of .38 for a non-clinical sample.

6.2.5 Multidimensional Anxiety Scale for Children (March et al., 1997)

Anxiety was measured using the Multidimensional Anxiety Scale for Children (March et al., 1997), a 39-item self-report measure that assesses anxiety dimensions in children and adolescents aged 8–19 years. It yields four scales: physical symptoms (tense, somatic), harm avoidance (perfectionism, anxious coping), social anxiety (humiliation fears, performance fears), and separation/panic. It also produces an index of total anxiety, with higher scores indicating higher anxiety. Respondents scoring above a *T* score of 65 are considered clinically symptomatic (March et al., 1997). The Multidimensional Anxiety Scale for Children has good psychometric properties, with an excellent internal reliability of .90, a 3-week test-retest reliability of .93 (March & Albano, 1996) and convergent validity with other validated child anxiety measures (Reynolds & Richmond, 1978).

6.2.6 **Affective symptomatology**

The total raw scores from the CDI-S (Kovacs, 1992) and the Multidimensional Anxiety Scale for Children (March et al., 1997) were combined to produce an affective symptomatology composite variable.

6.2.7 **Millon Adolescent Clinical Inventory (Millon et al., 1993)**

Personality was measured using the MACI (Millon et al., 1993), a self-report inventory comprising 27 clinical scales that tap clinical syndromes, expressed concerns and personality styles. Of relevance to the present study was the personality subscale of borderline tendency. The MACI was developed and normed in a clinical sample and generally has good psychometric properties, with test-retest reliability between .57 and .92 for individual scales, and internal consistency coefficients between .73 and .91 for individual scales (Millon et al., 1993).

6.2.8 **Child Attachment Interview (Shmueli-Goetz et al., 2008; Target, Fonagy, Shmueli-Goetz, Datta, & Schneider, 1999; Target, Fonagy, & Shmueli-Goetz, 2003)**

The CAI is a semi-structured interview that assesses the quality of the children's attachment patterns to each of their primary caregivers (e.g., mother, father or step-parent). It has 19 questions, designed to explore the child's current and past experiences with their primary caregivers (parents) and to prompt the child to think about the qualities of these relationships. It uncovers information about the current availability and responsiveness of attachment figures, and the child's view of attachment relationships. The questions are designed to tap into the child's representations of self and of caregivers, especially during situations in which the attachment system is activated (e.g., emotional upset, conflict, distress, illness, hurt, separation and loss).

Throughout the interview, probes are used to generate examples for particular episodic detail. Children are assisted to sequence their narrative by requests for detail about the events, such as, ‘Who was there?’, ‘What happened?’ or ‘What did you do?’ The child is also asked how they and others felt in the situation.

The interview is usually video recorded and later transcribed verbatim, noting relevant non-verbal behaviours, such as obvious changes in behaviour in response to a particular question, or obvious anxiety. Transcripts of the interviews are coded according to nine scales outlined in the CAI Coding and Classification Manual (Shmueli-Goetz et al., 2011). Six scales measure the child’s overall state of mind in regard to attachment, and three scales—anger, idealisation and dismissal—are scored separately relating to each relationship, on a scale of 1 to 9. Scoring of the CAI yields independent classifications of main attachment style for mother and father: secure, dismissing, preoccupied or disorganised.

A child is classified as secure if she presents as reasonably emotionally open, offers concrete examples that support her descriptions of her relationships with her parents, and can talk about both positive and negative aspects of these relationships comfortably.

A child is classified as dismissing if she has limited or no memory of her experiences with her parents; if she idealises her relationships with parents, but either is unable to back up her descriptions or actively contradicts them; if she denies ever having been upset, hurt or sick; and if she is unable to acknowledge feelings of vulnerability when directly asked about them.

A child is classified as preoccupied if she focuses only on negative aspects of her relationship with her parents, becomes angry to the point of losing track of the

interview when talking about her parents, is unable to resolve conflicts presented in the interview, and is unable to describe her emotional states in the interview.

A child is classified as disorganised if, when discussing loss, trauma, or very frightening experiences, her behaviour changes—for example, displaying sudden and obvious changes in affect, or offering bizarre associations or catastrophic images; or she displays a hostile, punitive, or controlling stance towards the interviewer (Shmueli-Goetz et al., 2008; Target et al., 2003).

The ‘overall coherence’ subscale of the CAI is a more ‘generalised’ measure of attachment security, in that attachment security or insecurity is measured along a continuum from 1 (very insecure) to 9 (very secure). It encapsulates all that is captured by the other CAI scales, for example, how emotionally open the child is, whether they can describe both their own and others’ feelings, how well they can evidence and illustrate what they say, and how balanced they are in their discussion of their relationships. In addition, the coherence subscale considers how well the child can monitor what they are saying in terms of how consistent and plausible the account is, and how ‘fresh’ or rehearsed the story feels. Those who score highly on the Idealisation subscale will score low on coherence, as this indicates contradictions or inconsistencies within the narrative. Those who score highly on the dismissing and the preoccupied subscales will also score low on coherence, as dismissing responses are usually very short and incomplete, and the preoccupied responses tend to be long, provide too much detail, lack relevance and demonstrate perseveration or repetition of themes. The coherence subscale can therefore act as a dimensional measure of attachment security, with higher scores indicating greater security.

Being able to measure attachment on a continuum in this way allows for the identification of more subtle differences than those afforded by the categorical

attachment classifications (secure, preoccupied, dismissing and disorganised). As this study aimed to investigate the presence of insecure attachment, and identify differences between groups on attachment patterns, as well as to investigate RF and its relationship with attachment coherence, both the coherence subscale scores and the attachment categories were used in the analysis.

The reliability and validity of the CAI were recently tested in a sample of 94 adolescent inpatients aged 12-17 years; the psychometric properties of the test were found to be adequate (Venta et al., 2013). Concurrent validity of the CAI classifications was supported by a significant association with established questionnaire measures of adolescent attachment; The Kern Security Scale (KSS; Kerns, Klepac & Cole, 1996), the parent subscales of the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1989), and the Parental Bonding Instrument (PBI: Parker et al., 1979).

Convergent validity of the attachment classifications of the CAI was confirmed by a highly significant association between CAI attachment classification and parent and self reported psychopathology and relationship with peers (using the peer scales of the IPPA, Youth Self Report, and Child Behaviour Checklist). Insecure attachment to mother was associated with self reported affective and conduct problems, and parent-reported oppositional defiant problems. Insecure attachment to father was associated with self-reported conduct problems, and parent reported externalising problems.

Discriminant validity of the CAI was established, in a sample of non clinical children aged 7–12 years recruited from schools ($n = 161$) and a clinical sample of children referred for psychiatric treatment ($n = 66$) (Shmueli-Goetz et al., 2008). Attachment style was unrelated to demographic variables (age, socio-economic status, ethnicity and number of parents in household) and psychiatric medication or psychiatric hospitalisation between in clinical and control samples.

In the present study, CAI coding was conducted by the lead author of the development study of the CAI (Shmueli-Goetz et al., 2008). Dr Shmueli-Goetz coded all of the transcripts, and was blind to the diagnosis of each participant.

6.2.9 RF scale on the Child Attachment Interview (Shmueli-Goetz et al., 2008; Target, Fonagy, Shmueli-Goetz, Datta, & Schneider, 1999; Target, Fonagy & Shmueli-Goetz, 2003)

Reflective Functioning (RF) was scored from the discourse elicited in the CAI (Shmueli-Goetz et al., 2008; Target, Fonagy, Shmueli-Goetz, Datta, & Schneider, 1999; Target, Fonagy & Shmueli-Goetz, 2003). There is currently no published scale to assess adolescent RF on the CAI. Transcripts of the interviews were coded with a combination of the CRFS and the ARFS.

Ensink (2004) used the CRFS to code the CAI data of a sample of 61 children aged 8–11, recruited from referrals to Child and Adolescent Mental Health Services in London. Results confirmed that RF can be reliably assessed in relatively young children, and that RF is closely linked to attachment, in that the higher a child's RF, the higher their attachment coherence. The CRFS has subsequently been used in a study of sexually abused children in Québec, Canada (Ensink et al., 2014) and the results of this study provide further evidence of the validity of the CRFS.

Only one study has rated RF of an adolescent sample using the Adult RF scale on the CAI (Benbassat & Priel, 2012). This study ($N = 105$) used the RF scale on the CAI (Target, Fonagy, & Shmueli-Goetz, 2003) and the Object Relations Inventory (ORI; Blatt, et al, 1992). In the present study, RF score was coded by the lead author of the development study of the CAI (Shmueli-Goetz et al., 2008) who has passed the reliability test for coding the RF scale on the AAI. Dr Shmueli-Goetz coded all of the transcripts, and was blind to the diagnosis of each participant.

6.2.10 Mentalisation Stories Test for Adolescents (Vrouva & Fonagy, 2007)

Explicit mentalising was measured using the MSTA-6, a 21-item self-report measure that assesses both accurate mentalising, avoidance of mentalising and pseudomentalising. For this test, the participant is required to read vignettes in which the main character interacts with another person. The MSTA stories describe adolescence-relevant everyday situations. In each story, a negative interaction takes place between the protagonist and another person, who is the protagonist's friend, classmate, sibling or parent. This interaction elicits feelings such as sadness, anger, disappointment, jealousy or shame in the protagonist, who does or says something as a result of this negative state. After reading each vignette, respondents are required to endorse one of four possible answers.

The responses differentiate between three different types of mentalising deficits that may reflect (a) a physical reality explanation with a dismissive quality, which is reasonable but does not identify the main conflict presented in the story, and offers a nonmental, situational reasoning; (b) inaccurate or excessive mentalising directed towards others, in which case the protagonist's attributions suggest excessive blaming of the other person in the story; and (c) inaccurate or excessive mentalising directed towards the self, in which case the protagonist's attributions are self-blaming or self-diminishing. These three types of incorrect answers were used as models for constructing distractor answers. Each stem also contains an accurate mentalising justification (correct option; Vrouva, Target, & Ensink, 2012). Responses are scored to provide a total score for mentalising, with higher scores indicating more proficient mentalising.

The same items are also scored for hypermentalising in regard to self and other, with a total combined score for hypermentalising, with higher scores indicating more

use of this strategy. Good psychometric properties have been reported for this measure, with a Cronbach's alpha of 0.76 (Vrouva, Target, & Ensink, 2012). Rutherford et al. (2012) used the MSTA-2 with 49 community-based adolescents from deprived backgrounds, aged 14–18 (mean age = 15, $SD = 1$) to measure explicit mentalising in normal adolescents. Results indicated that scores on the test did not correlate with age, or differ between boys and girls.

6.3 Parent Measures

6.3.1 Demographic questionnaire

Mothers completed demographic data, including date of birth, postcode of residence, composition of family, highest level of education achieved and occupational status.

6.3.2 The Parent Development Interview coded on reflective functioning

The PDI R2-S (Slade, Aber, Bresgi, Bergerm & Kaplan, 2004) is a semi-structured clinical interview containing 33 questions to assess parents' representations of their child, of themselves as a parent, and of their relationship with their child. The PDI was adapted by Arietta Slade and colleagues (Slade et al., 2004) to be coded for RF. The PDI elicits representations drawn from a current and ongoing relationship with a particular child. During the interview, parents are required to access representations of their feelings, their child's feelings and their relationship; combined, these representations provide a stable, cross-situational measure of mentalising capacity (Slade et al., 2004).

The three major dimensions that are coded on the interview are: (1) parental representations of the affective experience of parenting, (2) parental representations of the child's affective experience, and (3) parental state of mind in relation to the child (Slade, Belsky, Aber, & Phelps, 1999). When scoring the interviews, raters look for four

general ‘types’ of mentalisation as identified in the RF manual (Fonagy et al., 1998): (1) awareness of the nature of mental states, (2) explicit effort to tease out mental states and underlying behaviour, (3) recognising developmental aspects of mental states, and (4) mental states in relation to the interviewer.

In order to code RF on the PDI, each interview was audio recorded and transcribed verbatim, and each question was coded separately based on the presence or absence of mental states and types of RF. In addition to the individual passage scores, an overall score was determined for each interview as a whole. Potential scores range from -1 to 9, with higher numbers reflecting higher RF.

Fonagy et al. (1998) provide detailed definitions for RF capacity on six scale points: negative (-1) to full or exceptional (9) RF, with the following intermediate points: absent but not repudiated (1); questionable or low (3); definite or ordinary (5); and marked (7). The scale makes a distinction between negative to limited (-1–3) and moderate to high RF (5–9). Scores that fall under 5 indicate either negative, absent or low (and not fully realised) RF. Scores of 5 and higher indicate clear support of mentalising capacities. A score of 5 has been shown to be the most common overall score in a ‘normal’ sample (Slade et al., 2005). Each interview is allocated an overall score based on the pattern of RF that has been demonstrated across a range of different domains. In order to obtain a high overall score, the parent must be able to reflect on her own mental states, those of her child, and the complex interactions between mental states and behaviour that occur within the context of the continually developing parent–child relationship.

Parental RF scores are not related to personality traits, verbal IQ, socio-economic status or age (Steele & Steele, 2007), but weak correlations between RF,

vocabulary skills and paternal level of education have been found (Fonagy et al., 1991; Fonagy et al., 1998).

Taubner et al. (2013) investigated the internal structure of the scale on a combined clinical and non-clinical sample ($N = 196$) from five different research projects. RF ratings were found to be stable over time both at item level ($r = .34$ to $.47$) and for the global RF scores ($r = .64$). RF scores were not predicted by age or gender (range: 17–64 years, $M = 28.7$). Though the RF scale has good inter-rater reliability in several studies (intraclass correlation coefficients range from $.70$ to $.91$; Fonagy et al., 1998), there have been no studies to ensure test-retest reliability or convergent and divergent validity (Choi-Kain & Gunderson, 2008).

In the present study, RF score on the PDI was rated by two raters who were blind to the grouping of the participants, and who had passed the reliability test for coding the RF scale on the PDI. An inter-rater reliability rating was performed on 15 of the 50 PDIs, showing good inter-rater reliability ($r = .88$).

6.3.3 Depression Anxiety Stress Scales Short Version (Lovibond & Lovibond, 1995)

The Depression Anxiety Stress Scales (DASS) is a 21-item self-report questionnaire of negative emotive states, measured across three scales: depression, anxiety and stress. The depression scale assesses dysphoria, hopelessness, devaluation of life, self-depreciation, lack of interest or involvement, anhedonia and inertia. The anxiety scale assesses autonomic arousal, muscle tension, situational anxiety and anxious affect. The stress scale assesses chronic non-specific arousal, difficulty relaxing, being upset or agitated, and irritability or over-reactivity. Respondents rate their experience of each state over the past week using a 4-point scale of severity or frequency (i.e. from 0, 'did not apply to me', to 4, 'applied to me very much or most of

the time'). The DASS-21 is considered suitable for research and screening of adults and adolescents in the general community, and its brevity makes it advantageous in research with non-clinical populations. Items are selected from the complete DASS inventory to represent the three subscales; scores are converted to full-scale by multiplying by 2. Correlation of the anxiety subscale with the Brief Symptom Inventory (Derogatis & Melisaratos, 1983) anxiety subscale is excellent ($r = 0.61$). Correlation of the depression subscale with the Brief Symptom Inventory depression subscale is also excellent ($r = 0.70$; Mitchell et al., 2008). Test-retest reliabilities for each 7-item scale are .81 for depression, .73 for anxiety and .81 for stress.

6.4 Procedure

Ethics approval was granted from the CAHS, Princess Margaret Hospital Research Ethics Committee and Curtin University Human Ethics Committee (See Appendix A and B).

6.4.1 De-identification and confidentiality

All participants were identified by number rather than name. During the questionnaire processing, all information was de-identified and entered into the database under the family identity codes. The family contact lists with identifiable details and the consent forms were stored separately to the questionnaires, and SPSS Statistics software's data files at a secure site in the Eating Disorders Program. The data analysis was completed with de-identified codes.

Following engagement in the Eating Disorders Program, clinical patients and their families were invited to participate in the study. The patients and their families were either handed information sheets inviting participation (see Appendix C) by reception staff, or received them in the mail. A follow-up phone call was made to determine whether they wished to participate in the study. The information sheet

provided the rationale and procedure for the study, and specified confidentiality and the participant prerogative to decline to answer any question or to withdraw from the research at any time without prejudice. Written informed consent (see Appendix E) was obtained from the participants and their parents prior to participation, and following the participant's discussion with the researcher as needed. All participants were provided a list of counsellors (see Appendix D) that they could contact should participating in the study evoke any difficult feelings or issues that they wished to address.

Adolescents in the clinical group completed the CDI-S (Kovacs, 1992), Multidimensional Anxiety Scale for Children (March et al., 1997) and MACI (Millon, Millon, & Davis, 1993) prior to an appointment in the outpatient clinic, where they took part in the CAI. While the normal process for administering the CAI is to videotape the interview, the interviews in this study were audio taped and transcribed, due to concerns about consent from this patient group. Feedback from consumers of the CAHS Specialised CAMHS Eating Disorders Program indicated that adolescents with eating disorders would be more likely to decline participation in a study that required videotaping, due to concerns about body image.

The CAIs were conducted by the researcher and postgraduate psychology trainees. Each interview took between 30 and 45 minutes to administer. All interviews were coded by the author of the measure, who had not administered the interviews and was blind to the grouping of the participants, in order to avoid any coding contamination related to having performed the interviews. The coder classified each interview into one of four categories: autonomous-secure, dismissing, preoccupied, and disorganised. The coder also provided a score of overall attachment coherence, and the RF score.

Mothers of the clinical participants attended the outpatient Eating Disorders clinic at an appointed time and completed the DASS and PDI in the course of a single appointment. The PDI interviews were administered by the researcher or postgraduate psychology trainees; PDI interviews took between 45 and 90 minutes to administer.

Control participants were recruited to match the age of the clinical adolescents and approximate socio-economic status of the parents. Adolescents and their parents were invited to participate in the study via an information sheet (see Appendix C). Consent forms (see Appendix D) were completed by the adolescent and their parent prior to their participation. Prior to conducting the interviews, a packet of measures (see Appendix F) was mailed to the adolescents in the control group to complete.

Adolescents in the control group completed the same questionnaires as the clinical sample, as well as the EAT-26 (Garner, Olmsted, Bohr, & Garfinkel, 1982). The EAT-26 was used to determine whether any of the participants had significant eating disorder cognitions, and consequently would be excluded from the study. One of the participants was excluded from the study due to meeting exclusion criteria on the EAT-26; this participant was referred to an appropriate counselling agency.

Mothers in the control group completed demographic information, the DASS21 (see Appendix G), and the PDI in the course of a single appointment. The PDIs were administered by the researcher or by postgraduate psychology trainees. The CAIs and PDIs were completed in control participants' homes at a time convenient to the participant. The interviews were conducted in private, in a quiet, distraction-free environment. The CAIs took between 30 and 45 minutes; PDIs took between 45 and 90 minutes to administer.

6.5 Statistical Analysis

6.5.1 Statistical power

According to G*Power (Version 3.1; Faul, Erdfelder, Lang, & Buchner, 2007), a sample size of 50 (25 participants in each of the two groups) is required for an 80% chance of detecting a 'large' ($f = .40$) between-group difference on each dependent variable at an alpha-level of .05 using the F -test family of analyses. In order to enhance internal validity and statistical power, control participants were matched as closely as possible to clinical participants in terms of age and socio-economic status. All participants were female, and therefore the two groups were also matched in terms of gender.

6.5.2 Data screening

Improbable values were checked against the questionnaires for data input errors, and errors were corrected. Cases with standardised residuals $> .3$ were defined as outliers; none were found. According to Little's Missing Completely At Random (MCAR) test, data were missing at random, constituting less than 5% of the total data. Mean substitution was therefore used to replace missing data.

6.6 Data Analyses

6.6.1 Statistical assumptions

For between-group designs such as these, the traditional analysis of variance (ANOVA) model assumes normality and homogeneity of variance. Some of the continuous outcomes showed minor violations of these assumptions. The Generalised Linear Mixed Model's (GLMM) 'robust statistics' option was therefore invoked to accommodate these violations. GLMM is also robust for unequal group sizes, a characteristic of the present research design. In order to optimise the likelihood of convergence, a separate GLMM analysis was run for each outcome measure.

Chapter 7: Study 1: Attachment Styles of Adolescents with Eating Disorders

7.1 Overview, Aims and Hypotheses

Empirical evidence supports the link between insecure attachment patterns and eating disorders in adult samples, with limited evidence available to support the same link in adolescent samples. Research has not been not conclusive as to whether a certain attachment pattern is related to a particular eating disorder diagnosis. Few previous studies on attachment in adolescents with eating disorders have reported on the presence of disorganised attachment styles. Applying an attachment framework to adolescent eating disorders could highlight another aetiological perspective on the development of symptoms, and provide insight and direction for clinical interventions.

The aim of Study 1 was to confirm previous research determining whether adolescent girls with eating disorders are more likely to present with insecure patterns of attachment to their mothers and fathers compared to an age- and socio-economic status-matched group of adolescent girls without eating disorders, and to determine whether a particular attachment pattern is related to a particular eating disorder diagnosis.

The following research questions were addressed in Study 1:

1. Will adolescents with eating disorders report higher levels of depression and anxiety symptoms compared to non-clinical controls?
2. Will adolescents with eating disorders present with higher rates of insecure attachment styles to their mothers and fathers compared to non-clinical controls, and what do the profiles of attachment styles look like among adolescents with eating disorders?
3. Will a particular attachment pattern relate to a specific eating disorder diagnosis?

The following hypotheses were tested:

H1 Girls who meet diagnostic criteria for AN, BN or atypical AN will report higher levels of depression as measured by the CDI-S compared to girls who do not have an eating disorder.

H2 Girls who meet diagnostic criteria for AN, BN or atypical AN will report higher levels of anxiety as measured by the Multidimensional Anxiety Scale for Children compared to girls who do not have an eating disorder.

H3 Insecure attachment to mother (preoccupied, dismissing or disorganised) as measured by the CAI will predict eating disorder group membership (AN, BN or atypical AN) such that girls presenting with insecure attachment will be more likely to meet diagnostic criteria for AN, BN or atypical AN than girls who do not have an insecure attachment.

H4 Insecure attachment to father (preoccupied, dismissing or disorganised) as measured by the CAI will predict eating disorder group membership (AN, BN or atypical AN) such that girls presenting with insecure attachment will be more likely to meet diagnostic criteria for AN, BN or atypical AN than girls who do not have an insecure attachment.

H5 Girls' attachment patterns to their mothers will correlate positively with attachment patterns to their fathers.

H6 Girls who meet diagnostic criteria for AN-R will be more likely to present with dismissing patterns of attachment as measured by the CAI.

H7 Girls who meet diagnostic criteria for AN-BP or BN will be more likely to present with preoccupied or disorganised patterns of attachment as measured by the CAI.

7.2 Results

A series of GLMMs was tested in order to determine whether the eating disorder group differed significantly from the control group in terms of depression (CDI-S) and anxiety (Multidimensional Anxiety Scale for Children). The GLMMs were implemented through SPSS's (Version 22) GENLINMIXED procedure. The GLMM represents a special class of regression model. The GLMM is 'generalised' in the sense that it can handle outcome variables with markedly non-normal distributions, and it is 'mixed' in the sense that it includes both random and fixed effects (IBM Corp., 2011). For this series of GLMMs, there was one nominal random effect (participant) and one categorical fixed effect (group: eating disorder versus control).

A second series of GLMMs was tested in order to determine whether insecure attachment and specifically dismissing or disorganised attachment style could predict the probability of belonging to the eating disorder group. For this series of GLMMs, there was one nominal random effect (participant) and two categorical fixed effects (insecure attachment [yes/no] and dismissing attachment [yes/no]). The fixed effects were linked to the binary outcome (eating disorder versus control) with a logit function.

7.2.1 Adolescent depression and anxiety

The adolescents' depression symptoms were measured by the CDI-S (Kovacs, 1992). The mean scores and standard deviations are reported in Table 7.1. Inspection of scores indicates that adolescents with eating disorders endorsed more depression symptoms than control adolescents. The GLMM *t*-tests confirmed that CDI-S total scores were significantly higher in the clinical than control group ($t(55) = 5.43$, $p < .001$). This result is consistent with H1.

The adolescents' anxiety symptoms were measured by the Multidimensional Anxiety Scale for Children (March et al., 1997). The mean scores and standard

deviations are reported in Table 6.3. Inspection of scores indicates that adolescents with eating disorders endorsed more anxiety symptoms than control adolescents. The GLMM *t*-tests confirmed that Multidimensional Anxiety Scale for Children total scores were significantly higher in the clinical than control group ($t(55) = 4.07, p < .001$). This result is consistent with H2.

Table 7.1 shows that, of the clinical group, 56% had a total CDI *T* score in the clinical range for depression, and 39% had a total Multidimensional Anxiety Scale for Children *T* score in clinical range for anxiety. Of the control group, 8% had a total CDI *T* score in the clinical range for depression and none had a total Multidimensional Anxiety Scale for Children *T* score in the clinical range for anxiety. As anticipated, a significant between-group difference was observed on affective symptomatology ($t(55) = 4.07, p < .001$), so hypothesis tests were conducted, including affective symptomatology as a covariate. Effect sizes were medium to large.

Table 7.1

Results of the GLMMs Comparing Depression and Anxiety Scores Between Clinical and Control Groups

Dependent variable	Description	Clinical <i>N</i> = 32	Control <i>N</i> = 25	Contrast estimate	Std. Error	<i>t</i>	<i>df</i>	<i>Adj. Sig</i>	Cohen's <i>d</i>
CDI-S	Mean score (<i>SD</i>)	8.4 (5.6)	2.2 (3.1)	6.28	1.15	5.43	55	<i>p</i> = .000*	1.37
	Number meeting clinical cut-off for depression (%)	18 (56%)	2 (8%)						
Multidimensional Anxiety Scale for Children	Mean score (<i>SD</i>)	55.8 (19.2)	39.6 (11.1)	16.18	3.98	4.07	55	<i>p</i> = .000*	0.87
	Number meeting clinical cut-off for anxiety (%)	12 (39%)	0 (0%)						
Affective symptomatology	Mean Score (<i>SD</i>)	64.22 (22.92)	41.76 (12.56)	22.56	4.69	4.79	55	<i>p</i> = .000*	1.22

* *p* < .001

Effect sizes: small = 0.2 to < 0.5, medium = 0.5 to < 0.8, large ≥ 0.8.

7.2.2 Adolescent attachment

Adolescent attachment style was coded on the CAI (Shmueli-Goetz et al., 2008). Excerpts to depict adolescent attachment styles are presented in Appendix H. Distribution of the four classifications of attachment to mother was as follows: 28% ($n = 9$) of the clinical group were coded as securely attached to their mothers, 22% ($n = 7$) as preoccupied, 34% ($n = 11$) as dismissing, and 16% ($n = 5$) as disorganised. Of the control group, 64% ($n = 16$) were coded as securely attached to their mothers, 12% ($n = 2$) as preoccupied, 24% ($n = 6$) as dismissing, and none as disorganised.

Distribution of the four classifications of attachment to father was as follows: 25% ($n = 8$) of the clinical group were coded securely attached to their father, 19% ($n = 6$) as preoccupied, 31% ($n = 10$) as dismissing, and 16% ($n = 5$) as disorganised. Of the control group, 64% ($n = 16$) were coded as securely attached to their fathers, 12% ($n = 2$) as preoccupied, 28% ($n = 7$) as dismissing, and none as disorganised.

Results of the GLMMs predicting the probability of having an eating disorder from attachment style after controlling for affective symptomatology are presented in Table 7.2. Attachment style was a significant predictor of eating disorder group membership; this was true for the four-category attachment to mother variable ($F[1, 52] = 27.54, p = .017$), and the four-category attachment to father variable ($F[1, 54] = 6.05, p = .017$). These effects were further analysed by conducting z -tests comparing the proportions of girls in the clinical and control groups as a function of attachment style. Girls with insecure attachment styles in relation to their mothers were more likely to be in the clinical group ($z = 1.98, p = .048$), as were girls with an insecure attachment to their fathers ($z = 2.31, p = .021$). Specifically, girls showing a preoccupied attachment style to the mother were more likely to be in the clinical group ($z = 2.29, p = .022$), as were girls who showed a disorganised attachment style to the mother

($z = 2.99, p = .003$). Similarly, girls showing a preoccupied attachment style to the father were more likely to be in the clinical group ($z = 2.23, p = .026$), as were girls who showed a disorganised attachment style to the father ($z = 2.99, p = .003$). These results are consistent with hypotheses 3 and 4. A further GLMM was tested to examine the association between mother and father attachment styles; the association was significant ($F[9, 39] = 3.42, p = .003, \phi = .930$). This result was consistent with H5.

Table 7.2

Results of the GLMMs Predicting the Probability of Having an Eating Disorder from Attachment Styles after Controlling for Affective Symptoms

Predictor	Description	Clinical	Control	z-value ¹	p-value	F-value ²	df ₁	df ₂	p-value	Phi ³
Attachment style to mother	Secure (%)	9 (36%)	16 (64%)	1.98	.048*	27.54	3	52	.001**	.417
	Preoccupied (%)	7 (78%)	2 (22%)	2.29	.022*					
	Dismissing (%)	11 (61%)	7 (39%)	1.33	.183					
	Disorganised (%)	5 (100%)	0 (0%)	2.99	.003**					
Attachment style to father	Secure (%)	8 (33%)	16 (67%)	2.31	.021*	24.86	3	49	.000***	.359
	Preoccupied (%)	6 (75%)	2(25%)	2.23	.026*					
	Dismissing (%)	10 (59%)	7(41%)	1.03	.304					
	Disorganised (%)	5 (100%)	0(0%)	2.99	.003**					

* $p < .05$

** $p < .01$

*** $p < .001$

1: A significant z-value indicates a significant difference between the clinical and control proportions.

2: A significant F-value indicates a significant *overall* association between the categorical predictor (attachment style) and the binary outcome (eating disorder).

3: Phi is an effect size measure. It conveys the strength of the association between the categorical predictor (attachment style) and the binary outcome (eating disorder).

Conventions for phi are:

.00 and under .10	Negligible association
.10 and under .20	Weak association
.20 and under .40	Moderate association
.40 and under .60	Relatively strong association
.60 and under .80	Strong association
.80 and under 1.00	Very strong association

7.2.3 Attachment patterns related to diagnostic groups

The results of the analysis to determine whether a particular attachment style predicted a specific eating disorder diagnosis are presented in Table 7.3. The diagnostic categories were divided into three groups: AN-R, AN-BP and BN, and atypical AN. Results of the GLMM analysis revealed, inconsistent with H6 and H7, that a particular attachment style to mother was not a significant predictor of a particular eating disorder diagnosis ($F[6, 24] = 0.85, p = .850$).

Table 7.3

Proportion of Clinical Girls Falling into Each 'Eating Disorder Diagnosis by Attachment Style to Mother' Category

Attachment Style		AN	BN and AN-BP	Atypical AN	Total
Secure	Count	6	2	1	9
	% within attachment	66.7%	22.2%	11.1%	100%
	% within diagnosis	40%	33.3%	9.1%	28.1%
Preoccupied	Count	4	1	2	7
	% within attachment	57.1%	14.3%	28.6%	21.9%
	% within diagnosis	26.7%			
Dismissing	Count	5	1	5	11
	% within attachment	45.5%	9.1%	45.5%	100%
	% within diagnosis	0%	33.3%	27.3%	15.6%
Disorganised	Count	0	2	3	5
	% within attachment	0%	40%	60%	100%
	% within diagnosis	0%	33.3%	27.3%	100%
Total	Count	15	6	11	32
	% within attachment	46.9%	18.8%	34.4%	100%
	% within Diagnosis	100%	100%	100%	100%

7.3 Discussion

This study aimed to confirm previous findings that adolescents with eating disorders present with higher rates of insecure attachment compared to non-clinical controls, and to explore the attachment patterns of adolescent females with AN, BN and

atypical AN. It also aimed to determine whether a particular attachment pattern predicts a particular eating disorder diagnosis.

7.3.1 Depression and anxiety

As predicted, adolescents with eating disorders scored significantly higher for symptoms of depression and anxiety than the control group. These findings are in line with those of recent studies that adolescents with eating disorders report high rates of anxiety and depression (Watson, Hoiles, Egan, & Limburg, 2014; Watson, Egan, Limburg, & Hoiles, 2014). In studies of individuals with eating disorders, symptoms of depression are elevated in individuals with AN (Blinder et al., 2006; Hughes, 2012), and BN (Linder et al, 2006). Mischoulon et al. (2011) identified that 59% of individuals with AN or BN reported a major depressive disorder during a 12 month period. Higher levels of depression have been found to be associated with greater severity of eating disorder symptoms (Bizeul, Brun, Rigaud, 2003; Cogley & Keel, 2003).

7.3.2 Insecure attachment patterns

The findings of the present study revealed the attachment classification distributions of the clinical group and control groups. In the clinical group 28% of the girls were coded as secure, 22% preoccupied, 34% dismissing, and 16% disorganised. Of the control group, 64% of the girls were coded as secure, 12% preoccupied, 24% dismissing, and none as disorganised.

It was predicted that insecure patterns of attachment (preoccupied, dismissing and disorganised) to mother and father as scored on the CAI would predict eating disorder diagnosis. These hypotheses were supported; after controlling for affective symptomatology, insecure attachment to both mother and father predicted the presence of an eating disorder. These findings are consistent with the body of literature linking insecure attachment styles with eating disorders (Chassler, 1997; Dias et al., 2011; Friedberg & Lyddon, 1996; Kenny & Hart, 1992; Latzer et al., 2002; Orzolek-Kronner,

2002; Ramacciotti et al., 2001; Ringer & Crittenden, 2007; Salzman, 1997; Tasca et al., 2006; Zachrisson & Kulbotten, 2006).

