Attachment and Eating Disorders: A Review of Current Research

Giorgio A. Tasca, PhD*
Louise Balfour, PhD

ABSTRACT
Objective: Attachment insecurity may confer risk for developing an eating disorder. We describe domains of attachment functioning that are relevant to eating disorders including: affect regulation, interpersonal style, coherence of mind, and reflective functioning. Research since 2000 on attachment and eating disorders related to these domains is reviewed.

Method: We searched MedLine/Pubmed and PsycINFO from January 2000 to February 2014 and kept articles that: were empirical, included adults with a diagnosed eating disorder, and used a standard attachment measure. We retained 50 relevant studies.

Results: Compared to controls, those with eating disorders had higher levels of attachment insecurity and disorganized mental states. Lower reflective functioning was specifically associated with anorexia nervosa. Attachment anxiety was associated with eating disorder symptom severity, and this relationship may be mediated by perfectionism and affect regulation strategies. Type of attachment insecurity had specific negative impacts on psychotherapy processes and outcomes, such that higher attachment avoidance may lead to dropping out and higher attachment anxiety may lead to poorer treatment outcomes.

Discussion: Research to date suggests a possible relationship between attachment insecurity and risk for an eating disorder. More research is needed that uses attachment interviews, and longitudinal and case control designs. Clinicians can assess attachment insecurity to help inform therapeutic stances and interventions.

Keywords: attachment; eating disorders; anorexia nervosa; bulimia nervosa; binge eating disorder

(Int J Eat Disord 2014; 47:710–717)

Introduction

Over the past 40 years attachment theory\(^1\) has emerged as one of the most important frameworks for understanding relationship functioning and affect regulation.\(^2\) In particular, attachment theory provides a developmental and contextual perspective on adult functioning. Although originally a theory of child development and adaptation,\(^1,3\) the model has been applied to adult functioning\(^4\) and adult mental health.\(^5\) According to the theory, attachment behaviors (e.g., crying, following, gazing, grasping) in human infants are necessary to ensure proximity to a caregiver. Repeated interactions with a caregiver in infancy and childhood become encoded in the implicit memory system, and these develop into internal working models of attachment.\(^6\) Internal working models become the bases for consistent ways in which children and adults interact with the world, experience themselves and others, and regulate affect. These functions, especially affect regulation have implications for eating disorder psychopathology.

Categories of attachment were originally identified by Ainsworth\(^3\) who observed separation and reunion events between infants and mothers in naturalistic and laboratory settings. Main\(^4\) extended this work to assessing parallel adult states of mind through the Adult Attachment Interview (AAI). Both Ainsworth and Main identified securely and insecurely attached individuals, with attachment insecurity being further divided into dismissing (i.e., avoidant) and preoccupied (i.e., anxious) states in adults. Another category of disorganized attachment related to loss or trauma was later identified by Main.\(^3\) Secure and insecure categorization is remarkably stable as demonstrated by longitudinal studies from infancy to adulthood, though changes in attachments over time were observed especially in low risk samples.\(^8\)
Four domains of attachment functioning are relevant to eating disorders: (1) affect regulation, (2) interpersonal style, (3) coherence of mind, and (4) reflective functioning. In this review, we will describe each of the attachment categories (secure, avoidant, anxious) with particular emphasis on these four domains of functioning. Then we will review some of the research since 2000 on adult attachment and eating disorders that touch upon these four domains, and conclude with some recommendations for research and practice.

Adult Attachment

Individuals with greater attachment security are characterized by the ability to adaptively regulate affect so that they can maintain a measured approach and response to interpersonal stressors and/or the absence of attachment figures. Interpersonally, these individuals are able to accept intimacy, and express love and support to others without feeling overwhelmed, anxious, or dismissive. Coherence of mind in the securely attached is characterized by discourse related to attachment figures that: is consistent and relevant, provides an adequate amount of information, and is collaborative given the conversational context. Coherent discourse indicates an ability to maintain a mindful and balanced state of mind when discussing attachment relationships. Reflective functioning (i.e., mentalizing) in securely attached individuals is characterized by: recognizing that one's own mental state and mental states of others are separate, making an explicit effort to identify that mental states underlie behavior, and appreciating that one's understanding of others' mental states may remain incomplete. Reflective functioning is key for abilities like empathy.

Individuals with greater attachment avoidance are characterized by a dismissing view of the importance of relationships, especially attachment relationships. These individuals minimize their emotional experiences so that emotions may be cut-off from experience, and they may have difficulty expressing their feelings. Coherence of mind tends to be low especially because those with greater attachment avoidance have a difficult time generating relevant attachment memories in their discourse. Further, the amount of information they provide about attachment relationships is often sparse. In addition, when they do consider close relationships, they may unrealistically idealize or be derogatory regarding attachment figures thus limiting their reflective functioning, i.e., their ability to appreciate others' internal experiences.

