



The Measurement of Attachment Styles in Adolescents: Psychometric Development and Validation of the ARA/AFR Scale

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Abstract: The present study addresses a significant gap in psychological research by developing and validating the ARA ("Apego nas Relações de Amizade"; in English, Attachment in Friendship Relationships - AFR) scale, tailored explicitly for the adolescent population. Adolescence is a critical developmental phase during which attachment styles profoundly influence personal development and social competencies. This scale is an adaptation of the well-established "Experiences in Close Relationships" (ECR) questionnaire, originally developed by Brennan, Clark,

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and Shaver in 1998, to assess attachment in adult romantic relationships. The ARA/AFR fills the void of appropriate instruments by offering a self-assessment tool relevant to everyday peer relationship experiences. Its user-friendly format allows for both individual and group administration, making it suitable for educational and therapeutic settings. The ARA/AFR was validated through multidimensional and factor analysis using a sample of 805 adolescents aged 12 to 17. The study revealed a two-factor structure (Anxiety and Avoidance) consistent with theoretical constructs. This tool provides a culturally relevant and age-appropriate self-assessment method. The normative scores facilitate categorizing participants into classical attachment styles: secure, anxious, avoidant, and fearful, broadening its applicability in various professional settings. The ARA/AFR is thus positioned as a valuable instrument for research, education, and therapy, aiding in understanding and supporting adolescent attachment dynamics.

Keywords: Attachment; Adolescent; Friendship; Relationships; Internal Working Model.

Resumo: O presente estudo aborda uma lacuna significativa na pesquisa psicológica ao desenvolver e validar a escala ARA ("Apego nas Relações de Amizade"; em inglês, Attachment in Friendship Relationships - AFR), adaptado especificamente para a população adolescente. A adolescência é uma fase crítica do desenvolvimento durante a qual os estilos de apego influenciam profundamente o desenvolvimento pessoal e as competências sociais. Esta escala é uma adaptação do bem estabelecido questionário "Experiences in Close Relationships" (ECR), desenvolvido inicialmente por Brennan, Clark e Shaver em 1998, para avaliar o apego em relacionamentos românticos adultos. A ARA/AFR preenche a lacuna de instrumentos apropriados, oferecendo uma ferramenta de autoavaliação relevante para as experiências diárias de relacionamento entre pares. Seu formato fácil de usar permite a administração individual e em grupo, tornando-o adequado para ambientes educacionais e terapêuticos. A ARA/AFR foi validada por meio de análise multidimensional e fatorial utilizando uma amostra de 805 adolescentes de 12 a 17 anos. O estudo revelou uma estrutura de dois fatores (Ansiedade e Evitamento) consistente com os construtos teóricos. Esta ferramenta fornece um método de autoavaliação culturalmente relevante e adequado à idade. Os escores normativos facilitam a categorização dos sujeitos em estilos de apego clássicos: seguro, ansioso, evitante e desorganizado, ampliando sua aplicabilidade em diversos ambientes profissionais. O ARA/AFR posiciona-se assim como um instrumento valioso para investigação, educação e terapia, auxiliando na compreensão e apoiando a dinâmica de apego dos adolescentes.

Palavras-chave: Apego; Adolescente; Amizade; Relacionamentos; Modelo Operacionais Internos.

The development of the attachment in adolescents in this study was inspired by a deficiency within the realm of psychological research, particularly in the Brazilian milieu. This initiative aimed to develop a reliable instrument for assessing attachment styles, specifically during adolescence, a critical developmental phase. Recent studies underscore the significance of culturally and developmentally appropriate measures to



evaluate attachment, reflecting the nuanced interplay between personal development and social influences during youth (e.g., Crittenden & Spieker, 2020; Jewell, Gardner, Susi, Watchorn, Coopey, Simic, Fonagy & Eisler, 2019; Thompson, Simpson & Berlin, 2022).

To substantiate the necessity of an instrument to measure attachment in a young sample, it stems from evidence that secure attachment in adolescence is pivotal, not only for immediate personal development but also for establishing enduring social and emotional competencies. Adolescents with secure attachment styles exhibit a remarkable capacity to advocate their viewpoints to their parents without fear of repercussions, thus affirming the role of secure bases in fostering psychological resilience (Delgado, Serna, Martínez & Cruise, 2022; Walsh & Zadurian, 2023). Moreover, thematic analysis within peer-reviewed studies has demonstrated that attachment styles directly influence friendship motivations and interpersonal dynamics among university students, thus validating the need for an Attachment Relationship Assessment focusing on the adolescent period (Marukami, 2014). Thus, the development of a tool to measure attachment based on friendship relationships addresses a critical gap in attachment measurement tools by providing a culturally relevant and age-appropriate assessment method, which is supported by empirical research underscoring the importance of secure attachment during adolescence (Venta, Shmueli-Goetz, & Sharp, 2013).

The necessity for a measure of attachment in friendship relationships (AFR) was further highlighted by the absence of appropriate instruments that are both effective in research and practical for educators and professionals working with youth. The AFR is designed to address these needs by providing a self-assessment tool relevant to everyday experiences and emotions in peer relationships. Its user-friendly format allows for both individual and group administration, making it a versatile tool in various educational and therapeutic settings (Wilkinson, 2011).

Introduction

In this article, we present the construction and validation of the Attachment in Friendship Relationships (ARA/AFR) scale for the measurement of attachment bonding in adolescence. This scale is an adaptation of the well-established



"Experiences in Close Relationships" (ECR) questionnaire, originally developed by Brennan, Clark, and Shaver in 1998, to assess attachment in adult romantic relationships. The AFR consists of 36 items, equally distributed across two scales—Anxiety and Avoidance. These scales embody the foundational dimensions of attachment theory, reflecting the dual aspects of attachment responses observed in adolescents.

The design of the ARA/AFR was informed by a growing body of research indicating the need for reliable measures that can capture the unique qualities of attachment in non-romantic relationships among youths. For instance, research on attachment insecurity in adolescents highlights its potential role as a predictor of various psychosocial outcomes, measuring these dimensions particularly relevant (Odelman, Cillessen & Ven Den Berg, 2023).