The higher rate of insecure attachment in clinical adolescents with eating disorders supports previous research of attachment styles and eating disorders using interview measures with adolescents. Cole-Detke (1996) found that 67% of adolescents with BN were classified as having insecure attachment patterns. Candelori and Ciocca (1998) found, in a study of 36 inpatients with AN and BN, that 83% of their sample were rated with insecure attachment patterns. This is a slightly higher percentage of insecure attachment than the 72% coded with insecure attachment in the current study. The Candelori and Ciocca study consisted of inpatients aged 13–24 years, so it is possible that the patients' disorders may have been more severe or entrenched. The results of the present study are also similar to those of Zavattini's (n.d.) study of Italian girls aged 13–16 years with AN. Zavattini found that 64.4% of adolescent girls with AN had insecure attachment patterns (dismissing style).

The findings of this study therefore confirm previous findings that a sample of adolescents presenting to a clinical treatment setting will have higher rates of insecure attachment styles compared to non clinical adolescent girls. Whilst the high rates of insecure attachment are clinically important, it is also important to note that 28% of the clinical group were coded as having secure attachment patterns.

The rate of 28% of secure attachment in this study's clinical group generally mirrored the two previous validation studies of the CAI with adolescent populations, in which Shmueli-Goetz et al. (2008) found 30.4% secure and Venta et al. (2013) found 26% secure attachment patterns. This finding indicates that it is not uncommon for patients in clinical samples to be coded with secure attachment patterns. In adult clinical samples, research using the AAI has also found that secure classifications are present. In a review of more than 25 studies considering AAI classifications amongst

diagnostic groups Dozier et al. (2008) found that the majority of the studies found at least a small number of participants with secure attachment patterns. In many of the studies reviewed, the rates of secure attachment were around 25-30%. These findings of both adolescent and adult clinical samples suggest that insecure attachment patterns are not a prerequisite for psychopathology in either adult and adolescent samples (Venta et al., 2013). This supports the notion that insecure attachment patterns may be one possible pathway to eating disorders, and that other factors including genetic and neurobiological, cultural and social must be considered.

The rates of insecure attachment found in the sample of control adolescents in this study were in accordance with findings of other samples of typical children, adolescents or young adults from the general population, where rates of insecure parental attachment are approximately 35–45%. This has been consistent across studies using the Strange Situation Procedure (van IJzendoorn & Kroonenberg, 1988), self-report measures of attachment (Hazan & Shaver, 1987) and the CAI (Scott et al., 2011; Shmueli-Goetz et al., 2008).

Many studies of attachment patterns and eating disorders have neglected the paternal attachment relationship. The hypothesis that insecure patterns of attachment to father would predict the presence of an eating disorder in adolescent girls was supported in this study. The rates of insecure patterns of attachment to father mirrored insecure attachment to mother. This finding of insecure attachment to fathers in adolescents with eating disorders contributes to the little published research available on this topic. This finding suggests that it is important to consider attachment patterns to both mother and father in the field of eating disorders (e.g., Domini et al., 2000; Evans & Wertheim, 1995; Humphrey, 1989; Palmer et al., 1988; Rowa et al., 2001). Rothschild-Yakar et al. (2013) found that for adolescents with eating disorders and controls, a secure attachment to father, but not mother, correlated negatively with emotional distress and

eating disorder symptoms, highlighting the importance of a secure attachment relationship with the father. This emphasises the importance of attending to the attachment relationship between an adolescent and both of their parents.

The hypothesis that girls' attachment patterns to their mothers would correlate positively with attachment patterns to their fathers was supported. These findings support those of Shmueli-Goetz et al.'s (2008) original CAI validation study, which found a 94.8% concordance between maternal and paternal attachment on a two-way classification (secure v insecure) for both parents and 87.9% agreement in a four-way classification (secure, dismissing, preoccupied and disorganised).

7.3.3 Attachment patterns related to diagnostic groups

The hypotheses that girls who met diagnostic criteria for AN-R would be more likely to present with dismissing patterns of attachment, and girls who met diagnostic criteria for AN-BP or BN would be more likely to present with preoccupied or disorganised patterns of attachment, were not met. This study failed to find a connection between particular patterns of attachment and specific eating disorder diagnoses. Although the clinical and control groups differed significantly in their rates of preoccupied and disorganised attachment patterns, the presence of all types of insecure attachment patterns across diagnostic categories offers support for the notion that attachment insecurity may cut across eating disorder diagnosis, and not be related to specific eating disorder subtype (Troisi et al., 2005).

The present results are consistent with those of other studies that failed to find significant differences in attachment patterns across eating disorder diagnostic groups (e.g., Zachrisson & Skårderud, 2010; Kuipers & Bekker, 2012). These results are also consistent with recent perspectives on the classification and treatment of eating disorders that point out the similarities between eating disorder diagnostic subgroups;

this views eating disorders through the lens of the transtheoretical model of eating disorders (Fairburn et al., 2003).

7.3.4 Attachment patterns of adolescents with eating disorders

7.3.4.1 Dismissing attachment pattern

In the current study, the dismissing attachment pattern was the predominant pattern of attachment of the girls with an eating disorder, which supports previous findings of avoidant or dismissing attachment patterns in girls with eating disorders (e.g., Candelori & Ciocca, 1998). When comparing the clinical and control groups however, dismissing attachment style did not predict eating disorder group membership, as a proportion of the girls without eating disorders also displayed dismissing attachment patterns. One reason for a predominance of dismissing attachment patterns during adolescence (even in non-clinical groups) may be related to the developmental struggles associated with adolescence (van IJzendoorn & Bakermans-Kranenburg, 2008), during which individuals are attempting to gain their own sense of identity and independence, which may promote a dismissive attitude towards their parents (Ammaniti et al., 2000; Weinfield et al., 2004).

7.3.4.2 Preoccupied attachment pattern

In this study, preoccupied attachment styles to mother and father predicted the presence of an eating disorder. This finding supports previous research using both self-report and interview measures of attachment (e.g., Armstrong & Roth, 1989; Fonagy et al., 1996; Friedberg & Lyddon, 1996; Kenny & Hart, 1992; Salzman, 1997; Troisi et al., 2005; Ward et al., 2000).

A preoccupied attachment style is characterised by diffuse boundaries between self and others, where personal identity is organised around a need for approval from significant others, along with a fear of being rejected by them (Bartholomew & Horowitz, 1991; Friedberg & Lyddon, 1996). Individuals with a preoccupied

attachment pattern attempt to control their anxiety by minimising emotional distance and seeking constant displays of support, love and care from others, and may perceive slight irritation in others as rejection (Jurist & Meehan, 2008). Individuals with preoccupied attachment styles have difficulty with emotion regulation (Mikulincer & Shaver, 2007). They are often able to identify their own negative affect, but it is often perceived in an exaggerated way. Studies on affect regulation have found that individuals with preoccupied attachment styles easily and repeatedly re-access painful interpersonal attachment-related memories, which in turn maintains an agitated state (Mikulincer, 1995). It has been demonstrated that preoccupied attachment patterns are more common among adolescents with emotional difficulties (Allen et al., 1996; Kobak et al., 1991; Rosenstein & Horowitz, 1996).

Preoccupied attachment to the mother has been theoretically linked with mother–daughter enmeshment, which has been identified as sometimes associated with families with a daughter with AN (e.g., Bruch, 1973; Minuchin et al., 1978). Enmeshment involves high levels of involvement; inappropriate intrusion on one another's thoughts, feelings and actions; and a lack of privacy between family members. Such enmeshment is seen to hinder separation and individuation during adolescence. Some researchers believe that adolescent failure to develop autonomy and separation from parents is central to eating disorder development, suggesting an eating disorder may provide the adolescent with the control and independence that is otherwise not possible in their attachment relationships.

The CAI coding for this study revealed that of the adolescents who were coded with preoccupied attachment, 50% presented with preoccupied anger; that is, they expressed anger and resentful feelings towards their parents. None of the non-clinical participants presented with preoccupied anger. These findings accord with those of Cunha, Relvas and Soares (2009), who found that eating disorder patients reported less

trust in their mothers and reported more anger and resentment towards their mothers and fathers. These findings suggest that those adolescents who displayed preoccupied anger toward their parents are displaying efforts to achieve proximity, love and support from their parents, combined with a lack of confidence that these resources will be available, and with anger and resentment when they are not provided (Mikulincer & Shaver, 2012).

7.3.4.3 Disorganised attachment pattern

In this study, the presence of disorganised attachment pattern predicted the presence of an eating disorder. Sixteen percent of the girls in the clinical group were coded with a disorganised attachment pattern, while none of the girls in the non-clinical sample were coded with a disorganised attachment pattern. These findings support those of studies of adults with eating disorders that found higher rates of disorganised attachment in their samples (e.g., Barone, 2009; Candelori & Ciocca, 1998; Ringer & Crittenden, 2007; Ward et al., 2001; Zachrisson & Kulbotten, 2006). Ward et al. (2001) found that not only were patients with AN presenting with disorganised attachment (unresolved trauma and loss), but that disorganised attachment patterns were also highly prevalent among their mothers. This finding suggests possible intergenerational transmission of disorganised mental states in patients with eating disorders, which could add to risk for an eating disorder (Tasca & Balfour, 2014). An exception is a study by Ramacciotti (2001), in a small sample of 13 adults with eating disorders which, failed to find evidence for disorganised attachment styles.

An interesting finding in this study, is that none of the girls with AN in the present study were coded as having a disorganised attachment style, only girls with BN or Atypical AN. This finding accords with the Zavattini (n.d.) study of adolescents with AN, where no patients were classified with preoccupied or disorganised attachment. This supports the notion that adolescents with AN-R may be more likely to present with

dismissing attachment styles, while those with AN-BP or BN features are more likely to present with preoccupied or disorganised attachment styles.

Very few studies of adolescent attachment in eating disorders have measured the presence of disorganised attachment, and this finding makes an important contribution to current knowledge about attachment patterns of adolescents with eating disorders. The disorganised classification is particularly relevant to psychopathology and eating disorders, as it identifies individuals whose attachment strategies and efforts to construct coherent internal working models of attachment are disorganised in the context of major loss or trauma, and who are unable to reorganise these experiences coherently (Main & Hesse, 1990). When coding attachment discourse on the Child Attachment Interview, a young person is classified as disorganised if, when discussing loss, trauma, or very frightening experiences, her behaviour changes—for example, displaying sudden and obvious changes in affect, or presenting bizarre associations or catastrophic images; or she displays a hostile, punitive, or controlling stance towards the interviewer (Shmueli-Goetz et al., 2008; Target et al., 2003).

Inspection of the discourse of the adolescents in the clinical sample coded with disorganised attachment revealed four of the adolescents presented with changes in affect in response to recalling traumatic events, and one in role reversal in the form of disorganised, controlling behaviour. These adolescents displayed disturbances in cognition and emotion surrounding loss or trauma (unresolved loss of a parent, childhood sexual abuse, and disorganised early childhood relationship with their parents). The girls presented with absorption, guilt or dissociation which is typically seen in disorganised attachment (Steele, Steele, & Murphy, 2009).

The findings of this study suggest that adolescents with eating disorders and disorganised attachment patterns may have experienced early childhood relationships in which they have been unable to develop an organised attachment system, and

unresolved trauma and loss. These experiences lead to a deficit in the development of self-regulating processes, which in turn leads to limited attachment coherence, poor understanding of mental states and reflective capacity as identified in the CAI discourse (Fonagy, Leigh, Steele, Steele, Kennedy, & Mattoon, 1996; Crittenden & Newman, 2010). This finding highlights the need to be alert for the presence of disorganised early childhood relationships, trauma and loss in the histories of adolescents with eating disorders.

Disorganised attachment is theorised to be associated with more severe psychopathology in adolescents (Nakash-Eisikovits et al., 2002). A disorganised pattern of attachment may lead to vulnerability to experiencing an eating disorder due to a disruption in the development of self-regulating processes that lead to affect dysregulation, poor impulse control, and anxiety (Fonagy, Gergely, Jurist, & Target, 2002). Because individuals with disorganised attachment patterns struggle with poor social or emotional regulation skills, they often have difficulty managing stress and may demonstrate hostile or aggressive behaviors. The adolescents with disorganised attachment in this study were frequently overwhelmed by emotion and used various behaviours, such as self-harm or bingeing-purging, as avoidance strategies (Nakash-Eisikovits et al., 2002).

The proportion of disorganised attachment in the current clinical sample, a low risk sample, ($n = 5$, 16%) was lower than that found previously in high-risk clinical samples of adolescents (up to 50%; Allen et al., 1996). In a cross-sectional study investigating the relationship between attachment style (as assessed using the AAI) and suicidal behaviour among adolescents referred for psychiatric services, 62% of the clinical group (adolescents with a history of suicidal behaviour) were classified as having disorganised attachment, compared to 34% of the comparison group (adolescents with no history of suicidal ideation or behaviour; Adam et al., 1996).

Further, in their review of AAIs, Bakermans-Kranenburg and van IJzendoorn (2009) reported that attachment styles for clinical samples were 23% dismissing, 21% secure, 13% preoccupied and 43% unresolved/cannot classify. In a recent study, Joseph et al. (2014) conducted 58 CAI interviews with adolescents (mean age 13.86; $SD = 1.95$) who were foster children from high-risk backgrounds; they found that around 36% were classified as disorganised. This present study supports previous findings that, although there is a higher incidence of disorganised attachment in high risk samples, disorganised attachment patterns are also present in middle-class samples at low risk for maltreatment, at approximately 15–30% (Ainsworth & Eichberg, 1991; Main & Morgan, 1996).

The findings of this study, that 16% of the eating disorder sample were classified with disorganised attachment are more in accordance with those of Glazebrook (2012), who investigated attachment styles of adolescents who self-harmed ($n = 49$, mean age = 15.2). Coding attachment on the CAI, 26.6% of the clinical sample were coded as having a secure attachment, 26.9% dismissing, 25.0% preoccupied and 19.2% disorganised. In another study of clinical adolescents, Venta et al. (2013) measured the attachment styles of 194 adolescent psychiatric inpatients aged 12–17 years. In this sample, 30.4% were classified as secure with their mother, 38.15% dismissing, 14.4% preoccupied, and 17% disorganised.

The rates of disorganised attachment found in the current sample are likely indicative of the low risk sample from which it is drawn: the clinical group comprised adolescents from middle to high socio-economic status. It may be that the presence of disorganised attachment patterns in this sample indicates that disorganised attachment is a general risk factor for psychopathology, including eating disorders.

However, it is possible that the CAI, which was originally designed for use with children, may not have picked up on certain subtleties of disorganised behaviour as

expressed in adolescence. As described in the methodology section of this chapter, attachment disorganisation can manifest in a variety of atypical behaviours that are difficult to quantify. The authors of the measure continue to develop and update the coding manual based on narratives from adolescent interviews, and it is expected that a clearer picture of disorganised attachment in this age group will be achieved as more adolescent interviews are conducted (Glazebrook, 2012).

The presence of disorganised attachment in a sample of adolescents of middle to upper socio-economic status adolescents highlights the need to be aware of the possibility of disorganised attachment styles in such samples and clinical settings, including treatment settings for eating disorders. Awareness of disorganised attachment styles in adolescents may assist with formulation and planning of treatment. Research has identified that parents of children with disorganised attachment patterns are more likely to have their own histories of childhood trauma and unresolved loss, resulting in part in feelings of helplessness (Lyons-Ruth et al., 2003; Solomon & George, 1999) that may affect their ability to support their child during treatment and engage in family-based interventions. Future research should focus on the connection between traumatic backgrounds and disorganised attachment, and on determining whether emotion regulation mediates the relationship between disorganised attachment and eating disorders.

7.4 Strengths and Limitations

This study was, to the author's knowledge, the first to use the CAI to assess the attachment styles of Australian adolescents. A limitation in the use of the CAI measure in this study was that, rather than adhering to the protocol of video recording the CAIs, the interviews were only audio recorded. This limited the coder to using only verbal responses to determine attachment category, eliminating any information from non-verbal responses. Another minor limitation related to the coding is that it was not

possible to be completely blind. Although the interviews were de-identified, information about the diagnosis was evident in some of the discourse; this is an issue in any clinical attachment research that uses such measures (van IJzendoorn & Bakermans-Kranenburg, 2008). However, maintaining the blindness of the coders regarding the diagnosis of the adolescents reduced the effect of this bias and thus preserved the reliability of the research.

The present analyses did not differentiate between those patients with pure eating disorders and those with comorbid Axis I and Axis II disorders. The prevalence of comorbid conditions found in this study (56% met clinical cut-offs for comorbid depression, 39% for anxiety) corresponds with that found in other studies (O'Brien & Vincent, 2003). Because insecure attachment is linked with a variety of other psychiatric disorders (Fonagy et al., 1996; Dozier et al., 2008), it is possible that different results would have emerged in patients with 'pure' eating disorders. However, excluding participants with comorbid diagnoses would have excluded some of the participants with the most severe eating disorders. The study did, however, control for anxiety and depression symptomatology.

Set against these limitations are several strengths of the study, including a comparatively large sample size for detailed clinical assessments, and the use of an interview measure of attachment. To date, no published research has explored the role of attachment in a clinical sample of adolescents with eating disorders using the CAI. The attachment interview is considered the gold standard in attachment research (Ravitz et al., 2010), yet much of the previous research in this field has relied on assessing attachment styles through self-report measures or an attachment interview designed for adults. A unique strength of this study, therefore, is that adolescent attachment classifications were assigned based on narratives produced from a reliable and valid attachment interview specifically designed for young people.

Another strength of this study is that it was conducted on a clinical sample of adolescents with eating disorders, and included a gender, age and socio-economic status-matched non-clinical control group. It was important to control for the possible confounding effects of socio-demographic variables including age, gender, socio-economic status, and mothers' education level on the relationship between attachment style and eating disorders, because these variables have been found to affect eating disorders. Previous analyses have frequently failed to account for these variables. Age matching was particularly important, as many previous studies have compared data drawn from adolescents to a control group composed of adults. The distinction between adolescents and adults is theoretically important; adult samples may differ in important respects due to the chronicity of their condition. Chronicity of eating disorder symptoms may indicate different underlying attachment issues (Ward et al., 2000). The young age of the eating disorder population means that the majority of the participants met diagnostic criteria for AN or atypical AN; adults with eating disorders are more likely to meet criteria for BN or AN. Therefore, this study offers insight into the specific diagnostic criteria that characterise adolescents with eating disorders.

7.5 Conclusion

This study confirmed previous research that has identified the presence of insecure attachment patterns to mother and father in adolescents with eating disorders. Analysis failed to find that a particular pattern of attachment related to a specific eating disorder diagnosis. Preoccupied and disorganised patterns of attachment predicted the presence of eating disorders in this sample. Individuals with secure attachments are able to identify their feelings; consider other people's potential reactions, feelings and needs; and consider the possible causes and effects of these (Tasca et al., 2011). The capacity to manage these processes is necessary for RF (Allen, 2005; Crittenden, 2006), which operates unconsciously and effectively in securely attached individuals (Allen, 2005).

The following chapter will outline Study 2, which investigated the relationship between attachment, coherence, RF and eating disorders in adolescents and their mothers. Study 2 investigated the mentalising capacities of adolescents with eating disorders and their mothers, and sought to identify links between (a) attachment security and RF in adolescents with eating disorders, and (b) mothers' RF, adolescents' RF and attachment coherence.

Chapter 8: Study 2: Reflective Functioning of Adolescents with Eating Disorders and Their Mothers

8.1 Overview, Aims and Hypotheses

Mentalising theory proposes that the onset of eating disorders occurs in the context of insecure attachment patterns. The model proposes that insecure attachment patterns result in a deficit in mentalising capacity, and that this deficit highlights discontinuities in the structure of the self, resulting in poor affect regulation, interpersonal problems, low self-esteem and lack of sense of self (Skårderud & Fonagy, 2012). The little available evidence on adolescent eating disorders and RF supports the presence of impaired mentalising capacity in adolescents with eating disorders; however, very little research has targeted the link with eating disorders specifically, and even less in adolescent samples. Few studies have considered the possible intergenerational transmission of RF capacity between parents and daughters with eating disorders. Study 2 aimed to compare the attachment coherence, RF and mentalising capacities of adolescents with eating disorders with non-clinical controls, as well as the RF of mothers of both groups, and the relationship between mother RF, daughter RF and attachment coherence. Although the reflective capacity of both mother and father would theoretically influence a child's developing mentalising capacity, this study focused only on mothers, who were more numerous in consenting to take part in the study.

The following research questions were addressed in Study 2:

1. Will low attachment coherence score, low RF score and low mentalising, hypermentalising or avoidance of mentalising predict the presence of an eating disorder in a group of adolescent girls?
2. Will RF score (low, medium or high) predict a particular eating disorder diagnosis?
3. Do adolescent girls with eating disorders have more borderline personality traits than adolescent girls without eating disorders, and does

- the presence of borderline traits predict difficulties with mentalising in adolescents with eating disorders?
4. Will adolescent girls' attachment coherence correlate with their RF? That is, will higher attachment coherence predict higher RF?
 5. Will mothers of daughters with eating disorders report higher levels of depression, anxiety and stress symptoms compared to mothers of daughters in the non-clinical control group?
 6. Will low RF score in mothers predict that their daughters have an eating disorder? Is there an association between the RF capacities of mothers and their daughters? Is there an association between the RF of mothers and the attachment coherence of their daughters?

The following hypotheses were tested:

H1 Adolescents' attachment coherence scores (as measured by the CAI) will predict the presence of an eating disorder, such that adolescent girls who meet diagnostic criteria for AN, BN or atypical AN will have lower levels of attachment coherence compared to the non-clinical control group.

H2 Adolescents' RF scores (as measured by the CAI) will predict the presence of an eating disorder, such that adolescent girls who meet diagnostic criteria for AN, BN or atypical AN will have lower levels of RF compared to the non-clinical control group.

H3 Reflective functioning scores will be predicted by attachment coherence in adolescent girls in both groups.

H4 Adolescents with AN-R will present with lower RF scores compared to adolescents with BN or BN-BP or atypical AN.

H5 Adolescent girls with eating disorders will exhibit more borderline personality traits (as measured by the MACI) compared to the non-clinical control group.

H6 Avoidance of mentalising or hypermentalising (as scored by the MSTTA) will predict the presence of an eating disorder, such that adolescent girls who meet

diagnostic criteria for AN, BN or atypical AN will have lower mentalising or higher hypermentalising scores compared to the non-clinical control group.

H7 Borderline personality features will predict hypermentalising in adolescent girls, such that more borderline personality features will be associated with more hypermentalising.

H8 Mothers of daughters with eating disorders will report higher levels of depression, anxiety and stress (as measured by the DASS Short Version) compared to mothers in the non-clinical control group.

H9 Mothers' RF scores (as measured by the PDI) will predict eating disorders such that mothers of daughters who meet criteria for AN, BN or atypical AN will have lower RF scores than mothers of daughters in the non-clinical control group.

H10 Mothers' RF scores will correlate positively with their daughters' RF scores.

H11 Mothers' RF scores will correlate positively with their daughters' attachment coherence.

8.2 Results

The hypotheses were tested with a series of GLMMs. The GLMMs were implemented through SPSS's (Version 22) GENLINUX procedure. The GLMM represents a special class of regression model. The GLMM is 'generalised' in the sense that it can handle outcome variables with markedly non-normal distributions, and 'mixed' in the sense that it includes both random and fixed effects. For this series of GLMMs, there was one nominal random effect (participant) and one fixed effect. The fixed effect varied according to the hypothesis being tested. For H1–7 and H9, the fixed effect was linked to the binary outcome with a logit function. For H8, H10 and H11, the fixed effect was linked to the continuous outcome with an identity function (i.e. no transformation of the outcome was performed).

8.2.1 Adolescent results

8.2.1.1 Correlations among study variables

The correlations among all of the adolescent study variables are reported in table 8.1.

8.2.1.2 Adolescent attachment coherence score

Adolescent attachment coherence score was a significant predictor of the presence of an eating disorder ($F[1, 55] = 5.55, p = .022$). The adolescent attachment coherence scores are presented in Table 8.2. The mean attachment coherence score for the clinical group was 4.45 ($SD = 1.99$) and the mean attachment coherence score for the control group was 5.68 ($SD = 1.74$); thus the study found that, consistent with H1, significantly lower attachment coherence predicted the presence of an eating disorder.

8.2.1.3 Adolescent reflective functioning

Adolescent RF score did not predict the presence of an eating disorder ($F[1, 55] = 2.23, p = .141$). This result is inconsistent with H2. The adolescent RF scores are presented in Table 8.2. Examples of low and high RF responses on the CAI are presented in Appendix I. The mean RF score for the clinical group was 3.5 ($SD = 2.36$) and the mean RF score for the control group was 4.4 ($SD = 2.17$).

Adolescent RF scores were then divided into low (< 2), medium (3–5) and high (6–9) to determine whether RF group membership would predict the probability of having an eating disorder. Although 50% of the clinical group compared to 24% of the control group scored low RF (a score of 2 or below), RF group membership did not predict the presence of an eating disorder ($F[2, 54] = 1.97, p = .150$).

8.2.1.4 Adolescent attachment coherence and reflective functioning

Consistent with H3, analysis of coherence and RF scores revealed that attachment coherence predicted RF ($F[1, 55] = 145.86, p < .001$). When examining specific attachment categories, securely attached adolescents were more likely to score

medium to high RF, and dismissing and disorganised attachment styles were more likely to score low RF ($p < .001$). The proportions of adolescents within each of the 12 attachment-by-RF categories are reported in Table 8.3.

8.2.1.5 Reflective function category predicting eating disorder diagnosis

Reflective functioning category (low, medium, high) did not predict eating disorder diagnosis category ($F[4, 26] = 0.39, p = .817$). This finding was inconsistent with H4. The proportions of adolescents within each of the nine attachment by RF categories are reported in Table 8.4.

8.2.1.6 Mentalising Stories Test for Adolescents results

Mentalising, avoidance of mentalising and hypermentalising (self and other) were measured by the MSTA-6 (Vrouva & Fonagy, 2009) and are presented in Table 8.6. When examining hypermentalising, the presence of hypermentalising of self and other significantly predicted the presence of an eating disorder ($F[1, 55] = 5.31, p = .025$). Closer inspection showed that hypermentalising regarding self predicted the presence of an eating disorder ($F[1, 55] = 6.24, p = .016$). Avoidance of mentalising did not predict the presence of an eating disorder ($F[1, 55] = 0.01, p = .920$). This result that hypermentalising predicted the presence of an eating disorder is consistent with H6.

8.2.1.7 Borderline traits

The presence of borderline traits was measured using the MACI. Mean scores and *SDs* are presented in Table 8.4. Ten clinical participants (31%) and one control participant (4%) met the clinical cut-off for borderline tendencies. Higher levels of borderline traits predicted the presence of an eating disorder ($F[1, 53] = 11.49, p = .001$), consistent with H5. When the regression analysis testing whether hypermentalising predicted eating disorder was re-run, controlling for borderline tendencies, the presence of hypermentalising no longer predicted the presence of an

eating disorder ($F[2, 52] = 2.78, p = .101$). The presence of borderline tendencies, however, did predict the presence of an eating disorder ($F[2, 52] = 8.94, p = .004$).

8.2.1.8 Borderline traits predicting hypermentalising

Higher levels of borderline traits predicted the presence of hypermentalising ($F[1, 55] = 2.58, p = .013$), consistent with H7. When the regression analysis testing whether borderline traits predicted hypermentalising was rerun, controlling for symptoms of negative affect, the presence of borderline traits no longer predicted the presence of hypermentalising ($F[1, 52] = 6.29, p = .172$),

Table 8.1 *Pearson Correlations Among Girls' Study Variables*

		Adolescents RF	Attachment Coherence	Hypermental. self	Hypermental. other	Hypermental. total	Avoidance of mentalising	Depression	Anxiety	MACI. Borderline	Group
Adolescents RF	Correlation	1	.842**	-.088	-.197	-.157	.422**	-.200	-.002	-.148	-.196
	Sig. (2-tailed)		.000	.517	.142	.244	.001	.135	.986	.282	.144
	N	57	57	57	57	57	57	57	57	55	57
Coherence	Correlation	.842**	1	-.104	-.214	-.173	.278*	-.329*	-.124	-.249	-.312*
	Sig. (2-tailed)	.000		.440	.110	.198	.036	.012	.358	.067	.018
	N	57	57	57	57	57	57	57	57	55	57
Hypermentalising Self	Correlation	-.088	-.104	1	.351**	.883**	.141	.476**	.502**	.442**	.290*
	Sig. (2-tailed)	.517	.440		.008	.000	.295	.000	.000	.001	.029
	N	57	57	57	57	57	57	57	57	55	57
Hypermentalising Other	Correlation	-.197	-.214	.351**	1	.724**	.236	.411**	.252	.309*	.262*
	Sig. (2-tailed)	.142	.110	.008		.000	.077	.001	.058	.022	.049
	N	57	57	57	57	57	57	57	57	55	57
Hypermentalising Total	Correlation	-.157	-.173	.883**	.724**	1	.205	.538**	.499**	.443**	.335*
	Sig. (2-tailed)	.244	.198	.000	.000		.125	.000	.000	.001	.011
	N	57	57	57	57	57	57	57	57	55	57
Avoidance of mentalising	Correlation	.422**	.278*	.141	.236	.205	1	.194	.215	.190	-.014
	Sig. (2-tailed)	.001	.036	.295	.077	.125		.149	.108	.166	.919
	N	57	57	57	57	57	57	57	57	55	57
Depression	Correlation	-.200	-.329*	.476**	.411**	.538**	.194	1	.655**	.706**	.559**
	Sig. (2-tailed)	.135	.012	.000	.001	.000	.149		.000	.000	.000
	N	57	57	57	57	57	57	57	57	55	57
Anxiety	Correlation	-.002	-.124	.502**	.252	.499**	.215	.655**	1	.396**	.452**
	Sig. (2-tailed)	.986	.358	.000	.058	.000	.108	.000		.003	.000
	N	57	57	57	57	57	57	57	57	55	57
MACI.Borderline	Correlation	-.148	-.249	.442**	.309*	.443**	.190	.706**	.396**	1	.401**
	Sig. (2-tailed)	.282	.067	.001	.022	.001	.166	.000	.003		.002
	N	55	55	55	55	55	55	55	55	55	55
Group	Correlation	-.196	-.312*	.290*	.262*	.335*	-.014	.559**	.452**	.401**	1
	Sig. (2-tailed)	.144	.018	.029	.049	.011	.919	.000	.000	.002	
	N	57	57	57	57	57	57	57	57	55	57

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 8.2 *Girl's Attachment Coherence and RF as Predictors of Eating Disorder*

Predictors	Description	Eating Disorder <i>n</i> = 32	Control <i>n</i> = 25	Regression Coefficient	Std. Error	<i>F</i>	<i>dfs</i>	<i>p</i> -value	Exp Co-efficient	Cohen's <i>d</i>	Lower	Upper
Attachment coherence	Mean score (<i>SD</i>)	4.45 (1.99)	5.68 (1.74)	0.342	0.145	5.55	1, 55	.022*	1.41	0.66	1.05	1.88
Daughter RF	Mean score (<i>SD</i>)	3.5 (2.36)	4.4 (2.17)	0.176	0.12	2.23	1, 55	.141	1.19	-0.39	0.94	1.51
	Low ($0 \leq \text{RF} \leq 2$) (%)	16 (50%)	6 (24%)			1.97	2, 54	.150				
	Mod ($3 \leq \text{RF} \leq 5$) (%)	10 (31%)	11 (44%)									
	High ($6 \leq \text{RF} \leq 8$) (%)	6 (19%)	8 (32%)									

* $p < .05$. Effect sizes: nil = 0 to < 0.2 , small = 0.2 to < 0.5 , medium = 0.5 to < 0.8 , large ≥ 0.8 .

