

The relationship between defense mechanisms and attachment: a narrative review

Rose Howell,¹ Vera Békés^{1,2}

¹Ferkauf Graduate School of Psychology, Yeshiva University, New York (NY), USA; ²Educational and Counselling Department, McGill University, Montreal, Canada

ABSTRACT

While a substantial number of studies investigate the nuances and clinical relevance of attachment styles and defense mechanisms separately, relatively few studies have explored the relationship between attachment styles and defense mechanisms. We aimed to provide a narrative review of empirical studies that used validated measures to assess the relationship between defense mechanisms and attachment styles in adolescents or adults. Twenty peer-reviewed studies published over the past 30 years were included. Except for one study involving high school students, all others focused on adults, mostly from community samples, with a few including clinical populations. Most studies employed various self-report questionnaires, though several used observer-rated or interview-based methods, with the majority using a cross-sectional design; a few studies used experimental and longitudinal designs as well. The studies' findings indicate an association between insecure attachment and greater use of immature defenses, while secure attachment is associated with more mature defenses. Anxious attachment was particularly linked to defenses such as projection, splitting, and devaluation, whereas avoidant attachment was associated with emotional suppression and denial. A subset of studies examined changes in these constructs during psychotherapy, suggesting that both defense mechanisms and attachment security may improve over time, and indicating the potential importance of reflective functioning as a mediator, as well as depressive immature defenses as obstacles to change. These results underscore the clinical relevance of assessing both attachment and defensive functioning and highlight the importance of addressing them as potential mechanisms of change in clinical contexts.

Key words: defense mechanisms, attachment, narrative review, psychotherapy.

Correspondence: Vera Békés, Ferkauf Graduate School of Psychology, Yeshiva University, 1165 Morris Park Ave, Bronx, 10461 New York (NY), USA.
E-mail: vera.bekes@yu.edu

Citation: Howell, R., & Békés, V., (2025). The relationship between defense mechanisms and attachment: a narrative review. *Research in Psychotherapy: Psychopathology, Process and Outcome*, 28(3), 879. doi: 10.4081/ripppo.2025.879

Conflict of interest: the authors have no conflict of interest to declare.

Ethics approval and consent to participate: not required.

Availability of data and materials: all data generated or analyzed during this study are included in this published article.

Received: 22 July 2025.
Accepted: 2 December 2025.

Publisher's note: all claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article or claim that may be made by its manufacturer is not guaranteed or endorsed by the publisher.

©Copyright: the Author(s), 2025
Licensee PAGEPress, Italy
Research in Psychotherapy: Psychopathology, Process and Outcome 2025; 28:879
doi:10.4081/ripppo.2025.879

This article is distributed under the terms of the Creative Commons Attribution-NonCommercial International License (CC BY-NC 4.0) which permits any noncommercial use, distribution, and reproduction in any medium, provided the original author(s) and source are credited.

Introduction

Understanding how individuals manage emotional experiences and navigate interpersonal relationships is central to the study of personality development and psychopathology. Across the lifespan, people use a range of psychological processes to regulate distress, preserve self-coherence, and maintain connections with others. Among the most influential frameworks for conceptualizing these processes are theories of defense mechanisms (Cramer, 2012; Perry, 1990) and attachment theory (Ainsworth & Bowlby, 1991; Bowlby, 1969). While both perspectives address how individuals cope with relational stress and internal conflict, they have historically evolved in parallel rather than in conjunction. In recent decades, however, a growing body of research has begun to explore the intersection between these two domains (Shaver & Mikulincer, 2007). The current review aims to synthesize empirical findings on the relationship between attachment styles and defense mechanisms in adolescent and adult populations, with particular attention to studies using validated quantitative measures.

Defense mechanisms

Defense mechanisms can be broadly characterized as unconscious, automatic responses (verbal, emotional, cognitive, and behavioral) to external or internal conflicts and experiences that threaten to elicit intolerable or uncomfortable feelings; feelings that must be kept at bay (Vaillant, 2020). Notably, due to their automatic nature, the individual is often not aware that they are re-

lying on defense mechanisms (Perry *et al.*, 2020). While mature defense mechanisms are connected to healthy functioning (such as humor, sublimation, or affiliation with others), the extensive use of immature defense mechanisms is associated with psychological symptoms, more severe psychopathology, and interpersonal difficulties (Di Giuseppe & Perry, 2021; Vaillant, 2020).

The distinction between mature and immature defense mechanisms lies in the extent to which they preserve a person's capacity to remain connected to others and accurately perceive reality, as opposed to distorting interpersonal experiences and external events (Perry & Bond, 2017). Defense mechanisms can be conceptualized along a continuum from immature to mature, with neurotic defenses occupying a middle ground (Di Giuseppe & Perry, 2021). Mature defenses facilitate conscious emotional processing, anxiety regulation, and adaptive engagement with stressors (Prout *et al.*, 2020). Neurotic defenses, such as intellectualization, help individuals avoid fully experiencing painful emotions while maintaining a basic grasp of reality. Although partially protective, they still allow some awareness of emotional content (Di Giuseppe & Tanzilli, 2025). In contrast, immature defenses are often linked to greater psychopathology, including impulsivity, rigidity, and relational dysfunction (Berney *et al.*, 2014; Ciocca *et al.*, 2020; Fiorentino *et al.*, 2024; Perry & Bond, 2012; Trower & Chadwick, 1995). Recent network analysis shows the interconnectivity of individual defense mechanisms and the central role of specific defenses (*i.e.*, self-assertion and passive aggression) in determining associations with depression and anxiety (Di Giuseppe *et al.*, 2024).

Attachment

John Bowlby formulated his theory of attachment in part to understand why some of his patients avoided intimacy and defended against emotional experiences, often with detrimental effects on their social adaptation (Duschinsky, 2020). He proposed that individual differences in early caregiving relationships are carried forward into later social and romantic relationships (Bowlby, 1988; Feeney, 2008; Groh *et al.*, 2014; Holland & Roisman, 2010; Roisman, 2006).

Building on Bowlby's foundational insights, extensive research has confirmed that early attachment patterns influence later cognitive and emotional processing of expectations regarding closeness and support. In the 1960s, Ainsworth and colleagues demonstrated that variations in parental sensitivity and responsiveness give rise to distinct infant attachment behaviors, based on the child's expectations about the parents' availability (Ainsworth, 1978). They identified three primary patterns: secure attachment, where children seek proximity in distress due to a reliable caregiver; avoidant attachment, where proximity-seeking is suppressed due to expectations of caregiver unavailability; and resistant/ambivalent attachment, where proximity is pursued anxiously due to inconsistent caregiver responsiveness.

Subsequent work has shown that these infant attachment behaviors are predicted by the parents' own attachment representations, as assessed through the Adult Attachment Interview (AAI; Main *et al.*, 1985). Parents classified as secure-autonomous can reflect coherently on their childhood experiences and tend to have securely attached infants. In contrast, dismissing parents minimize or avoid discussing attachment-related experiences and are more likely to have avoidant children, whereas preoccupied parents show increased emotional involvement with attachment themes, corresponding with resistant attachment in their children. Of note, attachment in the AAI paradigm refers to how adults currently or-

ganize, evaluate, and narrate their childhood experiences with caregivers, that is, to the interviewee's current state of mind regarding their childhood experiences, and their *attachment state of mind* is captured by the coherence of their representation of their childhood caregiver. In contrast, self-report measures aim to capture current *attachment style* in close relationships (Roisman *et al.*, 2007). In the present review, we use the term attachment style broadly for general individual differences in attachment and where relevant, we refer explicitly to the attachment state of mind *vs.* self-reported attachment style to distinguish these constructs.

Relationship between defense mechanisms and attachment

Attachment strategies are often viewed as adaptive responses to environmental challenges (Luyten *et al.*, 2021). From this perspective, secure attachment is characterized by a relatively balanced and accurate processing of emotionally charged information, with minimal need to rely on defense mechanisms to distort reality (Cramer & Kelly, 2010; Dykas & Cassidy, 2011). In contrast, insecure attachment tends to involve protective defensive strategies in response to negative emotional experiences, perceived threats of separation, or distress more broadly (Ein-Dor *et al.*, 2016).

Various defense mechanisms play a central role in shaping the interpersonal dynamics through which attachment insecurity contributes to psychological difficulties such as depression. For example, individuals with a dismissing attachment classification may minimize or deny vulnerabilities in themselves and in their attachment figures (Main *et al.*, 2002). Ainsworth and colleagues found that it was an infant's anticipation of non-attentiveness or unavailability from the caregiver that prompted a defensive response, such as avoiding closeness (Ainsworth, 1978). On the other hand, those with a preoccupied attachment often amplify distress signals and maintain a heightened focus on negative emotions, which may, at least, temporarily enhance proximity to others.