Moreover, the development and psychometric properties of scales similar to the ARA have been tested, showing that understanding attachment styles through self-report measures can significantly contribute to the predictive validity of friendship quality and stability during adolescence (Delgado, Serna, Martínez & Cruise, 2022; Jones, Fraley, Ehrlich, Stern, Lejuez, Shaver & Cassidy, 2018; Rubin, Dwyer, Kim, Burgess, Booth-Laforce & Rose-Krasnor, 2004). These studies underline the importance of accurately capturing the dimensions of Anxiety and Avoidance as they relate specifically to peer relationships.

The ARA/AFR thus stands as an important tool not only for researchers but also for practitioners working with adolescents. It offers a nuanced view of attachment dynamics in friendships, which is pivotal for interventions aimed at improving interpersonal relationships and overall mental health during this critical developmental period.

The foundational theoretical framework of this article is John Bowlby's attachment theory, a cornerstone in developmental psychology recognized for its profound clinical implications. Attachment theory is pivotal in understanding the development of psychopathologies and behavioral disorders associated with maladaptive attachment styles. Considering the substantial impact of this theory, as affirmed by a broad consensus among developmental scholars, it is essential to integrate it thoroughly within the theoretical discourse of this subject.



Bowlby's propositions suggest that disruptions in early attachment processes can lead to diverse psychopathological outcomes in later life. Recent research continues to substantiate Bowlby's theory, demonstrating how attachment insecurity can predispose individuals to various mental health issues, including anxiety, depression, and personality disorders (Schechter & Willheim, 2009; Sroufe, Carlson, Levy & Egeland, 1999). Moreover, the linkage between early attachment experiences and later behavioral patterns emphasizes the critical role of early interventions aimed at mitigating these adverse outcomes (Crittenden, 2002; Lorenzini & Fonagy, 2013).

In light of the considerations above, it is important to explore attachment and its relationship to adolescence. Adolescence is a crucial developmental stage during which attachment styles significantly influence personal growth and social abilities

Attachment and Adolescence

The attachment system plays a crucial role in assisting adolescents as they navigate the challenges by the maturation process. This stage of life marks the development of advanced intellectual functions, including abstract thinking and hypothetical-deductive reasoning (Allen, Hauser, Bell, & O'Connor, 1994). Rather than abandoning early childhood attachment models, adolescents undergo a personal restructuring of their attachment system. This restructuring facilitates their quest for autonomy and is integral to their identity development. Bowlby (1969, 1973, 1980, 1982, 1988) described this process as the dramatic enhancement of self-distinction from others. Consequently, adolescents learn to differentiate among various relationships and maintain a coherent self-image across different interactions (Allen & Land, 1999; Allen, Hauser, Eickholt, Bell & O'Connor 1994; Allen, Hauser, Bell, & O'Connor, 1994; Fraley & Davis, 1997; Becker-Stoll, Fremmer-Bombik, 1997; Lerner & Steinberg, 2009; Roazzi, Nascimento & Gusmão, 2013).

In light of attachment theory, notable studies conducted in 2000 and 2002 provide valuable insights into the impact of attachment styles on youth behavior and interpersonal relationships. A study by Leondari and Kiosseoglou (2000) involving 153 university students in Athens found a positive correlation between secure attachment styles and reduced feelings of guilt, anxiety, and conflict in familial and peer relationships, as well as enhanced communication strategies in educational and social



settings for both genders. Conversely, research led by Feiring, Deblinger, Hoch-Espada, and Haworth (2002) with 254 high school students in the United States identified a significant relationship between insecure attachment patterns and increased aggression and insecurity in school, friendship, and romantic relationships among adolescents of both sexes. This study particularly noted that aggressive behaviors in girls often mask deep-seated feelings of shame and anxiety linked to avoidant or anxious-ambivalent attachment styles, which can also manifest in boys as a response to a familial atmosphere marked by neglect and physical or sexual abuse.

Moreover, empirical evidence indicates that secure attachment during adolescence fosters self-awareness, emotional expression, and emotional regulation (Kobak, Sudler, & Gamble, 1991). Additionally, it is associated with enhanced self-esteem and a more positive self-perception, characterized by a sense of friendliness. Furthermore, studies have indicated that individuals with a secure attachment style are more sociable, helpful to others, and able to rely on themselves and others as a secure base (Bartholomew & Horowitz, 1995; Brennan & Bosson, 1998).

The bond with the partner is realistically experienced as a relationship that also implies respect, friendship, mutual support, but not annulment or dependence (Bartholomew & Horowitz, 1991; Collins & Read, 1995; Feeney & Noller, 1995; Flykt, 2021; Shaver & Hazan, 1992; Pianta, Egeland & Adam, 1996; Vagos & Carvalhais, 2020).

Avoidant adolescents, on the other hand, often exhibit behaviors that minimize or deny distress within interpersonal interactions. Research highlights that these adolescents tend to provide incoherent self-descriptions, indicating a fragmented self-concept (Lapsley, Rice, & Fitzgerald, 1990). Moreover, they frequently encounter difficulties in forming close relationships due to their distancing behaviors (Kenny, 1987). These individuals are characterized by their emotional coldness and lack of expressiveness, which often leads to significant challenges in social interactions (Bartholomew & Horowitz, 1991). Recent studies have further validated these traits, noting that avoidant attachment can result in poorer peer relationships and a diminished capacity for emotional regulation (Delgado et al. 2022).

Adolescents with anxious-ambivalent attachment styles often exhibit less coherent and integrated experiences of attachment compared to their securely



attached peers. This attachment style is marked by strong affective ambivalence, characterized by conflicting emotions of anger toward and desire to remain close to the parent. This intense emotional involvement significantly hampers their ability to process these experiences effectively (Bartholomew & Horowitz, 1991). Such adolescents typically display lower self-esteem and self-confidence, struggle with self-assertion, and face difficulties in managing challenging situations (Kobak & Sceery, 1988; Feeney & Noller, 1990). Furthermore, their affective ambivalence complicates the formation of stable and balanced relationships, both platonic and romantic (Collins & Read, 1990).