Table 8.3

Results of Regression Analysis

Predictors	Description	Eating Disorder <i>n</i> = 32	Control <i>n</i> = 25	Regression Coefficient	Std. Error	<i>F</i>	<i>dfs</i>	<i>p</i> -value
	Borderline predicting Hypermentalising			0.002	0.001	2.58	1, 55	0.013*
	Controlling for negative affect			0.001	0.001	6.298	1, 52	0.172
	Daughter attachment coherence predicting RF			0.988	0.082	145.86	1, 55	0.000*

Table 8.4

Attachment Style and Reflective Functioning Categories of Clinical Girls

Attachment Style		Low RF	Moderate RF	High RF	Total
Secure	Count	1	11	13	25
	% secure attachment	4%	44%	52%	100%
Preoccupied	Count	3	5	1	9
	% within preoccupied attachment	33.3%	55.6%	11.1%	100%
Dismissing	Count	13	5	0	18
	% within dismissing attachment	72.2%	27.8%	0%	100%
Disorganised	Count	5	0	0	5
	% within disorganised attachment	100 %	0%	0%	100%
Total	Count	22	21	14	57

Table 8.5

Eating Disorder Diagnosis Related to Reflective Functioning Categories

Eating Disorder Diagnosis		Low RF	Moderate RF	High RF	Total
AN	Count	5	5	5	15
	% within AN	33.3%	33.3%	33.3%	100.0%
AN-BP, BN	Count	3	2	1	6
	% within AN-BP BN	50.0%	33.3%	16.7%	100.0%
Atypical AN	Count	8	3	0	11
	% within Atypical AN	72.7%	27.3%	0.0%	100.0%
Total	Count	16	10	6	32
	% within ED diag.	50%	31.3%	18.8%	100%

Table 8.6

Results Mentalising (MSTA) and Borderline Tendencies

Predictors	Description	Eating Disorder <i>n</i> = 32	Control <i>n</i> = 25	Regression Coefficient	Std. Error	<i>F</i>	<i>dfs</i>	<i>p</i> -value	Exp Co-efficient	Cohen's <i>d</i>	Lower	Upper
MSTA	Mean Correct (<i>SD</i>)	0.81 (0.16)	0.89 (0.13)	4.232	2.34	3.28	1, 55	0.76	68.87	0.54		
	Mean Hypermentalising self (<i>SD</i>)	0.11 (0.13)	0.05 (0.05)	-8.06	3.02	6.24	1, 55	.016*	0.00	0.61	14.9	1.59
	Controlled for borderline traits			-4.44	3.39	1.71	1, 54	.196	0.01		11.2	2.37
	MACI Borderline			0.03	0.01	6.23	1, 54	.016*	0.97		0.06	0.00
	Mean Hypermentalising other (<i>SD</i>)	0.06 (0.06)	0.03 (0.05)	-10.55	6.38	2.74	1, 55	.104	0.00	0.54		

	Mean	0.17 (0.16)	0.08 (0.09)	-7.19	3.12	5.31	1, 55	.025*	0.00	0.69	.00	.39
	Hypermentalising self & Other (SD)											
	Controlled for borderline tendencies			-7.51	6.594	1.29	1, 54	.260	0.01			
	MACI Borderline			-0.035	0.013	6.90		.110*	0.97			
	Mean	0.04 (0.06)	0.03 (0.06)	0.51	4.92	0.011	1, 55	0.92	0.00	0.16	9.36	10.37
	Avoidance of mentalising (SD)											
MACI borderline tendencies	Mean score (SD)	53.9 (28.0)	33.6 (16.7)	20.267	5.98	11.49	1, 53	.001*		0.88	32.25	8.277
	Controlled for negative affect			-0.023	0.014	2.78	2, 52	.101	0.98		0.051	0.005
	Negative affect			-0.051	0.017	8.94	2, 52	.004*	0.95		-0.085	-0.017

* $p < .001$

Effect sizes: small = 0.2 to < 0.5, medium = 0.5 to < 0.8, large \geq 0.8.

8.2.2 Mother results

8.2.2.1 Mothers' emotional wellbeing

The maternal depression, anxiety and stress symptoms were measured by the DASS-21 total score (Lovibond & Lovibond, 1995). The mean scores and standard deviations are reported in Table 8.7. Inspection of scores reveals that mothers of the clinical group reported more depression, anxiety and stress symptoms than mothers of the control group ($F[1, 50] = 2.16, p = .035$). This result is consistent with H8.

8.2.2.2 Mothers' reflective functioning

Mothers' RF was scored using the RF scale on the PDI. Mothers' RF scores are presented in Table 8.7. The average RF score of mothers in the clinical group was 3.81 ($SD = 1.23$) while the average RF score of mothers in the control group was 4.19 ($SD = 1.16$). The mean RF score across groups was 3.98 ($SD = 1.21$), so a score under 2 was considered to be very low within this sample. Examples of mothers' RF responses on the PDI are presented in Appendix J. The discourse of the PDI identified that these mothers experienced difficulty attending to their daughters' mental states, experienced frequent misunderstandings of their daughter's cues, were triggered by their daughter's emotional dysregulation, thus frequently becoming embroiled in a cycle of non-mentalising and frequently blamed their daughter for her dysregulated affect and eating disorder symptoms. One of the mothers with very low RF had been bereaved by the death of her husband, all described difficult and traumatic early childhood experiences.

Results found that mothers' RF scores did not predict the probability of having an eating disorder ($F[1, 57] = 1.54, p = .220$) this result is inconsistent with H9. However, a difference in distribution was noted between the patient and control groups across low (< 2), moderate (3–5) and high (> 6) RF subgroups, although the difference was not significant ($F[1, 56] = 1.49, p = .233$). The proportions of mothers in the RF

categories by clinical and control groups are reported in Table 8.7. More mothers in the clinical group scored with low RF compared to the control mothers: 21% scored < 2 , compared to only 3.8% of the control group. It is possible that with a larger sample, this difference would become significant.

Mothers' RF scores did not predict their daughters' RF scores ($F[1, 49] = 0.02$, $p = .901$), nor did they predict their daughters' attachment coherence ($F[1, 49] = 0.30$, $p = .584$). These results are inconsistent with H10 and H11.

Table 8.7

Mothers' DASS Scores and RF Scores Predicting Eating Disorder Diagnosis

Predictors	Description	Eating Disorder <i>n</i> = 33	Control <i>n</i> = 26	Regression Coefficient	Std. Error	<i>F</i>	<i>dfs</i>	<i>p</i> -value	Cohen's <i>d</i>
Mothers' DASS	Mean score (<i>SD</i>)	12.0 (9.1)	7.6 (5.8)	4.37	2.02	2.16	1, 50	0.035*	0.57
Mothers' RF score	Mean score (<i>SD</i>)	3.81 (1.23)	4.19 (1.16)	0.27	0.21	1.54	1, 57	.220	-0.32
	Low ($0 \leq \text{RF} \leq 2$) (%)	7 (21%)	1 (3.8%)			1.49	1, 56	.233	
	Mod ($3 \leq \text{RF} \leq 5$) (%)	24 (51%)	23 (49%)						
	High ($6 \leq \text{RF} \leq 8$) (%)	2 (6.1%)	2 (7.7%)						
	Mothers' RF predicting daughters' RF			-0.05	0.28	0.03	1, 49	.856	
	Mothers' RF predicting daughters' coherence			0.11	0.21	0.30	1, 49	.584	

Table 8.8

Mothers' RF Category Predicting Presence of Eating Disorder in Adolescents

RF Category		Clinical Group	Control Group	Total
Low RF	Count	7	1	8
	% within Low RF Category	87.5%	12.5	100%
	% within Group	21.2%	3.8%	13.6%
Moderate RF	Count	24	23	47
	% within Moderate RF Category	51.1%	48.9%	100%
	% within Group	72.7%	88.5%	79.7%
High RF	Count	2	2	4
	% within High RF Category	50%	50%	100%
	% within Group	6.1%	7.7%	6.8%
Total	Count	33	26	59
	% of Total	55.9%	44.1%	100%

8.3 Discussion

8.3.1 Attachment coherence and eating disorders

The hypothesis that attachment coherence score would predict the presence of an eating disorder was supported. Low attachment coherence predicted the presence of an eating disorder. The attachment coherence scale of the CAI measures reflectiveness, spontaneity and flexibility in discourse, with higher coherence scores indicating greater attachment security. These findings indicate that adolescents with eating disorders,

when thinking and talking about their attachment relationships with their parents, are less able than their non-clinical peers to describe these relationships in a way that is 'fresh', reflective, spontaneous, consistent and understandable. High attachment coherence identifies individuals who have the capacity to understand and contain both positive and traumatic experiences (Fonagy et al., 1991) and who try to maintain a good relationship with their parents despite negative situations (Fonagy et al., 1998). The findings of this study suggest that adolescents with eating disorders display lower capacity than their non-clinical peers with these abilities.

The limited attachment coherence of the girls in the clinical sample is theoretically expected given the higher rates of insecure attachment identified in study one. Individuals who score highly on dismissing and preoccupied subscales on the CAI will score low on coherence, as this points to shortening or inconsistencies within the narrative. Dismissing responses are usually very short and incomplete, and preoccupied responses tend to be long, overly detailed, lack relevance and demonstrate perseveration or repetition of themes. In the same way, disorganised narratives fail to provide a fresh, coherent narrative and are prone to lapses into odd speech, include lengthy pauses during discussion of loss or trauma, and involve disintegration of speech. This disintegration is considered to be a sign of interference from intrusive/ overwhelming memories or absorptive affective experiences that are elicited by the discussion (Borelli, Sbarra, Mehl & David, 2011).

The findings of this study indicate that, compared to their non-clinical peers, adolescents with eating disorders are less able to identify their feelings; consider other people's perspectives, potential reactions, feelings and needs; and consider the possible causes and effects of these (Tasca et al., 2011). The capacity to manage these processes is necessary for RF (Allen, 2005; Crittenden, 2006).

The use of the coherence score in this study suggest that attachment coherence score may be a useful measure for identifying differences between clinical and non-clinical groups related to attachment and reflective capacity. The coherence score may have utility in clinical settings, not only for measuring attachment coherence, but also potentially as a treatment outcome measure. An increase in attachment coherence following intervention may reflect a growing capacity to make sense and meaning out of attachment relationships and difficult or traumatic experiences.

8.3.2 Adolescent reflective functioning score and eating disorders

Contrary to expectations, the hypothesis that low adolescent RF score would predict presence of an eating disorder was not supported. Although the adolescents with eating disorders scored on average lower RF scores (RF=3.5) compared to the control group (RF=4.4), this difference was not statistically significant, and low RF did not predict eating disorder diagnosis.

This finding is not in agreement with previous studies of RF of individuals with eating disorders from interview measures that have identified low levels of RF in the eating disorder group (Fonagy et al., 1996; Ward et al., 2001; Rothschild-Yakar et al., 2010; Rothschild-Yakar et al.; 2013). The most relevant studies with which to compare these findings are those conducted on adolescent eating disorder patients (e.g., Rothschild-Yakar et al., 2013; Zavattini, n.d.). While Rothschild-Yakar et al. (2013) utilised an age-matched non-clinical control group, they scored RF on the Object Relations Inventory, and found that eating disorder patients scored significantly lower RF compared to a control group. Patients were all inpatients and met criteria for eating disorders (AN-R, $n = 31$; AN-BP, $n = 18$; BN, $n = 22$). Zavattini (n.d.) did not include an adolescent control group, but rather compared scores to published adult RF norms. He did not report a mean RF score, but reported that 54.8% of the adolescents with AN

scored 3 on the RF scale. The lack of an adolescent control group is a significant flaw of the study, as there is no current empirical consensus on the average RF of typically developing adolescents.

Although a statistically significant difference was not found between the two groups' RF scores, it is worth considering that the average RF score of 3.5 in the clinical group compared to 4.4 in the control group is of clinical significance. From a clinical perspective, the mean RF score of 3.5 in the eating disorders sample suggests that the adolescents in the clinical sample possessed only a basic capacity to think about themselves, and their attachment relationships in terms of mental states. The descriptions offered did not display evidence of an integrated, coherent and elaborated understanding of self, and this has clinical implications for a possible goal of therapy.

Further information is required to ascertain the mean RF of non-clinical adolescents. To date, a foundation of studies on population norms of adolescent RF has not been established, due to a lack of research on adolescent mentalising (Rutherford et al., 2012). It is important to ascertain the RF capacity of typically developing adolescents because, while undergoing a period of change in cognitive development and neural plasticity, adolescents may not have reached adult RF capacity.

In a study of non-clinical adolescents aged 14–18 (mean age 15.8; $SD = 1.13$), Benbassat and Priel (2012) reported an average RF score for non-clinical adolescents coded on a shortened version of the AAI of 3.88 ($SD = 1.1$). Another study of typically developing German high school students—47 (48%) female and 50 (52%) male, aged 15–18 years—found an average RF score coded on the AAI of 3.96 ($SD = 1.38$; range from 1 [absent RF] to 7 [marked RF]; Taubner & Curth, 2013). These average RF scores are lower than the average RF score of the non-clinical participants in the current study ($M = 4.4$).

There are several things to consider when thinking about the RF scores obtained in the current study, and possible reasons as to why a significant difference was not detected between the two groups. First, the clinical participants had engaged in psychotherapy prior to participating in the study. Psychotherapy in its essence is focused on enhancing mentalising about relationships. Had the adolescents been assessed for RF prior to treatment, it is possible that a difference in RF between the two groups may have been detected. Future studies should endeavour to measure RF of clinical adolescents prior to patients engaging in therapy.

Second, it is possible that the typically developing adolescents in the control group—the majority of whom had secure attachment patterns and no mental health conditions—may not yet have been required by circumstances to develop RF capacity in the same way as their eating disordered peers. Research has found that children from chaotic environmental backgrounds, often out of necessity, develop abilities to interpret the thoughts and feelings of others beyond what would be expected developmentally (Perlman, Kalish, & Pollak, 2008; Pollak & Sinha, 2002). It is possible that challenging attachment experiences, such as difficult interpersonal relationships, loss, abuse or the onset of a serious mental health difficulty such as an eating disorder, demand RF in order to work through the experiences successfully. Perhaps the presence of negative relationships may have fostered a capacity for RF in some individuals with eating disorders, particularly those with secure attachments (Fitzpatrick, 2010). It should be noted that, even in the clinical group, the patients with secure attachment patterns scored moderate to high on RF. Fonagy et al. (1993) found this to be the case in a study of adult mothers' responses to the AAI. Reflective functioning only differentiated secure from insecure attachments in those from deprived backgrounds. It is possible that the clinical adolescents in this study may have developed RF capacity equal to their

typically developing control peers as a result of grappling with the interpersonal and emotional consequences of an eating disorder.

On the other hand, typically developing adolescents, who may not have experienced early childhood insecure attachment, loss; trauma or interpersonal challenges, may not yet have had to call upon their latent RF capacity. This idea is in keeping with the descriptions offered by the Dynamic-Maturational Model of attachment and adaptation (Crittenden, 2008) in regard to the two types of secure attachment: 'naïve' or 'earned'. This model suggests that 'earned' security results from the integration of childhood experiences to offer balanced representations of both safety and danger, while naïve security is the product of a matter of luck from growing up in a predictably safe environment (Farnfield, Hautamäki, Nørbech, & Sahhar, 2010).

Another possible reason that the two groups did not significantly differ in RF score arises from a limitation of this study: that the CAIs were administered by postgraduate psychology students who had not undertaken the training for administering and coding the CAI. Thus, the quality of questioning and probing for RF was lacking in some interviews, and may not have elicited the full extent of the adolescents' RF (Shmueli-Goetz, personal communication).

Finally, the CAIs were coded with a combination of the CRFS and ARFS that has not yet been validated for research. Most previous research on adolescent RF has used the Adult RF scale on the AAI. It is important that work continues to validate a measure to code RF of adolescents on the CAI. Future studies should ensure adequate training of interviewers in the use of the CAI, and utilise a validated means of scoring RF on the CAI.

8.3.3 Attachment coherence and reflective functioning

As predicted, attachment coherence scores predicted RF scores across the sample. This finding is in agreement with Fonagy et al. (1998), who reported a strong correlation between RF and coherence on the AAI. It is also in accordance with a study conducted by Vrouva (2009) on attachment and mentalising in an adolescent population, in a large community sample of 1,141 high school students. In this study, Vrouva found that attachment was closely correlated with mentalisation. She found positive correlations between mentalisation, measured by the Empathy Quotient measure, and peer attachment, measured on the IPPA scale (Armsden & Greenberg, 1987). She also found correlations between total peer attachment and mentalising on the Reflective Function Questionnaire (Fonagy & Ghinai, 2007). This finding supports the theory that secure attachment represented by high attachment coherence lays the foundation for good mentalising capacity.

Close inspection of the relationship between attachment style and RF identified that participants with secure and preoccupied attachment styles were more likely to score with medium or high RF, while those with dismissing and disorganised attachment styles were more likely to present with low RF as scored with the RF scale on the CAI.

The finding that adolescents with secure attachment styles were more likely to score moderate to high RF supports the previously outlined argument around attachment coherence and RF. That adolescents with preoccupied attachment styles presented with higher RF compared to those with dismissing and disorganised attachment styles supports another study that found patients with eating disorders and preoccupied attachment styles had relatively higher RF (Candelori & Ciocca, 1998). It may be that individuals with a preoccupied attachment style have a higher awareness of their own

internal states, and are therefore more likely to report and reflect on them in the CAI, thus resulting in a higher RF score. Individuals with a dismissing attachment style are characterised by a shutting-down of emotions, have been found to be sensitive to high levels of appraisal of threat, and are often unable to identify emotions in themselves and others (Dozier & Kobak, 1992; Roisman, Tsai, & Chiang, 2004). This may lead individuals with a dismissing attachment style to be less likely to verbalise their feeling states and the connections between mental states and behaviours.

In the current sample, 100% of the participants coded with a disorganised attachment style scored very low RF (< 2). This finding supports the notion that individuals with disorganised attachment styles are more likely to display difficulty monitoring their speech, and may present as disoriented, frightened or dissociating during the CAI, which results in a low RF score. The finding also supports the theory that a child with a disorganised attachment style has not been able to acquire reflective functioning capacity in the context of their early attachment relationships, as disturbances in attachment relationships will disrupt the developmental process of acquiring mentalising capacity (Fonagy et al., 2010).

8.3.3.1 Why significant difference existed between coherence but not RF score

It is worth considering the reasons why attachment coherence score, but not RF score, predicted the presence of an eating disorder in this study, given that the two scores were correlated with each other. The RF score overlaps with the coherence score conceptually and in terms of coding on the CAI; nevertheless, there are some key differences between them (Jessee, 2012). The coherence scale covers a much broader construct than the RF scale; it is not only related to the quality and clarity of mentalisation in the interview, but also captures internal contradictions between general and specific descriptions, such as vague or confusing language or answers that are off

topic. An interview may evidence relatively high levels of mentalisation, but still be scored low on coherence, due to frequent tangents, confusing descriptions of episodes, unfinished sentences or vague phrases—all features that represent low coherence (Katznelson, 2014). In addition, coherence scored on the CAI places an emphasis on whether the adolescent can ‘back up’ the descriptions used to describe relationships with parents, by providing relevant examples. It is possible to have a high score for coherence without referencing mental states (Katznelson, 2014). For example, an interviewee could describe their relationship with a parent as ‘very close’, and use consistent examples to support that description, but still rate low on RF if the interviewee did not describe those behaviours in terms of mental states. The theoretical expectation, however, is that a securely attached individual with high coherence would have good capacity for thinking about relationships in terms of mental states. The limitations around coding for RF already outlined above could also account for the discrepancy in findings.

8.3.4 Hypermentalising and eating disorders

As hypothesised, a deficit in mentalising, specifically, hypermentalising in regard to self predicted eating disorder group membership. The hypermentalising displayed by the adolescents with eating disorders involved inaccurate or excessive mentalising directed towards the self, characterised by self-blaming or self-diminishing attributions.

To the author’s knowledge, this is the first time the MSTA measure has been used with a group of adolescents with eating disorders. Even typically developing adolescents tend to be hypersensitive to their own mental states and those of others around them (Fonagy, Gergely, Jurist, & Target, 2006). This may be partly due to changes in cognitive development that allow adolescents to begin to integrate mental

state knowledge, as well as due to an emerging ability to make explicit references to mental states in their language. This study demonstrated that adolescents with eating disorders hypermentalise—or over attribute mental states that are unlikely to be real—in regard to self more than typically developing adolescents. Hypermentalising is a pre-mentalising mode of functioning linked with pretend mode functioning. In pretend mode, individuals are able to symbolise their own inner states, and can distinguish internal from external reality, but only when the inner and the outer worlds are completely separated (Fonagy et al., 2002). Not being able to symbolise or accurately sense what they really feel, patients functioning in pretend mode often have problems identifying, expressing and regulating affect.

The presence of hypermentalising in this adolescent sample agrees with other studies that have demonstrated deficits in RF in eating disorder samples (Fonagy et al., 1996; Ward et al., 2001; Rothschild-Yakar et al., 2010; Rothschild-Yakar et al., 2013; Zavattini, n.d.). The results also accord with other studies that have identified hypermentalising in adolescents with other mental health conditions. While other studies have found that adolescents with BPDs and self-harm present with hypermentalising in relation to others (e.g., Sharp et al., 2011, 2013; Rossouw, 2013b), it is noted that this sample of adolescents with eating disorders displayed hypermentalising in regard to self. This hypermentalising is characterised by inaccurate or excessive mentalising directed towards the self; in the MSTA, the protagonist's attributions are self-blaming or self-deprecating.

The reason why adolescents with eating disorders would display hypermentalising that is self-blaming and self-diminishing rather than directed towards others may lie in the core psychopathology or underlying processes that have been identified to exist in individuals with eating disorders. A pervasive trait of adolescents

with eating disorders is low self-esteem, or a self-demeaning personality (e.g., Liley et al., 2013). It is well recognised that low self-esteem is a risk factor for the onset of eating disorder symptoms (see Fairburn, Cooper, & Shafran, 2003; Fairburn & Harrison, 2003). Adolescents with eating disorders report general feelings of ineffectiveness and poor self-worth, and low self-esteem has a strong consistent association with the prevalence of eating disorders (Fairburn, Cooper, & Shafran, 2003; Halvorsen & Heyerdahl, 2006; Karpowicz, Skarsater, & Nevenon, 2009).

Self-criticism or harsh self-scrutiny and evaluation have also been linked to the core psychopathology of eating disorders (Broussard, 2005; Dunkley & Grilo, 2007; Fennig et al. 2008; Noordenbos, Aliakbari, & Campbell, 2014). Individuals who are self-critical have a chronic fear of criticism and disapproval (Blatt, 2004). Self-criticism has been found to be a key factor in predicting eating disorder severity (Fennig et al., 2008); a highly critical style of self-evaluation might influence eating-disordered patients to attempt to control eating, shape and weight as a means to bolster their negative view of self and create a sense of achievement. These efforts trap them in a constant struggle of critical self-questioning, whereby they attribute all kinds of failure to their own deficits (Noordenbos et al., 2014). In addition, individuals with eating disorders have difficulty in recognising, naming, tolerating and expressing emotions, as well as differentiating emotions from physical sensations, particularly in relation to the self (Beales & Dolton, 2000; Bydlowski et al., 2005; Corstorphine, 2006; Gilboa-Schechtman et al., 2006; Zonnevijlle-Bender, van Goozen, Cohen-Kettenis, van Elburg, & van Engeland, 2002).

A lack of capacity in the self-focused dimension of RF has implications for adolescents with eating disorders, as the lack of capacity for self-mentalisation affects self-organisation, self-agency, impulse control and affect regulation. Sharp et al. (2013)

offer some insight into why adolescents with mental health disorders may present with adequate mentalising on some aspects of mentalising, but not others. They point out that neurodevelopmental research (e.g., Lieberman, 2007) provides evidence for independent neural underpinnings of the different systems of mentalising. The unconscious, non-verbal, fast, reflexive processes of implicit or automatic mentalising (Satpute & Lieberman, 2006) require little attention, effort or intention, allowing individuals to respond quickly to mental states. These processes involve the amygdala basal ganglia, ventromedial prefrontal cortex, lateral temporal cortex, and the dorsal anterior cingulate cortex. Sharp et al. suggest that this system appears to work more efficiently in adolescents with BPD due to a dysfunction in controlled or explicit mentalising, which requires verbal, reflective, intentional awareness and control, involving the lateral prefrontal cortex, medial prefrontal cortex, lateral parietal cortex, medial parietal cortex, medial temporal lobe, and rostral anterior cingulate cortex (Lieberman, 2007; Satpute & Lieberman, 2006). Sharp et al. suggest that the presence of hypermentalising indicates an overcompensation of automatic mentalising due to dysfunction in the controlled mentalising system. It is possible that a similar process is in action in adolescents with eating disorders in this study, although related to hypermentalising in regard to self. Further research could investigate the neural systems involved in hypermentalising relating to self.

8.3.5 **Borderline traits**

As hypothesised, the present sample of adolescents with eating disorders yielded more borderline traits than the control group; this is consistent with previous research (Dunkley & Grilo, 2007; Gazzillo et al., 2013; Sansone et al., 2005). Borderline traits have been found consistently in adult patients with eating disorders, particularly those with binge-purge symptoms (Kleifield et al., 1994; Lilenfeld et al., 2000; Wonderlich,

2002). In this study, once the analysis was repeated to control for affective symptomatology, the between-group difference in relation to borderline traits was no longer present. Literature suggests that personality traits are amplified by symptoms of anxiety and depression (Bizeul, Brun, & Rigaud, 2003; Liley et al., 2013). For example, significant personality differences were found between a depressed AN group and healthy controls, but not a non-depressed AN group and healthy controls (Bizeul, Brun, & Rigaud, 2003; Liley et al., 2013). In addition, a key feature of borderline personality pathology is dysregulated affect, and more than 50% of adolescents with BPD meet criteria for a mood disorder (Kaess et al., 2013). It is hypothesised that controlling for negative affect (through controlling for anxiety and depression) diluted the effect of borderline traits, as they are overlapping constructs.

Given the link already established in other studies between borderline personality traits in adolescents and hypermentalising, it was hypothesised that borderline personality traits would predict hypermentalising on the MSTA. This hypothesis was supported. Once the analysis investigating the relationship between hypermentalising and eating disorders was repeated to control for borderline traits, the relationship between hypermentalising and eating disorders diminished to the point that it was no longer significant. This finding—that the presence of borderline personality traits washed out the impact of hypermentalising on eating disorders—suggests that it is the presence of borderline traits in the eating disorder group that accounts for the presence of hypermentalising in this sample.

To the author's knowledge, this is the first study to examine the presence of hypermentalising in adolescents with eating disorders. Results of this study support those of Rossouw (2013) in a study of self-harming adolescents, which found hypermentalising associated with borderline traits. Rossouw did not control for the

presence of negative affect in her analysis; as mood instability and anxiety are integral aspects of BPD, controlling for them could be seen as controlling for symptoms of the condition (Personal communication, Trudie Rossouw, 2014). Sharp et al. also found hypermentalising to be present in adolescents with BPD, but found no significant differences in hypermentalising at admission or discharge between those with anxiety or mood disorders (measured by the Diagnostic Interview Schedule for Children; Shaffer, Fisher, Lucas, Dulcan, & Schwab Stone, 2000) and those without mood disorders. They interpreted these results to indicate that the tendency to hypermentalise is specific to BPD pathology rather than pathology of mood, anxiety or conduct. In the Sharp et al. study, all participants met criteria for BPD, which, apart from comorbid depression and anxiety, involves high levels of affective dysregulation and symptomatology.

8.3.6 Mothers' depression, anxiety and stress scores

As hypothesised, mothers of daughters with eating disorders were found to score significantly higher for depression, anxiety and stress. This finding supports those of previous studies that have demonstrated that parents of a child with an eating disorder experience psychological distress (e.g., Kyriacou et al., 2008; Graap et al., 2008; Ma, 2010; Orive, Padierna, Martin, Aguirre, Gonzalez, Munoz, & Quintana; 2013; Perkins et al., 2004; Whitney et al., 2005; Treasure et al., 2001).

8.3.7 Mothers' reflective functioning and eating disorders

In this study, contrary to the hypothesis, low maternal RF score did not predict eating disorder diagnosis in children. This finding does not support those of the two previous studies that have investigated maternal RF of patients with eating disorders. Ward et al. (2001) scored RF on the AAI and found that mothers of adolescent or adult children with AN ($n = 20$; aged 15–46 years) scored low RF ($M = 2.4$; $SD = 1.6$) compared to norms. As this sample included patients that were well into adulthood,

some may have had more severe or entrenched AN. Similarly, Zavattini (n.d.) measured RF on the AAI and found that 16% of mothers of the sample of adolescent girls with AN scored negative RF (-1) and 51.1% scored equal or less than 2, indicating 'questionable or low RF'. RF scores of 2 were allocated to parents who displayed active disavowal of RF, were hostile, self-serving, or excessively general or concrete.

That 21% of the mothers in the clinical group had very low RF (< 2) is considered an important finding, with clinical implications. The mothers who scored RF of 2 or below either actively disavowed reflective thinking, or were hostile, self-serving or overly general or concrete in their responses. For those mothers in the clinical group who scored a very low RF, poor reflective capacity may inhibit their ability to regulate their own affect and to help regulate the affect of their adolescent children, particularly since those children may also have disrupted capacity for RF (Malberg, 2013). Malberg highlights the challenges of parenting an adolescent, and suggests that an adolescent with a chronic illness may block reflective thinking in a defensive effort to survive the developmental upheaval of adolescence. He states that, with an adolescent with a chronic illness in a hospital or home setting, the urgency of the young person's ill health can overwhelm the parent's own capacity for RF. This may result in a series of non-mentalising exchanges around illness management and medical procedures.

A confounding factor in the present study is that parents of daughters with eating disorders had engaged in various levels of therapy via the CAHS Specialised CAMHS Eating Disorders Program prior to participating in the study. The program for parents includes parent skills training, case management and family therapy. Similar to their daughters, parents' RF capacity may have been enhanced by their participation in the various therapies they had been engaged in. Had the mothers' RF been assessed prior to

engaging in treatment, it is possible that a greater difference in RF score between the two groups may have been detected.

Since the main body of research using the RF scale is in the field of transgenerational transmission of attachment (e.g., Rosenblum et al., 2008; Slade et al., 2005), the evidence base for RF scores in clinical samples and control samples is still limited. Studies on RF abilities in the general 'normal' population are few and mainly consist of medical outpatients or primiparous women. These studies found mean RF scores in normal adult samples ranging from 3.6 to 5.8 (Arnott & Meins, 2007; Benbassat & Priel, 2012; Fonagy et al., 1996; Levinson & Fonagy, 2004). Although individuals receiving a score of 3 show some evidence of mentalising efforts, their responses lack true signs of RF capacity, such as showing efforts to integrate opposing emotions as well as conflict and uncertainty (Slade et al., 2005). In this study, on average, mothers in the clinical group displayed similar RF to mothers in the control group.

8.3.8 Mothers' reflective functioning related to child reflective functioning and attachment coherence

In this study, contrary to the hypothesis, mothers' RF scores did not correlate with their daughters' RF scores. This is counter to expectations based on previous studies that have substantiated the influence of maternal RF on children and adolescents' RF (Sharp & Fonagy, 2008a, 2008b; Ensink et al., 2014; Tohme, 2014). It is also counter to recent findings of a correlation between the RF scores of mothers and their children (Benbassat & Priel, 2012; Jessee, 2012), and also to the findings of Zavattini (n.d.), who found a positive correlation between the RF of mothers and daughters with eating disorders, but not fathers and daughters.

The lack of support for this hypothesis in the current study may be due to other factors impinging upon adolescent RF. The relation between maternal and child RF is mediated by the mother's capacity to understand her child's cognitive and emotional reactions to attachment-related events. However, by adolescence, the impact of this effect may be moderated by factors that may explain individual differences in RF abilities in adolescents (Ensink et al., 2014). Other factors could include the roles of fathers, peers (Ensink et al., 2014), and genetic and environmental factors (Hughes et al., 2005). The lack of support for this hypothesis in the current study may also be due in part to the different measures utilised to measure mothers' RF (i.e. the PDI), rather than the typically used AAI and CAI for adolescents. It may be also due to the noted limitations in the data collection due to lack of training, and also the nature of the coding via the adolescent RF, which is not a validated measure of RF on the CAI (Shmueli-Goetz, personal communication).

No significant positive correlation was found between mothers' RF scored on the PDI and daughters' attachment coherence on the CAI. This was another unexpected finding; theoretically, it was anticipated that mothers' RF would be positively correlated with daughters' attachment coherence. Benbassat and Priel (2012) also failed to find a correlation between mothers' RF and adolescents' coherence on the AAI. The lack of finding in this regard could be due in part to limitations with the measures used to determine mothers' RF and children's attachment coherence. It could also be related to the proximal nature of measuring mothers' RF and daughters' attachment. While there is a strong correlation between the two constructs in early childhood, it is likely that other aspects beyond maternal RF intervene to affect attachment coherence by adolescence. For example, Fearon et al. (2014) highlighted that a large proportion of the variance in adolescent attachment can be explained by non-shared environmental

influences. Fearon et al. (2006) also highlighted these factors when explaining how differences in attachment security can exist between children in the same family.

Developmental studies have highlighted the increased role of peers and other child-specific influences on attachment style in adolescence (Allen, 2008; Blos, 1967; Scott et al., 2011).

8.4 Limitations

The primary limitation of this study is its coding of adolescents' RF score on the CAI. The CAIs were administered by individuals who lacked training and expertise in delivering the interview. This may have meant that some participants did not reach their full RF capacity due to insufficient or inappropriate probes. In addition, RF scores were allocated utilising a combination of the CRFS and the adult Reflective Functioning Scale to code the interviews. Although both scales have independently been validated for research, the combination of both scales to measure adolescent RF has not been validated.

An important consideration is that this study is only representative of those who consented to the study; a large proportion of those with eating disorders who were invited to participate declined. This may reflect a bias in the eating disorder sample. It is possible that the families who were experiencing more distress, chaos, and conflict were those who declined to participate, and so the clinical sample may not have been representative of the patient group as a whole, in that those who participated may have been higher functioning in regard to their levels of stress, anxiety, depression, and mentalising capacities.

In addition, the sample did not include patients with extremely severe eating disorder presentations, as acute inpatients were excluded from the sample to enhance internal validity by ruling out the potential confounding effect of malnutrition on RF.

Some participants, however, had previously received inpatient treatment as a component of their care. Another limitation was that the clinical participants and their mothers had been exposed to psychotherapy prior to the research. It is possible that psychotherapy had enhanced the patients' capacity to mentalise, and results may have been different had the patients been assessed prior to engaging in treatment. Future studies should measure patients' RF capacity prior to treatment.

A potential limitation of the use of the PDI to assess the RF of mothers of adolescents is that the PDI was initially designed to measure RF in mothers of babies and toddlers.

8.5 Conclusion

The findings from this study indicate that adolescents with eating disorders score lower on attachment coherence compared to their non-clinical peers, indicating difficulty with understanding and containing both positive and traumatic experiences (Fonagy et al., 1991). They were rated as less able to identify their feelings; consider other people's perspectives, potential reactions, feelings and needs; and consider the possible causes and effects of these (Tasca et al., 2011).