Unlike models that emphasize defense as an intrapsychic process, attachment theory situates the emergence of defenses within relational experiences. Attachment theory, in this context, can be seen as a relational framework for understanding conflict and defense, as it highlights the regulatory and defensive strategies used to manage fear and distress within attachment relationships. Bowlby (1980) introduced the concept of defensive exclusion, where emotionally painful attachment-related material is kept out of conscious awareness when support from attachment figures, either real or imagined, is perceived as unavailable. Thus, defensive responses occur as adaptive reactions to the distress or comfort of the exchanges with the attachment figures. These repeated exchanges may give rise to the use of specific defense mechanisms (Lyons-Ruth, 2003). Thus, within the adult attachment framework, defenses are understood as modulators of the attachment system, functioning to reduce distress arising from negative interpersonal expectations (Bincoletto *et al.*, 2025; Kobak & Bosmans, 2019). As a result, internal working models representing the self and others and organizing expectations in close relationships will guide both attachment strategies and defensive responses across development (Bowlby, 1988). In addition, Fonagy and Luyten (2009) argue that secure attachment relationships lay the groundwork for mentalization, *i.e.*, the ability to understand behavior in terms of mental states, which allows for better emotion regulation and the use of more adaptive defenses. In this way, both defense mechanisms and attachment are crucial factors in emotion regulation (and dysregulation) and thus fundamentally

affect mental health outcomes (Békés *et al.*, 2021a; Di Giuseppe & Perry, 2021).

However, despite the substantial number of studies that explore the nuances and clinical relevance of attachment styles and defense mechanisms separately, relatively few studies have investigated the relationship *between* attachment styles and defense mechanisms, and even fewer studies have explored the relationship between the two constructs as they change over the course of therapy. Therefore, we conducted a narrative review using a systematic search of the empirical literature on the relationship between defense mechanisms and attachment. The goal was to synthesize the current state of research by examining study populations, measurement approaches, research designs, and key findings.

Methods

This review employed a narrative approach with a structured search strategy to synthesize empirical findings on the relationship between attachment styles and defense mechanisms. The aim was to explore and interpret patterns in the literature by identifying themes across various populations, measurement methods, and research designs, rather than assessing methodological rigor of the included papers. This approach aligns with the purpose and practice of a narrative review, which seeks to provide an integrative overview of the current evidence and narratively synthesize conceptual and methodological approaches (Marriott *et al.*, 2014; Sukhera, 2022).

A structured literature search was conducted in four electronic databases: PubMed, PsycINFO, Web of Science, and Google Scholar. The search strategy included combinations of the following key words and Boolean operators: (“defense mechanism” OR defense* OR defence*) AND (“attachment style*” OR attachment). These terms were searched in titles, abstracts, and key words across selected databases. The search spanned the last 30 years and was conducted in two phases: the initial search from February 14 to March 1, 2022, and a follow-up update on July 17, 2025.

Studies were included if they were peer-reviewed and published in English, reported empirical data using validated quantitative measures of both attachment and defense mechanisms, included adolescent or adult samples, and explicitly addressed both attachment and defense mechanisms as central constructs. Since our aim was to provide a synthesis of the validated and peer-reviewed literature (as opposed to mapping all existing studies), studies were excluded if they were dissertations, theoretical papers, or non-peer-reviewed, did not assess both constructs directly but used proxy measures (*e.g.*, internalized object relations instead of attachment), or lacked validated measures.

The study selection process followed the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines to enhance transparency and provide a clear overview of the search process; however, in keeping with narrative review methodology, PRISMA guidelines were not followed in full, as a systematic review process would require. In total, 4,719 records were identified through database searching, and five additional records were found via Google Scholar. After removing duplicates and screening titles and abstracts, 37 full-text articles were assessed. Seventeen met the inclusion criteria. An additional eligible study identified in the updated search brought the final number to 20 studies (see Figure 1 for PRISMA flowchart).

Key data were extracted from each study, including sample characteristics, measures used, and findings relevant to attachment

and defense mechanisms. An inductive narrative synthesis was conducted, through which thematic categories reflecting conceptual patterns in the literature were identified: i) emotion and affect, ii) maladaptive behavior and beliefs, iii) psychotherapy and change, and iv) reflective functioning. This structure allowed to meaningfully organize findings under each domain that emerged.

Results

Table 1 shows the list of the 20 studies included in this review. These studies included different populations and used diverse research designs and measures. First, we will present these studies, and then we will summarize their findings regarding the relationship between defense mechanisms and attachment.

Population

Except for one study with adolescents in high school (Laczkovics *et al.*, 2018), all studies included adult samples. The vast majority of the reviewed studies focused on nonclinical populations, most often students and community samples (Berant & Wald, 2009; Fraley & Brumbaugh, 2007; Fraley & Shaver, 1997; Fraley *et al.*, 2000; Laczkovics *et al.*, 2018; Lopez *et al.*, 1997; Marks & Vicary, 2016; Mikulincer & Horesh, 1999; Mikulincer & Orbach, 1995; Prunas *et al.*, 2019; Salandé & Hawkins, 2017; Tondar *et al.*, 2017; Richardson *et al.*, 2023). A smaller number of studies included clinical populations, such as depressed patients in psychotherapy (Békés *et al.*, 2021a), patients with major depressive disorder and persistent depressive disorder (Tanzilli *et al.*, 2021), female patients with borderline personality disorder (BPD; Tmej *et al.*, 2021), women with binge eating disorder (Carlucci *et al.*, 2023), and court-ordered abusive parents (Cramer & Kelly, 2010). One study also included individuals with eating disorders from a community sample (Lenzo *et al.*, 2021).

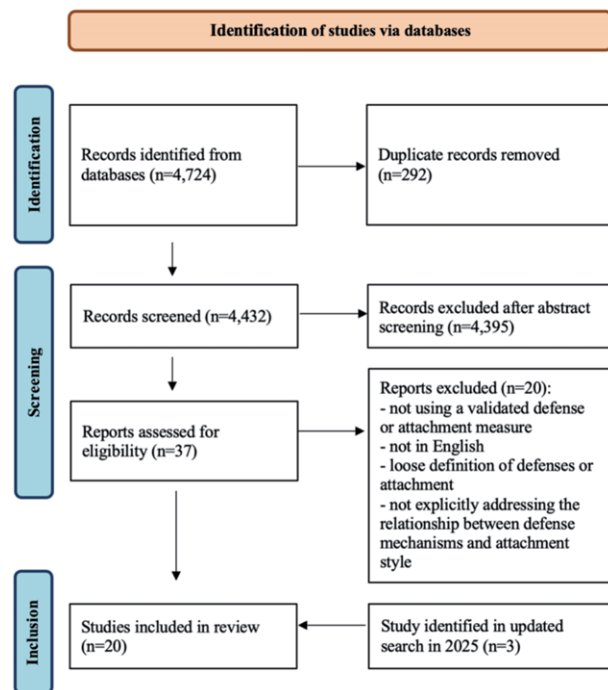


Figure 1. Prisma chart of the search and selection process.

Table 1. Study characteristics and main findings.