Research into adolescent development highlights that this period is pivotal for the evolution of the attachment system, where individuals extend their attachment behaviors beyond familial contexts to include peers and romantic partners. This transition signifies the restructuring of primary attachment configurations, supporting the formation of a diverse attachment network that includes not only parents but also friends and significant others (Delgado et al. 2022). Adolescents begin to rely on their peers for emotional support, mirroring the attachment functions traditionally reserved for parents. This shift is a critical development, illustrating the flexibility and adaptability of the attachment system. As Mary Ainsworth's seminal work in 1989 demonstrated, peers increasingly become significant attachment figures, providing security and comfort previously associated with parental figures (Ainsworth, 1989).

This phenomenon suggests that adolescence represents a pivotal stage in the development of an individual's attachment network, allowing for the formation of multiple significant relationships beyond the family. This period facilitates the establishment of secure attachments with peers, which are crucial for healthy psychological development and form the foundation for future intimate relationships (Flykt et al., 2021).

Secure or insecure attachments formed during adolescence—not just with parental figures but also with significant others—play a critical role in shaping the individual's psychological landscape. These relationships influence not only adolescent development but also extend their impact into adulthood, affecting the individual's overall life trajectory (Delgado et al. 2022). The security of these attachments can determine the quality of future relationships, emotional well-being,



and the ability to cope with life's challenges (Mónaco, 2019). By understanding the complexities of these relationships during key developmental phases, we can better support adolescents in cultivating healthier attachments that will benefit them throughout their lives.

Attachment Bond Measurement Instruments

The study of attachment employs diverse methodologies tailored to the subject's age. In early childhood, researchers prefer direct observation to gauge attachment styles accurately due to the non-verbal nature of this age group. As individuals mature, the methods shift towards projective tests, semi-structured interviews, and self-assessment questionnaires, which are more suitable for capturing the complex psychological constructs of older children, adolescents, and adults (Bartholomew & Shaver, 1998; David & Norberg, 2022; Pollard, Bucci & Berry 2023; Yang, Suanpong, Ruangkanjanes, Yu & Xu 2022). The following section will describe the most widely used techniques for measuring Mental Attachment Models.

The Measure of Attachment in Childhood: The Strange Situation

For the study of attachment in childhood, the contribution of Mary Ainsworth (Ainsworth & Bell, 1970; Ainsworth, Blehar, Waters & Wall, 1978) has been of great importance, who has developed a standardized procedure called the **Infant Strange Situation (ISS)**, for the evaluation of attachment behavior in young children between 12 to 24 months. This standardized observational method evaluates a child's reactions to a series of separations and reunions with their caregiver, which are pivotal for classifying the nature of their attachment bond. More in detail, it is a technique that involves observing the child's behavior during separation from the mother and reunion with her, which allows the attachment bond to be classified into three categories: secure (children show distress upon separation but are quickly comforted upon reunion), ambivalent (children exhibit intense distress and are not easily comforted upon reunion), and avoidant (children show little or no distress upon separation and avoid the caregiver upon reunion).

The ISS is based on 8 episodes of 3 minutes each, video-recorded in a room-laboratory where mother and son have games at their disposal.



The course of the sequence entails two instances of separation from the mother. In the first instance, the child is left in the company of a stranger. In the second instance, the child is left completely alone. During each instance, the child is observed to examine his behavior in the the mother's absence and at the time of her return to the room.

This method not only illuminates the early attachment strategies children develop but also correlates these behaviors with later emotional and social outcomes (Kohlhoff, Lieneman, Cibralic, Traynor & McNeil, 2022; Pollard et al. 2023). Recent studies continue to validate the SSP's relevance, emphasizing its predictive value regarding various aspects of psychological well-being (Mónaco, 2019).

Mary Ainsworth's seminal research highlighted the critical link between maternal responsiveness and the development of secure attachment patterns in children. Her findings indicated that infants whose mothers responded sensitively to their needs during early interactions—such as feeding, crying, and face-to-face engagements—exhibited distinct behaviors when later assessed under controlled conditions (Ainsworth & Bell, 1970). During the "Strange Situation" experiment—a structured observational test—these infants demonstrated a capacity for effective self-regulation. Specifically, upon reunion with their mothers after a brief separation, they displayed behaviors indicative of secure attachment: they sought comfort, quickly regained their composure, and resumed exploration and play (Ainsworth, Blehar, Waters, & Wall, 1978). This pattern of secure attachment, identified as Group B within Ainsworth's classification system, underscores the importance of early responsive caregiving. It reflects the child's trust in their caregiver's availability and support, which facilitates their emotional and exploratory behaviors. Such interactions are foundational to the child's confidence and ability to manage separations and unfamiliar environments, suggesting that the primary caregiver's sensitivity is crucial during the formative stages of life.

In the context of daily interactions, some children have mothers who consistently exhibit insensitivity to their signals, even maintaining a physical distance from them. When these children are subjected to the 'Strange Situation' they do not display noticeable signs of discomfort upon separation from their mother. Interestingly, these children continue to engage in play even when left alone. Upon their mother's return,



they do not show clear signs of either rejection or acceptance, creating an impression of indifference towards their mother's presence. Such children are typically classified as 'insecure avoidant' (Group A) in attachment theory.

Children who have experienced an unpredictable relationship with their mothers, where the mother's caregiving availability is not in sync with the child's needs, exhibit distinct behaviors when observed in the 'Strange Situation'. At the moment of separation from their mother, these children display signs of desperation. Upon reunion, they seek close physical contact, but their fear of the mother potentially leaving again is evident. They continue to cry, appear inconsolable, and have difficulty re-engaging in play. These children are typically referred to as 'insecure-anxious-resistant' or 'ambivalent' (Group C) in attachment theory.