On the other hand, those with greater attachment anxiety tend to be highly preoccupied with attachment relationships especially regarding potential loss or abandonment. These individuals likely hyper-activate their affective system so that they often re-access emotional experiences especially related to loss or hurt. As a result of their hyper-activated emotions, their coherence of mind suffers because current anger and/or self loathing interferes with their narrative discourse about attachment relationships. Reflective functioning also tends to be impaired since these individuals may struggle with understanding the separateness of mental states, and their intense emotions may make it difficult to take a reflective perspective on their own or others internal experiences.

Authors of a meta-analysis that included over 10,000 AAIs reported that in non-clinical samples 58% were classified as secure, 23% as dismissing (i.e., avoidant), 19% as preoccupied (i.e., anxious), and 18% received a superimposed classification of disorganized. In clinical samples, 27% were classified as secure, 37% as preoccupied, and 37% as dismissing; 43% were additionally classified as disorganized. Hence, insecure and disorganized states were over-represented in clinical samples, including in those with post traumatic stress disorder, borderline personality disorder, and depressive disorders. Research suggests a clear association between infant disorganized attachment and dissociative symptoms in early adulthood, and between infant resistant attachment and anxiety disorders in adolescence. Longitudinal studies point to an increased probability of adult psychopathology among those with insecure versus secure attachment in childhood.

One of the controversies and difficulties with regard to attachment research is related to the methods by which attachment is measured. Attachment research has advanced along two relatively independent lines. First, developmental researchers have relied on observational ratings of attachment in children or interviews with adults such as the AAI. The AAI measures current mental states with regard to attachment, and is not necessarily an autobiographical measure of what actually occurred in childhood. That is, the main distinction between secure and insecure adult mental states on the AAI is based on the patterns of speech in response to 20 questions mainly about experiences with primary caregivers. This method typically categorizes individuals as secure or insecure (i.e., with insecure further divided into dismissing or preoccupied), with a possible additional categorization of disorganized
mental states with regard to trauma or loss. A dimensional scale of reflective functioning may also be rated using AAI transcripts.\(^\text{11}\) Second, social psychological researchers have developed a variety of self report measures of adult attachment that often focus on current relationships including romantic relationships. Self report measures tend to result in dimensional scales, such as attachment avoidance or attachment anxiety.\(^\text{14}\) A high score on one scale but not the other indicates greater attachment avoidance or anxiety, respectively. Low scores on both scales indicate attachment security, and high scores on both scales indicate fearful attachment.\(^\text{15}\) Nevertheless, the scales are commonly treated as dimensional. These two methods of measuring attachment (i.e., interview versus self report) tend to be poorly correlated.\(^\text{16}\) Likely, these two approaches assess different and perhaps complementary aspects of attachment. That is, the AAI measures unconscious states of mind related to attachment in adults, whereas self reports likely tap into consciously available information about one’s interpersonal relationships and affect regulation. The AAI is time consuming and challenging to learn and achieve reliability, and so the number of studies using the AAI in eating disorder samples tends to be few with small sample sizes. Self reports are much easier to administer. Hence there has been a proliferation of attachment research using self reports relative to studies using the AAI.

As indicated, one purpose of this paper is to provide a review of the current state of attachment research in eating disorders. Reviews that have been published in recent years have focused almost exclusively on AAI research.\(^\text{17–19}\) The current review will include findings from the AAI and self-report measures, but will be limited to adult clinical samples with eating disorders, and since 2000. Rather than provide a comprehensive review of every study published during that period, we will focus on five themes related to eating disorders: (1) the prevalence of attachment insecurity and the level of reflective functioning; (2) the association between attachment insecurity and eating disorder diagnosis or symptom severity; (3) mechanisms by which attachment may affect eating disorders; (4) associations with trauma and disorganized mental states; and (5) the impact on treatment processes and outcomes.

**Search Strategy and Results**

We searched the databases MedLine/Pubmed and PsychINFO using a combination of the key terms ‘Attachment’ and ‘Eating Disorder’ or ‘Anorexia Nervosa’ or ‘Bulimia’ or ‘Binge Eating Disorder’. Only results published from January 2000 to February 2014 were examined in detail, yielding an initial 185 papers. These works were then screened for English language. Further, to be included, the studies had to: be empirical research with greater than six participants (i.e., excluding case studies and theoretical papers); include adults (>17 years) with a diagnosed eating disorder in the sample; and use a standard and valid self report measure of attachment or standard coding of an attachment interview.