Study	Sample type	Sample size	Measures used	Findings related to defenses and attachment
Békés <i>et al.</i> (2021)	Clinical sample (depressed patients)	30	<ul style="list-style-type: none"> • HRSD-17 • BDI-II • DMRS • PACS 	Preoccupied attachment was positively related to ODF and negatively related to depressive immature defenses (early phase). Early neurotic and immature defenses predicted changes in attachment style over time.
Berant & Wald (2009)	Community sample	89	<ul style="list-style-type: none"> • AAS (Hebrew) • Rorschach (CS) • BPS• DFF 	Significant associations found between attachment orientations and dynamically coded Rorschach defenses related to anxiety and avoidance.
Carlucci <i>et al.</i> (2023)	Women with and without BED	BED n=101; overweight without BED n=47; normal weight without BED n=49	<ul style="list-style-type: none"> • DMRS • AAI • ECR-R 	Higher ODF was related to lower attachment avoidance and anxiety. Women with BED had lower ODF compared to normal weight women without BED.
Carone <i>et al.</i> (2025)	Community sample of pregnant women	68	<ul style="list-style-type: none"> • DMRS-Q • AAI 	Mothers' lower AAI coherence of mind during pregnancy was related to less adaptive maternal defensive functioning, which in turn was related to poorer parent-infant relationship later on.
Cramer & Kelly (2010)	Court-ordered abusive parents	86	<ul style="list-style-type: none"> • RQ • RSQ • DMM (TAT) 	Fearful attachment was associated with high use of denial; preoccupied attachment with identification defenses.
Fraley & Brumbaugh (2007)	College students	145 (Study 1); 130 (Study 2)	<ul style="list-style-type: none"> • RSQ • Recall tasks 	Avoidant adults recalled less attachment-related information, suggesting defensive exclusion at encoding.
Fraley & Shaver (1997)	College students	200 (Study 1); 100 (Study 2)	<ul style="list-style-type: none"> • RSQ • Suppression Task • Physio (EDA) • Stream of consciousness task 	Dismissing-avoidant adults suppressed attachment-related distress both cognitively and physiologically.
Fraley <i>et al.</i> (2000)	College students	201 (Study 1); 229 (Study 2)	<ul style="list-style-type: none"> • RSQ • Memory tasks 	Avoidant adults initially encoded less attachment-related information than non-avoidant adults.
Laczkovics <i>et al.</i> (2018)	High school students	1,487	<ul style="list-style-type: none"> • REM-71 • YSR • RSQ 	Positive self-image attachment styles predicted greater use of mature defenses; insecure styles were related to greater use of immature defenses.
Lenzo <i>et al.</i> (2021)	Community sample	284	<ul style="list-style-type: none"> • ASQ • DSQ • EDI-3 	Maladaptive defense style mediated the relationship between insecure attachment and ED symptoms.
Lopez <i>et al.</i> (1997)	College students	253	<ul style="list-style-type: none"> • SPS • PBI • AASI • RQ 	Insecure attachment styles (preoccupied and fearful) were associated with higher use of splitting defenses, especially under stress.
Marks & Vicary (2016)	College students	211	<ul style="list-style-type: none"> • ECR-R • ACL • Stroop• LDT 	Avoidant individuals used implicit and explicit defensive processes in response to attachment threats.
Mikulincer & Horesh (1999)	College students	70	<ul style="list-style-type: none"> • AAS • SQ • Projection Tasks 	Avoidant individuals projected unwanted-self traits; anxious individuals projected actual-self traits in perception and memory of others.
Mikulincer & Orbach (1995)	College students	120	<ul style="list-style-type: none"> • AAS • TMAS • MCSDS • Memory tasks 	Avoidant individuals reported high defensiveness and low access to negative memories; anxious individuals reported high anxiety and emotional flooding.
Prunas <i>et al.</i> (2019)	College students	238	<ul style="list-style-type: none"> • REM-71 • ASQ • MOPS 	Immature defenses were positively associated with insecure attachment and negatively with secure attachment. Specific defenses mapped onto avoidant and anxious attachment.
Salande & Hawkins (2017)	Online random sample	55	<ul style="list-style-type: none"> • AAQ-II • IPO • ECR-R 	Attachment anxiety and avoidance were significantly associated with primitive defenses and identity diffusion.
Tanzilli <i>et al.</i> (2021)	Clinical sample with MDD and PDD	28	<ul style="list-style-type: none"> • AAI • RFS • PDC-2 • DMRS-Q 	Secure attachment was associated with mature defenses and better emotion regulation. Insecure attachment linked to less adaptive defensive profiles.
Richardson <i>et al.</i> (2023)	College students	250	<ul style="list-style-type: none"> • ECR • DSQ 	Attachment-avoidance predicted defensive isolation; attachment-anxiety predicted multiple defenses (e.g., splitting, projective identification) and was a stronger overall predictor of defensive functioning.
Tmej <i>et al.</i> (2021)	Female patients with BPD	104	<ul style="list-style-type: none"> • SCID-I/II • STIPO • AAI 	Changes in attachment security were associated with reductions in maladaptive defenses during treatment.
Tondar <i>et al.</i> (2017)	Community sample	352	<ul style="list-style-type: none"> • DEQ • BDI-II • DSQ • ECR-R • SONI 	Immature and neurotic defenses were associated with high attachment anxiety and neediness. Specific defense styles explained variance in insecure attachment dimensions.

HRSD-17, Hamilton Depression Rating Scale; BDI-II, Beck Depression Inventory-II; DMRS, Defense Mechanism Rating Scales; PACS, Patient Attachment Coding System; ODF, overall defensive functioning; BED, binge-eating disorder; AAS, Adult Attachment Scale; CS, comprehensive system; RSQ, Relationship Styles Questionnaire; DMM, Defense Mechanism Manual; TAT, Thematic Apperception Test; EDA, electrodermal activity; REM-71, Response Evaluation Measure-71; YSR, Youth Self-Report; ASQ, Attachment Style Questionnaire; DSQ, Defense Style Questionnaire; DFF, Defense Functioning Framework; EDI-3, Eating Disorder Inventory-3; SPS, Splitting Scale; PBI, Parental Bonding Instrument; AASI, Adult Attachment Style Indexes; RQ, Relationship Questionnaire; ECR-R, Experiences in Close Relationships-Revised; ACL, Adjective Check List; LDT, Lexical Decision Task; SQ, Selves Questionnaire; TMAS, Taylor Manifest Anxiety Scale; MCSDS, Marlowe-Crowne Social Desirability Scale; MOPS, Measure of Parenting Style; AAQ-II, Acceptance and Action Questionnaire-II; IPO, Inventory of Personality Organization; MDD, major depressive disorder; PDD, persistent depressive disorder; AAI, Adult Attachment Interview; RFS, Reflective Functioning Scale; PDC-2, Psychodynamic Diagnostic Chart-2; DMRS-Q, Defense Mechanism Rating Scales-Q-Sort; BPD, borderline personality disorder; SCID-I/II, Structured Clinical Interview for DSM; STIPO, Structured Interview for Personality Organization; DEQ, Depressive Experiences Questionnaire; SONI, Self-Object Needs Inventory.

Measurement

The majority of studies relied on self-report measures for both defense mechanisms and attachment style. In the case of attachment, self-report methods of attachment style have not always yielded the same results or measured the same construct as the interview-based, gold-standard measure of attachment state of mind, the AAI (Steele & Steele, 2008). In addition, studies often used a variety of attachment classifications, including categorical classifications (*e.g.*, secure, dismissing, preoccupied) and dimensional approaches (*i.e.*, attachment anxiety and avoidance); therefore, their terminology was often not directly comparable with different studies' findings that were based on a different attachment approach. Regarding defense mechanism measures, some evidence has indicated that self-report and observer-rated defense ratings tend to align (Di Giuseppe *et al.*, 2020; Roisman, 2006; Strauss *et al.*, 2015).

Attachment measures

Most studies used one of several self-report measures to assess attachment styles. The most commonly used is the Relationship Styles Questionnaire (RSQ; Guédeney *et al.*, 2010), which assesses attachment patterns and links them to avoidance, proximity seeking, and dependency on others (Cramer & Kelly, 2010; Fraley & Brumbaugh, 2007; Fraley & Shaver, 1997; Fraley *et al.*, 2000). All self-report measures are described in detail in Table 2.

A minority of studies used observer-rated measures, such as the AAI, to measure attachment (Tanzilli *et al.*, 2021; Tmej *et al.*, 2021). The AAI is generally considered the gold standard of attachment measures and is based on an extensive interview that assesses the capacity of adults to make sense of and reflect on their childhood and their parents (Steele & Steele, 2005). Additionally, two novel observer-rated methods were used: the Structured Interview for Personality Organization (STIPO; Stern *et al.*, 2010) and the Patient Attachment Coding System (PACS; Talia *et al.*, 2017), which can be applied to therapy transcripts or any *verbatim* text and do not require an interview (Békés *et al.*, 2021b; Tmej *et al.*, 2021).

Defense mechanism measures

Self-report, observer-rated, interview-based, and projective assessment tools were used to assess defense mechanisms in this review's studies. Most studies used one of the several self-report defense mechanisms questionnaires (Laczkovics *et al.*, 2018; Lenzo *et al.*, 2021; Lopez *et al.*, 1997; Mikulincer & Orbach, 1995; Tondar *et al.*, 2017; Prunas *et al.*, 2019; Salandé & Hawkins, 2017); for the list of self-report measures and their characteristics, see Table 2.

One study (Békés *et al.*, 2021a) used the Defense Mechanism Rating Scales (DMRS; Perry, 1990), an observer-rated measure that locates 30 defenses as they occur in a transcript of a clinical interview or psychotherapy session, categorizes them into three defensive categories (*i.e.*, Mature, Neurotic, and Immature; Immature category includes Depressive and Non-depressive defenses), and seven hierarchically ordered defense levels (Di Giuseppe & Perry, 2021). A Q-sort computerized version of the DMRS was also developed (DMRS-Q) (Di Giuseppe *et al.*, 2014). The DMRS-Q is an observer-rated method that allows coders with minimal training to reliably rate the intensity/frequency/presence of 150 behaviors, communications, relational dynamics, or coping mechanisms, each associated with a defense mechanism (Békés *et al.*, 2021a). The scoring system of the DMRS-Q is automatic

and consistent with the original DMRS (Tanzilli *et al.*, 2021).