The adolescents with eating disorders did not significantly differ in their RF scores as measured on discourse elicited by the CAI, the average RF score of 3.5 in the clinical group suggests that the girls in the clinical group displayed only a simple, capacity to think about themselves and their relationships in mental state terms. The girls with eating disorders did display impaired mentalising in the form of higher rates of hypermentalising in regard to self, which highlights adolescents with eating disorders' misattribution of mental states as self-critical and self-demeaning. The presence of borderline traits accounted for the relationship between eating disorders and hypermentalising.

In regard to mothers' RF, scores did not predict the presence of an eating disorder in daughters. In general, average scores for mothers of the clinical group did not differ from average scores of mothers of the non-clinical group. However, a significant proportion of mothers of daughters with eating disorders (21%) were found to display low RF (< 2), indicating that low RF is a feature of some parents of adolescents with eating disorders.

Evaluation of these findings indicates that there could be multiple developmental pathways to eating disorders. The presence of low maternal RF in a proportion of mothers of daughters with eating disorders suggests that this may be one possible risk pathway to an eating disorder (or psychopathology in general). This may interact with other risk factors present in the child linked to the core psychopathology of eating disorders, such as insecure attachment patterns, low self-esteem, a self-demeaning personality style and a tendency toward self-criticism and harsh self-scrutiny which may drive the specific type of hypermentalising in regard to self that was identified in this study, as well as poorly developed RF.

To deepen understanding of how attachment patterns, attachment coherence and mentalising capacity of adolescents and mothers may affect parent-child relationships and family dynamics in families of adolescents with eating disorders, and to explore how adolescents and parents subjectively assess their relationships when an adolescent has an eating disorder, a qualitative study was conducted. Chapter 9 details Study 3.

Chapter 9: Study 3: Qualitative Analysis of Adolescents' and Mothers' Voices

9.1 Overview, Aims and Hypotheses

The primary aim of this study was to enhance understanding of parent–adolescent relationships and family functioning in families of adolescents with eating disorders, compared to families of without eating disorders, through the lens of attachment and systems theories. Both adolescents' and mothers' responses to the semi-structured CAIs and PDIs were examined. A thematic analysis was conducted to identify recurring themes relevant to the relationship between adolescents with eating disorders and their mothers, and compared to the control group. In this chapter, the themes from the girls' and mothers' interviews are identified and discussed.

The following research questions were addressed in Study 3:

1. Does the presence of an eating disorder influence parent–adolescent relationships and family functioning?
2. What are the self-reported features of relationships of girls with eating disorders with their mothers and fathers? Will there be reported differences from those of families without eating disorders?
3. What are the self-reported levels of conflict in the families with girls with eating disorders? Will there be reported differences from those of families without eating disorders?
4. What are the reported levels of worry, stress and experience of parenting in the mothers of girls with eating disorders compared to the mothers of girls without eating disorders?

9.2 Data Analysis

The audio-recorded interviews were transcribed verbatim, and the data analysed using Interpretive Phenomenological Analysis as described by Smith and Osborn (2008). This type of analysis focuses on exploring the meanings and themes that contribute to the personal experience of each individual within the parent–adolescent relationship. It attempts to identify and make sense of interrelations, and in this case, to

further understand the sense the parents make of their daughter's experience, and the daughter of each parent's experience of the relationship. This type of analysis also aims to understand the different perspectives of each person in relation to the other. The interpretative activity of the researcher that occurs as part of the process is considered an integral part of the research process, and the final analysis is considered a product of that engagement with the data and a co-construction between the researcher and the participant (Smith & Eatough, 2007).

Data analysis closely followed Smith and Osborn's four stage process (Smith & Osborn, 2008). The first stage consisted of reading one transcript from each group (clinical and control) several times so that the researcher was immersed in the data. During the readings, interpretations, notes and comments on points of significance or interest were recorded in the left margin of the transcript. The second stage involved returning to the transcripts to transform the initial notes into emerging themes in the right margin. The researchers' own interpretations and the participants' words were highlighted separately so as to preserve differentiation. The emerging themes were then examined and clustered together based on conceptual similarities. These clusters were given a descriptive label, which finally evolved into major themes. A professional peer experienced in the field of eating disorders was then consulted to audit the initial stages by reading through and confirming clusters, and acting as an objective peer.

The process was then repeated with the remaining transcripts from each group. Each cluster of themes was compared and contrasted to produce a distinct list of main themes. This essential phase of the analysis was carried out by the first interviewer and then verified by the peer consultant. Any previously unidentified nuances or anomalies were noted upon subsequent readings by either person. During this process there was

frequent discussion between the researcher and consultant, ensuring that the participants' material was presented as accurately as possible.

A table of themes was then produced (see Table 9.1). The table shows the structure of themes and the sub-themes. The table of themes provides the basis for constructing a narrative account in the discussion section. This narrative is the interplay between the participants' account of their experience and the interpretive activity of the interviewer. This narrative account contains relevant extracts in the participants' own words, which enables the reader to assess the relevance of the interpretations, but also retains the voice of the participants' personal experience (Shinebourne & Smith, 2009).

9.3 Results

The interpretive phenomenological analysis yielded three major themes, identified as *view of relationships*, *conflict*, and *mother loss and worry*. These themes and their subcategories are summarised in Table 9.1. In the following sections, the results will be presented under these major themes, and issues relating to each theme will be discussed.

Table 9.1

Summary of Major Themes and Sub-themes

Major Themes	Sub-themes
View of relationships	-Positive view of relationship with mother versus negative view of relationship with mother -Positive view of relationship with father versus negative view of relationship with father
Conflict	-Expressions of conflict and anger -Vicious cycle of non-mentalising
Mother loss and worry	-Growing up versus ceasing to exist -Typical concerns versus illness and death

9.3.1 View of relationships

9.3.1.1 Control daughters' relationship with mother

A major theme that emerged from the semi-structured interviews was the perception of adolescent–parent relationships by members of the family. The girls were asked to describe their relationships with their parents, providing three adjectives to describe each relationship. All of the girls in the control group offered predominantly positive descriptions of their relationship with their mother. Descriptions provided a representation of relationships that were close, caring, trusting, enjoyable, fun, open, communicative, comfortable and calm. The general sense was that the adolescent girls felt they had relationships with their mothers that were positive overall and that their experience was of access to emotional and practical support:

Um, yeah, I can tell her everything... Um, she listens to me, like, we can just chat about anything really and, um, she gives me advice. Um, she's always there. (Control girl 22)

Five of the girls in the control group balanced their positive descriptions with one 'negative' adjective that indicated some challenges in their relationship with their mother. These girls reported that sometimes their relationship with their mother could be tense, irritating, and involve some levels of confusion and difference of opinion:

Well... I guess when I am with Mum I kind of sometimes get a bit irritated with her. So not all the time... but she does make me feel loved... And.. um, she doesn't really like judge me which is good. (Control girl 33)

Mothers of the girls in the control group offered descriptions that reflected the responses of their daughters. They described their relationships with their daughters in mostly positive terms, as loving, close, fun, warm, generally non-confrontational, and respectful:

I think we are close. You know she has her times where she, you know, needs to be alone and goes to her room or doesn't want to have a bar of us. I think this is normal. But I think from her side it feels really close when she wants to show me all this stuff that she does with her friends and that sort of thing. (Control mother 41)

Umm well our relationship is certainly loving, umm... I think there's an admiration for each other.. there are certainly moments where we argue and carry on so um but we're also respectful, I'd say I don't know if that really captures it but at the end of the day we can have a discussion and might disagree but, we can respect where we're at with each other. (Control mother 32)

In a similar way to their daughters, several mothers acknowledged challenges in their relationship with their adolescent daughter and described their relationship as sometimes frustrating and conflicted. A common theme of conflict or challenge revolved around the renegotiation of boundaries due to the developmental changes of adolescence:

She can be very egocentric, which I guess is a quality of adolescents, but when she doesn't seem to appreciate the effort that people are putting in around her and it's all about her and she can get grumpy and frustrated if we're not going along with what she wants. (Control mother 42)

9.3.1.2 Clinical daughters' relationship with mother

Most of the girls in the clinical group provided one positive adjective out of the three to communicate that their relationship with their mother was close, loving, respectful, protective and caring:

Um, I feel very close to my mum so I feel like she really understands me. I think because she sort of knows me quite well, like if I'm grumpy she's not gonna pester me you know, 'Why are you grumpy?'. She understands that I get upset sometimes so she's... you know I can be myself with her I don't have to put on a façade of all happy and joyful... or put a lot of energy into things that I don't really wanna do when I have to sometimes do that with my friends, because you know sometimes you just feel down and that's it. But I feel very relaxed to be... genuine with my mum and not put on an act. (Clinical girl 8)

The description below is from a girl with AN discussing how her mother offered her support, justifying her description of her relationship with her mother as 'comforting':

I was just struggling to eat and then um... and to not exercise and I sort of just came up to Mum and told her and then, yeah, she comforted me. She just told me that um 'No, you're not going to put on heaps of weight' or 'You don't have to exercise' just stuff like that. It's nice just knowing someone who sort of knows what you're going through. (Clinical girl 20)

The same girl also reflected on some difficult aspects of her relationship with her mother, describing their relationship as 'tense'. Her comments reflect the challenges that many of the girls with eating disorders raised related to conflict that arose in their relationships due to their eating-disordered behaviours, such as restricting intake, excessive exercise or bingeing:

Umm, just when she keeps on bringing the subject of the eating disorder and everything and then she tells me not to do something and then, that or I shouldn't be doing something, 'No you shouldn't be exercising' and 'How much exercise have you done today?' but I just feel like I have to do it and then it can

get a tense because I get annoyed at her for continuing to say the same thing over and over again. (Clinical girl 20)

Compared to the girls in the control group, the girls with eating disorders' descriptions of their relationships with their mothers reflected higher levels of conflict, ambivalence and frustration. The vast majority of the girls with eating disorders offered negative adjectives to describe their relationship with their mother, indicating greater levels of conflict, misunderstanding and tension. Several of the girls with eating disorders indicated that they felt they had lost a level of closeness or 'connection' with their mother, and reported difficulties with communication and feeling misunderstood:

Our relationship is frustrating... um... what's a word to say that we don't communicate properly, like we don't understand each other? We just don't understand each other, we are completely different people. (Clinical girl 15)

The girls' descriptions often described very tumultuous interactions, reflecting discord, unpleasant interactions and fluctuations in the relationship. They also reflected that their relationships with their mothers were unpredictable, volatile and dramatic:

Our relationship is a rollercoaster. It's like emotion rollercoaster. I don't know. Um fighting... crazy (can you give me an example?)- .. Well if I'm in a bad mood and Mum says something that's, like not very nice or, upsetting I'll like go off at her... Like I start yelling at her and have, like, a fit and rage just because and then she has to put up with me. (Clinical girl 4)

Mothers of clinical girls all offered at least one positive adjective to describe their relationships, indicating that they had close, respectful, affectionate relationships with their daughters. More dominant in their descriptions, however, were descriptions that reflected those provided by their daughters, describing their relationships as

strained and conflictual. Many mothers described their relationships with their daughters as dependent, difficult, wearing, lacking trust, conflicted, distant and volatile.

The discourse of the mothers of girls with eating disorders reflected their daughters' descriptions of a tumultuous relationship, indicating dramatic fluctuations in the status of their relationship:

It's a rollercoaster it's up and down we have (laughing) good days and we have bad days umm (sighs)..... mmm.. I dunno (laughs) it's just.. so there's no relationship at the moment it's just... umm.. not good (laughs) really bad... I can't talk, um I mean I.. whatever I, if I talk to her nicely, if I get cross.. it doesn't matter.. umm nothing seems to be working so I just feel like she's we're growing further and further apart. (Clinical mother 7)

The mothers of girls with eating disorders also described difficult, tumultuous relationships with their daughters, including a great deal of expressed emotion, shouting and crying between themselves and their daughters:

It's just, lots of anger lots of shouting, lots of tears.. she tells me every day she hates me, 'I wish you weren't my mother.. I wish you'd die.. I hate this family.'
(Clinical mother 31)

Mothers of the girls in the clinical group also reflected that their daughters had become more dependent on them, due to issues such as requiring support to choose food or to eat, or symptoms of depression or anxiety:

Umm.. she's highly dependent.. very dependent, umm to the point where, recently I've had to give up my job, because it was—the time that I was at work was affecting on her highly dependent umm.. I find it difficult.. umm and.. wearing. Umm yeah because.. you know while having someone as being, very dependent upon you.. you're also the person that they most.. frequently treat like

crap.. (laughs) you know you're everything to them and at the same time you're the person that they—they dump on—which she does.. on a daily basis which she did last night.. again and that happens on a daily basis, I'm her punching bag. (Clinical mother 24)

9.3.2 Relationship with father

9.3.2.1 *Control daughters' relationship with father*

Differences were noted in the ways in which the girls in the control group described their relationships with their fathers compared to the clinical group. Of the 25 daughters in the control group, 20 used three positive adjectives to describe their relationship with their father. In general, girls in the control group described their relationship with their father as comfortable, relaxed, fun and funny:

Um well he always... he always cracks silly jokes. Yeah (laugh). We call them dad jokes. Yeah (laugh)... and so that always makes us laugh. (Control daughter 42)

They offered descriptions of a close relationship that tended to revolve around their father's involvement in extracurricular activities, especially sport:

It's fun, and enjoyable and just 'cause he is working all day so I only see him at night. On the he likes to come and watch me play netball; so that is good, I like that. (Control daughter 22)

While the girls in the control group offered descriptions of their relationship with their father as being close, they noted a different quality to the closeness compared to what they experienced with their mothers:

Um,... he's very different to Mum; so, like, I wouldn't ever openly, just talk about, like, school, like, friendship problems or anything with him, like, that is not what we do; it's more like fun and just, like, he's just like funny and

whatever. He cares a lot and he really wants me to do well, but not in such an upfront way, like, Mum will say you need to go and study now, but, like, Dad he just he likes to be involved in our lives so I think that is how he's supportive and loving. (Control daughter 22)

Four of the girls from the control group offered descriptors that indicated that they sometimes experienced conflict with their fathers; one stated that she did not have a close relationship with her father, although it was amicable.

9.3.2.2 Clinical daughters' relationship with father

Of the 32 adolescents with eating disorders, 10 described their relationship with their father with at least one positive adjective. These girls offered similar adjectives to the daughters in the control group, describing their relationship with their father as loving, fun, funny and supportive:

I feel we have a loving relationship when he tries his best... like last night during dinner we went out and I was struggling so, we were with a big group of people and he just came and sat next to me and sort of just talked me through it and that was really nice and he tries his best to help me when I'm struggling. (Clinical daughter 28)

Of the 32 of the adolescents with eating disorders, 20 described their relationship with their father in purely negative terms (two of the girls' fathers had passed away). These girls described their relationship with their father as awkward, distant, unpleasant, angry and sometimes frightening.

Four of the girls reported that they did not have a relationship at all with their father. Two of the fathers lived overseas and were in very limited contact. One father had a mental illness and his daughter found their relationship very frightening and upsetting:

I don't want to talk about my dad. (Can you tell me a bit about why?) He has like depression and mental illness.. He frightens me... We don't really—have a relationship. (Clinical girl 20)

Many of the girls felt misunderstood by their fathers, particularly in relation to their eating disorder symptoms. While the general feeling was that their mothers attempted to understand their symptoms, many described their fathers as closed-minded, and not attempting to understand:

He doesn't understand that much about eating disorders. Like.. he's like, um, 'Why don't people just eat'. Like, 'Just force them to eat'. Like, it's not like that.. when I was sick in hospital he would always be like 'Just eat' and if I could do that I would probably be healthy, but he doesn't understand that. Yeah, it was upsetting. (Clinical girl 9)

The girls with eating disorders also described feeling distant and disconnected from their father:

Mmm... its.. it's a bit frustrating hmm mmm um feel a bit disconnected yeah and mmm I don't know.. I just think I'm nowhere near as close to Dad as I am with Mum I don't really see him... I see him, I see him every day but like you know he goes to work early, comes in pretty late yeah so and weekends you know, he usually out doing something in the backyard or somewhere. I don't know, it's just... like it's not... I... I just don't know, I don't know him that well and I don't think he knows me that well either. (Clinical girl 3)

9.3.3 Conflict

9.3.3.1 Control daughters' expression and impression of conflict and anger with parents

Although the period of adolescence is considered to be fraught with interpersonal stressors and difficulties between adolescent and their parents, in the sample of girls in the control group, parents and their daughters seemed to negotiate this developmental stage without frequent, intense conflict. A general level of family harmony was described, with occasional arguments or intense bursts of conflict. Conflict and expressions of anger were reported to occur from mother, father and daughter, with descriptions of overt anger and frustration.

The majority of daughters in the control group reported comfort with expressing anger with their parents. The daughters that expressed their anger freely did not appear to fear retaliation from parents. The effect of the parents' anger towards the daughter was always described and acknowledged with some form of sensitivity from the daughter, indicating an understanding of why their parent may be frustrated with them:

Umm she usually gets.. quite mad like.. really stressed out, angry.. She raises her voice a bit umm kinda tells me off for doing, whatever I've done or.. umm she doesn't really put any.. like groundings or anything in place yeah just mainly.. tells me off (laugh) raises her voice. (Control girl 44)

Sources of conflict described by daughters included issues such as prolonged use of electronic devices, ignoring parents' requests, lack of completion of chores, and arguing with siblings:

Um sometimes she yells if I keep annoying her.. like this morning me and my sisters were kind of mucking around a bit and she was like trying to talk on the phone and we were just being annoying so... but sometimes she just asks me to

go to my room, or yeah or just like spend some time by myself, like to think about what I've done. (Control girl 32)

Some disagreements revolved around increasing independence and autonomy, and expression of individuality:

Oh well um, she wasn't really that angry at me but I was wearing a top and it showed my bra strap and I was, I had just done it like accidentally. And then she said it looked a tarty and I was like 'Mum it doesn't'.... She mainly gets annoyed when she feels, maybe she is feeling like that um, I am not listening to her... normally our fights aren't something that I like, that we like did... mainly it's just about washing up. (Control girl 33)

Daughters in the control group described similar levels of conflict with their fathers, although there was a general sense that daughters were less likely to engage in arguments with their fathers:

Um, we, I normally like... I don't really like yell back at him. He doesn't usually yell at me, he will just like tell me. And then we speak about it or we go like and do it, whatever I have to like do. So there's not much yelling, like I do with Mum. (Control girl 33)

Sources of conflict cited with fathers were similar to those with their mothers, revolving around compliance with family rules, and completion of homework:

With my dad, I got home really late from a party I just came home and went to bed. And then in the morning.. he was really, really angry at the fact that I didn't tell 'em, that I was coming home that late which I should have. He kind of overreacted like, 'You're grounded blah-blah-blah' like 'You can't go out.. you're not allowed to go to parties anymore.' It was really full on, and then he saw that I was really (chuckles) upset about it and stuff (laughs). And then I

kinda went over and told him I was in the wrong, he understood why I was upset and then, he kind of, didn't ground me. (Control girl 44).

Dad, he just sometimes walks off... and just leaves me and like makes me feel bad for what I've done.... and sometimes he like asks me to go to my room or gives me like a consequence sometimes. (Control girl 32)

9.3.3.2 Control mothers' expression and impression of conflict and anger with daughter

All the mothers in the control group reported expressing some level of anger or disapproval towards their daughters. This was typically related to various issues around the daughter striving for independence and 'pushing boundaries', as well as the reasons cited by daughters, such as lack of compliance with chores. Anger seemed to be openly expressed towards the daughter by both mothers and fathers. More often, overt anger towards the daughter was demonstrated by the use of language and the tone of voice:

Umm.... I usually get angry about fairly routine stuff... like getting where we need to be or kids arguing. I'm a person who gets it out, I'm a yeller, sometimes she yells back, sometimes she feels guilty because she likes to please me. Then I reflect not too (laughs) far afterwards (takes breath) and then I'll chat to the girls about it, 'Mum was a bit, over the top with that, I'm sorry.' (Control mother 32)

I say to her sometimes like 'You need to make your bed, tidy your room'. I don't get really angry though, like.. I'm a little bit like too like oh well, I know she's got so much to do.. I try to help her a bit, let her off a little. (Impact of your angry feeling on her?) Umm well she gets defensive and upset and starts yelling and screaming and then you can't.. talk to her at that stage, if you want to

talk to her rationally it's not possible. I think underneath she knows why, and but she just trying to defend herself all the time because-protect herself. (Control mother 44)

9.3.3.3 Clinical daughters' expression and impression of conflict and anger with parents

While descriptions of conflict in the families of adolescents in the control group revolved around age-appropriate issues such as household chores, pushing parent-set boundaries, study and peer relationships, the descriptions of conflict in the clinical sample revolved mostly around themes related to the girl's eating disorder such as food intake, exercise or self-harm.

Vivid descriptions of frequent conflict were provided around issues such as food intake and exercise. These depicted more strain, stress and turmoil than those of the control group:

Um, well we are constantly having arguments and not seeing eye to eye and yelling at each other so.. Generally they are about food because of the eating disorder... She usually loses her temper and kind of and snaps and then we both end up very upset. (Clinical girl 37)

Umm, just when she keeps on bringing up the subject of the eating disorder and everything and then she tells me not to do something and then, that or I shouldn't be doing something, but I just feel like I have to do it and then it can gets tense because I get a annoyed at her for continuing to say the same thing over and over again. Just a few days ago when, um, I felt like I had to exercise and she kept on saying 'No you shouldn't be exercising' and 'How much exercise have you done today?' and then just like 'Your weight's probably

gonna be down when you go to see the Doctor' and I was kind of like 'Mum, just leave it alone.' It can get annoying you know. I feel mad. (Clinical girl 28)

Most descriptions of conflict involved outward expressions of anger and dysregulated affect, leading to yelling and, frequently, crying or withdrawal from the daughter and mother:

When we fight Mum just gets really irritated, she gets really emotional, and... really fragile as well. Like takes everything way too personally... She either gets really upset, likes starts crying, or gets really angry and starts yelling at me and gets really aggressive. But she knows she's got to be careful with me because I can respond really erratically and do something dangerous or stupid. But... she... yeah, she tries to keep her emotions contained but she's not very good at it. (Clinical girl 15)

The same girl described a common theme in the clinical group, which was feeling misunderstood by her parents. Girls in the clinical group expressed that their parents did not understand their eating disorder, or their behaviours related to their eating disorder:

I feel really upset, just like, she doesn't understand me. Just like, I wish that she would understand me 'cause there's so much that she doesn't understand and she doesn't get what goes on in my head. And there's just nothing I can do really to make her understand. Like I can try and explain but she never will fully get it... And it's really frustrating and you just—I've just sorta given up lately on trying to make her understand. I just sort of sit there and let her let everything out and just yell at me, and, sit there and just, yeah, soak it up. (Clinical girl 15)

Several of the girls with eating disorders offered descriptions of conflict that escalated into aggressive or violent outbursts:

We ended up getting into this huge, huge fight and I ended up stabbing one of the drawers in the kitchen, and putting a hole in the floor.. That was scary, when I had the knife I didn't know what I was gonna do. A part of me thought I might stab my mum (laughs)... (Clinical girl 18)

Descriptions of conflict with fathers frequently involved incidences of aggression:

Um... like one day I wanted to have eggs on toast for breakfast and Mum wanted me to have porridge. But I was like 'Mum, on my meal plan it says that I can have either' so I wanted one because I just felt like it. And then my dad came in and he was just yelling at me and like banging his hand on the table and like go on, 'Just eat what your mother tells you' kind of thing. And it was scary because he is bigger than me.... And he gets really close when he yells (crying) and it's scary. And it's intimidating. (Clinical daughter 40)

Girls in the clinical group also frequently reported feeling misunderstood by their fathers:

Dad he gets quite aggressive, he swears and he doesn't mean to but he sort of puts you down like... he'll be like 'Oh this is fucking ridiculous' or like 'This is a joke.' He'll never say something to you but it's very clearly aimed at you and it's always quite aggressive and sort of rude and is a bit like, well I used to get really scared of it when I was little but now I'm used to it and I know he just gets a bit angry and he's not very good at controlling it, but I know he's not going to hurt me or anything... (Clinical girl 15)

9.3.3.4 Clinical mothers' expression and impression of conflict and anger

Similar to their daughters, mothers in the clinical group described frequent disharmony and conflict between themselves and their daughters:

We fight all day, every day. She gets in the car, she gets out the car.. the only time I'm not fighting with her is when she's sleeping. (Clinical mother 40)

Conflict described by mothers of the girls in the clinical group predominantly revolved around their daughters' eating disorder and behaviours related to the eating disorder:

There is constant disharmony, all the time.. this morning she chose to have fat-free milk instead of full-cream milk.. 'Just leave me alone' and I said, 'Our rule is you don't eat breakfast in your bedroom, why are you taking your food to your room?' 'But I always have.' I said, 'No, the rule has been since we've moved in here, you never take food to your room.'... So that brought on an argument. (Clinical mother 25)

Our relationship is totally strained and conflicted... We just can't communicate at all and everything is involving food and (takes breath) what (J) doesn't understand is I'm very angry, with the eating disorder, not with (J) but (J) perceives it as anger with her. You know I see the eating disorder is destroying our family, and (takes breath) my anger.. is just commensurate with my love for (J) but she doesn't see that she just sees it as Mum being controlling and Mum being angry, and I'm not prepared to negotiate, around eating and exercise.. I'm not prepared, to negotiate... so it's causing, constant tension. (Clinical mother 37)

Mothers in the clinical group frequently described exasperation and frustration with their daughter's eating disorder symptoms:

We made some roast potatoes and (E) freaked when she saw the roast potatoes and she started peeling.. the skin off every potato and I just did my nut in.. that was just 'oh, please' (And how did you feel in that moment?) ..Like I could hang her up against the wall open her mouth and shove the food down her throat. (What emotion would you describe that as?) ..Anger—frustration.. anxiety.. ahh.. hatred's probably a strong but sometimes I do feel like I hate her.. hate the person that she's become... (Clinical mother 40)

9.3.3.5 Cycles of non-mentalising

The mothers and daughters in the clinical group also provided many examples of the vicious cycle of non-mentalising during instances of the girls' emotional dysregulation. As a reaction to their child's breakdown of mentalising capacity, a picture emerged of parents attempting to exert more control in situations of dysregulation, such as when the girl was bingeing, refusing to eat, or refusing to take medications. This in turn reinforced their daughter to further act out of their distress, and shut down from mentalising. Thus the mothers and daughters described a self-perpetuating sequence where they found themselves stuck, with resulting feelings of frustration and distress:

My daughter is saying 'I'm not gonna eat that.. what should I have?, why can't I have?..' and I was, it was in the morning, and I was making breakfast.. and I just, I actually threw the plate across the room and it shattered and I screamed and I was like 'Why do we have to do this? Let's not do this to me.. why?' you know, it was 'You don't do this to me.. because if you put me in this position

we're gonna fight'.. you know and then she carried on, and then was in my face about it and it just escalated. (Clinical mother 37)

And she was starting on her third binge for the day.. and I was tryin' cook dinner.. and she was goin' on about the smells and.. she was blaming me... for the fact that she had her third binge for the day.. because the.. the smells were driving her crazy.. And then um well then you know I've started back at her saying well.. 'you know I really wanna you to do some jobs today (takes breath) and you started on another binge and how's that gonna achieve anything that's gonna be, another three hours cycle of two hours bingeing and an hour of purging.. you know we're not gonna get anything done and you now we're tired and.. you know it's gonna be a whole another day you know.. tryin', let's try to stop the binge now before it really even gets started'. And then it just led to.. a whole heap of emotions coming out and her getting really angry going crazy in the kitchen and follows me around the whole time and.. and 'I'm not fine and leave me alone and you're not listening to me, you don't care about me' and then she just started picking things up and smashing things and getting-pulling out the knife and (takes breath) that was a bad night (laughs). (Clinical mother 15)

Caught in such a vicious cycle, parents described feeling stuck, angry, ashamed, helpless, and being more likely to punish, criticise, reject or disengage from their daughter. They also described a lack of enjoyment in the parenting role, and a feeling of hopelessness about how to help their daughter:

ah I totally felt guilty.. but I just, it's exhausting dealing with it.. (Clinical mother 37)

This is getting really—really (takes breath) umm hard and-and exhausting.. and if she's in her mind-set with her anorexia at the moment then—then it can really explode to a big—big thing.. and then she starts abusing me, and that really I really that's something I just hardly can bear anymore.. I think she told me too much that she hates me, it's just something I, can't hear anymore... and to a certain extent its normal teenagers but (sighs)... but it has been full on, that I—we had to go to the point where we nearly had to call the police you know like it's just really, there had been times where it has been really bad like, really bad.. (Clinical mother 38)

Those mothers of girls with eating disorders that displayed dysregulated affect and a history of suicidality and self-harm, also expressed added concern that the conflict between them would lead their daughter to become too upset, and consequently engage in self-harming behaviour:

Oh she's, she doesn't like it and I know it probably makes her worse but.. when you're in the, in the heat of a discussion and she's done the most horriblest things you can imagine.. I'm not the type of person that's just gonna (laughs) be able to stand there and stay calm (laughs), and I know it's wrong, I'll be the first to admit that but.. so no I'm sure it makes it—the situation worse and (takes breath).. she probably gets more angry but she probably also gets sad as well.. um it can cause her,.. if we have a big fight, she use that as a reason to go and self-harm or do something like that... She would get blades, whatever she can get her hands on, or overdose.. threaten to kill herself, you know, you, 'You did this, you said that' so.. yeah. (Clinical mother 31)

The thing is with (Y) I get—I get I'm so scared to upset her that I rather... avoid starting an argument with her because she tends to cut herself when we argue, that's what she does now, she cuts.. Harms herself and I'm.. I'm so afraid of that (takes breath) that I... yeah, and sometimes I think, in—in things like that.. umm I also think that she uses, this power she had over me a bit.. I mean... she knows I'm a tidy person and she knows that I don't like it when there is a huge mess... on the dinner table, and um... and she knows that I'm not gonna argue too much because I'm afraid she's starts cutting. (Clinical mother 38)

9.3.4 **Mother loss and worry**

9.3.4.1 *Adolescent development: Growing up versus ceasing to exist*

A striking theme was the difference between the two groups of mothers' experience of their daughters growing up and developing into adolescence. The PDI asks the mothers whether they felt as if they were 'losing' their daughters a little bit. The majority of mothers of girls in the control group stated that they did feel as if they were losing their daughters a little bit, and referred to a sense of loss related to their daughter growing up into adolescence, developing friendships and romantic relationships outside of the family and developing greater autonomy from parents.

The following mother demonstrated an understanding of the developmental changes of adolescence, and an adaptation of her own behaviour to accommodate her daughter's development, while maintaining a relationship with her daughter:

Yeah I think our relationship is changing now that she's a teenager... you know, when she was younger she was, quite I guess, child-like and innocent and it was different and now that she's a teenager—I'm aware of trying to keep the communication open but to not be um.. too intense and overbearing... initially I found it a bit frustrating and had to change my own, approach a bit, but recently

it seems to be good you know where we have moments where she'll you know, hang out and just, be quite relaxed and happy to be with me and then other times when she doesn't really want to be with me at all. (Control mother 29)

This mother articulated the normal developmental sequence of an adolescent expanding her network to depend more on her peers:

In recent times, yep I definitely feel that that has started to happen a little bit, because I can sense there's a shift, where you know, her dad and I aren't the most important people in her life anymore. Like, I can sense that yes, we are still very important, but her friends, she's you know, is starting to become a bit more influenced by what they think I've just noticed it, maybe a little bit more this year, since she's started high school. (Control mother 49)

This mother articulated a theme that emerged from the mothers of girls that had formed romantic relationships:

Definitely, since she's had her boyfriend, I don't feel like she's... well she's been with him for over two years now, and probably in the last um, 12 months, he's her 'go to' person now, not me. Well we both are, but um, I don't feel like she needs me as much for emotional support anymore. (Control mother 46)

When answering the question about loss, for the mothers of girls with eating disorders, the theme of increasing engagement with the outside world, peers, romantic relationships, increasing autonomy and independence as typically occurs in adolescence was very limited. Rather, these mothers spoke mostly of a sense of loss of the daughter they had prior to the eating disorder:

Well yeah I have felt like I am losing her to the eating disorder... when it was really bad um.. probably between the two hospital admissions, ah the struggle she had to endure.... that was hard.. it was scary.. I suppose... because you know

it's not your daughter at that point, it's the eating disorder... I felt helpless.

(Clinical mother 4)

This mother clearly articulates a common theme of a sense of losing the identity of her daughter prior to the eating disorder:

Well through this you feel you're losing the person she is. Before she went into hospital there was just this other person there. It was completely like...

definitely I thought I'm losing her to the illness... Yeah she was just changed completely. She would sit there and say nothing all day long. It was just not N.

(Clinical mother 6).