Using these criteria, 46 studies were classified as meeting criteria for review. Recent reviews of AAI research\(^\text{18,19}\) were used to find four additional relevant studies through their reference sections. The current review is organized along the themes indicated above, and focused on studies that address the following domains relevant to eating disorders: affect regulation, interpersonal style, coherence of mind, and reflective functioning. Hence, our review included 32 of the 50 studies. A complete list of the 50 studies is available as online supporting information.

**Attachment and Eating Disorders Research**

**Attachment Insecurity and Reflective Functioning**

A recent meta analysis of attachment, social communication, and social processes in eating disorders\(^\text{20}\) reported that compared to non-clinical controls, those with eating disorders had greater attachment insecurity measured by self report, and the effect size was large (\(d=1.31\)). This was the second largest effect size, after negative self evaluation (\(d=2.27\)), of all of the 11 social process variables that were reviewed. Similar findings regarding AAI research were reported by Kuipers and Bekker.\(^\text{17}\) The prevalence of attachment insecurity in eating disorder samples ranged from \(70\%\)\(^\text{21,22}\) to \(100\%\).\(^\text{23}\) Several studies reported higher incidence of avoidant attachment style compared to anxious attachment in samples including anorexia nervosa (AN), bulimia nervosa (BN), and binge eating disorder (BED).\(^\text{21,24,25}\) However not many studies reported this comparison and so we make no conclusions at this stage of the research regarding relative prevalence of each attachment insecurity category in the population of those with an eating disorder.

An emerging line of research looks at the role of mentalizing or reflective functioning in eating disorders. Bateman and Fonagy\(^\text{26}\) argued that
problems in early attachments and/or later trauma could disrupt the ability to mentalize, which in turn may impair affect regulation. Concurrently, binging and purging or restrictive eating behaviors may be related to under- or over-controlled affect regulation, respectively. In a review of three empirical studies, Kuipers and Bekker found that reflective functioning as assessed through the AAI was significantly lower in eating disorder samples largely made up of those with AN. A recent study published after that review reported similar levels of reflective functioning in patients with BN and controls, however, the distribution of reflective functioning was bimodal in the BN sample. In other words, some patients with BN had higher reflective functioning than non-clinical controls but many had lower reflective functioning than controls, suggesting distinct subgroups within BN with regard to mentalizing. In the only study to compare eating disorder patients to psychiatric patients and non-clinical controls, Fonagy et al. found that inpatients with eating disorders (therefore likely with AN) had significantly lower reflective functioning scores compared to both psychiatric and non-clinical comparison groups. This study and others suggest that lower abilities to mentalize may be a specific feature of eating disorder diagnoses, especially AN. The cumulative research to date on reflective functioning and AN is consistent with research on theory of mind that found that unconscious decoding of others’ emotions without cognitive deduction was impaired in patients with AN.

**Attachment Insecurity and Eating Disorder Diagnosis or Severity**

Researchers have looked at whether there is a relationship between eating disorder diagnosis and attachment category. Based on the literature on personality and eating disorders, one could speculate, for example that those who binge and purge (i.e., who have BN) may show greater attachment anxiety associated with affect dysregulation, whereas those who engage in dietary restriction (i.e., who have AN) may have greater attachment avoidance characterized by down-playing of affect. Some studies show a significant specific, though inconsistent, differences in attachment categories or scales among eating disorder diagnostic groups, but other studies did not find differences. The inconsistent findings are not affected by the method by which attachment was assessed (AAI or self report). At this stage, we conclude that type of attachment insecurity is not necessarily related to a specific eating disorder diagnosis, although attachment insecurity may be related to severity of eating disorder symptoms across diagnostic groups.

The possible transdiagnostic importance of attachment insecurity in part is indicated by research that examines the relationship between attachment insecurity and eating disorder symptom severity. In particular, need for approval, an aspect of attachment anxiety is positively associated with body dissatisfaction and eating disorder psychopathology independent of personality dimensions, demographics, eating disorder diagnosis, and depression. Preoccupation with relationships and fear of abandonment, especially when expressed as needing others’ approval, may be a particularly problematic attachment-related insecurity that may put individuals at risk for greater eating disorder symptom severity.