The STIPO (Stern *et al.*, 2010) was used to assess defenses in one study (Tmej *et al.*, 2021). In another study (Berant & Wald, 2009), defensiveness was assessed through the Rorschach Inkblot test (Hertz, 1935) using Exner's comprehensive system (Exner, 1993) to code patient responses, which is a well-established scoring method. In another study (Cramer & Kelly, 2010), defensiveness was assessed using the Thematic Apperception Test (TAT; Hibbard *et al.*, 1994), a standard projective method that involves showing patients different pictures on cards and asking them to tell a story for each card. The responses generated are coded using the Defense Mechanism Manual (Cramer, 1991).

Notably, two studies assessed defenses using either the DMRS or the DMRS-Q on AAI transcripts (Carlucci *et al.*, 2023; Carone *et al.*, 2025). A list of the defense and attachment measures used in each reviewed study is included in Table 1.

Research design

Most studies analyzed cross-sectional relationships between certain types of defenses and certain types of attachment styles in non-clinical populations; only two studies used a longitudinal design by assessing defense mechanisms and attachment in clinical populations at different points over the course of psychotherapy (Békés *et al.*, 2021; Tmej *et al.*, 2021). Six studies involved an experimental setting where participants' defenses were intentionally activated through attachment-based stimuli before facilitating a recall activity, such as details of an attachment-laden story. These studies then analyzed the quality of participants' defenses in their responses to targeted questions (Fraley and Brumbaugh, 2007; Fraley & Shaver, 1997; Fraley *et al.*, 2000; Marks & Vicary, 2016; Mikulincer & Horesh, 1999; Mikulincer & Orbach, 1995), with the aim of assessing whether the defensive reactions were related to certain attachment styles, or the attachment styles were connected with certain types of defensive functioning.

Relationship between defense mechanisms and attachment

Studies on the relationship between defense mechanisms and attachment mainly focused on how individuals process relational stress and regulate affect. Broadly, they found that avoidant or dismissive individuals tend to engage in defensive processes that limit emotional exposure, while anxious or preoccupied individuals often struggle with emotion regulation and rely on less adaptive defenses. The following sections outline empirical findings organized by key themes: i) emotion and affect, ii) maladaptive behavior and beliefs, iii) psychotherapy and change, and iv) reflective functioning.

Emotion and affect

Experimental studies involving the activation of relational defenses have shown that avoidant or dismissive adults may be less clinically vulnerable than previously assumed. Their implicit and explicit regulation strategies or defenses limit attention to, encoding of, and recall of attachment-related information, reducing distress exposure (Fraley & Brumbaugh, 2007; Fraley & Shaver, 1997; Fraley *et al.*, 2000; Marks & Vicary, 2016). However, avoidant individuals may project disowned traits onto others, suggesting reliance on the defense mechanism of projection (Mikulincer & Horesh, 1999). In contrast, anxiously attached individuals tend to project traits more diffusely, reflecting less distorted interpersonal perceptions.

Table 2. Description of self-report measures of defenses and attachment.

Study	Measure	Description of measure
Defense Mechanisms		
Békés <i>et al.</i> (2021); Carlucci <i>et al.</i> (2023)	DMRS (Perry, 1990)	Observer-rated measure including 30 defense mechanisms categorized into mature, neurotic, and immature styles; includes an ODF score.
Cramer & Kelly (2010)	DMM (Cramer, 1991)	Projective scoring system applied to TAT responses; evaluates the frequency of denial, projection, and identification; item count depends on the number of TAT stories coded.
Laczkovics <i>et al.</i> (2018); Prunas <i>et al.</i> (2019)	REM-71 (Steiner <i>et al.</i> , 2001)	71-item self-report questionnaire assessing a wide range of defense mechanisms across adaptive and maladaptive defense styles.
Lenzo <i>et al.</i> (2021); Tondar <i>et al.</i> (2017)	DSQ (Bond, 1992)	40 items for 20 defense mechanisms, organized in under Immature, Mature, Image-distorting and Neurotic defense categories.
Lopez <i>et al.</i> (1997)	SPS (Gerson, 1984)	14-item self-report measure assessing the characteristic use of splitting as a defense.
Mikulincer & Orbach (1995)	TMAS and MCSDS	Repressive defensiveness is measured by using two self-report measures: a 50-item scale measuring anxiety symptoms and the 33-item self-report questionnaire that assesses whether or not respondents are concerned with social approval.
Prunas <i>et al.</i> (2019)	REM-71	A 71-item questionnaire based on a developmental model of defenses.
Carone <i>et al.</i> (2025); Tanzilli <i>et al.</i> (2021)	DMRS-Q (Di Giuseppe & Perry, 2021)	Observer-rated Q-sort with 150 items representing specific behaviors or communication patterns; items are sorted to assess 30 defense mechanisms hierarchically ordered into seven levels of defensive maturity; includes an ODF score.
Attachment		
Békés <i>et al.</i> (2021)	PACS (Talia <i>et al.</i> , 2017)	Observer-rated coding system applied to verbatim therapy transcripts; no fixed item count; assesses in-session attachment patterns based on discourse markers and narrative structure.
Berant & Wald (2009); Mikulincer & Horesh (1999); Mikulincer & Orbach (1995)	AAS (Collins & Read, 1990)	18-item self-report questionnaire measuring comfort with closeness, dependence on others, and anxiety about abandonment using a Likert scale.
Berant & Wald (2009)	RQ adapted (Mikulincer <i>et al.</i> , 1990)	10-item Hebrew-language adaptation of Hazan and Shaver's (1987) RQ; assessing adult secure, avoidant, and anxious/ambivalent attachment styles through participants' agreement with brief statements.
Cramer & Kelly <i>et al.</i> (2010); Lopez <i>et al.</i> (1997)	RQ (Bartholomew & Horowitz, 1991)	A brief self-report tool where individuals identify or rate themselves on four adult attachment styles: secure, preoccupied, fearful, and dismissive.
Fraley & Shaver (1997); Fraley & Brumbaugh (2007); Fraley <i>et al.</i> (2000); Laczkovics <i>et al.</i> (2018)	RSQ	The RSQ extends on the RQ and contains 30 short statements, the participants rate the extent to which each statement best describes their characteristic style in close relationships on a Likert scale.
Lenzo <i>et al.</i> (2021); Prunas <i>et al.</i> (2019)	ASQ (Fossati <i>et al.</i> , 2003)	40 self-report items assigned to five scales: Confidence, Discomfort with Closeness, Need for Approval, Preoccupation with Relationships, and Relationships as Secondary.
Lopez <i>et al.</i> (1997)	PBI (Parker <i>et al.</i> , 1979)	Measures childhood attachment bonds through participants' retrospective self-reports of the quality of their childhood emotional bonds with their parents
Lopez <i>et al.</i> (1997); Mikulincer & Horesh (1999); Mikulincer & Orbach (1995)	AASI (Shaver & Hazan, 1987)	Single-choice self-report measure in which participants select one of three brief paragraph descriptions: secure, avoidant, or anxious/ambivalent, that best reflects their romantic attachment style.
Carlucci <i>et al.</i> (2023); Marks & Vicary (2016); Salande & Hawkins (2017); Tondar <i>et al.</i> (2017)	ECR-R (Fraley <i>et al.</i> , 2000)	A 36-item attachment measure that assesses attachment anxiety and avoidance.
Carlucci <i>et al.</i> (2023); Carone <i>et al.</i> (2025); Tanzilli <i>et al.</i> (2021); Tmej <i>et al.</i> (2021)	AAI (Main <i>et al.</i> , 1985)	Semi-structured interview assessing adult attachment based on discourse coherence and reflective capacity; responses are coded with validated classification criteria; no fixed item count.

DMRS, Defense Mechanism Rating Scales; ODF, overall defensive functioning; DMM, Defense Mechanism Manual; TAT, Thematic Apperception Test; REM-17, Response Evaluation Measure-71; DSQ, Defense Style Questionnaire; SPS, Splitting Scale; TMAS, Taylor Manifest Anxiety Scale; MCSDS, Marlowe-Crowne Social Desirability Scale; DMRS-Q, Defense Mechanism Rating Scales-Q-Sort; PACS, Patient Attachment Coding System; AAS, Adult Attachment Scale; RQ, Relationship Questionnaire; RQS, Relationship Styles Questionnaire; ASQ, Attachment Style Questionnaire; PBI, Parental Bonding Instrument; AASI, Adult Attachment Style Indexes; ECR-R, Experiences in Close Relationships Scale-Revised; AAI, Adult Attachment Interview.