The following mother also articulated a sense of loss of her daughter, who suffered from severe comorbid depression as well as AN:

Yeah you know when she's been in those really um dark holes you know just think I feel like I'm losing her then, like where is she? And will she ever, will she ever find a happy path, or will she end up killing herself? (Clinical mother 2)

9.3.4.2 Typical concerns versus illness and death

The mothers were also asked what they worried about when they worried about their daughters. For mothers in the control group, their concerns centred on developmentally appropriate themes related to their daughters emerging autonomy and independence, expanding peer and romantic relationships, future choices and happiness, and academic achievement:

I worry about her happiness, whether she's happy in her life and her decision and her choices, and whether she feels content and feels like she's on the right path, that sort of thing. (Control mother 29)

Friendships she has, I guess I do worry about what sort of influences she coming in contact with and if they are positive or negative ones, how she approaches them, if she handles them okay. (Control mother 49)

Whether she's achieved everything she can with her studies. She's always had heaps of potential, and never used it. (Control mother 48)

For the vast majority of the mothers of daughters with eating disorders, their worries were more immediate and compelling, and revolved around their fears of the potential consequences of the eating disorder. Mothers reported worrying about the detrimental effects of the eating disorder to their daughter's physical, emotional and mental health, and the risk of self-harm and suicide:

I definitely worry about the self-harm suicidal, stuff it's.. torture that would have to be number one.. number two is like the physical.. besides the self-harm is probably.. would have to be like the.. the physical effects of, um the bulimia and.. anorexia on her body. They're the secondary things to the emotion. Her actual choices, her impulsiveness to self-harm and.. commit suicide, we've already had a couple of attempts so, but suicide, that's just, always there.. (Clinical mother 15)

Mm god now I worry that she's gonna die... probably second to not dying is that we're not gonna fix this for her and that the rest of her life will be.. a series of, psychiatric.. rooms and appointments and, unhealthy relationships (Clinical mother 37)

The mothers of girls with eating disorders also frequently noted that the burden of worry that they carried for their daughter was enormous and very draining for them on a personal level:

Umm probably... dealing with her potential death...the thought of having, those thoughts, are awful.. When she took this last overdose she knocked us for six because (takes breath) she'd been back at school she'd had her friends she had this boyfriend, um she appeared to be going okay but what, what I knew that she was gaining weight 'cause she started bingeing and stuff (takes breath) and that's got too much for her.. so umm your umm.. (clicks tongue) I've lost my train of thought again, it's too deep (little laugh). (Clinical mother 41)

9.4 Discussion

The overall aim of this qualitative study was to explore the lived experiences of mother–daughter relationships in a group of adolescent girls with eating disorders, compared to mother–daughter dyads without eating disorders, through a lens of attachment theory and family systems theory. Attachment theory and systems theory provide complementary approaches to understanding parent–child dynamics.

Attachment theory provides a context from which to understand interpersonal dynamics. From the perspective of attachment theory, behaviours within families are understood as attempts to provide attachment security for the parent–child dyad. A family systems perspective offers a way to conceptualise attachment theory that extends attachment patterns beyond the parent–child dyad to the larger family (Caffery & Erdman, 2000). Recognising the systemic nature of the attachment relationship shifts the focus away from the internal process of the adolescent, to the properties regulating the relationships between parents and child (Caffery & Erdman, 2000).

The in-depth interviews allowed participants to describe their experiences of their relationships from their own perspective. The data were analysed for emerging themes from the transcribed discourse derived from the PDIs and CAIs. The major themes that emerged were differing views of relationships, conflict, and mother loss and worry.

9.4.1 View of relationships

The discourse of girls and mothers in the control group revealed ample descriptions of behaviours that exemplified secure attachment relationships. These included descriptions of closeness, trust, intimacy, openness, solid communication, and an ability to interpret each other's mental state by both parents and their daughters.

Of the daughters in the control group, the majority reported strong relationships between themselves and both parents. Descriptions of parenting relationships in the control group frequently exemplified specific parenting behaviours that play an important role in promoting attachment security in adolescence. These included psychological availability, warmth, active listening, behaviour monitoring, limit setting, acceptance of individuality and negotiation of rules and responsibilities (Allen & Hauser, 1996; Allen et al., 1998). The descriptions provided by the control group support previous findings that parental support during this time of transition predicts positive adolescent adjustment (Papini & Roggman, 1992). They also support the findings that secure attachment relationships allow and encourage adolescents to seek comfort and gain independence in their cognitive and emotional autonomy (Allen & Land, 1999).

The findings of this study support those of a longitudinal community study that found that typically developing adolescents report generally positive relationships with their parents (Smart, Sanson, & Toumbourou, 2008). In the Smart et al. study, parent

reports revealed that over 70% of parents and adolescents had generally positive perceptions of their relationship. High relationship quality was associated with harmonious family relationships, and was also found to be related to closer peer relationships and better academic achievement for the child. However, Smart et al. noted that the direction of effects could not be ascertained, and suggested that it may be easier for parents to maintain good relationships with adolescents who do not have problem behaviours. The conclusions of Smart et al. (2008) were that difficult parent–adolescent relationships are atypical, and if they do exist, it may be a sign that adolescents are experiencing problems. The authors noted that community perceptions that conflictual parent–adolescent relationships are the norm is not consistent with research.

Depictions of relationships between adolescent girls and their mothers in the clinical group illustrated the higher rates of insecure attachment compared to the control group. While there were some descriptions of behaviours that exemplified secure attachment relationships, including closeness, trust, intimacy, openness and solid communication, the majority of the self-reports of both mothers and daughters included vivid descriptions of minimising the importance of the attachment relationship, angry distress, preoccupation, or disorganised attachment patterns. The discourse of the girls with eating disorders and their mothers frequently presented detailed descriptions of intense and frequent conflict, distress and disagreement.

9.4.2 Relationship with father

The period of adolescence is a particularly important time for the father–daughter attachment relationship in terms of the adolescent’s developing sense of identity and self-image (e.g., Doyle & Markiewicz, 2005; Grossmann, Grossmann, & Zimmermann, 1999; Haudek et al., 1999; Lieberman et al., 1999; Ohannessian, Lerner,

Lerner, & von Eye, 2000; Sharpe et al., 1998). There are significant correlations between adolescent girls' attachment relationships with their fathers and their social and emotional wellbeing, including social competence and internalising difficulties (Sandhu, 2014).

In this study, the girls in the control group described strong relationships with both parents, although several reported that, while they were close to their father, they shared a different kind of relationship that was less close and involved less emotional nurturing compared to their relationship with their mother. This confirms previous research that found that adolescent girls are more likely to report consistently positive relationships with their mothers than with their fathers (e.g., Thornton, Orbuch, & Axinn, 1995). In the Thornton et al. study, 43% of children claimed always to get the affection they needed from their mother, while only 28% made the same statement about their father. Larson and Richards (1994) also proposed that, typically, there is more conflict in mother–adolescent relationships than in father–adolescent relationships, partly due to fathers' lesser involvement in adolescents' everyday life.

The control girls did describe many examples of warmth, involvement and support from their fathers, particularly related to support of schooling, sporting and other recreational activities. This study's finding of supportive, attuned, involved fathers, coupled with daughters who reported positive self-esteem and good peer relationships, confirms previous research showing that positive paternal involvement benefits children and may affect academic success, externalising behaviours and social behaviours (Marsiglio, Amato, Day, & Lamb, 2000).

A distinctive pattern reported by the girls with eating disorders was difficult, strained and distant relationships with their fathers in two thirds of the girls. This finding supports previous research that found that eating disorders are associated with

ratings of very poor relationships with fathers, who were presented as emotionally unavailable and very critical of their daughters (Cole-Detke & Kobak, 1996). The findings support previous studies that identified that women with eating disorders perceive their relationships with their fathers as less friendly, less caring, and more rejecting compared to women without eating disorders (e.g., Domini et al., 2000; Humphrey, 1989; Palmer et al., 1988). The significance of the father for adolescents with eating disorders was highlighted by a recent study by Rothschild-Yakar et al. (2013), who identified that for both adolescents with eating disorders and controls, a secure attachment with father, but not mother, correlated negatively with emotional distress and eating disorder symptoms.

9.4.3 Descriptions of conflict

The descriptions of conflict and expression of anger in the families in the control group reflected the evidence that conflict in typically developing adolescents' families revolves around everyday details of family life, such as completion of household chores, clothing choices, choice of friends and activities and regarding homework (Laursen & Collins, 1994; Allison & Shultz, 2004). In addition, the presence of a secure attachment relationship was characterised by descriptions of a parent's willingness and ability to mostly respond to their adolescent in a calm, attentive, consistent, and supportive manner in response to their adolescent's expressions of needs, fears, frustrations, anger, and distress (Diamond, Siqueland, & Diamond, 2003).

Researchers have found that the development of autonomy for adolescents does not involve significant moodiness, storm and stress, full-fledged rebellion or detachment from parents (Smetana, Campione-Barr, & Metzger, 2006). Instead, most adolescents gradually increase their emotional and behavioural autonomy in the context of warm and caring parent-adolescent relationships. However, this developmental time

period is also characterised by frequent low-intensity conflict with parents (Smetana, et al., 2006; Steinberg & Morris, 2001). This conflict typically increases during adolescence, as parents provide boundaries and the adolescent strives for increasing independence (Allen et al., 1994; Galambos et al., 2003; Paikoff & Brooks-Gunn, 1991).

Along with descriptions of typical levels of conflict, the girls in the control group demonstrated evidence of the normal developmental process of de-idealisation of both parents. The process of de-idealisation is essential in order to allow the adolescent to begin to explore their cognitive and emotional autonomy and explore the world outside the family, while seeing their parents as fallible human beings with both strengths and weaknesses (Allen & Land, 1999). Adolescents become more focused on developing their own individuality and their parents' acknowledging them as mature individuals with their own opinions, rather than children who naively accept their parents' ideas (van Doorn et al., 2011).

The findings of this study are consistent with other studies that have found that families with a daughter with an eating disorder report higher levels of conflict, difficulty with intimacy and trust, and decreased harmony between the parents (Bemporad & Ratey, 1985; Yager, 1982). Previous studies have identified family relationships characterised by low parent–adolescent communication, low parental time, conflict, criticism and hostility and a lack of supportive interactions are associated with AN during adolescence or early adulthood (e.g., Herzog et al., 2000; Lilenfeld et al., 2000; Rodriguez Martin et al., 2005; Sim et al., 2009; Steiner et al., 2003). Low family cohesion, high conflict, and high parental intrusiveness have been observed in families with adolescents with BN (e.g., Leon et al., 1994; Rorty, Yager, Buckwalter, Rossotto, & Guthrie, 2000; Scalf-McIver & Thompson, 1989; Webster & Palmer, 2000). Latzer et

al. (2009) reported that parent-child relationships of adolescents with eating disorders (AN or BN) present with more tension and distress than families with healthy girls. Conflict in the Latzer et al. study related to emotional closeness, open confrontation, autonomy and supervision. Similar to this present study, conflict between Chinese adolescents with eating disorders and their mothers was found to be based on issues related to the eating disorder, as well as the developmental issues typical of healthy adolescents including maturity, fears of growing up, and striving for autonomy (Ma, 2011).

The findings of this study also support others that have found that parents of adolescents with eating disorders supervise them more closely, limit their autonomy, and provide less encouragement for their development individuation and personal growth (Dancyger et al., 2003; Latzer et al., 2002; Mujtaba & Furnham, 2001; Solomon, Klump, McGue, Iacono, & Elkins, 2003). The impact of an eating disorder on attachment processes during the critical period of adolescence may distort parent-child relationships and hamper the process of individuation and autonomy for the adolescent, due to parental anxiety and helplessness leading to overprotection or control (Ødegård, 2005). Sargent (1996) suggests that families with a member who has an eating disorder often fluctuate between over involvement and under involvement, which impairs the adolescent's ability to negotiate autonomy. It has also been suggested that symptoms of an eating disorder are a sign of a girl's ambivalence about fulfilling her need to grow up and develop as a person (e.g., Protinsky & Marek, 1997).

From an attachment perspective, the parent-child conflict observed in this study may be due to unmet attachment needs of the adolescent and the parent and the resulting problematic patterns of attachment in the parent-child relationship (Hautamaki, Hautamaki, Neuvonen, & Maliniemi-Piispanen, 2010; Kindsvatter & Desmond, 2013).

The difficulties observed with resolving conflict in the clinical group may be related to insecure attachment patterns and unresolved loss. Families with an adolescent with an eating disorder may find it difficult to acknowledge the presence of conflict due to a fear of loss of the relationship. Or alternatively, if conflict is recognised, and expressed, strong feelings evoked by the relationship may limit the effectiveness of conflict resolution skills. Either way, the family is not able to experience the resolution of conflict if caught in either of these cycles (Dring, 2014).

The descriptions of parent–child conflict in the clinical group may also represent a system of reciprocal functioning (Dozier & Kobak, 1992). For example, a dismissing parent who responds to an anxious adolescent’s requests for comfort by dismissing may result in more desperate attempts (hyperactivation strategies) on the part of the adolescent in order to elicit a nurturing response from the parent. This was evident in the discourse in instances where the adolescent displayed heightened dysregulation affect, and self-harm. This sometimes served to provoke further parental deactivation (Kindsvatter & Desmond, 2013). These patterns are likely to exacerbate parent-child conflict as each person makes ineffective attempts to have their needs for proximity or distance met (Caffery & Erdman, 2000). Once created, such patterns of interaction perpetuate themselves within relationships, even across generations, becoming what Bowlby (1988) termed a ‘vicious cycle’ (Kindsvatter & Desmond, 2013).

Decreased mentalising capacity may also contribute to the relationship problems and conflict in families reported in this study (Asen & Fonagy, 2012). Mentalising difficulties can emerge at different times in different forms and with varying severity according to the particular situations. Even mild mentalising difficulties and non-mentalising attitudes can have detrimental long-term effects on the functioning of individuals and families (Asen & Fonagy, 2012).

Many of the girls with eating disorders described feeling misunderstood by their parents. Misunderstandings are common in situations of decreased mentalising. Feeling misunderstood has the potential to create acute distress and long-term distortions of relationships (Asen & Fonagy, 2012). Mentalising strategies can be underutilised, or used erratically due to demands on the family, or high levels of stress. In a time when adolescents may have reduced capacity for RF, parenting an adolescent with a chronic illness such as an eating disorder may disrupt a parent's capacity for RF (Malberg, 2013).

This study supported Malberg's assertion that the stress of a daughters mental and physical health issues can overwhelm the parents own capacity for RF. In this study, parents and children both offered many descriptions of non-mentalising exchanges around managing the behaviours and affect related to the eating disorder. This also fits with Bleiberg's (2013) description of the vicious cycle of non-mentalising between adolescents and their parents. Inspection of the discourse of the interviews of girls with eating disorders and their mothers offered preliminary support for the a cycle of parents feeling increasingly out of control, anxious, angry, paralysed and unable to mentalise in the face of their child's behaviour and emotional dysregulation. The discourse revealed self-reported examples of mothers own mentalising capacity shutting down, and responding in desperate ways to control their children and squash their manipulative, secretive, defiant behaviour, which served only to further reinforce their child's withdrawal from mentalising (Bleiberg, 2013).

9.4.4 Autonomy, worry and fear of loss

The worries of mothers of girls in the control group reflected concerns appropriate for the stage of their daughter's development. They reported worries related

to their daughter's peer and romantic or sexual relationships, achievement at school, increasing autonomy from parents, and related decreased supervision.

The concerns of the mothers of girls with eating disorders revolved much less around normal developmental issues. This finding supports the notion that adolescents with severe eating disorders fail in varying degrees to achieve other psychosocial developmental tasks of adolescence (e.g., Bruch, 1973). Eating disorders during adolescence lead to academic and occupational difficulties, social isolation and family conflict, and the resultant inhibition of involvement of family and peers to support normal development. All of these factors interfere with the mastery of the developmental tasks of adolescence (Abraham et al., 2006; Bamford & Sly, 2010; DeJong et al., 2013; Gowers & Bryant-Waugh, 2004; Jenkins et al., 2014).

Rather than being concerned with issues related to normal adolescent development, mothers of girls with eating disorders' worries revolved mainly around potential loss, be it loss of their daughter to the eating disorder, hospitalisation or death. Previous studies have found that parents of adolescents with eating disorders suffer from anxiety and fear about the potential medical, personality and cognitive consequences of the eating disorder, and also experience feelings of hopelessness and self-doubt about the best ways to help their child (Perkins et al., 2004; Eisler, 2005; Goodier et al., 2014). Sim et al. (2009) also found that mothers of girls with AN reported more symptoms of depression and anxiety, as well as family conflict and reduced feelings of efficacy and satisfaction in the parenting role, compared with mothers of healthy girls. These findings are also consistent with other studies that have found that parents of girls with eating disorders experience considerable distress and anxiety (Dimitropoulos et al., 2009; Kyriacou et al., 2008; Latzer et al., 2002; Ma, 2011; Treasure et al., 2001). The impact on family members includes disruption to family

relationships and caregiver stress (Goddard et al., 2010; Whitney & Eisler, 2005).

Family members suffer from high levels of stress and burnout; the impact of caring for a family member with an eating disorder has a similar impact to caring for someone with psychosis (Treasure et al., 2001; Zabala et al., 2009).

9.5 Limitations

This qualitative study only represents the perspectives of the family members who were willing to participate in the study, and may not generalise to all families of adolescents with eating disorders. In addition, due to their lack of participation in the study, it does not include the perspective of fathers. Future research should focus on exploring fathers' perspectives in order to provide a balanced view of the daughter–mother–father triad. Qualitative analysis is not only an analysis of the participant's narrative, but also taps into the researchers' 'own conceptual framework' (Smith, 1995). The researchers' own life stories, beliefs, experiences and attachment styles, along with their experiences of the interview, all affect interpretation of data.

9.6 Conclusions

This qualitative study identified that girls with eating disorders described less favourable relationships with both their mothers and their fathers compared to the girls in the control group, describing feelings of being misunderstood and high levels of family conflict, mostly related to their eating disorder symptoms. Mothers of girls with eating disorders also reported high levels of conflict, as well as significant anxiety and fear about the potential medical, personality and cognitive consequences of the eating disorder, including the fear that their daughter may die from medical complications of the eating disorder, or as a result of suicide. The mothers also expressed reduced feelings of efficacy and satisfaction in the parenting role, cycles of decreased mentalising, and feelings of hopelessness and self-doubt about the best ways to help

their child. The study also revealed the disruption to the normal process of individuation and autonomy due to the onset of an eating disorder in adolescents.

The final chapter will discuss findings and observations from the three studies in this thesis: the two quantitative studies of attachment, mentalising and RF, and the qualitative analysis of daughter and mother perceptions of family relationships. Overall conclusions will be drawn regarding attachment patterns, RF and family functioning in families of adolescents with eating disorders.

Chapter 10: General Discussion and Conclusions

Adolescent eating disorders are severe, chronic, life threatening mental health conditions that involve serious disturbances in eating and body image. Eating disorders have serious physical and emotional consequences for the sufferer and their family members, and are very difficult to treat (Thompson-Brenner et al., 2010). Over the past decade, attachment theory and its related concepts, such as mentalising, have been applied to the field of eating disorders (Skårderud, 2007; Tasca & Balfour, 2014a; Skårderud & Fonagy, 2012; Zachrisson & Skårderud, 2010). Theorists assert that eating disorders are characterised by insecure attachment patterns and deficits in mentalising, which lead to an embodiment of distress that manifests in eating disorder symptoms. This study examined the adolescent participants' attachment patterns to both mother and father, as well as their attachment coherence, mentalising capacities, and the RF of their mothers. It also examined the lived experience of mother–daughter relationships in families of adolescents with eating disorders, compared to families of girls without eating disorders.

10.1 Key Findings

Compared to the control group of non-clinical adolescents, adolescents with eating disorders presented with significantly higher rates of insecure attachment patterns to both mother and father. No particular attachment style was identified as predicting a specific eating disorder diagnosis. Although the dismissing attachment pattern was the most prevalent among the insecure attachments, it was the presence of preoccupied and disorganised attachment patterns that predicted the presence of an eating disorder when comparing the two groups of adolescents. Qualitative analysis of the discourse of the CAI provided evidence for insecure attachment patterns. The girls with eating disorders described less favourable relationships with both their mothers and their fathers

compared to the girls in the control group, and described high levels of family conflict, mostly related to their eating disorder symptoms. Descriptions were offered of parent child relationships characterised by controlling behaviours including punitively aggressive, compulsively care taking or compulsively self-reliant behaviours, as well as angry and distrustful relationships or relationships that minimised or devalued emotions and emotional need.

The findings of the present study suggest that insecure attachment patterns, whether attachment avoidance, anxiety or disorganisation, are associated with a lack of coherence of mind and deficits in mentalising capacity in adolescents with eating disorders. In line with hypotheses, the present study found that the girls with eating disorders scored significantly lower than the girls in the control group on attachment coherence, supporting the theory that adolescents with eating disorders have reduced capacities to make sense of their attachment relationships, discuss feelings and mental states, and hold both their own and others' perspectives in mind. This was supported by the qualitative analysis that revealed descriptions from the girls with eating disorders of getting stuck in their own point of view, not being able to take on the others' perspective, and resisting taking responsibility for their own behaviour. The girls with eating disorders offered examples of frequent misunderstandings and conflict between themselves and their parents, often involving significant emotional dysregulation, and cycles of decreased mentalising. They also described difficulty tolerating and regulating negative affect in their interactions with their parents, as well as difficulty self-monitoring and controlling their impulses.

Contrary to expectations from previous research, low adolescent RF capacity scored on a combined RF scale from the CAI did not predict presence of an eating disorder in this study. In addition, RF capacity did not predict eating disorder diagnosis

category; patients with AN did not differ from patients with AN-BP, BN or atypical AN in terms of RF score.

In line with hypotheses, adolescent girls with eating disorders demonstrated deficits in mentalising—specifically, hypermentalising towards self—on the MSTA, a measure of explicit mentalising. This hypermentalising involved inaccurate or excessive mentalising directed towards the self, characterised by self-blaming or self-diminishing attributions. As discussed earlier, hypermentalising is a form of pseudomentalising, and takes place when an individual is overly concerned with trying to understand what people think and feel, without an actual connection to the real internal emotional or mental state of the person in question. This finding was accounted for by the presence of BPD traits, so hypermentalising towards the self may not underlie eating disorders, but may be present in adolescents with eating disorders and comorbid borderline personality traits.

Based on the theoretical link between maternal RF, attachment style and mentalising function in adolescents, this study explored the relationship between mother's RF, daughter's RF and attachment coherence. Results showed that, on average, the mothers in both groups scored with similar RF capacity when RF was scored on the PDI. When considering the distribution of RF scores however, 21% of mothers of the girls with eating disorders demonstrated very low RF (scores equal to equal or less than 2) compared to only 3.8% of mothers in the control group. These very low scores demonstrated deficits in the ability to think about their own and their daughters' mental states, with the mothers either actively disavowing the mental states of themselves or their daughters, or providing hostile, self-serving or very general or concrete responses when thinking about their own or their daughters' mental states.

As predicted, the sample of mothers of girls with eating disorders reported higher levels of stress, anxiety and depression on the DASS-21 compared to the non-clinical parent group. Qualitative analysis of the PDIs supported this finding, revealing that mothers of adolescents with eating disorders described high levels of stress, anxiety guilt and shame in relation to managing their daughter's eating disorder symptoms. They reported significant anxiety and fear about the potential negative consequences of the eating disorder, including the fear that their daughter may die from medical complications of the eating disorder, or as a result of suicide. The mothers of the girls with eating disorders also expressed feelings of hopelessness and self-doubt when considering how to help their child.

At a time when parents require robust reflective functioning in order to maintain a close relationship with their developing child, the onset of an eating disorder may overwhelm emotional resources and diminish reflective capacity in the parent. This was supported by the finding of mothers of girls with eating disorders expressing high levels of family conflict, reduced feelings of efficacy and satisfaction in the parenting role, cycles of decreased mentalising, and feelings of hopelessness and self-doubt about the best ways to support their daughter.

Contrary to expectations, reflective capacity in the mother was not related to their adolescent child's RF score or attachment coherence.

10.2 Theoretical Implications

The findings of this study lend support to the theoretical importance of attachment and mentalising in the field of eating disorders (Skårderud, 2007; Skårderud & Fonagy, 2012; Tasca & Balfour, 2014a, 2014b) by providing empirical evidence that adolescents with eating disorders present with higher rates of insecure attachment and deficits in attachment coherence and mentalising capacity (hypermentalising), and that

these impact parent child relationships and family functioning. The findings of this study make a particular contribution when considering the mentalising capacities of adolescents with eating disorders and borderline traits.

In regard to the presence of borderline traits in adolescents with eating disorders, this study found significantly more borderline personality traits in the clinical group than in the control group. Borderline traits were positively correlated with hypermentalising on the MSTA. When considering whether hypermentalising predicted the presence of an eating disorder, the significant relationship between hypermentalising and eating disorders diminished when borderline personality traits were controlled for. This suggests that the relationship between mentalising and eating disorders is at least partially explained by the presence of borderline personality traits in this sample.

The comorbid presentation of eating disorders and borderline personality traits in adolescents is well documented (e.g., Sansone & Sansone, 2011; Magallón-Neri et al., 2014). The treatment of patients with eating disorders and comorbid BPD symptoms presents special therapeutic challenges, making this area of understanding an important one to pursue (Robinson et al., 2014; Thompson-Brenner et al., 2010).

The presence of hypermentalising has been found to interact with emotion regulation in adolescents with mental health conditions. Adolescents with emotion regulation difficulties and hypermentalising experience misunderstanding when interpreting the minds of others, which leads to distress and further difficulty regulating emotions, and greater negative symptomatology (Sharp et al., 2013). The results of this study may indicate that a similar process of hypermentalising (regarding self rather than others) occurs with adolescents with eating disorders and borderline personality traits.

The finding of higher rates of insecure attachment patterns and decreased attachment coherence in girls with eating disorders compared to girls without eating

disorders is broadly consistent with Treasure and Schmidt's (2013) cognitive-interpersonal maintenance model of AN (see Figure 3.1) and lends support to the contribution of the factors outlined as predisposing and perpetuating factors for AN. Specifically, Treasure and Schmidt outlined insecure attachment patterns, limited representation of self and other, emotion regulation difficulties, and difficulty expressing and interpreting communication signals as predisposing factors to the development of an eating disorder in a young person, as well as factors that contribute to perpetuating the illness.

Treasure and Schmidt also considered that parents' vulnerabilities may play a role in the onset and maintenance of adolescent eating disorders (see Figure 3.2). In their model, they referred to parents' attachment patterns, along with features such as increased focus on detail, difficulty with set shifting, and increased sensitivity to stress and negative emotion, as important factors to consider. They also outlined parental qualities that they conceptualised as perpetuating the eating disorder, such as decreased warmth, increased criticism, overprotection, and accommodating and enabling behaviours. Parental RF may be particularly important during adolescence, when the relationship between parent and child is undergoing significant change and potential reorganisation (Benbassat & Priel, 2012). The parental qualities identified as perpetuating an eating disorder can be understood as qualities offered by parents with low RF. The features identified in the mothers with very low RF in this study reflected those identified as exhibited by parents with low RF (e.g. Lyons-Ruth et al., 2005; Grienenberger et al., 2005). They included a tendency to withdraw from their child, a focus on her own needs rather than her child's, reversed child-caregiver roles, a tendency to misinterpret or override the child's cues, misinterpretation of the child's outer and inner worlds, anger and antagonism towards her daughter.

Thematic analysis of the PDI and CAI transcripts also identified personal accounts that depicted cycles of non-mentalising between mothers and their daughters with eating disorders, similar to those that Bleiberg (2013) observed in his clinical work with families of adolescents with impaired mentalising capacity (see Figure 4.2). It is asserted that it is the parents who scored with very low RF that would benefit from interventions aimed at enhancing parental mentalising.

In addition, the findings of this study provide support for Fonagy's (2005) model of mentalising difficulties in patients with eating disorders (see Figure 4.1), which suggests that the onset of eating disorders occurs in the context of negative early childhood experiences, negative environmental contributions, insecure attachment patterns and adverse experiences. Fonagy's model suggested that a young person may present with a deficit in mentalising as demonstrated by the pre-mentalising modes of psychic equivalence, pretend mode and teleological thinking, and that this deficit in mentalising capacity highlights discontinuities in the structure of self. This occurs in the context of insecure attachment patterns, particularly disorganised attachment, and may be amplified by trauma. The findings of the present study substantiate the presence of insecure attachment patterns and deficits in mentalising, specifically the presence of pretend mode (hypermentalising), in adolescents with eating disorders.

10.3 Clinical Implications

The findings of this study provide empirical support for the assertion that attachment and mentalising are crucial dimensions of adolescent development, and important domains to consider in the management of adolescent eating disorders. Moreover, insecure attachment patterns and decreased mentalising capacity play out in the context of the family relationships of adolescents with eating disorders.

The present findings suggest that the presence of insecure attachment patterns and impaired mentalising may combine with other biological, social and environmental risk factors during a developmentally challenging period, culminating in the onset of an eating disorder, or the maintenance of eating disorder symptoms, in some adolescents and their families. For example, low maternal RF may be one possible risk pathway to an eating disorder (or psychopathology in general). This may interact with other risk factors present in the child linked to the core psychopathology of eating disorders, such as insecure attachment patterns, low self-esteem, a self-demeaning personality style and a tendency toward self-criticism and harsh self-scrutiny which may drive the specific type of hypermentalising in regard to self that was identified in this study, as well as poorly developed RF to lead to the onset of an eating disorder.

Insecure attachment patterns may be reactive or secondary to the development of eating disorders, and are not necessarily aetiological (Lis, Mazzeschi, Di Riso, & Salcuni, 2011). Even if functioning well prior to the onset of the eating disorder, relationships in families of patients with eating disorders frequently become distorted as a result of the illness. Eating disorders place adolescent patients and their families under extreme stress (Treasure et al., 2001), which may further emphasise the negative impact of pre-existing insecure attachment patterns.

It is known that stressful life events, poverty, physical health problems and turbulent interpersonal relationships strengthen the link between insecure patterns of attachment and psychopathology (Mikulincer & Shaver, 2012). The presence of a serious chronic illness such as an eating disorder can affect attachment processes. The provision of a secure base and the normal development of individuation and autonomy are frequently disrupted by the onset of a chronic illness (Ødegård, 2005). This process was observed in the family dynamics of the girls with eating disorders in this study. The

mothers in the clinical group scored significantly higher in symptoms of both anxiety and depression compared to the control group. Many of the mothers of daughters with eating disorders demonstrated high levels of anxiety and helplessness, manifesting in an overprotective or controlling stance in relation to their daughter.

The presence of hypermentalising in relation to self in adolescents with eating disorders may influence emotion regulation in the same way that has been recognised in adolescents with BPD (Sharp et al., 2013). Adolescents with emotion regulation difficulties and hypermentalising experience a misunderstanding of others' minds, resulting in distress, further difficulty regulating emotions, and increased negative symptomatology. There are several ways in which this knowledge can be translated into the practice of assessment and treatment interventions for adolescents and their parents; these will be outlined in the following sections.

10.3.1 Treatment of eating disorders in adolescence

10.3.1.1 Assessment

Given that this study has identified that many adolescent patients with eating disorders present with insecure attachment patterns, decreased attachment coherence, and hypermentalising, it is clear that attachment organisation, attachment coherence and mentalising offer a helpful framework for understanding the internal processes of sense of self and self-esteem, emotional and behavioural regulation, and interpersonal relatedness in adolescent eating disorder patients. It is suggested that the assessment and treatment of adolescent eating disorders should involve emphasis on attachment functioning and mentalising capacity, as well as on eating disorder symptoms (Tasca et al., 2011).

Assessment of adolescents with eating disorders and their families should include assessment of attachment functioning, specifically interpersonal style, affect

regulation, coherence of mind and RF (Tasca & Balfour, 2014a). Also important, given its strong link with psychopathology and impaired reflective functioning is the assessment of and identification of disorganised attachment patterns related to unresolved loss and trauma.

Assessment of attachment functioning would assist with formulation regarding the predisposing, precipitating and maintaining factors of the eating disorder, thus assisting with treatment planning. Insight into an adolescent patient's attachment functioning may better equip clinicians to direct their therapeutic interventions towards factors that may have played a part in the disorder's aetiology, that are currently serving as maintaining factors for the disorder, or that may potentially affecting therapeutic relationships.

In addition, an understanding of the adolescent patients' attachment style could assist in predicting treatment outcomes and reducing drop-out from treatment (Dakanalis et al., 2014; Illing et al., 2010; Tasca et al., 2006, 2011). Attachment style has been found to moderate response to various types of therapies for adolescent disorders, which may impact treatment response (Scott, et al., 2011). For example, in a study of group treatment for eating disorders, attachment avoidance at pre-treatment was related to lower engaged group climate (Illing et al., 2011).

The finding of impaired attachment coherence in the girls with eating disorders suggests that, in particular, the attachment coherence score as measured on the CAI may have particular utility in assessing adolescents with eating disorders. Attachment coherence score can be utilised as a continuum score of attachment security, as well as an indication of reflective capacity. In addition, as hypermentalising was particularly linked to the presence of borderline personality traits, it is recommended that assessment of adolescent patients with eating disorders include the identification of

borderline traits. This can be achieved via the use of the self-report measure, the MACI (Millon et al., 1993). Identifying those patients with BPD traits could highlight those patients who may display mentalising difficulties particularly related to hypermentalising.

Assessing parents' attachment patterns and RF can assist in determining appropriate treatment strategies and areas for therapeutic efforts within the family. Understanding parents' attachment styles, including the presence of unresolved trauma or loss, will further assist with formulation and treatment planning, especially given the known relationship between unresolved trauma or loss and low RF. Given the findings in this and previous studies on the presence of low reflective functioning and unresolved trauma or loss in mothers of patients with eating disorders (e.g., Ward et al., 2001; Ringer & Crittenden, 2007) it is suggested that during assessment, close attention be paid to these issues in the family assessment for history of adverse or traumatic events (Kuipers & Bekker, 2012).