**Possible Mechanisms**

As indicated, attachment insecurity, and perhaps attachment anxiety in particular, may confer specific risk for greater eating disorder symptom severity such as body dissatisfaction. However, only few studies to date have assessed the possible mechanisms by which attachment insecurity may affect eating disorder psychopathology. In a recent large clinical study using self reports in a mixed diagnostic sample, Dakanalis et al. found that maladaptive perfectionism mediated the relationship between insecure attachment patterns and eating disorder symptoms. The authors argued that attachment anxiety or avoidance could be a risk factor to sensitize one to the negative effects of maladaptive perfectionism. In another large mixed diagnostic sample, Tasca et al. found that affect regulation characterized by hyper-activation of emotions mediated the relationship between attachment anxiety and eating disorder symptoms. However, attachment avoidance had a direct relationship to eating disorder symptoms not mediated by cutting off of emotions. Similarly, researchers reported negative affect and alexithymia were mediators of the relationship between insecure attachment and restrained eating or body dissatisfaction, respectively. These studies, although large and transdiagnostic, were cross sectional in nature thus limiting conclusions about causal relationships. Nevertheless, the research to date suggests maladaptive perfectionism and problematic affect regulation as potential mechanisms to explain how attachment insecurity might put someone at risk for or might maintain an eating disorder.

**Trauma, Loss, and Disorganized Mental States**

Childhood trauma, abuse, and loss occur at a high rate among those with eating disorders. In a cross
sectional study using self reports, researchers\textsuperscript{37} found that retrospective reporting of childhood trauma was directly associated with core eating disorder psychopathology. In addition, attachment avoidance and attachment anxiety each independently and partly explained this direct relationship. The authors argued that childhood adversity might lead to attachment insecurity, which in turn may maintain or make some vulnerable to eating disorder symptoms. As well, some researchers reported that the interaction between childhood trauma and the short (S) allele of the serotonin transporter promoter polymorphism (5HTTLPR) accounted for greater attachment anxiety in women with BN\textsuperscript{48}.

Attachment theory indicates that childhood adversity could have disorganizing effects on adult mental states, and disorganized mental states are associated with significant psychopathology among adults\textsuperscript{12}. Several studies using the AAI reported high levels of disorganized mental states in those with eating disorders\textsuperscript{18,23} including among those with BED\textsuperscript{24} and AN\textsuperscript{32,49}. In an interesting study, Ward et al.\textsuperscript{32} found that not only were patients with AN reporting unresolved trauma and loss, but disorganized mental states were highly prevalent among their mothers. This finding, which needs to be replicated, suggests possible transgenerational transmission of disorganized mental states in patients with AN, which could add to risk for AN.

**Attachment and Psychotherapy Processes and Outcomes**

Much of the research to date on attachment and psychological interventions for eating disorders comes from the work of Tasca et al. on day treatment for BN, AN, and eating disorder not otherwise specified (EDNOS), and on group therapy for BED. These studies used self reports of attachment styles. Pre-treatment attachment avoidance was associated with dropping out of day treatment for AN\textsuperscript{50} and dropping out of group cognitive behavioral therapy (GCBT) for BED\textsuperscript{51}. Attachment avoidance was also associated with problematic group treatment processes. For example, greater attachment avoidance in patients with BED was related to a decreasing therapeutic alliance in group psychodynamic interpersonal psychotherapy (GPIP)\textsuperscript{52}. Attachment avoidance was also associated with lower group cohesion in the day treatment of a mixed diagnostic sample\textsuperscript{52}. Illing et al.\textsuperscript{53} suggested that despite the apparent dismissiveness of those with greater attachment avoidance, these patients were likely highly sensitive to implicit group therapy demands for closeness and cohesion, and this may have precipitate their dropping out.

Higher pre-treatment attachment anxiety was associated with poorer outcomes in the day treatment of AN\textsuperscript{35,54} and in group therapy for those with BED who received GCBT\textsuperscript{51}. Conversely, higher attachment anxiety was associated with relatively better treatment outcomes for those with BED if they received GPIP. Follow up research indicated that those with BED and higher attachment anxiety may have required an increasing sense of group engagement, cohesion, and alliance in order to benefit from group treatment\textsuperscript{52,55}. Tasca et al.\textsuperscript{51,52,55} suggested that group treatment that specifically focused on affect regulation, interpersonal sensitivities, and developing group cohesion (i.e., GPIP), which are key elements of attachment anxiety, may have made this treatment modality more relevant and perhaps more effective for these participants.

Only one small scale exploratory study associated the AAI to psychotherapy processes in an eating disorder sample\textsuperscript{56}. In that study, preoccupied (anxiously attached) patients with BN had more and longer speaking turns, and initiated speaking more frequently than dismissing (avoidantly attached) patients with BN. These findings suggest that attachment states of mind as assessed by the AAI may have an impact on the manner in which patients with BN make use of psychotherapy. Evidence from research on non-eating disorder patient groups suggest that psychological treatments can change attachment states of mind from insecure to secure\textsuperscript{57}. Such research using the AAI in a sample of those with eating disorders has not yet been published. However, studies using self reports in patients with BED suggest that attachment insecurity can improve up to 1 year post group treatment\textsuperscript{58,59}. The effect of attachment states of mind as assessed by the AAI on treatment processes and outcomes in eating disorders remains an important and largely untapped area of research.