Mikulincer and Orbach (1995) found that although both anxious and avoidant individuals reported anxiety when recalling early experiences, avoidant individuals exhibited higher defensiveness and better affect inhibition, limiting emotional generalization. Anxious individuals, in contrast, had better access to emotional memories but were more prone to overgeneralizing negative affect. Supporting these trends, Berant and Wald (2009) found that attachment anxiety was associated with anxiety-linked Rorschach responses, including boundary blurring, projective identification, and use of devaluation as a defense. Lopez *et al.* (1997) similarly reported greater use of splitting among preoccupied and fearful individuals, with stress increasing this tendency in dismissive and preoccupied participants.

Maladaptive behavior and beliefs

Multiple studies confirm that insecure attachment is associated with greater use of neurotic and immature defenses, whereas secure attachment corresponds to mature defense use (Békés *et al.*, 2021; Prunas *et al.*, 2019). Preoccupied or ambivalent attachment is particularly associated with fantasy, projection, and other immature defenses. In contrast, avoidant attachment is more linked to splitting and repression (Prunas *et al.*, 2019). Similarly, Richardson *et al.* (2023) found that among college students, attachment-avoidance predicted defensive isolation, while attachment-anxiety was associated with a wider array of immature defenses, such as splitting and projective identification, and emerged as a stronger predictor of overall defensive functioning (ODF). In a clinical sample of abusive parents, fearful attachment was associated with denial, occasional projection, and possible dissociative processes, such as difficulty encoding aspects of a TAT image (Cramer & Kelly, 2010). Dismissive parents used projection more frequently, while preoccupied individuals tended to identify with their own abusive parents.

Laczkovics *et al.* (2018) found that insecure attachment styles were linked to the defensive strategy of assimilation (interpreting experiences according to rigid internal schemas), while secure attachment predicted accommodation (schema flexibility). This distinction was linked to psychopathology, including depression. Similarly, Lenzo *et al.* (2021) reported that maladaptive defenses mediated the relationship between insecure attachment and eating disorder symptoms, whereas secure attachment and confident defenses were protective.

Salande and Hawkins (2017) found that attachment anxiety was associated with low psychological flexibility, higher use of primitive defenses, and greater identity diffusion – traits linked to personality disorders. Tondar *et al.* (2017) also showed that neediness and self-criticism, common in attachment-anxious individuals, were related to high use of immature defenses and lower use of mature defenses. Finally, Carlucci *et al.* (2023) found that in their study, which included women with or without binge eating disorder, and with being overweight or of normal weight, more adaptive defensive functioning was significantly correlated with lower attachment avoidance and anxiety.

Change in psychotherapy

Three studies have examined the evolution of attachment and defense mechanisms throughout psychotherapy. Békés *et al.* (2021) found that neurotic and immature defenses at therapy onset predicted increased avoidant attachment later in treatment, potentially indicating reduced relational anxiety. Immature, non-depressive defenses predicted reductions in preoccupied attachment.

Interestingly, preoccupied attachment early in treatment correlated positively with ODF and later negatively with depressive immature defenses.

Tmej *et al.* (2021) explored change in attachment and defenses among women with BPD receiving transference-focused psychotherapy (TFP). Two trajectories of attachment change emerged: a “straightforward” shift from insecure to predominantly secure attachment, and a less direct shift toward more balanced functioning. Patients also reduced their use of maladaptive defenses (*e.g.*, acting out, devaluation, splitting) and showed improved coherence in conceptualizing relational experiences.

Tanzilli *et al.* (2021) contributed further evidence by showing that securely attached patients with higher reflective functioning displayed greater overall defensive maturity. These findings suggest that secure attachment and reflective capacity are linked to the use of more adaptive defenses.

Defensive maturity and reflective functioning

Reflective functioning, or mentalization, appears to play a key role in moderating the link between attachment and defensive strategies. Individuals with secure attachment and higher reflective functioning exhibit greater emotional balance and are less reliant on immature defenses to manage painful early experiences (Steele & Steele, 2008; Tanzilli *et al.*, 2021). These individuals tend to use mature defenses, enhancing affect regulation and interpersonal functioning. Conversely, low reflective functioning in insecurely attached individuals may contribute to defensive rigidity and psychological vulnerability.

Discussion

This narrative review synthesized findings from 20 peer-reviewed, empirical studies that investigated the relationship between attachment styles and defense mechanisms using validated quantitative measures in adolescent and adult populations. The results suggest a consistent association between insecure attachment styles and the use of immature and neurotic defenses, while secure attachment tends to correlate with more mature defense functioning.

The findings converge with developmental models positing that attachment and defensive functioning are closely intertwined. Both systems serve protective functions that emerge early in life and evolve through interpersonal experiences. The findings align with Bowlby’s (1987) conceptualization, in which defense mechanisms arise as responses to the pain and distress experienced when attachment needs are not met. These early and repeated experiences often result in the exclusion of painful relational experiences from awareness, and over time, they will shape the way an individual perceives and responds to attachment clues and processes. The reviewed studies support this proposition, showing that individuals with insecure attachment patterns – particularly dismissing/avoidant and preoccupied/anxious types – tend to employ defensive strategies aimed at downregulating emotional distress and minimizing the perception of threats. (Békés *et al.*, 2021; Cramer & Kelly, 2010). Secure attachment, in contrast, is associated with the capacity to process affectively laden information without distorting reality through primitive or neurotic defenses (Dykas & Cassidy, 2011; Kobak & Bosmans, 2019; Luyten *et al.*, 2021). Our findings thus appear to imply that attachment styles may indeed reflect defensive strategies originating in early childhood (Bowlby, 1987).

These associations were supported across various study designs and measurement approaches. For instance, experimental studies found that avoidant individuals often suppress attachment-related content at both cognitive and physiological levels (Fraley & Shaver, 1997; Fraley *et al.*, 2000), whereas anxious individuals tend to project traits associated with the self more diffusely onto others (Mikulincer & Horesh, 1999). These patterns indicate distinct defensive profiles associated with different attachment strategies.

Several studies identified clinically relevant patterns in defensive functioning across attachment styles. For example, anxious attachment was associated with the defense of devaluation in projective testing (Berant & Wald, 2009), while avoidant and preoccupied individuals demonstrated greater use of splitting under relational stress (Lopez *et al.*, 1997). These findings have implications for the psychotherapy process, including the emergence of ruptures or alliance difficulties in patients with insecure attachment who rely on relationally destabilizing defenses.

Other studies identified defense styles that may impede or facilitate treatment response. Saland and Hawkins (2017) and Tondar *et al.* (2017) reported that attachment anxiety was associated with lower psychological flexibility and greater reliance on primitive defenses and identity diffusion – features often linked to personality disorders. Similarly, Laczkovics *et al.* (2018) found that insecure attachment predicted the use of assimilation as a defensive process, potentially mediating depressive symptoms, while Lenzo *et al.* (2021) found that maladaptive defense styles mediated the link between insecure attachment and eating disorder symptoms.

The two longitudinal studies included in this review offer valuable insights into the potential for therapeutic change in both attachment and defense mechanisms. Békés *et al.* (2021a) found that individuals presenting with neurotic and immature defenses early in treatment demonstrated a shift toward avoidant attachment later in therapy, potentially reflecting a reduction in relational anxiety. Non-depressive immature defenses were particularly predictive of reductions in preoccupied attachment. Conversely, individuals with depressive immature defenses showed less improvement, suggesting that such defenses may hinder relational engagement and reflective functioning – both critical components in the development of secure attachment (Steele & Steele, 2005, 2008).

Notably, defensive functioning assessed early in treatment did not always correspond to expected patterns. For example, participants with preoccupied attachment exhibited relatively high ODF at treatment onset, which may reflect limitations of assessing defenses before emotionally triggering material has been activated in the therapeutic process. These findings highlight the importance of considering timing and context when evaluating defensive functioning in psychotherapy.

Tmej *et al.* (2021) extended these findings by examining patients with BPD undergoing one year of TFP. Their results indicated significant shifts in both attachment classifications and defense use. Patients demonstrated reductions in maladaptive defenses – such as acting out, devaluation, and splitting – and increased coherence in describing relational experiences. Although some individuals experienced increased anxiety as they relinquished defensive avoidance, their narratives reflected greater emotional integration and complexity. These results suggest that TFP, with its emphasis on relational exploration and interpretation of transference, may be effective in promoting shifts toward more secure attachment and mature defensive functioning.

Cramer and Kelly's (2010) study offered further clinical in-

sight by examining abusive parents. The results indicated that fearful attachment was associated with reliance on denial and difficulty encoding emotionally salient content, suggesting possible dissociative tendencies. In contrast, dismissive and preoccupied parents were more likely to employ projection or defensive identification, respectively. These findings suggest that different attachment profiles are associated with distinct defensive constellations, with implications for tailoring therapeutic interventions. For instance, parents with fearful attachment may require interventions focused on enhancing emotional awareness and tolerance before deeper relational work can be undertaken.