A tool for measuring attachment in late childhood is the *Manchester Child Attachment Story Task* (Green, Stanley, Smith & Goldwyn, 2000). This task utilizes a narrative technique where children engage with two puppets, representing a child and his or her mother in scenarios of perceived danger, to reveal the patterns of their attachment behavior (Green et al., 2000). During the MCAST, children are prompted to express their understanding and responses to attachment-related themes by telling a story. They assume the roles of both the child and the mother alternately, which helps in activating the child's attachment system. This method allows observers to gain insights into the child's attachment style by analyzing how they portray the relationship and coping strategies in the face of hypothetical stress or threats (Minnis, Read, Connolly, Burston, Schumm, Putter-Lareman, & Green 2010). The MCAST is especially valued for its ability to elicit direct expressions of the child's internal working models of attachment, making it a vital tool in both clinical and research settings to assess attachment representations beyond early childhood (Goldwyn, Stanley, Smith, & Green 2000).

The Measure of Attachment in Adulthood

Research into adult attachment has developed along two principal lines. The first line, rooted in developmental psychology, primarily examines familial relationships. This approach extensively employs interviews to delve into early relational experiences with caregivers, providing a deep understanding of one's



foundational interpersonal dynamics. The most prominent tool emerging from this research is the Adult Attachment Interview (AAI) devised by Mary Main. This structured interview method is designed to explore an individual's past experiences and their influence on current attachment behaviors. By analyzing responses about childhood relationships with caregivers, researchers can classify adult attachment styles into secure, dismissive, preoccupied, and unresolved/disorganized categories (Hesse, 1999).

The second line of research, developed in the field of social psychology, has focused on couple relationships, using self-assessment questionnaires **to investigate** experiences in intimate relationships (for a review, see Crowell, Fraley & Shaver, 1999; Barone, & Del Corno, 2007). This line of research predominantly employs self-assessment questionnaires to explore experiences within intimate relationships, offering insights into interpersonal patterns that echo cognitive representations of attachment. These self-assessment tools, such as those reviewed by Crowell, Fraley, and Shaver (1999), and further discussed by Barone and Del Corno (2007), enable researchers and practitioners to delineate attachment styles in adulthood with greater precision. The methodologies adopted often parallel those used in the Adult Attachment Interview (AAI), thus providing a robust framework for examining adult attachment beyond familial settings. A pivotal instrument in this domain is the Experiences in Close Relationships Scale (ECR) developed by Brennan, Clark, and Shaver (1998). This scale has profoundly influenced subsequent tools, including the ARA ("*Apego nas Relações de Amizade*") questionnaire, which we developed. The ECR measures adult attachment along two dimensions: anxiety and avoidance, mirroring the AAI's emphasis on secure and insecure attachments.

Adult Attachment Interview

The tool that has represented a seminal instrument for the development of subsequent methodologies is the *Adult Attachment Interview* (AAI) by Main and collaborators (Main & Goldwin, 1984; George, Kaplan, & Main, 1984/1996). This structured interview, comprising 18 questions, is designed to elicit detailed narratives about individuals' earliest attachment experiences with their caregivers. It explores how these foundational relationships influence their later development both as adults



and as parents. The AAI's primary focus is not merely on the nature of the relationships described but rather on the enduring impact these relationships have left on the individual's unconscious. The crux of this assessment lies in how interviewees recount their experiences—whether they can provide an integrated and coherent narrative of these relationships and articulate the significance they hold. This ability to reflect on and interpret past relationships is indicative of their attachment style and has profound implications for their interpersonal behaviors as adults. Significant research has underscored the AAI's utility in revealing the subtle nuances of adult attachment styles. Studies highlight its effectiveness in identifying patterns of secure, avoidant, and anxious attachment, which are critical in predicting relational behaviors and psychological outcomes in adulthood (Hesse, 2008; Baker & McNulty, 2013).

The interviews are transcribed and analyzed based on the communicative principles outlined by the linguist Paul Grice in his seminal works from 1975 and 1989 (Grice, 1975, 1989). These principles, known as "Grice's maxims," guide the evaluation of the interview transcripts in four key areas:

1. **Quality:** This maxim assesses the truthfulness and accuracy of the content communicated by the interviewee. It emphasizes the inclusion of concrete examples that substantiate the statements made, ensuring that the information presented is credible and well-supported by evidence (Grice, 1975).
2. **Quantity:** According to this principle, the length of the communication should be adequate—sufficiently informative but concise. The content should be comprehensive yet not overly verbose, providing just enough information to clearly convey the intended message without superfluous details (Grice, 1975).
3. **Relevance:** This maxim concerns the relevance and coherence of the discourse. It necessitates that the narrative remains focused on pertinent topics, avoiding digressions into unrelated areas. The discussion should logically connect, demonstrating how different points relate and contribute to the overarching theme (Grice, 1989).
4. **Manner:** This principle dictates the clarity and organization of the presentation. It calls for straightforward and orderly communication, free



from ambiguous expressions and confusing terminology. The use of metaphors, if any, should be appropriate and enhance understanding rather than obfuscate the message (Grice, 1989).

The language and style utilized in narratives are indicative of an individual's mental state regarding attachment, as suggested by seminal works in attachment theory (Main, Kaplan, & Cassidy, 1985; Hesse, 1999). These aspects are systematically analyzed using graduated rating scales that explore the depth and nuances of attachment experiences, articulated into two distinct categories:

1. Subjective Experience Scales:

- **Affect:** This scale measures the emotional tone reflected in the narrative.
- **Rejection:** It assesses instances where the subject felt rejected or sidelined.
- **Involvement:** This scale evaluates the degree of engagement and presence the caregivers had in the subject's life.
- **Neglect:** It determines the perceived lack of attention or neglect from caregivers.
- **Pressure to Succeed:** This measures the expectations and pressures to achieve, placed on the subject during childhood.

The objective of these scales is to reconstruct the individual's life history, providing a rich, experiential context of their attachment experiences, as they have perceived and reported them.

2. State of Mind Scales:

- **Transcript Coherence:** Assesses the logical flow and clarity of the narrative.
- **Metacognitive Monitoring:** Measures the subject's awareness of their cognitive processes during the narrative.
- **Idealization:** Evaluates the extent of idealizing caregivers without supporting examples.
- **Lack of Memory:** Checks for instances where the subject reports an inability to recall specific events.
- **Devaluation of Attachment:** Assesses the subject's undervaluation or dismissal of attachment relationships.
- **Anger:** Measures expressions of anger or resentment towards caregivers.
- **Passivity:** Evaluates the passivity or emotional disengagement in the narrative.
- **Lack of Resolution of Trauma or Bereavement:** Assesses unresolved feelings regarding traumatic events or losses.