**Recommendations for Attachment Research in Eating Disorders**

Our examination of AAI research in eating disorders highlighted the limited number of such studies. In addition, with one recent exception\textsuperscript{29}, sample sizes in these AAI studies are quite small. We are aware of at least two research groups who are currently conducting larger AAI studies in BN\textsuperscript{60} and BED\textsuperscript{61}. Psychotherapy research using the AAI to assess change in attachment states of mind and their interaction with treatment type will add to

our knowledge of treatment processes and outcomes for those with eating disorders. Research on the impact of reflective functioning and disorganized mental states on symptom maintenance and severity will inform our understanding of potential risk and maintenance factors for eating disorders. However, due to the time and cost associated with AAI research, we expect that the vast majority of studies likely will continue to use self report measures of attachment.

Regardless of measurement approach, research on the mechanisms by which attachment insecurity affects the maintenance of eating disorder symptoms would clarify the nature and impact of attachment functioning, and would suggest targets for interventions. To date, this research has been cross sectional in nature. Prospective, longitudinal, and case control studies are needed to truly understand the potential risk for eating disorders conferred by attachment insecurity and the mechanisms by which this occurs. Further, the roles of childhood adversity and family environment and their interaction with attachment insecurity could inform specific prevention and treatment programs. Finally, research showed that serotonin dysregulation may be a mechanism by which attachment insecurity and/or childhood adversity leads to BN symptoms. Such research could point to potential gene by attachment environment interactions that are detrimental for women who binge eat.

**Practice Implications**

Individuals with eating disorders and attachment avoidance or attachment anxiety have differing affect regulation approaches and interpersonal styles that affect their interactions with treatment providers and their behaviors in therapy. Clinicians may consider assessing attachment insecurity by self report or by interview. Tasca et al. reference data on clinical and non-clinical samples that clinicians can use to help interpret self report and AAI scales. Pedersen et al. provide similar data for reflective functioning among patients with BN.

Evidence-based treatment-oriented practice reviews now exist for attachment insecurity in general and for eating disorders in particular. Assessing and understanding a patient’s level and quality of attachment insecurity could provide a map for clinicians on how to personalize therapy and therapeutic stances to optimize patient outcomes. Individuals with attachment avoidance are at risk for experiencing a decrease in the therapeutic alliance and dropping out of treatment. Despite outward appearances these individuals are highly sensitive and tend to react negatively to pressures to self disclose, to bond with the therapist or group, and to express emotions. Distress caused by such pressures may precipitate premature treatment termination among those high in attachment avoidance. Although in general these patients may benefit from increasing their emotional experiences and reducing interpersonal distance, they will require a therapeutic approach that takes a graded and gradual approach to self disclosure and affective expression. On the other hand, those with greater attachment anxiety require an early and ongoing sense of increased therapeutic alliance or group cohesion to benefit from therapy. However, often their attachment anxiety interferes with their ability to be reflective and to make the best use of treatment. Helping those with greater attachment anxiety to distance from their emotions may improve their mentalizing capacities with regard to themselves and others. Improved reflective functioning could help those with greater attachment anxiety to take a step back from their overwhelming anger, self loathing, and fears associated with relationship loss.

In summary, although still relatively new, attachment research in eating disorders has important clinical utility by helping to inform clinicians on effective therapeutic stances that are specific to type of patient attachment insecurity. As indicated, longitudinal research in community samples shows that attachment insecurity and disorganization in infancy confers greater risk for adult psychopathology in general. Whether these elevate the specific risk for an eating disorder is currently unknown, though cross sectional research suggests mechanisms by which attachment insecurity may affect eating disorder symptoms. Further, longitudinal research in other samples has shown that biological vulnerabilities likely interact with early attachment insecurity and disorganization to confer risk for adult psychopathology. Similarly, adult attachment insecurity may interact with biological vulnerabilities for those who binge eat. Research on attachment functioning among those with eating disorders provides a promising avenue to further understand developmental risk factors, symptom maintenance, and treatment processes and outcomes.

Giorgio A. Tasca holds the Research Chair in Psychotherapy Research, University of Ottawa and The Ottawa Hospital. The authors thank Livia Chyurlia for her help in preparing the manuscript.
References