Reflective functioning emerged as a potential mechanism linking attachment security to defensive maturity. Securely attached individuals demonstrated higher levels of reflective functioning and mature defense use (Tanzilli *et al.*, 2021), consistent with models proposing that mentalization supports emotion regulation and interpersonal understanding (Steele & Steele, 2005, 2008). These findings suggest that therapies that enhance reflective functioning may also support shifts in both attachment and defensive functioning.

Limitations and future directions

Despite the promising findings, this review identified several methodological limitations in the current literature. Many studies relied exclusively on self-report measures, which, although shown to be aligned with observer-rated assessments (*e.g.*, Di Giuseppe *et al.*, 2020), may not adequately capture unconscious processes such as defense mechanisms or internal working models of attachment. Only a minority used observer-rated or interview-based assessments, such as the AAI or the DMRS, the gold-standard measures in attachment and defense research, respectively, and which are better suited for capturing the complexity of these constructs. Given that self-report measures dramatically reduce time and labor required to obtain attachment and defense scores, this choice is understandable and increases the feasibility of measuring these constructs; however, findings should be interpreted as reflecting perceived rather than actual attachment and defensive characteristics. In addition, the literature often fails to clearly distinguish between *attachment state of mind* (coherence measures in the AAI) and *attachment style* (self-report of current attachment style in close relationships). In fact, Roisman *et al.* (2007) pointed out that the two are only trivially to weakly correlated, suggesting that they capture related but nonetheless distinct aspects of attachment. Future studies could further explore these differences and the overlap. Moreover, most studies used cross-sectional designs, limiting conclusions about developmental trajectories or treatment effects.

In addition, studies used various attachment classification systems, which were often not directly comparable given their different theoretical approaches; future studies using multiple attachment measures that are able to capture both dimensional and categorical aspects could be helpful to map overlaps and differences. New initiatives combining defense and attachment theory have developed a self-report tool specifically to capture and assess defense mechanisms associated with attachment processes (Richardson *et al.*, 2025).

There is also limited research examining clinical populations longitudinally or comparing different therapeutic modalities. Only one study (Tmej *et al.*, 2021) explicitly examined changes in both attachment and defense mechanisms over the course of a specific treatment. Future research would benefit from using multi-method assessments and incorporating repeated measures designs to ex-

amine how these systems change over time and in response to different interventions.

Clinical implications

Across studies, the findings suggest that attachment-related defensive patterns have direct implications for clinical work. Assessing attachment and defensive functioning at an early point of treatment can inform decisions regarding treatment focus and length. Attachment insecurity may imply an increased need to focus on relational work, addressing patterns both inside and outside the therapy, compared to securely attached patients. Being aware of common defensive tendencies associated with different attachment styles might be especially helpful to understand patients' presenting dynamics. For example, avoidant patients may require a slow and careful building of the therapeutic alliance and exploration of attachment-related clinical material, whereas anxiously attached patients might need more active support in regulating affect and navigating potential alliance ruptures. Moreover, early assessment of defensive functioning can inform treatment length as lower defensive functioning has been consistently linked to lower psychological functioning and diminished treatment efficacy (Bekes *et al.*, 2024; Perry & Bond, 2012). Carefully monitoring in-session defensive reactions can provide important clues about internal conflicts and when they get triggered, and addressing defenses used outside of therapy can provide important insights into the patients' general everyday functioning. Finally, if these mechanisms can indeed be viewed as mechanisms of change, as Békés *et al.* (2021) and Tmej *et al.* (2021) proposed, directly addressing them through interpretations and corrective relational experiences in a secure therapeutic relationship holds the promise of shifting longstanding underlying mechanisms that might positively impact on psychological symptoms.

Furthermore, given that early caregiving shapes internal working models and defensive responses (Bowlby, 1988; Steele & Steele, 2008), parenting interventions that aim to increase parents' own emotion regulation, stress tolerance, mentalization capacity, and foster emotional attunement to their child, may impact the child's attachment distress and related defensive reactions. This change may lead to the development of more secure attachment and mature defensive functioning in the child, and ultimately lead to healthier psychological development in the long run.

Conclusions

The findings reviewed here underscore the close relationship between attachment and defense mechanisms. These systems appear to co-develop and co-regulate, and their dynamic interaction may influence psychological functioning across the lifespan. Future research should further explore how attachment-based interventions can modify defensive functioning and how shifts in defense use may, in turn, facilitate more secure attachment. Given the centrality of both constructs in shaping internal experience and interpersonal behavior, this line of inquiry holds promise for advancing theory and improving clinical practice.

References

- Ainsworth, M. D. S. (1978). The Bowlby-Ainsworth attachment theory. *Behavioral and Brain Sciences*, *1*, 436–438. doi: 10.1017/S0140525X00075828
- Ainsworth, M. D. S., & Bowlby, J. (1991). An Ethological Approach to Personality Development. *American Psychologist*, *46*(4), 333–341. doi: 10.1037/0003-066X.46.4.333
- Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: a test of a four-category model. *Journal of Personality and Social Psychology*, *61*(2), 224–226. doi: 10.1037/0022-3514.61.2.226
- Békés, V., Aafjes-van Doorn, K., Spina, D., Talia, A., Starrs, C. J., & Perry, J. C. (2021a). The Relationship Between Defense Mechanisms and Attachment as Measured by Observer-Rated Methods in a Sample of Depressed Patients: A Pilot Study. *Frontiers in Psychology*, *12*, 648503. doi: 10.3389/fpsyg.2021.648503
- Békés, V., Prout, T. A., Di Giuseppe, M., Wildes Ammar, L., Kui, T., Arseno, G., & Conversano, C. (2021b). Initial validation of the Defense Mechanisms Rating Scales Q-sort: A comparison of trained and untrained raters. *Mediterranean Journal of Clinical Psychology*, *9*(2). doi: 10.13129/2282-1619/mjcp-3107
- Békés, V., Starrs, C. J., Perry, J. C., Prout, T. A., Conversano, C., & Di Giuseppe, M. (2024). Defense mechanisms are associated with mental health symptoms across six countries. *Research in Psychotherapy: Psychopathology, Process, and Outcome*, *26*(3), 729. doi: 10.4081/ripppo.2023.729
- Berant, E., & Wald, Y. (2009). Self-reported attachment patterns and Rorschach-related scores of ego boundary, defensive processes, and thinking disorders. *Journal of Personality Assessment*, *91*(4), 365–372. doi: 10.1080/00223890902936173
- Berney, S., de Roten, Y., Beretta, V., & Kramer, U. (2014). Identifying psychotic defenses in a clinical interview. *Journal of Clinical Psychology*, *70*, 428–439. doi: 10.1002/jclp.22087
- Bincoletto, A. F., Liotti, M., Di Giuseppe, M., Fiorentino, F., Nimbi, F. M., Lingardi, V., & Tanzilli, A. (2025). An investigation into the interplay of epistemic trust, defensive mechanisms, interpersonal problems, and symptomatology: a mediation model. *Personality and Individual Differences*, *233*, 112893. doi: 10.1016/j.paid.2024.112893
- Bowlby, J. (1969). *Attachment and loss* (No. 79). Random House.
- Bowlby, J. (1980). *Attachment and loss: Vol. 3. Loss, sadness and depression*. The Hogarth Press and the Institute of Psychoanalysis.
- Bowlby, J. (1987). Defensive processes in light of attachment theory. In J. Sacksteder & D. P. Schwartz (Eds.), *Attachment and the Therapeutic Process: Essays in Honor of Otto Allen Will, Jr., MD*. International Universities Press.
- Bowlby, J. (1988). *A Secure Base: Parent-Child Attachment and Healthy Human Development*. New York: Basic Books.
- Bond, M. (1992). An empirical study of defensive styles: The Defense Style Questionnaire. *Ego mechanisms of defense: A guide for clinicians and researchers*, 127–158.
- Carlucci, S., Chyurlia, L., Presniak, M., Mcquaid, N., Wiebe, S., Hill, R., Wiley, J. C., Garceau, C., Baldwin, D., Slowikowski, C., Ivanova, I., Grenon, R., Balfour, L., Maxwell, H., & Tasca, G. A. (2023). Assessing defense mechanisms in binge-eating disorder: Preliminary validity and reliability of the Defense Mechanism Rating Scale (DMRS) coded from Adult Attachment Interviews. *Psychoanalytic Psychology*, *40*(4), 279–287. doi: 10.1037/pap0000457
- Carone, N., Tracchegiani, J., & Lingardi, V. (2025). Maternal attachment state of mind and defensive functioning in pregnancy: predicting mother–infant relationship at 6 months through the PDM-2 Infancy and Early Childhood section. *Frontiers in Psychology*, *16*, 1568620. doi: 10.3389/fpsyg.2025.1568620