These scales are designed to evaluate the current mental state of the subject, focusing on how they represent and organize their attachment-related experiences and memories. The evaluation process adheres strictly to the criteria set forth in attachment theory, ensuring that each narrative is analyzed for both its content and form in a structured and reliable manner.

In the second phase, the interview is analyzed as a whole, in order to assign a final classification of the subject's attachment.

The *patterns* derived from the scores of the scales allow the individual to be assigned to one of four distinct classifications. Each classification corresponds to a set of patterns discerned from the subject's responses, evaluated through specific scoring scales that measure their attachment experiences and current psychological state. The four primary classifications are:

- A. **Secure:** These responses exhibit an understanding and appreciation of attachment relationships. Individuals classified as secure typically acknowledge the importance and impact of their early attachments on their personality and current relationships, reflecting a balanced and coherent perspective (Main, Goldwyn, & Hesse, 2003).
- B. **Dismissing-Avoidant:** Characterized by a minimization of the importance of attachment needs. Individuals in this category often deny or devalue their emotional needs and may depict their childhood experiences in a way that lacks genuine warmth or emotional content, suggesting an avoidance of attachment (Bartholomew & Horowitz, 1991).
- C. **Preoccupied:** These responses frequently reflect ongoing distress about past relationships, often with narratives that emphasize a lack of support or stability from caregivers. Subjects with a preoccupied attachment style may display unresolved anger, sadness, or confusion regarding past relationships, indicating an entangled state of mind (Hesse, 1999).



D. **Unresolved/Disorganized:** Responses in this category often reveal trauma or loss that has not been emotionally processed. Narratives may include disoriented or disorganized behaviors during the interview, often relating to experiences of fear, neglect, or abuse that remain unresolved (Main & Hesse, 1990).

Each category is derived from a thorough analysis of the interviewee's responses, using established protocols to ensure a reliable and valid assessment of adult attachment. This process is critical for understanding how past attachment experiences influence current behaviors and relationships.

The Experiences in Close Relationships Questionnaire for the Measurement of Attachment in Couple Relationships

Research in the field of adult romantic relationships consistently supports the concept of continuity in attachment styles, suggesting that adults often seek partners who affirm their pre-established attachment patterns. This tendency is driven by an intrinsic readiness of the attachment system to engage with partners who mirror familiar attachment dynamics, facilitating a resonance with one's established emotional behaviors and expectations (Weiss, 1982).

Interesting is the research conducted by Hazan and Zeifman in 1999 exploring the evolution from asymmetrical, parent-child attachment to symmetrical, adult relationships. This transition is characterized by a shift in the attachment dynamics from a dependence typical of early life to a mutual, reciprocal engagement seen in adult bonding (Hazan & Zeifman, 1999). The study meticulously outlines how the four pivotal components of attachment—"maintenance of closeness," "discomfort at separation," "safe haven," and "secure base"—gradually transition from parental figures to peers, and ultimately to romantic partners over several years. It reveals that attachment behaviors initially directed towards parents begin to incorporate peers during adolescence, setting the stage for adult romantic attachments. Further, the research highlights that the role of a 'secure base' typically held by parents during childhood is increasingly taken on by romantic partners in adulthood (Hazan & Shaver, 1987, 1990). This transition is often accompanied by the development of a sexual component, which intensifies during adolescence. The sexual element not only



catalyzes the formation of peer attachments but also promotes the development of deeper emotional bonds that can mature into stable, long-term relationships, characterized by shared experiences and profound emotional connections (Hazan & Zeifman, 1999). This intricate process underscores the significant influence of early attachment patterns on the formation and stability of adult romantic relationships, suggesting that the foundational attachment behaviors shape, and are reshaped by, interpersonal and romantic interactions throughout life.

Brennan et al. (1998) conducted a significant study involving 1,086 students, administering a comprehensive 323-item questionnaire aimed at assessing attachment bonds within romantic relationships. This questionnaire synthesized elements from various existing measures to cover a broad spectrum of attachment-related concerns. Through rigorous factor analysis, the researchers successfully consolidated sixty initial subscales into two primary dimensions of attachment: Anxiety and Avoidance.

- **Anxiety** is described as an intense concern about romantic relationships, encompassing fears of abandonment and continuous demands for deeper involvement from partners.
- **Avoidance** involves reluctance to become emotionally close, discomfort with intimacy, and an aversion to depending on partners.

These dimensions echo the attachment styles identified in children by Ainsworth et al. (1978), highlighting a developmental continuity in attachment patterns from childhood to adulthood. By isolating items that strongly correlated with these dimensions, Brennan and colleagues crafted the Experiences in Close Relationships (ECR) questionnaire. This instrument comprises two 18-item scales, each demonstrating high internal consistency (Cronbach's alpha > .90), which quantifies anxiety and avoidance in romantic attachments (Brennan, Clark, & Shaver, 1998). Further validation of this instrument in diverse cultural contexts underscores its robustness and applicability across different populations. Specifically, a Portuguese version of the ECR has been adapted and validated, confirming its utility in non-English speaking countries (Roazzi, Nascimento, Souza & Mascarenhas, 2017; see also the Italian version of the ECR Picardi, Vermigli, Toni, D'Amico, Bitetti & Pasquini, 2002). This refined assessment tool has been pivotal in advancing the understanding



of adult attachment dynamics in romantic relationships, providing a reliable measure that aligns with foundational attachment theories proposed by Ainsworth and others.