10.3.1.2 Interventions

The findings of a high prevalence of insecure attachment patterns in girls with eating disorders indicate the positive potential of interventions that facilitate development of secure attachment patterns, development of understanding of mental states, and accompanying strategies to facilitate affect regulation is indicated in the treatment of adolescent eating disorders. A feature of attachment theory and internal working models is the idea that attachment experiences and memories are able to be 'reworked' (Pinquart et al., 2013). The period of adolescence is considered a prime time to offer clinical interventions that focus on family relationships and attachment models, as the developmental changes of adolescence offer opportunities for intervention to assist the process of reintegration and consolidation of attachment-related information

(Brown & Wright, 2001). It is therefore suggested that interventions directed toward the attachment relationship between the adolescent patient and their parents are utilised. Interventions that take into account attachment functioning for adolescent eating disorder patients could possibly lead to better outcomes and improve long-term interpersonal functioning, peer relationships, emotion regulation and mental states (Tasca et al., 2011).

Evidence suggests that enhancement of attachment security can facilitate improvement in symptoms of psychopathology (Mikulincer & Shaver, 2012). The role of the clinician is important in this process, as psychotherapy that provides warm and empathic interactions and facilitates the development of a sense of internal security and autonomy may provide a 'secure base' from which an adolescent can achieve a more secure attachment style (Byng-Hall & Stevenson-Hinde, 1991; Byng-Hall, 1995; Dallos, 2004; Hochdorf et al., 2005; Liddle & Schwartz, 2002).

The adolescents with eating disorders in the present study that were coded with disorganised attachment patterns were unresolved in relation to loss and traumatic events which included traumas such as traumatic early childhood experiences, sexual abuse, and the sudden death of a father. Therapeutic interventions can assist adolescents with disorganised attachment patterns resulting from unresolved loss or trauma to make sense of their history, by providing experiences that help them to form a coherent narrative. Enhancing RF may be a way through which attachment models can be raised to conscious awareness, reevaluated, and potentially transformed (Dubois-Comtois, Cyr, Pascuzzo, Lessard, & Poulin, 2013). Adolescents who present with insecure or disorganised attachment patterns may use enhanced RF to gain a perspective on these relationships and rework internal working models of attachment through the more conscious process of RF. The therapist can assist with this process by modelling RF for

the adolescent and evoking the patient's interest in the therapist's mind (Steele & Steele, 2007), with the goal of developing more flexible working models and greater capacity for reflective thinking (Farber 2008; Fonagy et al., 2002; Steele & Steele, 2007).

In this study, the adolescent eating disorder patients displayed hypermentalising—a limited or misinterpreted understanding of their own and others' thoughts and emotions. It is recommended that psychotherapy, which elaborates the patient's internal experiences as they occur either in one-on-one or group dialogue, may facilitate improved RF. Specific mentalising based interventions have been designed for work with adult eating disorder patients (Skårderud, 2007c; Skårderud & Fonagy, 2012). A randomised controlled trial of Mentalising-Based Therapy for patients with eating disorders and symptoms of BPD, compared to treatment as usual, is currently underway (Robinson et al., 2014).

Research has begun to investigate the effectiveness of Mentalising-Based Therapy for adolescents and their families, with studies so far demonstrating positive results. Rossouw and Fonagy (2012) found that mentalisation-based individual and family therapy for adolescents (MBT-A and MBT-F) was superior to treatment as usual in reducing self-harm and depression in a group of 80 adolescents who self-harmed. The superior rates of improvement for participants receiving MBT-A were explained by improved mentalisation and reduced attachment avoidance.

Sharp et al. (2013) also investigated the effectiveness of MBT on inpatient adolescents. They found that MBT achieved a reduction in hypermentalising (Sharp et al., 2011) in 164 inpatients (62 girls and 49 boys; mean age = 15.5; $SD = 1.44$) with BPD features. Participants in both groups displayed significant decrease in hypermentalising scores at discharge compared to assessment, while greater

improvement was found in the BPD group than in the non-BPD group. Laurensen et al. (2014) also found significant decreases in symptoms and improvements in personality functioning and quality of life at 12 months following implementation of an inpatient MBT-A program for adolescents with BPD. Bleiberg (2013) describes an adapted version of MBT for adolescents. The positive outcomes from Mentalising-Based Therapy with adolescents suggest that mentalising may be a potential focus of intervention for adolescents with eating disorder symptomatology, particularly those with comorbid BPD features.

Given that the starving, bingeing and purging behaviours associated with eating disorders are considered non-mentalising means of managing emotional difficulties (Skårderud & Fonagy, 2012), a key to therapeutic interventions for adolescents with eating disorders may be the ability to link bodily experiences to mental states. An intervention that may be particularly helpful for adolescents with eating disorders is therapy that aims to assist the young person to understand the connection between their mental states and their body; that is, to find the middle ground between hyperembodied experience (too much focus on the body) and disembodied experience (lack of awareness around bodily states, seen when shut off from physicality; Sommerfeldt & Skårderud, 2009). This approach has been used for other mental health conditions that involve somatisation, such as chronic fatigue and pain (Luyten, van Houdenhove, Target, Fonagy & Lemma, 2012; Luyten & Van Houdenhove, 2013). The goal of therapy is for the patient to see their body not only as a physical reality, but also as a symbolic representation rather than a literal embodiment of self. Bodywork-based therapy involves therapeutic techniques that involve working with the human body utilising modalities such as massage therapy, manipulative therapy, breath work, feldenkries, kinesiology and postural awareness, in order to promote awareness of the

'bodymind connection'. These therapies focus on the integration of physical and emotional aspects of functioning, and have been found to be useful therapeutic interventions for eating disorders (e.g., Carei et al., 2010; Cook-Cottone, Beck, & Kane, 2008; Douglass, 2011; Duesund & Skårderud, 2003).

The findings of this study revealed that both the adolescent with the eating disorder, and her parents, are experiencing significant psychological distress including higher rates of anxiety, depression and stress compared to control families. In addition, this study found that families of girls with eating disorders experience greater family conflict and strain compared to families without a daughter with an eating disorder. These findings highlight the potential benefit of systemic interventions to families of adolescents with eating disorders. Family therapy is the recommended intervention for adolescent eating disorders, it provides an environment for all members of the adolescent's family to think about relationship dynamics, affects and processes, and alter attachment patterns between the adolescent and their parents (Hooper & Dallos 2012; Israel & Diamond, 2013).

Family therapy interventions can be implemented to transform the dynamics identified in families of adolescents with eating disorders. This study found difficulties with communication, misunderstandings, high conflict, and high parental worry and overprotection or intrusion. Other studies have revealed similar dynamics including differences in communication styles, low paternal affection, communication difficulties between parents and adolescents, low family cohesion, high conflict, and high parental intrusion (e.g., Herzog, Kronmuller, Hartmann, Bergmann, & Kroeger, 2000; Laliberte, Boland, & Leichner, 1999; Leon et al., 1994; Lilenfeld et al., 2000; Rodriguez Martin et al., 2005; Rorty, Yager, Buckwalter, Rossotto, & Guthrie, 2000; Scalf-McIver & Thompson, 1989).

Dallos (2004) suggests incorporating an attachment-based perspective into systemic family therapy for adolescents with eating disorders, noting the intergenerational transmission of insecure attachment, the avoidance of conflict in family dynamics, and problems in discussing feelings and relationships among family members of adolescents with eating disorders. Changing and enhancing relationship patterns with parents may assist an adolescent with an eating disorder to achieve psychosocial and interpersonal change (e.g., Israel & Diamond, 2013; Johnson, Maddeaux, & Blouin, 1998; Kaslow, Broth, Smith, & Collins, 2012). A focus on assisting parents to meet the attachment needs of their children in the context of parent-child conflict is suggested (Kindsvatter & Desmond, 2013) This should include a focus on the parent's approach to the child, as changes in parents' behaviour and subjective experiences of their children have been found to directly effect changes in childrens' attachment patterns (Berlin et al., 2008; Hoffman, Marvin, Cooper, Powell, 2006; Slade et al., 2005). Mentalising-Based Treatment for Families (MBT-F; Asen & Fonagy, 2012) focuses on assisting families to develop mentalising skills, which in turn assists with communication and problem solving within the family. MBT-F focuses on enhancing mentalising strengths within families rather than searching for pathological patterns of mentalising, or targeting specific types of dysfunctional mentalising (Asen & Fonagy, 2012).

The present study found that when considering the distribution of RF scores, 21% of the mothers of the girls with eating disorders demonstrated very low RF compared to only 3.8% of the mothers in the control group. The parents in the present study who scored with very low RF compared to the rest of the sample presented with difficulty attending to their daughters' mental states, experienced frequent misunderstandings, were triggered by their daughter's emotional dysregulation, thus

frequently becoming embroiled in a cycle of non-mentalising and frequently blamed their daughter for her dysregulated affect and eating disorder symptoms. These findings highlight the importance of addressing mentalising capacity in parents of adolescents with eating disorders where parents are identified as displaying low RF. Research has found that parents with low RF are often those who have a history of insecure attachment patterns, and unresolved loss or trauma.

A parent's capacity to mentalise fluctuates according to that person's situation and emotional responses. A parent's capacity to think about their child's inner life, their relationship with their child, and themselves as a parent will fluctuate. The descriptions offered by parents and girls of vicious cycles of impaired mentalising suggest that the stress of parenting an adolescent with an eating disorder, including frequent instances of conflict, can impair a parent's capacity to mentalise, particularly for those who may already have reduced or limited RF capacity (Malberg, 2013).

A parent with strong mentalising capacity has an awareness of their child's mental states and makes an active attempt to understand what is going on in their mind that may be influencing their behaviour (Fonagy et al., 2002; Rosenblum, et al., 2008). Such a parent is able to anticipate and respond in a sensitive manner to their child's cues especially in moments of heightened affect, by putting aside their own affective experience and focusing on their child's inner experience (Stacks et al., 2014). A parent with high reflective functioning is less likely to perceive their child's behaviour as problematic, more likely to identify possible reasons underlying their child's behaviour, is more able to be both emotionally involved and in control when the child is distressed, assist the child with emotional regulation, and have a secure pattern of attachment with their child (Fonagy, Target, Steele & Steele, 1998; Slade, Grienberger, Bernbach,

Levy, & Locker, 2005). These features would greatly assist parents managing the difficult position of parenting an adolescent with an eating disorder.

An important aim of attachment-based interventions for parent-child relationships is for parents to move from conceptualising their adolescent child in terms of their behaviour, especially negative attributions (e.g., ‘She’s attention seeking, manipulative, controlling’), towards understanding the internal experiences that drive their child’s behaviour (Fonagy et al., 1991; Slade, 2005; Slade et al., 2005). When a parent is able to understand the internal experiences that drive their adolescent’s emotional dysregulation, they are better able to meet the needs of their child (Kindsvatter & Desmond, 2013; Stacks et al., 2014). To be able to acknowledge and manage the difficult feelings and frustration experienced in parenting a child with an eating disorder, a parent needs to be able to accurately label and reflect on the emotional states that are elicited by their child and the eating disorder. Interventions aimed at increasing RF will assist this process.

Therapeutic interventions for parents identified with reduced RF may improve the parent–child relationship, and assist the adolescent to manage their eating disorder symptoms. Several studies have demonstrated that parents’ levels of RF can be enhanced through interventions (Aber et al., 1999; Steele & Steele, 2008; Suchman et al., 2010; Taubner et al., 2013). Slade (2007) designed reflective parenting programs aiming to improve relationships between parents and children through engaging and enhancing parental RF. It is proposed that a similar focus on enhancing parental RF could result in benefits in the management of adolescent eating disorders. Research suggests that there are many benefits for a child whose mother has increased mentalising capacity (Fonagy et al., 1991; Fonagy et al., 1997; Slade et al., 2005b; Slade et al., 1999; Grienberger et al., 2005). For example, a study by Ilardi (2010)

found a significant positive relationship between maternal RF and the social functioning of children with Attention Deficit Disorder, learning disorders and associated behaviour problems.

Recently, researchers and clinicians have developed new ways to involve families in the treatment of their children with eating disorders (Eisler, 2005; Goodier et al., 2014; Rockwell et al., 2011). Such recent developments include moving focus towards interpersonal and family-related maintaining factors for the eating disorder (Treasure et al., 2008; Schmidt & Treasure, 2006). Treasure, Smith and Crane (2007) have developed a parent and carer skill-building intervention that targets potential eating disorder maintaining processes, including carer distress, expressed emotion, and accommodating and enabling behaviours. The intervention is delivered in a workshop format, and has been adapted for parents of adolescents (Goodier et al., 2014). The aim of skills training is to improve parents' skills in caring for their child with an eating disorder, reducing personal distress and reducing the influence of maintaining factors. Studies indicate that, among parents of adolescents with eating disorders, skills training reduces carer distress, caregiving burden, expressed emotion, and difficulties related to eating disorder symptoms (Goodier et al., 2014). This type of parent skills training, which includes role play and identification of interpersonal interaction patterns, could be effectively supplemented with information about attachment styles and RF.

10.4 Research Limitations and Strengths

The main limitations of the present study have been discussed in earlier chapters, and are mainly related to the measures and coding methods used. Other limitations will be outlined below.

Due to the clinical nature of this study, and the low numbers of boys presenting for treatment at the Eating Disorders Program, boys were not included in this study.

The exclusion of males from this study represents a sampling bias, as boys also experience eating disorders. Future studies should include boys in data collection.

The sample of this study is small, which may impair the generalisability of the results, although adolescent eating disorder samples are frequently small, due to the low point prevalence of eating disorders and complexities in collecting data. In addition, the sample of eating disorder patients included a large proportion of atypical AN; however, this is common in child and adult clinical samples (Tozzi et al., 2005), and it is important to determine whether patients with atypical AN present with similar attachment and mentalising difficulties as patients who meet full diagnostic criteria.

As the sample was not randomly selected, it is prone to selection bias. It is possible that the eating disorder participants in this sample represent families who were functioning at a higher level, evidenced by their decision to participate. It is noted that a large proportion of the clinical families invited to participate in the study declined to participate. It is possible that the families who were experiencing more distress, chaos and conflict were those who declined to participate, and so the clinical sample may not have been representative of the patient group as a whole. Similarly, it can be argued that, of the control families approached, those that perceived themselves as having more conflictual and difficult relationships were less likely to agree to participate. The control participants were not assessed for eating disorder diagnosis, but were screened and excluded if they reported eating disorder symptoms.

The sample did not include patients with extremely severe eating disorder presentations, as acute inpatients were excluded from the sample to enhance internal validity by ruling out the potential confounding effects of malnutrition on RF. Some participants, however, had previously received inpatient treatment as a component of their care. The sample consisted of mostly Australian-born girls, and all were aware that

the study was about attachment, RF and eating patterns. While the sample included adolescent girls from a range of ages, it only reflected the population characteristics of adolescents receiving treatment at an eating disorders program in Perth, Western Australia, and was derived from a fairly high socio-economic status background.

The findings of this study suggest that interview-based ratings of attachment to mother and father, and self-report measures of mentalising, help predict presence of an eating disorder. Whether insecure attachment styles and mentalising capacities actually contribute significant risk can only be established via longitudinal research, which was beyond the scope of this study.

The study analysis did not differentiate between those patients with pure eating disorders and those with comorbid Axis I and Axis II disorders. The prevalence of comorbid conditions found in this study (56% met clinical cut-offs for comorbid depression, 39% for anxiety) corresponds with the high prevalence of comorbid psychiatric disorders found in other studies (O'Brien & Vincent, 2003). Since insecure attachment is linked with a variety of other psychiatric disorders (Fonagy et al., 1996; Dozier et al., 2008) it is possible that different results would have emerged in patients with 'pure' eating disorders. However, if participants with comorbid diagnoses were excluded, some of the participants with the most severe eating disorders would have been excluded. The study did however, control for anxiety and depression symptomatology and borderline traits.

While this study supported the hypothesis that attachment and mentalising processes are related to eating disorders, it did not compare eating disordered adolescents to those with other psychiatric difficulties, perhaps leading to an impression that attachment styles and mentalising are related to eating disorders in a way that is specific to the disorder. In fact, attachment styles and mentalising deficits have been

found to be related to psychopathology in general (Cole-Detke & Kobak, 1996; Evans & Wertheim, 1998, 2005). In order to identify a specific link between eating disorders, attachment and mentalising beyond other types of pathology, a clinical control group would be necessary.

A further limitation is that other attributes, such as interpersonal functioning, sense of self, self-efficacy, self-esteem and emotional regulation—all identified as related to attachment, mentalising and eating disorders—were not assessed as part of this study. A full test of the theoretical model identifying the connection between attachment, mentalising and eating disorders would require measuring these variables and including them in the model.

Set against these limitations are several strengths of the study, including a comparatively large sample size for detailed clinical assessments and the use of an interview measure of attachment. The attachment interview is considered the gold standard in attachment research (Ravitz et al., 2010); however, much of the previous research in this field has relied on assessing attachment styles through self-report measures or an attachment interview designed for adults. A unique aspect of this study, therefore, is that adolescent attachment classifications were assigned based on narratives produced from a reliable and valid attachment interview designed specifically for young people, and also one that allowed for a dimensional measure of attachment. In addition, attachment classification was investigated for both mother and father.

Another strength of this study is that it was conducted on a clinical sample of adolescents with eating disorders and included a gender-, age- and socio-economic status-matched non-clinical control group. It was important to control for the possible confounding effects of socio-demographic variables that have been found to affect eating disorders, including age, gender, socio-economic status, and mothers' education,

on the relationship between attachment style, mentalising and eating disorders. Previous analyses have frequently failed to account for these factors. A benefit of the control group is that many previous studies have compared data drawn from adolescents to a control group comprised of adults. This is a theoretically important distinction, as attachment and mentalising issues in adolescence are different from those of the adult years.

The current study focused on adolescents (mean age 15 years). Many previous studies have focused on adults, who may comprise a different sample due to the chronicity of their condition. Chronicity of eating disorder symptoms may indicate different underlying attachment and mentalising problems (Ward et al., 2000). The young age of the eating disorder population meant that the majority of the participants met diagnostic criteria for AN or atypical AN, where adults with eating disorders are more likely to meet criteria for AN-BP or BN. Therefore, this study offers insight into the specific diagnostic criteria that characterise adolescents with eating disorders.

10.5 Recommendations for Future Research

This study focused on the attachment relationships and mentalising capacities of adolescents and their parents, but only measured RF capacity of mothers. Changing societal and cultural views on fatherhood are leading to increasing acknowledgment of their important role as caregivers and attachment figures (Cabrera, Tamis-LeMonda, Bradley, Hofferth, & Lamb, 2000; Pleck, 2010). Further research on mentalising and attachment should include fathers. Similarly, the potential influences of multiple attachment relationships during adolescence should also include peer relationships and romantic partners (Boldt, Kochanska, Yoon, & Koenig Nordling, 2014; Brumariu & Kerns, 2010; Fearon et al., 2010).

Regarding attachment, there is a need to refine our instruments of assessing attachment status, especially in adolescents. Given the potential usefulness of such information in the clinical setting, future research could focus on designing and validating measures of adolescent attachment that could be used for day-to-day assessments in clinical settings (Gerlsma & Luteijn, 2000).

Regarding mentalising, this study focused on adolescents' capacities to mentalise about their attachment relationships and social scenarios. Luyten et al. (2012) suggested that research should focus more broadly on interview methods that probe for reflective capacity, not just in reference to attachment relationships, but also other interpersonal relationships and how patients experience their symptoms. This would be particularly helpful for adolescents with eating disorders, as this is a group representing frequent struggles with mentalising. Research that investigates adolescents' capacities to think about their mental states in relation to food, weight shape and weight loss behaviours would potentially be very enlightening.

Research focusing on the effectiveness of treatment for improving states of attachment and mentalising will increase knowledge of treatment processes and outcomes for adolescents with eating disorders (Tasca & Balfour, 2014). In addition, research on the impact of RF and disorganised mental states on symptom maintenance and severity will increase understanding of risk and maintenance factors for eating disorders. Prospective, longitudinal research could investigate the roles of childhood adversity and family environment and their interaction with attachment insecurity, and could inform prevention and treatment programs for adolescents.

10.6 Conclusion

This study contributes to the emerging body of knowledge on adolescent eating disorders in the context of attachment and mentalisation, and the impact of eating

disorders on family relationships. To the author's knowledge, it is the first mixed methods study design to investigate attachment and mentalising processes in families of adolescents with eating disorders. This study provides evidence for a previously unidentified relationship between insecure attachment patterns, deficits in mentalising and adolescent eating disorders through the use of the MSTA-6. Results found that the presence of insecure attachment styles, specifically preoccupied and disorganised attachment patterns to both mother and father, predicted the presence of an eating disorder in a sample of adolescent girls. While RF scores did not predict clinical versus control group membership, low attachment coherence and the presence of hypermentalising in relation to self (indicating of deficit in mentalising capacity) predicted the presence of an eating disorder in the sample of adolescent girls. The presence of hypermentalising was related to BPD traits in the eating disorder group, suggesting that it is frequently those patients with eating disorders and borderline traits in this sample who display deficits in mentalising.

While the RF scores of the mothers in the sample did not significantly predict control versus clinical group membership, results revealed that 21% of the mothers in the clinical group displayed very poor RF in relation to the sample, suggesting that mentalising-based interventions could be beneficial for some parents of adolescents with eating disorders.

The findings of this study support the role of attachment patterns and related mentalising capacity in the aetiology and maintenance of eating disorders. The period of adolescence provides a unique opportunity to provide interventions aimed at enhancing attachment relationships and mentalising capacity, as well as an opportunity to intervene at a systemic level. Evidence suggests that therapeutic interventions aimed at improving attachment relationships and mentalising capacity for adolescents, parents

and families have beneficial potential. The findings of this study support the introduction of attachment and mentalising-based interventions for adolescents with eating disorders and their families. The significant social, emotional and physical impacts of adolescent eating disorders on patients and their families demand new approaches and interventions that can assist young people to recover from these disorders.

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Every reasonable effort has been made to acknowledge the owners of copyright material. I would be pleased to hear from any copyright owner who has been omitted or incorrectly acknowledged.

Appendix A: Ethics Approval Princess Margaret Hospital Ethics Committee



Government of Western Australia
Department of Health
Child and Adolescent Health Service



Ms Elizabeth Seah
Eating Disorders Program
991 Wellington Street
PERTH WA 6000

Dear Ms Seah

REGISTRATION NUMBER: 1657/EP

TITLE: Patterns of reflective functioning in families of adolescents with eating disorders

MEETING DATE: 16 April 2009

RECOMMENDATION: At meeting on 16 April 2009 the Ethics Committee recommended for approval this study subject to amended documentation as required by the Ethics Committee. This documentation has been received and reviewed on 2 June 2009.

The Princess Margaret Hospital for Children Ethics Committee has recommended approval be given for you to undertake the abovenamed research study. This recommendation has been ratified by the Child and Adolescent Health Service.

The Ethics Committee does however wish to be informed immediately of:

- I. any untoward effects experienced by any participant in the trial where those effects in degree or nature were not anticipated by the researchers, and steps taken to deal with these,
- II. substantial changes in the research protocol together with an indication of ethical implications, and
- III. other unforeseen events.

The Ethics Committee has been charged with the responsibility of keeping the progress of all approved research under surveillance. A copy of the final result must be forwarded to the Committee upon completion of the research or if the research is not completed within twelve months you are asked to submit a progress report and annually thereafter. This information should include:



Appendix B: Ethics Approval Curtin University



Office of Research and Development

Human Research Ethics Committee

TELEPHONE 9266 2784

FACSIMILE 9266 3793

EMAIL hrec@curtin.edu.au

memorandum

To	Dr Lynn Priddis Psychology
From	A/Professor Stephan Millett, Chairperson, Human Research Ethics Committee
Subject	Protocol Approval HR 80/2009
Date	8 May 2009
Copy	Elizabeth Seah, 40 Simper Street, Wembley WA 6014 Graduate Studies Officer, Faculty of Health Sciences

Thank you for your application submitted to the Human Research Ethics Committee (HREC) for the project titled "*Patterns of Reflective Functioning in Families of Adolescents with Eating Disorders*". Your application has been reviewed by the HREC and is **approved** subject to the conditions detailed below:

1. Please provide confirmation that a therapist will be immediately accessible whilst interviews are taking place.
2. Please provide a progress report to the Research Ethics Office on the completion of ten participant interviews.

Please do not commence your research until your response to the above conditions has been approved by the Executive Officer.

Please note the following:

- Reference Number: **HR 80/2009**. Please quote this number in any future correspondence.
- Approval of this project is for a period of twelve months **01-09-2009** to **01-09-2010**. To renew this approval a completed Form B must be submitted before the expiry date **01-09-2010**.
- If you are a Higher Degree by Research student, data collection must not begin before your Application for Candidacy is approved by your Divisional Graduate Studies Committee.
- The following standard statement **must be** included in the information sheet to participants:
This study has been approved by the Curtin University Human Research Ethics Committee (Approval Number HR 80/2009). If needed, verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, c/- Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth, 6845 or by telephoning 9266 2784 or by emailing hrec@curtin.edu.au.
- It is the policy of the HREC to conduct random audits on a percentage of approved projects. These audits may be conducted at any time after the project starts. In cases where the HREC considers that there may be a risk of adverse events, or where participants may be especially vulnerable, the HREC may request the chief investigator to provide an outcomes report, including information on follow-up of participants.

Regards,

AP A/Professor Stephan Millett
Chair Human Research Ethics Committee

Appendix C: Parent and Participant Information Sheets

ADOLESCENT INFORMATION SHEET CLINICAL GROUP

Project Title: **Patterns of Reflective Functioning in Families of Adolescents with Eating Disorders**

Introduction to the research and invitation to take part.: My name is Elizabeth Seah, I am a PhD (Clinical Psychology) student at Curtin University. I am running a study to look at the ways teenagers with eating disorders and their parents think and I would appreciate you taking part in my study.

What is this research study about? The aim of this study is to find out if the way teenagers' and their parents think affects the way a teenager eats. We are especially interested in studying a type of thinking called 'reflective functioning'. This is the name given to how well we understand why we and those around us behave in certain ways. If we can learn more about this type of thinking, it may help us to understand more about eating disorders. It might give us clues about the causes of eating disorders, why they keep going and how best to treat them.

What will I have to do? If you and your parents agree for you to take part in the study, you will take about 60 minutes to fill in questionnaires, and 30 minutes to answer some questions. The interview will be done by a member of the eating disorders team, that isn't your individual therapist or your care coordinator. The interview will be done with you on your own; your parents will not be there. The questions are about your thoughts about yourself, how people react in everyday situations, and your relationship with your parents. The interview will be tape recorded and then your answers will be typed out and read by another person who will not know your identity. Your eating disorders team medical file will be looked at for information about your eating problem, and answers to questionnaires that you did during the initial eating disorders assessment. If you would like feedback from the study I would be happy to talk about it with you once the study is finished.

What happens if my parents or I decide for me not to be involved in the study? Taking part in this study is up to you. You can say you don't want to be involved at anytime. If you or your parents decide for you not to be involved, your treatment at Princess Margaret Hospital for Children (PMH) will not be affected in any way.

How will my privacy be protected? To protect your privacy **your name will be removed from the answers you give**, and replaced by a code which will be kept in a password protected document separate from your answers. Only I and the research psychologist in the Eating Disorders Team will have the codes. All information will be kept private and **any forms which you sign will be kept separate from your answers**. No names or other ways to know you will be used in any writing about the research.

Are there any risks involved in the study? The questions will ask your feelings about yourself, and your relationship with your parents, answering the questions may upset you. If this happens I will let your case coordinator and individual therapist know if you want me to, and have given you a list of counsellors that you can talk to.

What happens if I don't like a question? The questions asked are personal. It is up to you if you answer them, you can decide to not answer any question that you do not like or stop the interview at any time.

Who has given permission for this study to proceed? This study has been approved by the Princess Margaret Hospital Research Ethics committee and the Curtin University Human Research Ethics Committee (Approval Number HR 80/2009). If needed, verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee. c/- Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth, 6845 or by telephoning 9266 2784 or by emailing hrec@curtin.edu.au. The Eating Disorders Team at Princess Margaret Hospital has given support for the study.

What if I have more questions or do not understand something? If you have any questions about this study please feel free to contact either myself, Elizabeth Seah, on 9429 5000 elizabeth.seah@health.wa.gov.au or my supervisor Associate Professor David Forbes from the PMH Eating Disorders Team, phone: 9340 8222 or Dr Lynn Priddis Curtin University, phone: 9266 9266. If you would like to speak to someone not involved in the study you can contact the PMH Executive Director, Medical Services, phone: 9340 8222.

PARENT INFORMATION SHEET

Project Title: **Patterns of Reflective Functioning in Families of Adolescents with Eating Disorders**

Introduction to the research and invitation to take part.: My name is Elizabeth Seah, I am a PhD (Clinical Psychology) student at Curtin University. I am running a study to look at the ways teenagers with eating disorders and their parents think and I would appreciate you taking part in my study.

What is this research study about? The aim of this study is to find out if the way teenagers' and their parents think affects the way a teenager eats. We are especially interested in studying a type of thinking called 'reflective functioning'. This is the name given to how well we understand why we and those around us behave in certain ways. If we can learn more about this type of thinking, it may help us to understand more about eating disorders. It might give us clues about the causes of eating disorders, why they keep going and how best to treat them.

What will my daughter have to do? If you and your daughter agree for her to take part in the study, she will take about 60 minutes to fill in questionnaires about her thoughts about herself and how people react in everyday situations, and about 30 minutes to answer questions about her relationship with her parents. The interview will be done by a member of the eating disorders team that isn't her individual therapist or care coordinator. The interview will be done with her on her own, you will not be there. The interview will be tape recorded and her answers will be typed out and read by another person who will not know her identity. Her eating disorders team medical file will be looked at for information about her eating disorder and answers to the questionnaires that she filled in during the initial eating disorders assessment. If you would like feedback from the study I would be happy to talk to you about it once the study is finished.

What will I have to do? If you agree to take part, it will take about 15 minutes to complete two questionnaires, and about 60 minutes to answer questions about your relationship with your daughter. The interview will be tape recorded, your answers transcribed, your name removed and then read by a third party to the research.

What happens if my daughter or I do not wish to be involved in the study? Taking part in this study is voluntary. You and your daughter can say you don't want to be involved at anytime. If you or your daughter decide not to be involved, her current and future care at Princess Margaret Hospital for Children (PMH) will not be affected in any way.

How will our privacy be protected? To protect your privacy **your names will be removed from the data collected**, and replaced by a code which will be kept in a password protected document separate from the data. Only I and the research psychologist in the Eating Disorders Team will have the codes. All information will be strictly private and **any forms which you sign will be kept separate from your data**. No names or other ways to know you will be used in anything written about the study.

Are there any risks involved in the study? The questions will ask you and your daughter feelings about close relationships, so it is possible that answering the questions may upset you. If this happens I will inform your daughter's care coordinator and individual therapist with her permission. I have given you a list of counsellors that you can talk to.

What happens if my daughter or I don't want to answer a question? The questions asked are personal. It is up to you and your daughter if you answer them; you can decide to not answer any question that you do not like or stop answering the questions at any time.

Who has given permission for this study to proceed? This study has been approved by the Princess Margaret Hospital Research Ethics committee and the Curtin University Human Research Ethics Committee (Approval Number HR 80/2009). If needed, verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee. c/- Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth, 6845 or by telephoning 9266 2784 or by emailing hrec@curtin.edu.au. The Eating Disorders Team at Princess Margaret Hospital has given support for the study.

What if I have more questions or do not understand something? If you have any questions about this study please feel free to contact either myself, Elizabeth Seah, on 9429 5000 elizabeth.seah@health.wa.gov.au or my supervisor Associate Professor David Forbes from the PMH Eating Disorders Team, phone: 9340 8222 or Dr Lynn Priddis Curtin University, phone: 9266 9266. If you would like to speak to someone not involved in the study you can contact the PMH Executive Director, Medical Services, phone: 9340 8222

Thank you for taking the time to read this information sheet.

ADOLESCENT INFORMATION SHEET CONTROL GROUP

Project Title: **Patterns of Reflective Functioning in Families of Adolescents with Eating Disorders**

Introduction to the research and invitation to take part.: My name is Elizabeth Seah, I am a PhD (Clinical Psychology) student at Curtin University. I am running a study to look at the ways teenagers with eating disorders and their parents think and I would appreciate you taking part in my study.

What is this research study about? The aim of this study is to find out if the way teenagers' and their parents think affects the way a teenager eats. We are especially interested in studying a type of thinking called 'reflective functioning'. This is the name given to how well we understand why we and those around us behave in certain ways. If we can learn more about this type of thinking, it may help us to understand more about eating disorders. It might give us clues about the causes of eating disorders, why they keep going and how best to treat them.

What will I have to do? If you and your parents agree for you to take part in the study, you will take about 60 minutes to fill in questionnaires, and 30 minutes to answer some questions. The interview will be tape recorded and will be done by Curtin University psychology student. The interview will be done with you on your own; your parents will not be there. The questions are about your thoughts about yourself, how people react in everyday situations, and your relationship with your parents. The interview will be tape recorded and then your answers will be typed out and read by another person who will not know your identity. If you would like feedback from the study I would be happy to talk about it with you once the study is finished.

What happens if my parents or I decide for me not to be involved in the study? Taking part in this study is up to you. You can say you don't want to be involved at anytime.

How will my privacy be protected? To protect your privacy **your name will be removed from the answers you give**, and replaced by a code which will be kept in a password protected document separate from your answers. Only I and the research psychologist in the Eating Disorders Team will have the codes. All information will be kept private and **any forms which you sign will be kept separate from your answers**. No names or other ways to know you will be used in anything written about the study.

Are there any risks involved in the study? The questions will ask your feelings about yourself, and your relationship with your parents, answering the questions may upset you. If this happens I have given you a list of counsellors that you can talk to.

What happens if I don't like a question? The questions asked are personal. It is up to you if you answer them, you can decide to not answer any question that you do not like or stop the interview at any time.