- Ciocca, G., Rossi, R., Collazzoni, A., Gorea, F., Vallaj, B., Stratta, P., Longo, L., Limoncin, E., Mollaioli, D., Gibertoni, D., Santamecchi, E., Pacitti, F., Niolu, C., Siracusano, A., Jannini, E. A., & Di Lorenzo, G. (2020). The impact of attachment styles and defense mechanisms on psychological distress in a non-clinical young adult sample: A path analysis. *Journal of affective disorders*, 273, 384–390. doi: 10.1016/j.jad.2020.05.014
- Collins, N. L., & Read, S. J. (1990). Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality and Social Psychology*, 58(4), 644. doi: 10.1037//0022-3514.58.4.644
- Cramer, P. (2012). *The development of defense mechanisms: Theory, research, and assessment*. Springer Science & Business Media.
- Cramer, P. (1991). The Defense Mechanism Manual. In: *The Development of Defense Mechanisms*. Springer, New York, NY. doi: 10.1007/978-1-4613-9025-1_12
- Cramer, P., & Kelly, F. D. (2010). Attachment Style and Defense Mechanisms in Parents Who Abuse Their Children. *The Journal of Nervous and Mental Disease*, 198(9), 619–627. doi: 10.1097/NMD.0b013e3181ef3ee1
- Di Giuseppe, M., & Tanzilli, A. (2025). Defenses and attachment in clinical practice: what came first? *Journal of Personality Assessment*, 107(1), 140–141. doi: 10.1080/00223891.2024.2431126
- Di Giuseppe, M., Perry, J. C., Petraglia, J., Janzen, J., & Lingiard, V. (2014). Development of a Q-sort version of the defense mechanisms rating scales (DMRS-Q) for clinical use. *Journal of Clinical Psychology*, 70, 452–465. doi: 10.1002/jclp.22089
- Di Giuseppe, M., & Perry, J. C. (2021). The Hierarchy of Defense Mechanisms: Assessing Defensive Functioning With the Defense Mechanisms Rating Scales Q-Sort. *Frontiers in Psychology*, 12, 718440. doi: 10.3389/fpsyg.2021.718440
- Di Giuseppe, M., Perry, J. C., Lucchesi, M., Michelini, M., Vitiello, S., Piantanida, A., Fabiani, M., Maffei, S., & Conversano, C. (2020). Preliminary Reliability and Validity of the DMRS-SR-30, a Novel Self-Report Measure Based on the Defense Mechanisms Rating Scales. *Frontiers in psychiatry*, 11, 870. doi: 10.3389/fpsyt.2020.00870
- Di Giuseppe, M., Lo Buglio, G., Cerasti, E., Boldrini, T., Conversano, C., Lingiard, V., & Tanzilli, A. (2024). Defense mechanisms in individuals with depressive and anxiety symptoms: a network analysis. *Frontiers in Psychology*, 15, 1465164. doi: 10.3389/fpsyg.2024.1465164
- Duschinsky, R. (2020). *Cornerstones of Attachment Research*. United Kingdom: Oxford University Press.
- Dykas, M. J., & Cassidy, J. (2011). Attachment and the processing of social information across the life span: theory and evidence. *Psychological Bulletin*, 137, 19–46. doi: 10.1037/a0021367
- Ein-Dor, T., Viglin, D., & Doron, G. (2016). Extending the Transdiagnostic model of attachment and psychopathology. *Frontiers in Psychology*, 7, 484. doi: 10.3389/fpsyg.2016.00484
- Exner, J. E., Jr. (1993). *The Rorschach: A comprehensive system: Basic foundations* (3rd ed.). John Wiley & Sons.
- Feeney, J. A. (2008). Adult romantic attachment: Developments in the study of couple relationships. En J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 456–481). Guilford Press.
- Fiorentino, F., Lo Buglio, G., Morelli, M., Chirumbolo, A., Di Giuseppe, M., Lingiard, V., & Tanzilli, A. (2024). Defensive functioning in individuals with depressive disorders: A systematic review and meta-analysis. *Journal of Affective Disorders*, 357, 42–50. doi: 10.1016/j.jad.2024.04.091
- Fonagy, P., & Luyten, P. (2009). A developmental, mentalization-based approach to the understanding and treatment of borderline personality disorder. *Development and psychopathology*, 21(4), 1355–1381. doi: 10.1017/S0954579409990198
- Fossati, A., Feeney, J. A., Donati, D., Donini, M., Novella, L., Bagnato, M., & Maffei, C. (2003). On the dimensionality of the Attachment Style Questionnaire in Italian clinical and non-clinical participants. *Journal of Social and Personal Relationships*, 20(1), 55–79. doi: 10.1177/0265407503020001187
- Fraley, C. R., & Brumbaugh, C. C. (2007). Adult attachment and preemptive defenses: Converging evidence on the role of defensive exclusion at the level of encoding. *Journal of Personality*, 75(5), 1033–1050. doi: 10.1111/j.1467-6494.2007.00465.x
- Fraley, R. C., & Shaver, P. R. (1997). Adult attachment and the suppression of unwanted thoughts. *Journal of Personality and Social Psychology*, 73(5), 1080–1091. doi: 10.1037/0022-3514.73.5.1080
- Fraley, R. C., Garner, J. P., & Shaver, P. R. (2000). Adult attachment and the defensive regulation of attention and memory: Examining the role of preemptive and postemptive defensive processes. *Journal of Personality and Social Psychology*, 79(5), 816–826. doi: 10.1037/0022-3514.79.5.816
- Gerson, M-J. (1984). Splitting: The development of a measure. *Journal of Clinical Psychology*, 40(1), 157–162. doi: 10.1002/1097-4679(198401)40:1<157::AID-JCLP2270400130>3.0.CO;2-C
- Groh, A. M., Fearon, R. P., Bakermans-Kranenburg, M. J., van Ijzendoorn, M. H., Steele, R. D., & Roisman, G. I. (2014). The significance of attachment security for children's social competence with peers: a meta-analytic study. *Attachment & human development*, 16(2), 103–136. doi: 10.1080/14616734.2014.883636
- Guédény, N., Fermanian, J., & Bifulco, A. (2010). La version française du Relationship Scales Questionnaire de Bartholomew (RSQ, Questionnaire des échelles de relation): étude de validation du construit [Construct validation study of the Relationship Scales Questionnaire (RSQ) on an adult sample]. *L'Encephale*, 36(1), 69–76. doi: 10.1016/j.encep.2008.12.006
- Hertz, M. R. (1935). The Rorschach ink-blot test: historical summary. *Psychological Bulletin*, 32(1), 33–66. doi: 10.1037/h0054565
- Hibbard, S., Farmer, L., Wells, C., Difillipo, E., Barry, W., Korman, R., & Sloan, P. (1994). Validation of Cramer's Defense Mechanism Manual for the TAT. *Journal of Personality Assessment*, 63(2), 197–210. doi: 10.1207/s15327752jpa6302_1
- Holland, A. S., & Roisman, G. I. (2010). Adult attachment security and young adults' dating relationships over time: self-reported, observational, and physiological evidence. *Developmental psychology*, 46(2), 552–557. doi: 10.1037/a0018542
- Kobak, R., & Bosmans, G. (2019). Attachment and psychopathology: A dynamic model of the insecure cycle. *Current Opinion in Psychology*, 25, 76–80. doi: 10.1016/j.copsyc.2018.02.018
- Laczkovics, C., Fonzo, G., Bendixsen, B., Shpigel, E., Lee, I., Skala, K., Prunas, A., Gross, J., Steiner, H., & Huemer, J. (2018). Defense mechanism is predicted by attachment and mediates the maladaptive influence of insecure attachment on adolescent mental health. *Current Psychology*, 39, 1388–1396. doi: 10.1007/s12144-018-9839-1