The Relationship Questionnaire (RQ), developed by Bartholomew and published by Bartholomew and Horowitz (1991), classifies attachment into four styles. This self-report instrument assesses adult attachment within Bartholomew's four-category framework secure, preoccupied, dismissing (or dismissing avoidant), fearful (fearful-avoidant). Brennan, Shaver, and Tobey (1991) demonstrated that secure, preoccupied, dismissing (or dismissing avoidant), align with Hazan and Shaver's (1987, 1990) secure, anxious and avoidant styles. Bartholomew's measure adds the "fearful" category and situates the four categories within a two-dimensional model (Bartholomew, 1991). The RQ consists of presenting four descriptions of attitudes towards affective relationships. Initially, the subject chooses the description that best represents their way of experiencing relationships. Subsequently, using the same descriptions, the subject expresses their evaluation on a 7-point Likert scale. This dual measurement allows those who do not fully identify with one description to articulate their attachment style more precisely. Attachment theory posits that these attachment styles significantly influence relational behaviors and emotional regulation in adult relationships. The RQ has been widely used and validated in various studies to assess attachment styles and their impact on relationship stability and quality (e.g., Holmes, & Lyons-Ruth, 2006). Its utility in both clinical and research settings highlights the importance of understanding individual differences in attachment orientations (e.g., Nortje, 2023).

Bartholomew (1990, 1994) integrated Bowlby's self-model and other model to describe prototypical forms of adult attachment. Table 01 illustrates the four attachment patterns derived from combining these dimensions: (1) The secure style is characterized by a positive model of both the self and others, high self-worth, belief in others' responsiveness, comfort with autonomy, and ease in forming close relationships; (2) The preoccupied style involves a negative model of the self and a positive model of others, characterized by self-worth dependent on gaining others' approval and acceptance; (3) The dismissing style includes a positive model of the self and a negative model of others, characterized by an overt positive self-view, denial of subjective distress, and dismissal of the importance of close relationships;

(4) The fearful style is characterized by a negative model of both the self and others, marked by a negative self-view, lack of trust in others, apprehension about close relationships, and high levels of distress.

Table 01. Model of adult attachment, in terms of Internal Working Models of the Self and the Other (Bartholomew & Horowitz, 1991).

		Internal working Model of Self	
		Positive (low anxiety) Secure	Negative (high anxiety) Preoccupied
Internal working Model of Others	Positive (low avoidance)	Comfortable with intimacy and autonomy in close relationships; self-confident	Preoccupied with close relationships. Hyper dependent on others for self-worth; demanding, approach orientation towards others
	Negative (high avoidance)	Dismissing Compulsively self-reliant; Dismissing of intimacy. Strongly independent	Fearful Fear of intimacy due to fear of rejection; social avoidant; low self-esteem & high attachment anxiety

Brennan, Clark, and Shaver traced the four Bartholomew styles to a model organized based on the dimensions of Anxiety and Avoidance as shown in Figure 01.

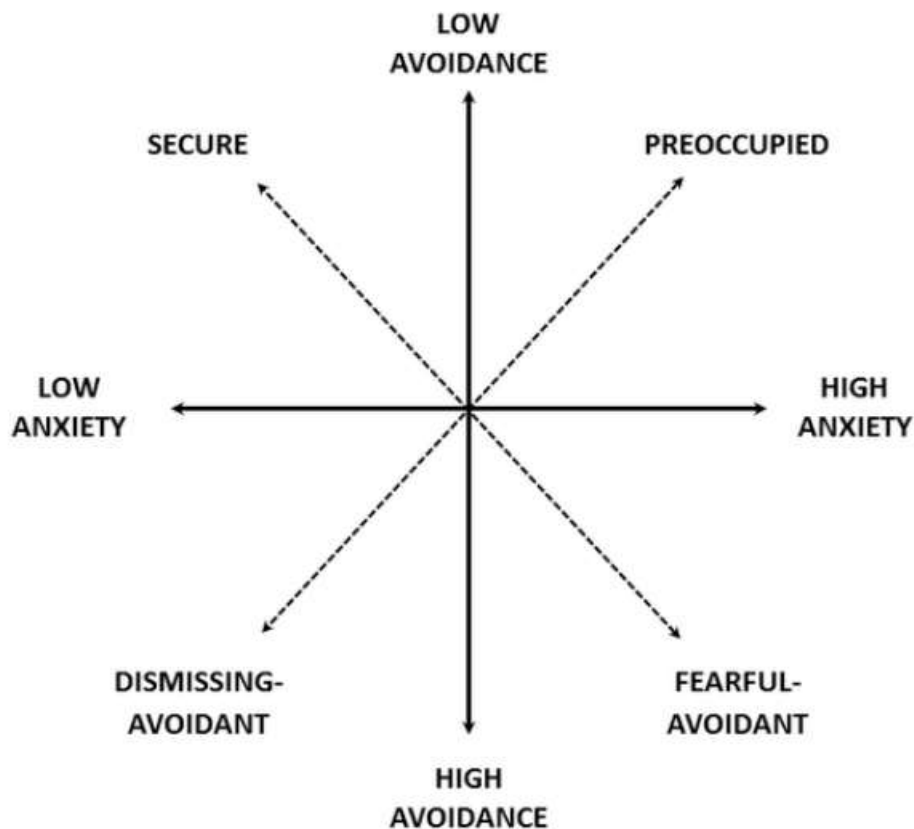


Figure 01. The two-dimensional model of individual differences in adult attachment (Brennan, Clark, Shaver, 1998; Fraley & Shaver, 2004)

According to this scheme, secure individuals are those who score low on both the anxiety and avoidance scales (Mikulincer & Shaver, 2001, 2003, 2007, 2017; Mikulincer, Shaver & Segal, 2005), characterized by intimate partner confidence, supportiveness and comfort with intimacy and interdependence. These individuals are typically viewed as well-adjusted and capable of maintaining healthy, balanced relationships. At the other end of the spectrum are fearful individuals, with high scores on both scales, expressing both fear of rejection and discomfort with intimacy. This group may struggle significantly in forming or sustaining close relationships due to these dual fears. Preoccupied (often referred to as Worried) people score high on the anxiety scale and low on the avoidance scale. Individuals with this style exhibit an intense concern about their relationships, fear of abandonment, and a dependency on continuous reassurance and involvement from their partners. Dismissing (often referred to as Detached) people have high scores on the avoidance scale and low on the anxiety scale, characterized by a discomfort



with intimacy and a distancing way of experiencing relationships. They typically manage relational stress by withdrawing and maintaining emotional independence.