Who has given permission for this study to proceed? The Princess Margaret Hospital Ethics and the Curtin University of Technology Human Ethics Committee.

What if I have more questions or do not understand something? If you have any questions about this study please feel free to contact either myself, Elizabeth Seah, on 9429 5000 elizabeth.seah@health.wa.gov.au or my supervisor Associate Professor David Forbes from the PMH Eating Disorders Team, phone: 9340 8222 or Dr Lynn Priddis Curtin University, phone: 9266 9266. If you would like to speak to someone not involved in the study you can contact the PMH Executive Director, Medical Services, phone: 9340 8222.

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What will my daughter have to do? What will my daughter have to do? If you and your daughter agree for her to take part in the study, she will take about 60 minutes to fill in questionnaires about her thoughts about herself and how people react in everyday situations, and about 30 minutes to answer questions about her relationship with her parents. The interview will be tape recorded and then her answers will be typed out and read by another person who will not know her identity. The interview will be done by a Curtin University psychology student. The interview will be done with her on her own, you will not be there. If you would like feedback from the study I would be happy to talk to you about it once the study is finished.

What will I have to do? If you agree to take part, it will take about 15 minutes to complete two questionnaires, and about 60 minutes to answer questions about your relationship with your daughter. The interview will be tape recorded, transcribed, de-identified and then read by a third party to the research.

What happens if my daughter or I do not wish to be involved in the study? Taking part in this study is voluntary. You and your daughter can say you don't want to be involved at anytime.

How will our privacy be protected? To protect your privacy **your names will be removed from the data collected**, and replaced by a code which will be kept in a password protected document separate from the data. Only I and the research psychologist in the Princess Margaret Hospital Eating Disorders Team will have the codes. All information will be kept strictly private and **any forms which you sign will be kept separate from your data**. No names or other ways to know you will be used in anything written about the study.

Are there any risks involved in the study? The questions will ask you and your daughter feelings about close relationships, so it is possible that answering the questions may upset you. If this happens I have given you a list of counsellors that you can talk to.

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Who has given permission for this study to proceed? The Princess Margaret Hospital Ethics and the Curtin University of Technology Human Ethics Committee.

What if I have more questions or do not understand something? If you have any questions about this study please feel free to contact either myself, Elizabeth Seah, on 9429 5000 elizabeth.seah@health.wa.gov.au or my supervisor Associate Professor David Forbes from the PMH Eating Disorders Team, phone: 9340 8222 or Dr Lynn Priddis Curtin University, phone: 9266 9266. If you would like to speak to someone not involved in the study you can contact the PMH Executive Director, Medical Services, phone: 9340 8222

Thank you for taking the time to read this information sheet.

Appendix D: Reflective Functioning—Counsellors

If you or your child needs advice or assistance about any issues raised by answering these questionnaires, I have listed a selection of recommended agencies and helplines:

For the family:

Relationships Australia

Toll-free Telephone Number: 1300 364 277

Your call will automatically be directed to the nearest Relationships Australia office in your area.

Head Office: 15 Cambridge St, West Leederville WA

Phone: 08 9489 6363

Fax: 08 9489 6300

Email: info@wa.relationships.com.au

Parenting Line

Information, advice about caring for children up to 18 years old

Phone: 9272 1466 or 1800 654 432

Family Helpline

A 24 hour confidential counselling and information for families with relationship difficulties

Phone: 9323 1100 or 1800 643 000

For your child:

School Psychologist:

You may wish to contact your child's school to arrange a referral

Kids Helpline:

A 24 hour counselling line for children and young people

Freecall: 1800 55 1800

Teaching University Child Clinics:

Murdoch University Psychology Clinic 9360 2570

Curtin Psychology Clinic 9266 3436

UWA Clinic 9380 3259

ECU (Joondalup) Psychological Services 9301 0011

Princess Margaret Hospital Eating Disorders Team

9429 5000

Appendix E: Parent and Participant Consent Forms

PARENT FORM OF CONSENT

I have

Given Names Surname

read the information explaining the study entitled '**Patterns of Reflective Functioning in Families of Adolescents with Eating Disorders**'.

I have read and understood the information given to me. Any questions I have asked have been answered to my satisfaction. I agree to allow

.....

(full name of participant and relationship of participant to signatory)

to participate in the study.

I understand my child may withdraw from the study at any stage and withdrawal will not interfere with routine care.

I agree that research data gathered from the results of this study may be published, provided that names are not used.

Dated day of 20

Parent or Guardian's Signature

I agree for the interview to be audio recorded, provided that the data is erased once the interview has been transcribed.

Dated day of 20

Parent or Guardian's Signature

I, have explained the above to the

(Investigator's full name)

signatories who stated that he/she understood the same.

Signature

ADOLESCENT FORM OF CONSENT

I have

Given Names Surname

read the information explaining the study entitled '**Patterns of Reflective Functioning in Families of Adolescents with Eating Disorders**'.

I have read and understood the information given to me. Any questions I have asked have been answered to my satisfaction.

I understand I may withdraw from the study at any stage and withdrawal will not interfere with routine care.

I agree that research data gathered from the results of this study may be published, provided that names are not used.

Dated day of 20

Signature

I agree for the interview to be audio recorded, provided that the data is erased once the interview has been transcribed.

Dated day of 20

Signature

I, have explained the above to the

(Investigator's full name)

signatory who stated that he/she understood the same.

Signature

PARENT FORM OF CONSENT CONTROL GROUP

I have

Given Names Surname

read the information explaining the study entitled '**Patterns of Reflective Functioning in Families of Adolescents with Eating Disorders**'.

I have read and understood the information given to me. Any questions I have asked have been answered to my satisfaction.

I understand I may withdraw from the study at any stage. I agree that research data gathered from the results of this study may be published, provided that names are not used.

Dated day of 20

Signature

I agree for the interviews to be audio recorded, provided that the data is erased once the interview has been transcribed.

Dated day of 20

Signature

I, have explained the above to the
(Investigator's full name)

signatory who stated that he/she understood the same.

Signature

ADOLESCENT FORM OF CONSENT CONTROL GROUP

I have

Given Names Surname

read the information explaining the study entitled '**Patterns of Reflective Functioning in Families of Adolescents with Eating Disorders**'.

I have read and understood the information given to me. Any questions I have asked have been answered to my satisfaction.

I understand I may withdraw from the study at any stage and withdrawal will not interfere with routine care.

I agree that research data gathered from the results of this study may be published, provided that names are not used.

Dated day of 20

Signature

I agree for the interviews to be audio recorded, provided that the data is erased once the interview has been transcribed.

Dated day of 20

Signature

I, have explained the above to the

(Investigator's full name)

signatory who stated that he/she understood the same.

Signature

Appendix F: Adolescent Pack

Demographic Details

Today's Date

Date of birth?

Postcode of residence.

Usual household makeup:

Both natural parents

Mother only

Father only

One natural parent, one step parent

Other

Place of birth

Australia

Other

Eating Attitudes Test- Eating Disorder*EAT © David M. Garner & Paul E Garfinkel (1979), David M. Garner, et al., (1982)***Please Circle a Response for Each of the Following Statements:**

Question	Always	Usually	Often	Sometimes	Rarely	Never
1. I am terrified about being overweight	3	2	1	0	0	0
2. I avoid eating when I am hungry.	3	2	1	0	0	0
3. I find myself preoccupied with food.	3	2	1	0	0	0
4. I have gone on eating binges where I feel I may not be able to stop.	3	2	1	0	0	0
5. I cut my food into small pieces.	3	2	1	0	0	0
6. I am aware of the calorie content of foods I eat.	3	2	1	0	0	0
7. I particularly avoid food with a high carbohydrate content (bread, rice, potatoes, etc.)	3	2	1	0	0	0
8. I feel that others would prefer if I ate more.	3	2	1	0	0	0
9. I vomit after I have eaten.	3	2	1	0	0	0
10. I feel extremely guilty after eating	3	2	1	0	0	0
11. I am preoccupied with a desire to be thinner.	3	2	1	0	0	0
12. I think about burning up calories when I exercise.	3	2	1	0	0	0
13. Other people think I'm too thin.	3	2	1	0	0	0
14. I am preoccupied with the thought of having fat on my body.	3	2	1	0	0	0
15. I take longer than others to eat my meals.	3	2	1	0	0	0
16. I avoid foods with sugar in them.	3	2	1	0	0	0
17. I eat diet foods.	3	2	1	0	0	0
18. I feel that food controls my life.	3	2	1	0	0	0
19. I display self-control around food.	3	2	1	0	0	0
20. I feel that other pressure me to eat.	3	2	1	0	0	0
21. I give too much time and thought to food.	3	2	1	0	0	0
22. I feel uncomfortable after eating sweets.	3	2	1	0	0	0
23. I engage in dieting behaviour.	3	2	1	0	0	0
24. I like my stomach to be empty.	3	2	1	0	0	0
25. I have the impulse to vomit after meals.	3	2	1	0	0	0
26. I enjoy trying new rich foods.	0	0	0	1	2	3

MASC40

MASC

by John March, M.D., M.P.H.

Client ID: _____ Age: _____ Gender: **Male** **Female**
(Circle One)

Date: ____/____/____ School Grade: _____
Month Day Year

This questionnaire asks you how you have been thinking, feeling, or acting recently. For each item, please circle the number that shows how often the statement is true for you. If a sentence is true about you a lot of the time, circle 3. If it is true about you some of the time, circle 2. If it is true about you once in a while, circle 1. If a sentence is not ever true about you, circle 0. Remember, there are no right or wrong answers, just answer how you have been feeling recently.

Here are two examples to show you how to complete the questionnaire. In Example A, if you were hardly ever scared of dogs, you would circle 1, meaning that the statement is rarely true about you. In Example B, if thunderstorms sometimes upset you, you would circle 2, meaning that the statement is sometimes true about you.

	Never true about me	Rarely true about me	Sometimes true about me	Often true about me
Example A I'm scared of dogs	0	①	2	3
Example B Thunderstorms upset me	0	1	②	3

Now try these items yourself. Don't forget to do the items on the back of the questionnaire as well.

1. I feel tense or uptight	0	1	2	3
2. I usually ask permission	0	1	2	3
3. I worry about other people laughing at me	0	1	2	3
4. I get scared when my parents go away	0	1	2	3
5. I keep my eyes open for danger	0	1	2	3
6. I have trouble getting my breath	0	1	2	3
7. The idea of going away to camp scares me	0	1	2	3
8. I get shaky or jittery	0	1	2	3
9. I try to stay near my mom or dad	0	1	2	3
10. I'm afraid that other kids will make fun of me	0	1	2	3
11. I try hard to obey my parents and teachers	0	1	2	3
12. I get dizzy or faint feelings	0	1	2	3
13. I check things out first	0	1	2	3
14. I worry about getting called on in class	0	1	2	3
15. I'm jumpy	0	1	2	3

Please flip the questionnaire over; the items are continued on the back page...

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MASC
by John March, M.D., M.P.H.

	never true about me	rarely true about me	sometimes true about me	often true about me
16. I'm afraid other people will think I'm stupid	0	1	2	3
17. I keep the light on at night	0	1	2	3
18. I have pains in my chest	0	1	2	3
19. I avoid going to places without my family	0	1	2	3
20. I feel strange, weird, or unreal	0	1	2	3
21. I try to do things other people will like	0	1	2	3
22. I worry about what other people think of me	0	1	2	3
23. I avoid watching scary movies and TV shows	0	1	2	3
24. My heart races or skips beats	0	1	2	3
25. I stay away from things that upset me	0	1	2	3
26. I sleep next to someone from my family	0	1	2	3
27. I feel restless and on edge	0	1	2	3
28. I try to do everything exactly right	0	1	2	3
29. I worry about doing something stupid or embarrassing	0	1	2	3
30. I get scared riding in the car or on the bus	0	1	2	3
31. I feel sick to my stomach	0	1	2	3
32. If I get upset or scared, I let someone know right away	0	1	2	3
33. I get nervous if I have to perform in public	0	1	2	3
34. Bad weather, the dark, heights, animals, or bugs scare me	0	1	2	3
35. My hands shake	0	1	2	3
36. I check to make sure things are safe	0	1	2	3
37. I have trouble asking other kids to play with me	0	1	2	3
38. My hands feel sweaty or cold	0	1	2	3
39. I feel shy	0	1	2	3

Thank you for completing the questionnaire.

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Printed in Canada CDSP

Client ID: _____ Age: _____ Birthdate: _____ <small>mm/dd/yyyy</small> Grade: _____ Gender: Male Female Today's date: _____ <small>mm/dd/yyyy</small>	 <h1 style="margin: 0;">CDI</h1> <h2 style="margin: 0;">Short Version</h2>	Maria Kovacs, Ph.D.
--	--	---------------------

Kids sometimes have different feelings and ideas.

This form lists the feelings and ideas in groups. From each group of three sentences, pick one sentence that describes you *best* for the past two weeks. After you pick a sentence from the first group, go on to the next group.

There is no right or wrong answer. Just pick the sentence that best describes the way you have been recently. Put a mark like this next to your answer. Put the mark in the box next to the sentence that you pick.

Here is an example of how this form works. Try it. Put a mark next to the sentence that describes you *best*.

Example:

I read books all the time.
 I read books once in a while.
 I never read books.

Remember, pick out the sentences that describe you best in the PAST TWO WEEKS.

Item 1 <input type="checkbox"/> I am sad once in a while. <input type="checkbox"/> I am sad many times. <input type="checkbox"/> I am sad all the time.	Item 6 <input type="checkbox"/> Things bother me all the time. <input type="checkbox"/> Things bother me many times. <input type="checkbox"/> Things bother me once in a while.
Item 2 <input type="checkbox"/> Nothing will ever work out for me. <input type="checkbox"/> I am not sure if things will work out for me. <input type="checkbox"/> Things will work out for me O.K.	Item 7 <input type="checkbox"/> I look O.K. <input type="checkbox"/> There are some bad things about my looks. <input type="checkbox"/> I look ugly.
Item 3 <input type="checkbox"/> I do most things O.K. <input type="checkbox"/> I do many things wrong. <input type="checkbox"/> I do everything wrong.	Item 8 <input type="checkbox"/> I do not feel alone. <input type="checkbox"/> I feel alone many times. <input type="checkbox"/> I feel alone all the time.
Item 4 <input type="checkbox"/> I hate myself. <input type="checkbox"/> I do not like myself. <input type="checkbox"/> I like myself.	Item 9 <input type="checkbox"/> I have plenty of friends. <input type="checkbox"/> I have some friends but I wish I had more. <input type="checkbox"/> I do not have any friends.
Item 5 <input type="checkbox"/> I feel like crying every day. <input type="checkbox"/> I feel like crying many days. <input type="checkbox"/> I feel like crying once in a while.	Item 10 <input type="checkbox"/> Nobody really loves me. <input type="checkbox"/> I am not sure if anybody loves me. <input type="checkbox"/> I am sure that somebody loves me.

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TEST DIRECTIONS:

The following pages contain a list of statements that young people use to describe themselves. They are printed here to help you in describing your feelings and attitudes. Try to be as honest and serious as you can in marking the statements since the results will be used to help your counselor learn about you and help you plan your future.

Do not be concerned if a few statements seem unusual; they are included to help teenagers with many types of problems. If you agree with a statement or decide that it describes you, fill in the **T** on the separate answer sheet to mark it True (**T** **F**). If you disagree with a statement or decide that it does not describe you, fill in the **F** to mark it False (**T** **F**). Try to mark every statement, even if you are not sure of your choice. If you have tried your best and still cannot decide, mark the **F** for False.

There is no time limit for completing the inventory, but it is best to work as rapidly as is comfortable for you.

Use a soft, black lead pencil and make a heavy dark mark when filling in the circles. If you make a mistake or change your mind, please erase the mark fully and then fill in your new choice.

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. I would much rather follow someone than be the leader. 2. I'm pretty sure I know who I am and what I want in life. 3. I don't need to have close friendships like other kids do. 4. I often resent doing things others expect of me. 5. I do my very best not to hurt people's feelings. 6. I can depend on my parents to be understanding of me. 7. Some people think of me as a bit conceited. 8. I would never use drugs, no matter what. 9. I always try to do what is proper. 10. I like the way I look. 11. Although I go on eating binges, I hate the weight I gain. 12. Nothing much that happens seems to make me either happy or sad. 13. I seem to have a problem getting along with other teenagers. 14. I feel pretty shy telling people about how I was abused as a child. 15. I've never done anything for which I could have been arrested. 16. I think everyone would be better off if I were dead. 17. Sometimes, when I'm away from home, I begin to feel tense and panicky. 18. I usually act quickly, without thinking. 19. I guess I'm a complainer who expects the worst to happen. | <ol style="list-style-type: none"> 20. It is not unusual to feel lonely and unwanted. 21. Punishment never stopped me from doing whatever I wanted. 22. Drinking seems to have been a problem for several members of my family. 23. I like to follow instructions and do what others expect of me. 24. I seem to fit in right away with any group of new kids I meet. 25. So little of what I have done has been appreciated by others. 26. I hate the fact that I don't have the looks or brains I wish I had. 27. I like it at home. 28. I sometimes scare other kids to get them to do what I want. 29. Although people tell me I'm thin, I still feel overweight. 30. When I have a few drinks I feel more sure of myself. 31. Most people are better looking than I am. 32. I often fear I'm going to panic or faint when I'm in a crowd. 33. I sometimes force myself to vomit after eating a lot. 34. I often feel as if I'm floating around, sort of lost in life. 35. Most other teenagers don't seem to like me. 36. When I have a choice, I prefer to do things alone. 37. Becoming involved in other people's problems is a waste of time. |
|---|--|

38. I often feel that others do not want to be friendly to me.
39. I don't care much what other kids think of me.
40. I used to get so stoned that I did not know what I was doing.
41. I don't mind telling people something they won't like hearing.
42. I see myself as falling far short of what I'd like to be.
43. Things in my life just go from bad to worse.
44. As soon as I get the impulse to do something, I act on it.
45. I've never been called a juvenile delinquent.
46. I'm often my own worst enemy.
47. Very few things or activities seem to give me pleasure.
48. I always think of dieting, even when people say I'm underweight.
49. I find it hard to feel sorry for people who are always worried about things.
50. It is good to have a routine for doing most things.
51. I don't think I have as much interest in sex as others my age.
52. I don't see anything wrong with using others to get what I want.
53. I would rather be almost anyplace but home.
54. I sometimes get so upset that I want to hurt myself seriously.
55. I don't think I was sexually molested when I was a young child.
56. I am a dramatic and showy sort of person.
57. I can hold my beer or liquor better than most of my friends.
58. Parents and teachers are too hard on kids who don't follow rules.
59. I like to flirt a lot.
60. To see someone suffering doesn't bother me.
61. I don't seem to have much feeling for others.
62. I enjoy thinking about sex.
63. I worry a great deal about being left alone.
64. I often feel sad and unloved.
65. I'm supposed to be thin, but I feel my thighs and backside are much too big.
66. I often deserve it when others put me down.
67. People put pressure on me to do more than is fair.
68. I think I have a good body.
69. I feel left out of things socially.
70. I make friends easily.
71. I'm a somewhat scared and anxious person.
72. I hate to think about some of the ways I was abused as a child.
73. I'm no different from lots of kids who steal things now and then.
74. I prefer to act first and think about it later.
75. I've gone through periods when I smoked pot several times a week.
76. Too many rules get in the way of my doing what I want.
77. When things get boring, I like to stir up some excitement.
78. I will sometimes do something cruel to make someone unhappy.
79. I spend a lot of time worrying about my future.
80. I often feel I'm not worthy of the nice things in my life.
81. I sort of feel sad when I see someone who's lonely.
82. I eat little in front of others; then I stuff myself in private.
83. My family is always yelling and fighting.
84. I sometimes feel very unhappy with who I am.
85. I don't seem to enjoy being with people.
86. I have talents that other kids wish they had.
87. I'm very uncomfortable with people unless I'm sure they really like me.
88. Killing myself may be the easiest way of solving my problems.
89. I sometimes get confused or upset when people are nice to me.
90. Drinking really seems to help me when I'm feeling down.
91. I rarely look forward to anything with much pleasure.
92. I'm very good at making up excuses to get out of trouble.
93. It is very important that children learn to obey their elders.
94. Sex is enjoyable.
95. No one really cares if I live or die.
96. We should respect our elders and not think we know better.
97. I sometimes get pleasure by hurting someone physically.
98. I often feel lousy after something good has happened to me.
99. I don't think people see me as an attractive person.

Please go on to the next page

100. Socially, I'm a loner and I don't mind it.
101. Almost anything I try comes easy to me.
102. There are times when I feel that I'm a much younger person than I actually am.
103. I like being the center of attention.
104. If I want to do something, I just do it without thinking of what might happen.
105. I'm terribly afraid that no matter how thin I get, I will start to gain weight if I eat.
106. I won't get close to people because I'm afraid they may make fun of me.
107. More and more often I have thought of ending my life.
108. I sometimes put myself down just to make someone else feel better.
109. I get very frightened when I think of being all alone in the world.
110. Good things just don't last.
111. I've had a few run-ins with the law.
112. I'd like to trade bodies with someone else.
113. There are many times when I wish I were much younger again.
114. I have not seen a car in the last ten years.
115. Other people my age seem more sure than I am of who they are and what they want.
116. Thinking about sex confuses me much of the time.
117. I do what I want without worrying about its effect on others.
118. Lots of things that look good today will turn out bad later.
119. Others my age never seem to call me to get together with them.
120. There have been times when I could not get through the day without some pot.
121. I make my life worse than it has to be.
122. I prefer being told what to do rather than having to decide for myself.
123. I have tried to commit suicide in the past.
124. I go on eating binges a couple of times a week.
125. Lately, little things seem to depress me.
126. I flew across the Atlantic 30 times last year.
127. There are times I wish I were someone else.
128. I don't mind pushing people around to show my power.
129. I'm ashamed of some terrible things adults did to me when I was young.
130. I try to make everything I do as perfect as possible.
131. I am pleased with the way my body has developed.
132. I often get frightened when I think of the things I have to do.
133. Lately, I feel jumpy and nervous almost all the time.
134. I used to try hard drugs to see what effect they'd have.
135. I can charm people into giving me almost anything I want.
136. Many other kids get breaks I don't get.
137. People did things to me sexually when I was too young to understand.
138. I often keep eating to the point that I feel sick.
139. I will make fun of someone in a group just to put them down.
140. I don't like being the person I've become.
141. I seem to make a mess of the good things that come my way.
142. Although I want to have friends, I have almost none.
143. I am glad that feelings about sex have become a part of my life now.
144. I'm willing to starve myself to be even thinner than I am.
145. I'm very mature for my age and know what I want to do in life.
146. In many ways I feel very superior to most people.
147. My future seems hopeless.
148. My parents have had a hard time keeping me in line.
149. When I don't get my way, I quickly lose my temper.
150. I often have fun doing certain unlawful things.
151. I guess I depend too much on others to be helpful to me.
152. When we're having a good time, my friends and I can get pretty drunk.
153. I feel lonely and empty most of the time.
154. I feel pretty aimless and don't know where I'm going.
155. Telling lies is a pretty normal thing to do.
156. I've given thought to how and when I might commit suicide.
157. I enjoy starting fights.
158. There are times when nobody at home seems to care about me.
159. It is good to have a regular way of doing things so as to avoid mistakes.
160. I probably deserve many of the problems I have.

The MSTA-6 has not been included due to copyright restrictions.

The Child Attachment Interview

This is an interview about you and your family. I am going to ask you some questions about yourself first and then I will ask questions about your relationship with your parents. For each question I will ask you to give me some examples. This interview is not a test, and there are no right or wrong answers. I would just like you to tell me what you and your family are like, from your point of view. The interview will last something like half an hour, maybe a bit more.

1 Can you tell me about the people in your family?

If the child's parents are separated or divorced, ask about step-parents. It is important to establish who the child considers to be the primary caregivers and ask all subsequent questions about them. It may mean that you ask not only about the biological parents but also about the step mum or grandmother.

2 Please describe yourself to me. (If child seeks clarification, ask them to describe themselves in whatever way they wish)

Now please tell me three words that describe yourself, the type of person you are.

1..... 2..... 3.....

a) Ask for specific examples to support each adjective, i.e. "can you give me an example of when you felt" 1..... 2..... 3.....

Prompts: After each example, prompt the child as appropriate, focussing on any specific relationship episodes.

3 Can you tell me three words to describe your relationship with your mum, that is, what it's like to be with your mum?

1..... 2..... 3.....

a) Ask for specific examples to support each adjective, i.e. "Tell me about a time when you felt 1..... 2..... 3..... with her.

Prompts: After each example, prompt the child for more detailed description of the relationship episode as necessary.

4 What happens when your Mum gets cross with you or tells you off?

a) Prompt: If you've done something wrong or done something to make her cross with you, what does she usually say or do? (if child says this has never happened, accept and move on.

Ask for a specific example, can say “tell me the last time mum got cross or upset with you”.

- b) How did you feel when that happens?**
- c) How did you think your mum feels when that happens?**
- d) Why do you think she does _____ (whatever the child say that the mother does).**

Prompts: If necessary and you think it may help the child to tell the story, you can add prompts such as: Do you know why she tells you off or what you have done wrong? Do you think its fair?

5 Can you tell me three words to describe your relationship with your Dad, what it’s like to be with your Dad?

1..... 2..... 3.....

- a) Ask for specific examples to support each adjective, i.e. “Tell me about a time when you felt 1..... 2..... 3..... with him.

Prompts: After each example, prompt the child for more detailed description of the relationship episode as necessary.

6 What happens when your Dad gets cross with you or tells you off?

- a) Prompt: If you’ve done something wrong or done something to make him cross with you, what does she usually say or do? (if child says this has never happened, accept and move on.**

Ask for a specific example, can say “tell me the last time Dad got cross or upset with you”.

- e) How did you feel when that happens?**
- f) How did you think your Dad feels when that happens?**
- g) Why do you think she does _____ (whatever the child say that the mother does).**

Prompts: If necessary and you think it may help the child to tell the story, you can add prompts such as: Do you know why she tells you off or what you have done wrong? Do you think its fair?

7 Can you tell me about a time when you were upset and wanted help?

Prompt: Prompt for a specific example of when child felt upset or misunderstood- if possible in the family/attachment context. If the child says it has not happened, accept that and carry on.

- 8 Do you ever feel that your parents don't really love you?**
a. Prompt: Can you tell me when you felt like that?
b. Do you often feel like that?
- 9 What happens when you're ill? (Give examples if necessary, e.g. had to stay in bed or off school because of an illness).**
Prompt: For a specific example i.e. "Can you tell me what happened? What did you do? Does anyone stay at home with you when you're ill?"
- 10 What happens when you get hurt?**
Prompt for a specific example, i.e. "Can you tell me about a time when you were hurt? What did you do? Who was there? Obtain examples to make it clear you mean physical injury, accidents. If the episode was not at home or with caregivers, ask whether she told the parents later, how they reacted.
- 11 Has anything really big happened to you that upset, scared or confused you?**
- 12 Has anyone important to you ever died? Has a pet you cared about died?**
a what happened? Was the death sudden? Was there a funeral?
b How did you feel about it?
c How do you think it made other people feel? (e.g. mum, Dad, siblings)
- 13 Is there anyone that you cared about who isn't around anymore?**
a How did it feel when they went away? Did things change much?
b Do you keep in touch? If yes, how, if no, why do you think that is?
- 14 Have you ever been away from your parents for longer than a day?**
Prompts: Prompt to get a clear idea of the incident the child is describing (i.e. when, who they were with, where to, how long for, what they did)
a What was it like to be away from your parent/s
b What do you think it was like for your mum and dad?
c (If appropriate) What was it like seeing mum and dad again
- 15 Do your parents sometimes argue?**
Prompt: For a specific example say "can you tell me about the last time your parents were arguing?"
a How do you feel? Why do you feel like that?

b Why do you think they do that?

c How do you think they feel?

d Do they know how you feel?

16 a In what ways would you like to be like your mum?

b In what ways would you not like to be like your mum?

c In what ways would you like to be like your dad?

d In what ways would you not like to be like your dad?

17 Ending question: If you could make three wishes for when you are older what would they be?

Appendix G: Parent Pack

Participant _____

ABOUT YOU

Today's Date

What is your date of birth?

What is the postcode of the home that you usually live?

What level of education have you completed?

None

Primary school
yr 1-7

High school
yr 8-10

High school
yr 11-12

Trade
qualification

Certificate/
diploma

Degree or
higher

Are you currently employed?

Yes

No

If so, what is your job?

Have you had an eating disorder?

Yes

No

If yes please provide a description of the type of eating disorder (Anorexia Nervosa, Bulimia) and length of illness.

DASS21 Name: Date:

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

- 0 Did not apply to me at all
 1 Applied to me to some degree, or some of the time
 2 Applied to me to a considerable degree, or a good part of time
 3 Applied to me very much, or most of the time

- | | | |
|----|--|---------|
| 1 | I found it hard to wind down | 0 1 2 3 |
| 2 | I was aware of dryness of my mouth | 0 1 2 3 |
| 3 | I couldn't seem to experience any positive feeling at all | 0 1 2 3 |
| 4 | I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion) | 0 1 2 3 |
| 5 | I found it difficult to work up the initiative to do things | 0 1 2 3 |
| 6 | I tended to over-react to situations | 0 1 2 3 |
| 7 | I experienced trembling (eg, in the hands) | 0 1 2 3 |
| 8 | I felt that I was using a lot of nervous energy | 0 1 2 3 |
| 9 | I was worried about situations in which I might panic and make a fool of myself | 0 1 2 3 |
| 10 | I felt that I had nothing to look forward to | 0 1 2 3 |
| 11 | I found myself getting agitated | 0 1 2 3 |
| 12 | I found it difficult to relax | 0 1 2 3 |
| 13 | I felt down-hearted and blue | 0 1 2 3 |
| 14 | I was intolerant of anything that kept me from getting on with what I was doing | 0 1 2 3 |
| 15 | I felt I was close to panic | 0 1 2 3 |
| 16 | I was unable to become enthusiastic about anything | 0 1 2 3 |
| 17 | I felt I wasn't worth much as a person | 0 1 2 3 |
| 18 | I felt that I was rather touchy | 0 1 2 3 |
| 19 | I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat) | 0 1 2 3 |
| 20 | I felt scared without any good reason | 0 1 2 3 |
| 21 | I felt that life was meaningless | 0 1 2 3 |

PDI-R2-S

PARENT DEVELOPMENT INTERVIEW

REVISED

SHORT VERSION

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This interview is an adaptation of the Parent Development Interview (Aber, Slade, Berger, Bresgi, & Kaplan, 1985). This protocol may not be used or adapted without written permission from Arietta Slade, Ph.D., The Psychological Center, R8/130, The City College of New York, 138th Street & Convent Avenue, New York, NY 10031, asladephd@earthlink.net .

PARENT DEVELOPMENT INTERVIEW-REVISED SHORT VERSION**A. View of the Child.**

Today we're going to be talking about you and your child. We'll begin by talking about your child and your relationship, and then a little about your own experience as a child. Let's just start off by your telling me a little bit about your family – who lives in your family? How many children do you have? What are their ages? (Here you want to know how many children, ages, including those living outside the home, parents, other adults living in home. If atypical rearing situation (foster care) history of foster placements, who have been primary caregivers, etc.; likewise, if there appears to be a history of divorce, or multiple moves, get some of the detail of that just to create a context for understanding the interview.)

1. I'd like to begin by getting a sense of the kind of person your child is... so, could you get us started by choosing 3 adjectives that describe your child. (Pause while they list adjectives.) Now let's go back over each adjective. Does an incident or memory come to mind with respect to ____? (Go through and get a specific memory for each adjective.)
2. And, what about you, what kind of person are you? Can you choose 3 adjectives that describe you. (Pause while they list adjectives.) Now let's go back over each adjective. Does an incident or memory come to mind with respect to ____? (Go through and get a specific memory for each adjective.)
3. OK, now let's return to your child... In an average week, what would you describe as her favourite things to do, her favourite times?
4. And the times or things she has most trouble with?
5. What do you like most about your child?
6. What do you like least about your child?

B. View of the Relationship

1. I'd like you to choose 3 adjectives that you feel reflect the relationship between you and (your child). (Pause while they list adjectives.) Now let's go back over each adjective. Does an incident or memory come to mind with respect to ____? (Go through and get a specific memory for each adjective.)
2. Describe a time in the last week when you and (your child) really "clicked". (Probe if necessary: Can you tell me more about the incident? How did you feel? How do you think (your child) felt?)
3. Now, describe a time in the last week when you and (your child) really weren't "clicking". (Probe if necessary: Can you tell me more about the incident? How did you feel? How do you think (your child) felt?)
4. How do you think your relationship with your child is affecting his/her development or personality?

C. Affective Experience of Parenting

1. Now, we're going to talk about your feelings about being a parent. Can you start out by choosing 3 adjectives that describe you as a parent. (Pause while they list adjectives.) Now let's go back over each adjective. Does an incident or memory come to mind with respect to ____? (Go through and get a specific memory for each adjective.)
2. What gives you the most joy in being a parent?
3. What gives you the most pain or difficulty in being a parent?
4. When you worry about (your child), what do you find yourself worrying most about?
5. How has having your child changed you?
6. Tell me about a time in the last week or two when you felt really angry as a parent. (Probe, if necessary: What kinds of situations make you feel this way? How do you handle your angry feelings?)
- 6a. What kind of effect do these feelings have on your child?
7. Tell me about a time in the last week or two when you felt really guilty as a parent. (Probe, if necessary: What kinds of situations make you feel this way? How do you handle your guilty feelings?)
- 7a. What kind of effect do these feelings have on your child?
8. Tell me about a time in the last week or two when you felt you really needed someone to take care of *you*. (Probe, if necessary: What kinds of situations make you feel this way? How do you handle your needy feelings?)
- 8a. What kind of effect do these feelings have on (your child?)
9. When your child is upset, what does he/she do? How does that make you feel? What do you do?
10. Does (your child) ever feel rejected?