- Lenzo, V., Sardella, A., Barberis, N., Isgrò, C., Torrisi, R., Giunta, S., Petralia, M. C., Verrastro, V., & Quattropani, M. C. (2021). The Interplay of Attachment Styles and Defense Mechanisms on Eating Disorders Risk: Cross-Sectional Observation in the Community Population. *Clinical Neuropsychiatry*, 18(6), 296–303. doi: 10.36131/cnfloriteditore20210603
- Lopez, F. G., Fuendeling, J., Thomas, K., & Sagula, D. (1997). An attachment–theoretical perspective on the use of splitting defences. *Counselling Psychology Quarterly*, 10(4), 461–472. doi: 10.1080/09515079708254192
- Luyten, P., Campbell, C., & Fonagy, P. (2021). Rethinking the relationship between attachment and personality disorder. *Current Opinion in Psychology*, 37, 109–113. doi: 10.1016/j.copsyc.2020.11.003
- Lyons-Ruth, K. (2003). Dissociation and the parent-infant dialogue: a longitudinal perspective from attachment research. *Journal of the American Psychoanalytic Association*, 51(3), 883–911. doi: 10.1177/00030651030510031501
- Main, M., Hesse, E., & Hesse, S. (2011). Attachment theory and research: Overview with suggested applications to child custody. *Family Court Review*, 49(3), 426–463. doi: 10.1111/j.1744-1617.2011.01383.x
- Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. *Monographs of The Society for Research in Child Development*, 50, 66–104. doi: 10.2307/3333827
- Marks, M. J., & Vicary, A. M. (2016). The interplay and effectiveness of implicit and explicit avoidant defenses. *Journal of Social and Personal Relationships*, 33(5), 619–639. doi: 10.1177/0265407515584583
- Marriott, C., Hamilton □ Giachritsis, C., & Harrop, C. (2014). Factors promoting resilience following childhood sexual abuse: A structured, narrative review of the literature. *Child Abuse Review*, 23(1), 17–34. doi: 10.1002/car.2258
- Mikulincer, M., & Horesh, N. (1999). Adult attachment style and the perception of others: The role of projective mechanisms. *Journal of Personality and Social Psychology*, 76(6), 1022–1034. doi: 10.1037/0022-3514.76.6.1022
- Mikulincer, M., & Orbach, I. (1995). Attachment styles and repressive defensiveness: The accessibility and architecture of affective memories. *Journal of Personality and Social Psychology*, 68(5), 917–925. doi: 10.1037/0022-3514.68.5.917
- Mikulincer, M., Florian, V., & Tolmacz, R. (1990). Attachment styles and fear of personal death: A case study of affect regulation. *Journal of Personality and Social Psychology*, 58(2), 273. doi: 10.1037/0022-3514.58.2.273
- Parker, G., Tupling, H., & Brown, L. B. (1979). A parental bonding instrument. *British Journal of Medical Psychology*, 52(1), 1–10. doi: 10.1111/j.2044-8341.1979.tb02487.x
- Perry, J. C., Banon, E., & Bond, M. (2020). Change in defense mechanisms and depression in a pilot study of antidepressive medications plus 20 sessions of psychotherapy for recurrent major depression. *The Journal of Nervous and Mental Disease*, 208, 261–268. doi: 10.1097/NMD.0000000000001112
- Perry, J. C. (1990). *Defense Mechanism Rating Scales (DMRS)*. 5th Edn. Cambridge, MA.
- Perry, J. C., & Bond, M. (2012). Change in defense mechanisms during long-term dynamic psychotherapy and five-year outcome. *The American journal of psychiatry*, 169(9), 916–925. doi: 10.1176/appi.ajp.2012.11091403
- Perry, J. C., & Bond, M. (2017). Addressing defenses in psychotherapy to improve adaptation. *Psychoanalytic Inquiry*, 37(3), 153–166. doi: 10.1080/07351690.2017.1285185
- Prout, T. A., Zilcha-Mano, S., Aafjes-van Doorn, K., Békés, V., Christman-Cohen, I., Whistler, K., & Di Giuseppe, M. (2020). Identifying predictors of psychological distress during COVID-19: a machine learning approach. *Frontiers in psychology*, 11, 586202. doi: 10.3389/fpsyg.2020.586202
- Prunas, A., Di Pierro, R., Huemer, J., & Tagini, A. (2019). Defense mechanisms, remembered parental caregiving, and adult attachment style. *Psychoanalytic Psychology*, 36(1), 64–72. doi: 10.1037/pap0000158
- Richardson, E., Beath, A. & Boag, S. (2023). Default defenses: the character defenses of attachment-anxiety and attachment-avoidance. *Current Psychology*, 42, 28755–28770. doi: 10.1007/s12144-022-03919-w
- Richardson, E., Beath, A., & Boag, S. (2025). The development of the attachment defenses questionnaire (ADQ-50): a preliminary examination of reliability, validity, and factor structure. *Journal of Personality Assessment*, 107(1), 58–72. doi: 10.1080/00223891.2024.2353142
- Roisman, G. I., Holland, A., Fortuna, K., Fraley, R. C., Clausell, E., & Clarke, A. (2007). The Adult Attachment Interview and self-reports of attachment style: an empirical rapprochement. *Journal of personality and social psychology*, 92(4), 678–697. doi: 10.1037/0022-3514.92.4.678
- Roisman, G. I. (2006). The role of adult attachment security in non-romantic, non-attachment-related first interactions between same-sex strangers. *Attachment & Human Development*, 8, 341–352. doi: 10.1080/14616730601048217
- Salande, J. D., & Hawkins, R. C., II. (2017). Psychological flexibility, attachment style, and personality organization: Correlations between constructs of differing approaches. *Journal of Psychotherapy Integration*, 27(3), 365–380. doi: 10.1037/int0000037
- Shaver, P., & Hazan, C. (1987). Being lonely, falling in love. *Journal of Social Behavior and Personality*, 2(2), 105.
- Shaver, P. R., & Mikulincer, M. (2007). Adult attachment strategies and the regulation of emotion. *Handbook of emotion regulation*, 446, 465.
- Steele, H., & Steele, M. (2005). Understanding and Resolving Emotional Conflict: The London Parent-Child Project. In K. E. Grossmann, K. Grossmann, & E. Waters (Eds.), *Attachment from infancy to adulthood: The major longitudinal studies* (pp.137-164). New York, NY, US: Guilford Publications.
- Steele, H., & Steele, M. (2008). On the origins of reflective functioning. In F. N. Busch (Ed.), *Psychoanalytic Inquiry book series. Mentalization: Theoretical considerations, research findings, and clinical implications* (pp. 133-158). Mahwah, NJ, US: Analytic Press.
- Steiner, H., Araujo, K. B., & Koopman, C. (2001). The Response Evaluation Measure (REM-71): A New Instrument for the Measurement of Defenses in Adults and Adolescents. *American Journal of Psychiatry*, 158. doi: 10.1176/appi.ajp.158.3.467
- Stern, B. L., Caligor, E., Clarkin, J. F., Critchfield, K. L., Horz, S., MacCornack, V., & Kernberg, O. F. (2010). Structured Interview of Personality Organization (STIPO): Preliminary Psychometrics in a Clinical Sample. *Journal of Personality Assessment*, 92(1), 35–44. doi: 10.1080/00223890903379308
- Strauss, B., Altmann, U., Schönherr, D., Schurig, S., Singh, S., & Petrowski, K. (2022). Is there an elephant in the room? A study of convergences and divergences of adult attachment measures commonly used in clinical studies. *Psychotherapy Research*, 32(6), 695–709. doi: 10.1080/10503307.2021.2020930

- Sukhera, J. (2022). Narrative Reviews: Flexible, Rigorous, and Practical. *Journal of graduate medical education*, 14(4), 414–417. doi: 10.4300/JGME-D-22-00480.1
- Talia, A., Miller-Bottome, M., & Daniel, S. I. F. (2017). Assessing attachment in psychotherapy: validation of the patient attachment coding system (PACS). *Clinical Psychology and Psychotherapy*, 24, 149–161. doi: 10.1002/cpp.1990
- Tanzilli, A., Di Giuseppe, M., Giovanardi, G., Boldrini, T., Cavigliola, G., Conversano, C., & Lingiardi, V. (2021). Mentalization, attachment, and defense mechanisms: a Psychodynamic Diagnostic Manual-2-oriented empirical investigation. *Research in psychotherapy (Milano)*, 24(1), 531. doi: 10.4081/ripppo.2021.531
- Tmej, A., Fischer-Kern, M., Doering, S., Hörz-Sagstetter, S., Rentrop, M., & Buchheim, A. (2021). Borderline patients before and after one year of transference-focused psychotherapy (TFP): A detailed analysis of change of attachment representations. *Psychoanalytic Psychology*, 38(1), 12–21. doi: 10.1037/pap0000302
- Tondar, S., Campos, R. C., Shakiba, S., Dadkhah, A., & Blatt, S. J. (2017). The associations between the maladaptive personality dimensions of neediness and self-criticism, defense styles, self-object needs, and attachment styles in an Iranian sample. *Psychoanalytic Psychology*, 34(1), 26–34. doi: 10.1037/pap0000097
- Trower, P., & Chadwick, P. (1995). Pathways to defense of the self: A theory of two types of paranoia. *Clinical Psychology: Science and Practice*, 2(3), 263–278. doi: 10.1111/j.1468-2850.1995.tb00044.x
- Vaillant, G. E. (2020). “Defense Mechanisms” in Encyclopedia of Personality and Individual Differences. eds. Zeigler-Hill V., Shackelford T. K. (New York: Springer International Publishing), 1024–1033.