Each of these styles represents a unique way individuals understand and respond to intimacy and their attachment needs, shaping how they interact within close relationships. The nuances of these styles are critical in psychological assessments and therapeutic settings to tailor interventions that address specific relational dynamics and attachment-related issues.

The Measure of Attachment in Adolescence

Attachment behavior, prominently observed in early childhood, manifests across the lifespan. The continuity of caregiving styles significantly anchors an individual's early relational schemas, forming a foundation for their interactions with others throughout different developmental stages. These internal models of attachment profoundly influence one's expectations and interactions in various relationships, including those with teachers, friends, and romantic partners. John Bowlby, a pioneer of attachment theory, posited that the core elements of early attachment processes are mirrored in later relational contexts, suggesting a fundamental similarity between the attachment bonds formed in childhood and those in adult romantic relationships (Bowlby, 1969, 1973, 1980, 1982, 1988). This perspective highlights the predictive nature of early attachment experiences on the stability and quality of future interpersonal relationships.

While attachment theory is commonly applied across various life stages, research has traditionally emphasized transitions from childhood to adulthood, often treating adolescence as merely an intermediate stage. However, adolescence should be understood as a critically transformative period wherein the focus of attachment shifts from parents to peers and romantic partners. This transition is crucial for the evolution of attachment dynamics, enabling adolescents to establish deeper connections outside their immediate family. Empirical studies, such as those by Moretti and Peled (2004), Allen and Land (1999) and Allen and Hauser (1999), have demonstrated that the relationships formed during adolescence are foundational to the development of adult attachment styles and profoundly affect subsequent relational and emotional health.



Therefore, adolescence represents a distinct and vital phase, meriting in-depth exploration for its unique impact on the continuum of attachment theory. This stage is not just a transitional period, but a significant epoch marked by substantial physical, emotional, and relational changes that play a pivotal role in shaping an individual's future interpersonal landscape.

This section provides a comprehensive overview of the instruments available internationally for measuring attachment in adolescence. It is important to note the limited availability of validated tools in Brazil, particularly those that are self-evaluative. These tools are crucial as they enable individuals to discern their attachment styles through a reflective assessment of how they navigate significant relationships. Notably, most existing tools are not specifically tailored to capture the nuanced ways adolescents experience and report attachment, which often encompasses both familial and peer relationships. To address this gap, more culturally and developmentally appropriate measures are needed that can accurately reflect the unique attachment dynamics present during adolescence (Cassidy & Shaver, 1999). This would enhance our understanding of attachment styles as they are expressed in the everyday interactions and relationships of Brazilian adolescents.

Within the field of adolescent psychological assessment, both projective and self-administered instruments have been developed to explore attachment dynamics. Projective and semi-projective tests, such as the Separation Anxiety Test (SAT, Attili, 2001) and the Bird's Nest Drawing (BND; Kaiser, 2016), allow adolescents to express their attachment-related thoughts and feelings indirectly through creative and interpretive tasks. These tests can reveal underlying attachment issues that might not be evident through direct questioning.

Self-administered questionnaires, such as the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987) and the Experiences in Close Relationships (ECR; Brennan, Clark & Shaver, 1998), offer a more structured approach. These tools ask adolescents to reflect on their feelings and behaviors in relationships with parents and peers, providing valuable insights into their attachment styles. Both types of instruments are essential for a thorough understanding of adolescent attachment, as they complement each other by addressing different aspects of the attachment experience.



Developing and validating these tools in diverse cultural contexts like Brazil is essential. Such efforts would ensure that the instruments are sensitive to the specific experiences and expressions of attachment in various populations, ultimately leading to better-informed interventions and support for adolescents. In the following sections, we will delve into the details of these tools.

Projective and semi-projective instrument to measure attachment

In the realm of adolescent attachment research, **projective and semi-projective** tests play a crucial role in assessing the nuances of attachment relationships with parents (e.g., Maharani, Wijayanti, Kahija, Dewi & Ediaty, 2023). One notable example is the ***Family Episodes Rating Task (FERT)***, developed by De Wuffel in 1986. This test comprises 12 photographs depicting various everyday family events, providing a visual and interactive method to explore attachment dynamics. The FERT consists of three distinct types of interactions depicted in the photos:

- **Directive Interactions:** These scenes showcase situations where both parents and adolescents are involved in mutual requests or directives. For instance, a parent might ask the adolescent to complete a chore, or an adolescent might request permission for an activity. This type of interaction is essential for understanding how directives are communicated and negotiated within the family context.
- **Regulatory Interactions:** These scenes illustrate moments of disagreement between parents and adolescents regarding behavioral norms. Such interactions are pivotal in examining how conflicts are managed and resolved, shedding light on the regulatory strategies employed by both parties. The ability to navigate and resolve disagreements is indicative of the overall health of the attachment relationship.
- **Expressive Interactions:** These scenes focus on conversations where both parents and adolescents share their experiences on an equal footing. Expressive interactions are vital for assessing the depth of emotional sharing and the perceived equality in the relationship. They provide insights into the openness and emotional connectivity between parents and adolescents.



The FERT's use of visual stimuli offers a unique advantage in eliciting natural and spontaneous responses from adolescents. By analyzing these responses, researchers can gain a comprehensive understanding of the attachment styles and relational dynamics present within the family. This tool is particularly effective in identifying subtle cues and unspoken aspects of the parent-adolescent relationship that might not surface in traditional self-report measures.