D. Parent's Family History

Now I'd like to ask you a few questions about your own parents, and about how your childhood experiences might have affected your feelings about parenting....

3. How do you think your experiences being parented affect your experience of being a parent now?
4. How do you want to be like and unlike your mother as a parent?
5. How about your father?
6. How are you like and unlike your mother as a parent?
7. How about your father?

E. Separation/Loss

1. Now, I'd like you to think of a time you and your child weren't together, when you were separated. Can you describe it to me? (Probe: What kind of effect did it have on the child? What kind of effect did it have on you?) Note: If the parent describes something other than a recent (i.e. within one year) separation, repeat the question asking for a more recent.
2. Has there ever been a time in your child's life when you felt as if you were losing her just a little bit? What did that feel like for you?
3. Is there anyone very important to you who (your child) doesn't know but who you wish she was close to?
4. Do you think there are experiences in your child's life that you feel have been a setback for her?

F. Looking Behind, Looking Ahead

1. Your child is _____ already, and you're an experienced parent (modify as appropriate). If you had the experience to do all over again, what would you change? What wouldn't you change?

Anything else you'd like to add? Thank you very very much!

Appendix H: Excerpts to Depict Adolescent Attachment

Styles

In order to examine the profiles of attachment styles of adolescents with eating disorders, descriptions of the nature of narratives for the different attachment styles and illustrative quotes from interviews are represented in the following sections.

Participant's speech (in italics) is transcribed verbatim and interviewer's speech is at times abbreviated.

Secure Attachment Style

Narratives from securely attached adolescents were characterised by the ability to explore and reflect on their relationships with their parents, showing autonomy of thought and a clear valuing of attachment relationships.

The following excerpt is of a 16 year old girl with restricting AN talking about her relationship with her mother. Throughout the interview she was very coherent and collaborative in describing her attachment experiences and relationships with little idealisation or preoccupation. She expresses clear valuing of her attachment relationships and other familial and peer relationships. She remains emotionally open throughout and does not shut down when discussing more conflictual or painful experiences.

I: And how do you feel when she does those sorts of things for you?

C: Um, I feel very close to my mum so I feel like she really understands me. I'm trying to understand, like I think it's hard when you have a parent who's had this whole life before you, and you only know part of them as (as a mother) not as like a young person...so yeah

I: And what about relaxed, can you tell me about a time when you felt relaxed with her?

C: Um, I think because she sort of knows me quite well, like if I'm grumpy she's not gonna pester me you know, why are you grumpy?!, she sort of understands that I get upset sometimes so she's...you know I can be myself with her I don't have to put on a façade of all happy and joyful...or putting a lot of energy into things that I don't really wanna do when I have to sometimes do that with my friends, because you know sometimes you just feel down and that's it but I feel very relaxed to be...genuine with my mum and not put on an act

Relationship with Father

I: And what about safe, can you tell me about a time when you felt safe with him?

C: Um, I know like despite the fact that my dad is really quiet and we don't talk about much and we don't have a lot of similar interests, that he really cares about me so I always feel very you know, safe with him because I know he's looking out for me and he does really like small things for me that are really like considerate, like you know, like if it's really early in the morning I'll make him go out in the cold and get the newspaper or get me a coffee or like if I'm feeling tired or you know just really exhausted or emotional, you know maybe something's gone wrong in the day he'll pick me up and take me home and, I dunno I've just felt always very safe that if I wasn't feeling well at all my dad would look after me. You know he might not be able to like understand why I'm angry or upset but he'd still you know make sure I can feel better sort of thing.

The following excerpt is from a 15 year old with a secure attachment relationship with her father:

I: Now can you tell me three words to describe your relationship with your dad?

C: Um ... wow, this is hard .. um .. loving .. um .. annoying and um ... ah I don't know ah fun.

I: So, do you think you can tell me about a time when you felt loving with your dad?

C: Um just when he tries his best to um like last night during dinner we went out and I was struggling so, we were with a big group of people and he just came and sat next to me and sort of just talked me through it and that was really nice and he tries his best to help me when I'm struggling.

I: So you say it was really nice, how did it feel for you?

C: Well, I felt a bit lonely before he did that and then I sort of felt like I was being pulled back into the group.

Securely attached adolescents also showed particular valuing in times of upset or hurt, and reflected on the impact of their attachment figures' response in that time. For example below:

I: Okay. Now can you think back to a time when you were upset and wanted help? And can you tell me about it.

C: *Ah . yeah. Um I found out something about one of my friends that I had no clue it was going on or anything. Um, she had been depressed for a while and then she did something, you can probably realise what that was. And um, yeah she ended up in hospital and I found out about it and I didn't know what to do and so I just kind of, I wasn't going to tell my parents at first because I wasn't sure what they would say and what they would think. But I got to a point where I was like I can't deal with this by myself so I ended up kind of out on the couch in tears next to my mum with my dad sitting across from me and yeah.*

I: Okay and how did that whole situation make you feel?

C: *Um, I was really scared that something like that had happened. And I was just, I felt really lonely and I didn't know, almost like .. almost lost. Kind of a lost feeling. Like I didn't know what was going on almost.*

I: Right.

C: *Well I knew what was going on but I didn't know how, like understand why it was happening. Yeah.*

I: Yeah. It does sound like a very scary time.

C: *Yeah.*

I: And then what was it that kind of made you tell your parents do you think?

C: *Um, I was just scared and those are the people that I rely on when I feel like that so I went to them.*

I: Okay and what was it like when you were speaking to them and crying on the couch?

C: *Um, I was worried about what they would say and what they would think of the friend. Um, but ah . I was just really relieved when I finally got it out.*

I: And how did they respond?

C: *My mum was just really caring. She gave me a hug and looked after me til I was you know, ready to go to bed again. And um, my dad just kind of held my hand and, oh my mum said a few things like you don't need to worry, she will be fine. And just kind of comforting things. And my dad was just there I guess.*

I: Yeah how do you think they felt about the circumstances?

C: *I think they were both really surprised and yeah that's completely understandable. Um, and I think my mum was probably worried. And my dad more concerned . but not so worried because he knows I can kind of deal with stuff more than mum.*

Secure adolescents are able to openly acknowledge the impact of separation from their caregivers. Below is an excerpt of a 15 year old ED patient reflecting on what it was like to return from a hospital admission.

I: And how did you feel in that situation? Having your dad speak to you about that?

C: Closer to him. We hadn't been able to talk for a couple of weeks. I hadn't been able to have a good conversation with my family for a couple of weeks because I had my roommate had people over constantly. Which I didn't mind, I was cool with that but I didn't get to talk about personal things with them.... It was nice to have a one on one with him..

I: Okay, what, what do you think that was like for your dad?

C: He said it was really nice to talk to me again because he hadn't been able to see where I'm at too. I think he felt closer to me as well.

Dismissing Attachment Style

Adolescents classified as having dismissing attachment minimised the need for attachment figures and instead emphasised their need for self-sufficiency, particularly during times of upset, illness or hurt.

For example, a 14 year old girl with an ED when asked what happens when she is ill or hurt responded:

I: And what happens when you're sick? Like if you had to stay at home from school what would happen in your family?

C: .. Um .. they would carry on with their day.

I: Would someone stay home with you or?

C: My parents work at home.

I: Okay. And are they kind of, would they be near you, around you?

C: Yes.

I: Can you tell me about the last time you were sick and had to stay at home from school?

C: Yesterday.

I: And so what happened yesterday?

C: Um .. I did my own thing and they worked.

Participants coded with dismissing attachment patterns also displayed difficulty with discussing episodes of vulnerability and need. For example, a 16 year old patient with Atypical AN discussing an episode of vulnerability.

I: Can you tell me about a time when you were upset and wanted help?

C: *Well I don't really want help right now but ... I don't know. I sort of do but I sort of don't. It's very confusing.*

I: So it feels confusing for you?

C: *Yeah.*

I: Any other feelings or about wanting help?

C: *(whispers) Not really.*

I: No. Okay And how do you think your parents feel about you wanting help?

C: .. *Did you say wanting or not wanting?*

I: Oh wanting or not wanting, so either one.

C: .. *Well they really want me to get help and just do the best that I can.*

Participants classified as having dismissing attachment minimised the impact of separation from their parents, for example a 14 year old girl describing times of separation from her parents.

I: OK. Um have you ever been away from your parents for longer than a day?

C: *Yeah, heaps of times*

I: Can you tell me about a time when you were away for a while, separated

C: *Um school camps*

I: How long do they usually go for?

C: *Maybe four, five days*

I: Where did you go on your last one?

C: *Uh somewhere (laughs) sorry I can't remember*

I: It's fine, OK. And what was it like to be away from your parents?

C: *Um fine, I didn't mind it at all*

I: OK. And what do you think it was like for your mum and dad?

I: *Um I think they're completely comfortable with it as well*

Dismissing adolescents demonstrated 'normalising' behaviour; they dismissed difficult episodes as normal, thereby diminishing the importance of the attachment relationship.

I: Can you tell me about a time you were upset and wanted help?

C: *Um (pause) probably last Thursday was a pretty bad day so*

I: Okay, can you tell me a little bit about last Thursday?

C: *Um, just had lots going on and everything just seemed to catch up to me that day, and like yeah, it all just seemed to affect me and I was just having a bad day...yeah but...*

I: What usually happens when you feel upset and you need help?

C: *Um, well I saw (therapist) that day so that was good. Um and I got home and my mum's always, like I know I can always talk to her so that was good*

I: Yep, so you were able to talk to her about it at all?

C: *Yeah going home and being able to know there was someone to talk to was good*

I: and how did she respond?

C: *Um, she was probably I think in a bit of shock about some of the things that I said, or the way I was feeling but I guess that's natural ha (laughs)...*

Another feature of dismissing narratives was the presence of 'blocking' techniques where participants denied recalling incidents, sometimes without any apparent effort to recall. For example, this 15 year old girl with Atypical AN who demonstrated strong avoidance and dismissal.

I: *What about your relationship with your dad, can you pick three words to describe your relationship with him?*

C: *Um ... I don't .. complicated, I don't know.*

I: *Yep. So complicated. Does anything else spring to mind when you think about what it's like to be with your dad?*

C: *I don't know. It's not always pleasant.*

I: *So it's tough? Anything else? Okay. Um can you tell me about a time when you felt like things were complicated with your dad?*

C: *A lot.*

I: *Yeah. In what situations?*

C: *Um ah I don't know really how to describe it. Just yeah no particularity's ... can't really particularly explain the situations.*

Finally, participants with dismissing attachment displayed idealising of their attachment figures, whereby positive adjectives could not be substantiated, or were at odds with negative episodes throughout the narrative. In this example, a female ED

patient (aged 16) was asked to provide three words to describe her relationship with her mother:

I: Can you tell me three words to describe your relationship with your mum, so that is what's it like to be with your mum?

C: *Um ... it's a good relationship. Um, like caring um like, protective.*

I: Can you tell me about a time when you felt good with her?

C: *Um hmm (tut) I can't think of any specific time, just like, generally most of the time we are, it's like, good.*

I: Can you tell me about a specific time when you felt good with her?

C: *Um hmm (tut) I can't think of any specific time, just like, generally most of the time we are, it's like, good.*

I: And what makes it good?

C: *Hmm, just like I can like talk to her about anything and ... yeah.*

I: Can you tell me about a time when you felt caring with her?

C: *Um (laughs) like I can't think of any specific times (huh)*

I: What about protective?

C: *Um just like, at times when she would like like times when she'd make sure I had to be home at a certain time or something like that and then she's being protective of me. It's nice.*

Preoccupied Attachment Style

Narratives from participants with preoccupied attachment style were characterised by a fixation with attachment figures and attachment experiences, which resulted in long, emotionally-entangled descriptions of interactions with caregivers and often involved repetitive themes, often at a tangent from the question asked.

The following excerpt is from a 15 year old girl with AN:

I: Um, can you tell me about a time when you felt like things were bad with your mum?

C: *. Um like one morning for breakfast I couldn't decide what I wanted, like whether I wanted porridge or toast and eggs or what I wanted for breakfast. And then she just like yelled at me for not being able to decide what I want and then it just escalated from there.*

I: Okay and what does it look like in that situation when it escalates?

C: *Just a lot of yelling.*

I: Mmm. How does it sort of end?

C: Um, my dad comes in and yells and then mum leaves while he is yelling at me and then he carries on yelling at me until he is finished.

I: Mmm.

C: And then, yeah.

I: And so how does all of that yelling make you feel?

C: Well intimidated and scared and annoyed and angry.

I: Mmm. What do you think your dad is feeling when he comes onto the scene?

C: He is just angry because people are yelling at each other and he just comes in and yells at us (mmm)..Well he yells at me, not my mum. My mum leaves when he comes in.

I: Okay and what do you think your mum is feeling in that situation?

C: Angry and frustrated.

I: Mmm. Yeah okay. Um, what about angry, can you think of any other you know, situations where things have felt quite angry with your mum?

C: Not really. They are all like exactly the same.

I: So what's the common situation do you think where these things, where things kind of get tense or bad or angry?

C: Um, I don't know. It's always around food. But no matter what I do they just yell at me for something.

I: It must be really hard. Okay. Um, so there is not really anything, are there any other particular situations that remind you of that angry sense with your mum?

C: It's usually when I can't decide what to eat and I am struggling to eat something like if I am trying to eat something then she yells at me for struggling. (mmm) Or ... um ... if she thinks I haven't eaten enough in a day.

I: Yeah.

C: Or if she thinks I am giving her attitude because when she asks me when I tell her I usually give her attitude because I am angry at her for asking.

I: Yeah.

C: And . when she gives me something and I feel like eating something else instead. Like it's still equivalent, it's still the same, like but the dieticians say you can have this or this. And she gives me one and I say no I want the other, then she will yell at me for that. Yeah.

The following is excerpt from a 16 year old young woman with AN binge purge:

I: Can you give me a specific example of when your relationship with your mum was unpredictable?

C: Um ... well when I was in – when I was admitted to 4H a few weeks ago, when she first came to meet me or to take me to the hospital ...

I: Yep.

C: She was really, really angry about like why I was being admitted, like what I'd done and we were just fighting and stuff and then it was at like 10 o'clock at night and I was lying in bed there and she came over and she just sort of sat there and stroked my hair like she used to when I lived with her when I was little.

I: Yeah.

C: So I don't know. I don't see that side to her very often, like the old side of her.

I: Yeah.

C: I always see the sort of intense ones. So I always expect that but sometimes very rarely she's unpredictable in that she responds in the way I would like her to. (laugh)

The same 15 year old girl also rated as preoccupied attachment with her father.

I: Can you tell me about a time when things have felt close minded with your dad?

C: Kind of like the same as the breakfast one I was talking to you about. Like . he just came and yelled at me because I was telling mum that I wanted something else for breakfast. And he was really close minded. He didn't even ask what I was talking about or anything. And as soon as I tried to tell him he just yelled at me for being difficult and giving him trouble and not just doing what I am told, but he didn't even listen to me. (crying).

I: You felt hurt.

C: So yeah, he just doesn't listen to what you have to say. And you feel like, like once it was really early they wanted me to have like, I had only had breakfast at like nine because it was like the weekend, and then it was like 11 or quarter past 11 and they wanted me to have lunch and I was like oh I will just have lunch a bit later. And then he just goes off and yells at me. It was just like oh just do what you are told and just eat, eat what we tell you and eat when we tell you. But he didn't even listen to what I actually, what I was actually saying. He just assumed that I was just going to go off and get in trouble. He didn't actually listen to what I was saying.

I: Alright, and how does that make you feel in those times?

C: Kind of like not ignored but just small because like whatever I say doesn't get listened to.

This is an example of a 17 year old daughter coded with preoccupied attachment discussing her sadness at not getting what she wants from her mother.

C: I know that she feels, like, helpless and that concerned and stuff but - and I understand all that, I know she loves me but the things she says totally reverse anything that – any sort of sympathy or whatever I have for her and I don't want us to be fighting but you don't tell your daughter “oh why don't you just kill yourself” like just goes about it the completely wrong way and I'm just glad that I don't – I let it go over my head.

The following excerpt is from a 16 year old girl with Atypical AN describing how her mother has given up on her:

I: Um, I guess generally what it's like to be with her. How you would describe your relationship?

C: Pretty much just, she has given up on me, she lets me do what I want. Um, like even when I got admitted into 4H, which you know, it's the thing down there.

I: Yeah.

C: She was meant to search my room. She told them she did, she didn't even open my top drawer because she would have found out, like she has just given up on me and she lets me do what I want which is part of the .. probably because I pushed her so much

and I put her through too much stuff but that's pretty much it. Um, I would say it's like that so.

I: So she has given up?

C: Yeah, one thing. It's incredibly frustrating on my behalf. Um, because it's like, why can't you just, like this is more food wise, but why can't you just be a mother and help me? Because she just let's, she literally just lets me do what I want. She buys whatever I want, even if she knows, she knows when I'm, I'm just not, I'm not very well with that. But, yeah but it's also, she loves me, she really does and she worries so much but she just doesn't know how to control me. Or she, well she can't control me because I control me. But she doesn't know how to influence me.

I: Mmm.

C: Um, I will also say, probably with all of us it's very um .. ah ... I am trying to think of the right word. Kind of like .. she has tried to do it the easiest she possibly can. Like we grew up on sausages. We'd have sausages every night, and if we are lucky in bread. Like, just because she didn't want to cook, like kind of .. she is, five kids is definitely a hard job and she has definitely struggled with it and that's reflected in her mothering kind of thing.

Another feature typical of preoccupied styles in the clinical sample was where participants expressed criticism and disappointment towards their parents. Descriptions also included complaints and derogation against parents that went beyond developmentally appropriate need for autonomy from parents.

For example, an 17 year old with AN binge purge describing her relationship with her family:

I: Okay, so can you tell me a time when you felt there was a culture clash between you and your dad?

C: Um, when I ate with a spoon and a fork at a restaurant, and the rest of the family were eating with their hands, my little brother was making fun of me and I snapped, and I told everyone that I was civilised and didn't act like monkeys like the rest of them

The following excerpt is from a 15 year old girl with an Atypical AN asked to describe ways she did and did not want to be like her mother:

I: In what ways would you like to be like your mum?

C: *I don't think I wanna be like any aspect of her.. oh, she is carefree*

I: Carefree

C: *Carefree. But I don't wanna be that carefree to the extent that I wear bad clothes and don't care about myself*

I: In what ways would you not like to be like your mum?

C: *I wouldn't like to be lazy like her and I wouldn't like to be unconfident.. and I wouldn't like to be dependent on other people. She sees no problem in me accepting a car from a random guy, or going on holidays with a random guy, and all that...that doesn't sit well with me at all, I like to keep my morals, I like to earn things for myself*

Disorganised Attachment Style

Disorganised attachment was characterised by controlling-withholding behaviour, where participants demonstrated hostile, punitive behaviour.

For example: a 14 year old patient with AN who frequently blocked any discussion and actively withheld information. Rather than simply saying 'I don't know' or 'I can't remember' she stated "it's too complicated" or "I can tell you briefly" etc. The quality was more teasing the interviewer with what she could say but chose not to. An excerpt below:

I: Okay. Um now do you think you can describe yourself to me? Like could you potentially choose three words that describe yourself?

C: *No not three.*

I: Why is that? Why couldn't you choose three?

C: *Um because I might pick the wrong words.*

I: Right okay. Is that maybe giving a little bit away about your personality do you think?

C: *Mmm I don't know.*

I: Do you think that um well how would you describe yourself in general?

C: *I don't really know.*

I: You don't know? Could you say what type of person you are?

C: *No.*

In addition, the patients classified as having disorganised attachment often attempted to control the interview by interrupting the interviewer or trying to set limits for the interview by using statements such as "and that's it" or "and that's all I can say".

I: Okay what about your relationship with your mum? Do you think you could tell me three words that describe that relationship?

C: *Um three aww ... not really in three words like.*

I: Could you choose, is there one word that comes to mind? Like what it's like to be with your mum?

C: *Um.*

I: Just wondering if I could get a bit of a picture of what that's like for you.

C: *Mmm we have a close relationship I suppose.*

I: Yeah that's a good one. Yep. So it's close. Is there anything else?

C: *.. I don't know. It's a bit complicated.*

I: Would that be a word to describe it do you think?

C: *Um yep.*

I: Yep. So close and complicated. Do you think there's any other words that would describe what it's like to be with your mum?

C: *Nope.*

I: Okay. Can you tell me about a time that you felt close with your mum?

C: *... Um ... mmm . yeah lots of times. I can't really remember.*

I: Is there any sort of situation where you feel close to your mum?

C: *Um I don't really know.*

I: Can you give me three words to describe your relationship with your dad. What it's like to be with your dad.

C: *Do we have to talk about my dad because...*

I: No , not if you don't want to

C: *Yeah, I don't want to*

I: Can you give me a little explanation with me to explain why?

C: *He has like depression and mental illness, I don't want to talk about it..*

I: Can you describe your relationship with him

C: *No we don't really - have a relationship*

The following excerpt is pronounced by dysregulation and paranoid thinking is shown when an 18 year old with BN talks about the death of her dog and how her step mother deliberately killed him, being driven by hate of her.

C: Yep, my step mother ran my dog over on purpose

I: Oh!

C: Because she knows it's the most precious thing to me

I: Really?

C: Yep, um that dog was the offspring of my first ever dog, which also died of scabies so that was heartbreaking but um, it wasn't as heartbreaking as you know, someone intentionally killing your dog

I: You really think she did it on purpose?

C: (Promptly) I know she did it on purpose.

I: Why do you think she did that?

C: Because she hates me. She loves seeing me upset, she told me I was fat like ever since she met me. She was the one who encouraged me to be anorexic, when I stopped eating my meals she said 'oh well done your face looks skinny already'.

I: (gasps)

C: And um, when she find out I was cutting myself, like my wrists, she didn't do anything, she didn't say anything to Dad even though she tells him everything else...like the fact that I smoke, or if I've been on the back of some guy's motorbike

I: Mmm, wow

C: And um, yeah she hated that dog. She used to kick it when she thought I wasn't looking

I: So how did you feel about it when your dog died, and in the circumstances that he/she died in?

C: Pissed off and vengeful

I: Yep

C: I'm still trying to coming to terms with whether or not I'm going to do something to her about it

I: What were you thinking of?

C: Trying to decide between either waiting till my Dad passes away and just punching her out in front of everyone, or doing it sneakily and like pretty much just busting up all of her properties, all of her businesses

I: Wow

C: And like getting people to like, um, Fuck it up

I: Mmm. And how do you think it made your step mother feel? That whole circumstance of her running over the dog?

C: Empowered, she loves feeling empowered. Like, yeah, the last time I was in Bali I asked if she had a clean pair of knickers, and she goes 'yeah I think I have some extra big ones around here', things like that (wow) Yeah, she's evil

Below is an excerpt from a discourse from a 17 year old young girl with AN discussing her experience of sexual abuse by her step-father. This young girl was coded as disorganised and becomes markedly incoherent and very vague, reflecting possibly a lack of resolution considered part of attachment disorganisation. It is also an example of incongruent affect, where this patient was laughing and smiling while recounting a very negative event.

I: Has anything really big happened to you in your life that upset, scared or confused you?

*C: Um well there was a time um ... well this is part of the reason why we separated **okay** that um my stepdad had once um sexually abused me **oh gosh** and um he couldn't remember it though and that was the big thing **aww wow** cause he was really drunk and that's why it really confused and upset me **wow** that was a huge time cause it was my word against his and he is like "nup I didn't do it". But now I've come back, because even though he said ... this is the other reason why I came back, even though he said um I can't remember, I have no recall of it but if you say it happened then it happened **oh okay** so I think I just needed that closure **yeah sure** and I think he did that.*

I: Yeah.

C: So that was a big struggle because people didn't believe me.

I: That must have been terrible.

C: It was a bit terrible.

I: Even just to go through the experience was terrible.

C: *Yeah, but it was more the not ... no one believed me (laugh).*

I: Yeah that must be awful. So what was that like for you,

C: *I think, um well the incident it, it wasn't weird because I was like close with him. He always used to give me back tickles and stuff **yeah** and I was like only little and so it didn't really matter **mmm mmm** um so I don't know that wasn't really ... probably now like the later couple ... last couple of years I have been thinking yeah that's not right. **Mmm mmm**. And um I also just saying that ah when I was speaking to I rudely or something, mum was like 'ah you have to respect him' and then like it kept coming in my head why should I respect a man like that **yeah, yeah** so that's one of the reasons ... on I think ... no I accidentally told them, I impulsively told them **mmm** because um I don't know, I think whatever the reason I ran away from home and went to my friend's house **okay** and um and then mum was like 'oh I got the Police to find you', do, do, do and I'm like I'm fine if the Police come I'll tell them that my stepdad sexually abused me and that's why she wasn't*

I: Okay, so you're still working through a lot of that stuff I imagine?

C: *Um no so much any of that stuff anymore **hmm mmm** but it's just more of the relationship between I and us **yeah sure** because like I feel, I feel like being like everything that ... we've given him this massive second chance and he's thrown it back in our face by drinking. **Mmm** that's like um **yeah** the ... our family counsellor ... ah who is it?*

I: That you see here?

C: *Yeah. The bald guy.*

I: Oh C.

C: *C, there we go mind blank. **Yeah** Um yeah he says that it's not the drinking itself but somehow ah in my mind I have like tagged that and watching that to see how loyal he is **yeah, yeah, yeah** so I can't help that I've tagged that.*

Appendix I: Examples of Adolescent RF Discourse

Transcripts of the CAI discourse were examined for examples of low and high RF of the adolescent girls with eating disorders.

Good RF

I: So can you tell me about a time when you felt unstable with your mum?

C: *When my eating disorder first started out I felt separated from her because I didn't feel like I was getting the help I needed. I didn't feel like she was understanding that I was, I was struggling a lot and I wanted to stop it before it really started. I knew there was something wrong. I needed to, I needed to do something and I didn't feel like she was really believing me I guess when I was telling her I think there's something wrong here. And yeah and sometimes she'd go onto to when I'd tell what I had eaten and I was worried, you know, then she'd, she'd be like "oh it's okay I used to only have like one apple in a day, you're fine" and that hurt me. And there'd be times when I just thought she didn't really care that much, I guess. Well of course she does care, she really cares, she doesn't want anything to happen to me but there were times I felt like she was putting it off a bit. She said herself that she's an optimist and she's like "it's just a phase you'll get through it, it'll pass" and she always tells herself that but it's never the case with me.*

In the following excerpt a 17 year old with AN demonstrates good RF, indicating she is able to take on a developmental perspective.

I: Right.

C: *But um, yeah I guess I just copped the blame that time.*

I: Yeah. How did you feel in that moment?

C: *Ah, I suppose I was, I wasn't too annoyed. It wasn't a big argument or anything. But um I was a bit ticked off I guess. Yeah.*

I: Yeah. Um, how did you think your mum was feeling at that time?

C: *Oh, annoyed. Yeah. Um, and . probably disappointed in me that I didn't get my brother out of the water and get out myself.*

I: Alright. Why do you think she did that? Why do you think she blamed you?

C: *Oh, she thinks because I am the oldest I should have, I suppose, more responsibility and be the one looking out for my brothers and you know, being more in control and*

being more responsible and listening to her and obeying the rules and stuff more I guess.

I: Right. It's tough being the oldest isn't it?

C: *Sometimes. (joint laugh)*

The following excerpt is from a 16 year old girls with AN with good RF thinking specifically about her ED.

I: Okay. Alright. Would you say that there has been anything really big that's happened to you that's upset, scared or confused you?

C: *Ah, yeah. Like anorexia.*

I: Yeah.

C: *Yeah.*

I: And has that been something that's sort of been I guess around for a while for you or?

C: *Um, since the end of year eight.*

I: Yeah. And you are Year 10?

C: *Year 10. Yeah. But it's not bad anymore. It's just kind of something that I remember and that I know not to ever get into again. Yeah.*

I: Mmm mmm. The question, next question is how did you feel during that time?

C: *I, a lot of it I don't even remember. I just, but what I do remember, I felt angry and I felt lost and I was never happy. Like I just felt so confused and I was really scared for most of it. And whether it was I was scared of the anorexia or scared of like letting go of it and stuff. I was just so scared like the entire time. It's the worst time of my life.*

I: It certainly sounds pretty rough.

C: *Yeah.*

I: What do you reckon it was that helped you the most during that time?

C: *Um, my parent's support and, because they were just there for me through everything. No matter what I did they would always be there for me. Um, the hospital system at PMH, they were really good. Um, but a lot of the time it was my parents getting me through stuff. And then there was just . if it ever got really bad I would think about my parents. But sometimes it wasn't enough. And then there was this one time when I felt terrible and it's the worst I have ever felt in my life. I have never . like I hope I never feel anything like that again. But um even thinking about my parents didn't help me. So I got to the point where I was like, there is nothing good here for me anymore*

and you know, it all sucks but, and then I remembered my brothers. And that just . saved me I guess.

Low Reflective Functioning

Below is a transcript of an adolescent with AN who scored low RF on the CAI.

I: Right yeah. And how did you think your mum feels when that happens?

C: *I don't know, she's, she thinks she's right. I think there's something wrong with her like that.*

In this excerpt below the adolescent girl scored very low RF as she displayed no evidence of RF apart from referencing mental states when prompted.

I: And what happens when your dad gets cross with you or tells you off?

C: .. *He gets really angry.*

I: Okay. So what, when you say really angry what happens?

C: *He ends up saying things that he doesn't really mean and . that really hurts.(laugh)*

I: Yeah. And what, what do you do?

C: ... *I like at the time I defend myself but then afterwards I sort of just believe like what he said and just yeah.*

I: So when was the last time you guys had an argument or a fight?

C: ... *Probably like a month or two ago.*

I: And what happened in that instance?

C: *There was just a lot of yelling and, yeah.*

I: Yeah. And how did, and what were you guys arguing about and yelling about?

C: *Well there was like a lot of things like ... like like because I had just like, like being put on medication and I was very confused about a lot of stuff. It was like that day I just like said everything to dad and he got really angry so it just . turned into that.*

I: Yeah so how did you feel when that happened?

C: *I was sort of scared because I didn't really want him to know about anything so.*

I: Yeah and how did you think your dad felt when it happened?

C: ... *He was just really angry.*

I: Yeah. And why did you think your dad was sort of yelling at you when you were arguing?

C: .. *Well I guess he was confused too so he just came up with anything and just said it.*

Appendix J: Examples of Mother Low RF Discourse

Below are some excerpts of transcripts to demonstrate examples of Low RF displayed by mothers of adolescents with eating disorders

Low RF

I: Can you describe a time in the last week when you and G really weren't clicking?

M: *Um, not really.*

I: Nothing comes to mind?

M: *No.*

I: What gives you the most pain or difficulty in being a parent?

M: *What she's going through now.*

I: And when you worry about G what do you find yourself worrying most about?

M: *(crying).... It takes me a while to gather... Um, she's been carrying it for at least a year now. But, unknowingly for us, there's probably been another one or two years prior to that that we weren't aware of. But, yeah, about 12 months that we're aware of what's, 12, 8 9 months...it's been a while.*

Below is an excerpt from a mother's interview when asked to describe a time when she "clicked" with her child. This mother displays difficulty thinking about the mind of her child and thinking about emotional responses to the event.

M: *Well on the weekend we went to a shopping centre, which we've never been to before (I: **Yep**) so I think I went in about whether plenty of children. And um, yeah, we had a good time there and um yeah, awesome being there. I bought a watch which I haven't had a watch for about 15 years (I: **Oh wow**) that was a new one. So that was good (I: **yeah**) and excited about that. (I: **yeah**)*

I: And can you tell me and.. and when you were at the shopping centre together, how did you feel?

M: *Yeah um, good, hot there were millions of people there. There was a ridiculous amount of people there but we.. we had a good day because we haven't been there before. We were being excited and having a laugh at some of the people (I: **Mm**) yeah*

I: And how do you think H felt?

M: *Yeah she was good. Yeah (I: **yeah**) And we went to visit some friends who lived close by afterwards which was good*

I: How do you think your relationship with H is affecting her development or personality?

M: *I don't really think it's really affecting it.. I think she's yeah, I don't think it's affecting her.*

In the following except a mother is asked to reflect on how having her child has changed her:

I: How has having a child changed you?

M: *Um. I don't know, hard to say cuz I had her when I suppose I was about 21 and I hadn't even lived life so, for me it made me grow up really quickly.*

I: Yeah.

M: *No real regrets or anything, but just, yeah, make you more responsible and be wise to the world more quickly.*

And when asked to reflect on how she manages her guilty feelings:

I: If you do feel guilty or when you do, how do you usually handle those feelings?

M: *Just keep moving on. Yeah.. well you can't turn back time ..You can't turn back time. So, maybe you look at it say maybe if you did do it maybe you're more aware of it, so if I did do it maybe I wouldn't do it quite so hard. (laugh). Don't dwell on it, you can't dwell on anything.*

How has having (E) changed you?

M: .. I've learnt never to say never.. to accept.. families and children, for who they are not who we want them to be.

A mother asked to reflect on how her angry feelings impact her 15 year old daughter with Atypical AN

I: What kind of an effect do you think those angry feelings have on your daughter?

M: *Personally I don't think anything, I don't think she, particularly cares at this stage.*

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PDI-R2-S

PARENT DEVELOPMENT INTERVIEW
REVISED

SHORT VERSION

Arietta Slade
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Child Attachment Interview

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