The **Adult Attachment Picture System (AAP)** is another projective test designed to assess internal working models of attachment in adolescents and adults. Developed by Carol George and her colleagues, the AAP is based on attachment theory and aims to explore how individuals internalize and mentally represent their attachment experiences (Buchheim, 2023; Buchheim & Gander, 2023; Gander, George, Pokorny & Buchheim, 2017; Gander, Diamond, Buchheim, & Sevecke, 2018; George & West, 2011, 2012; George & Buchheim, 2014). The AAP involves presenting participants with a series of eight black-and-white drawings depicting various attachment-related scenarios, such as separation, solitude, and reunion. Each picture is designed to elicit narratives from the participant that reveal their underlying attachment representations. Participants are asked to describe what is happening in each picture, what led up to the scene, what the characters are thinking and feeling, and what might happen next. The responses are then analyzed using a standardized coding system that categorizes the narratives into different attachment classifications. These classifications include secure, dismissing, preoccupied, and unresolved/disorganized attachment styles. The narratives are assessed for themes such as proximity-seeking, exploration, caregiving, and responses to attachment-related stress.

The AAP is widely used to give clinicians an understanding of attachment classifications based on the analysis of these stimuli, which depict attachment situations such as solitude, separation, illness, death, and threat (Gallichan & George, 2018; Gander et al., 2017). Not only does the AAP reveal attachment classifications, but the stimuli in the AAP are recorded to understand defensive processes. Krause et al. (2016) describe the defensive patterns revealed through the AAP as deactivation (avoidance), cognitive disconnection (ambivalence), and segregated systems (attachment fear and resolution). Furthermore, the stimuli from the AAP have different



interpretations. Pictures with "alone scenes" are interpreted for agency of self and connectedness, whereas the dyadic pictures are evaluated based on their degree of synchrony in the interactions (Krause et al., 2016).

Categorization of attachment classifications and defensive processes are understood through how individuals build the story based on the stimulus. Individuals that show a sense of self-agency, connectedness, and synchrony in attachment stories indicate a secure attachment. In contrast, individuals with insecure-dismissing or insecure-preoccupied attachment show manifestations of stories characterized by absent relationships. Jones-Mason et al. (2015) compared the use of the AAP with the Adult Attachment Interview (AAI) and found that the AAP uses similar attachment classifications as the AAI, such as insecure, dismissing, preoccupied, and unresolved, but the AAP is simpler and less costly to administer than the AAI.

The AAP has been used in various studies and has shown promising results (e.g., Buchheim & George, 2012a, b; Buchheim, Gander & Juen, 2014; Buchheim, George, Juen & West, 2011; Buchheim, Gander & Juen, 2014; Gander, Diamond, Buchheim & Sevecke, 2018; Hloucal, Petersen, Frick, Buchheim, Bettenbrock, 2012; Karabatsiakos, De Punder, Doyen-Waldecker, Ramo-Fernández, Krause, Gump, Bach, Fegert, Kolassa, Gündel, Ziegenhain & Buchheim, 2022). For instance, a pilot study assessed the inter-rater reliability and face validity of the AAP with adults with intellectual disabilities. The AAPs of 20 adults with intellectual disabilities were coded blind by two reliable judges and classified into one of four groups: secure, dismissing, preoccupied, or unresolved. The study found significant agreement between AAP judges ($\kappa = 0.677$, $p < 0.001$). Five out of six participants showed stability in their classifications over time. The majority of expert ratings were "good" or "excellent." There was a significant inter-class correlation between raters suggesting good agreement between them ($r = 0.51$, $p < 0.05$) (Gallichan & George, 2018). Another study used scenes from the AAP to develop a short fMRI assay eliciting the neural correlates of encoding potentially hurtful and threatening social situations such as social losses, rejections, or loneliness (Labek, Dommès, Bosch, Schurz, Viviani, & Buchheim, 2022).

Another projective test is the **Bird's Nest Drawing (BND)** that was developed by American art therapist Dona Kaiser. This method involves a single drawing to assess attachment, which can reveal unconscious metaphors of home and family dynamics



(Harmon-Walker & Kaiser, 2015; Kaiser, 2016; Kaiser & Deaver, 2009). In contrast to the Attachment Projective Picture System (AAP), which uses direct picture stimuli, the BND is perceived as less threatening, more symbolic, and emotionally distant, making it an effective tool for sensitive evaluations.

In the BND, clients are instructed to "draw a picture of a bird's nest" (Harmon-Walker & Kaiser, 2015). After completing the drawing, clients provide narratives that correspond to their illustrations. These narratives and drawings are then evaluated through a systematic rating procedure, which helps classify the attachment style of the individual (Yoon, Betts & Holtum, 2020).

Several studies have employed the BND to assess attachment security. Notable research includes works by Goldner (2014), Golan and Goldner (2019), Goldner and Golan (2016), Kwong (2021), Reyes (2002), and Wijayanti, Oktawirawan, Maharani, and Ediati (2023). These studies support the reliability and significance of the BND in art-based assessment, highlighting its potential as a robust tool for evaluating attachment security. The increasing use of overall impression scoring systems with theory-based drawing assessments further underscores the effectiveness of the BND in this field.

The Draw-a-Person (DAP) test is a projective psychological assessment used to evaluate various aspects of a person's psychological state, including parent-child attachment. In this test, individuals are asked to draw a person, and the resulting drawing is analyzed for various psychological indicators. The DAP test can reveal unconscious aspects of the individual's self-perception, emotional state, and relational dynamics, particularly in the context of attachment (e.g., Bardos, Softas & Petrogiannisc, 1989; Kamphaus & Pleiss, 1991).

Originally developed by Florence Goodenough in 1926, this test was initially known as the Goodenough Draw-a-Man test. Goodenough detailed the method in her book titled "*Measurement of Intelligence by Drawings*". Later, Dale B. Harris revised and extended the test, resulting in the *Goodenough–Harris Drawing Test* (Harris, 1963; Harris & Pinder, 1974). His work is outlined in the book "*Children's Drawings as Measures of Intellectual Maturity*" (Harris, 1963).

The DAP test involves asking the test subject (usually a child or adolescent) to draw separate figures on individual pieces of paper: a man, a woman, or a figure that



represents themselves and another significant person (e.g., a parent). No specific instructions are given beyond requesting a drawing of a whole person (from head to feet) each time. The test is non-invasive and non-threatening, making it appealing for assessing cognitive development without language barriers or special needs. The drawings are analyzed based on several criteria, including the size of the figures, placement on the page, details included, and overall coherence. Specific aspects like facial expressions, body posture, and the presence or absence of particular features (e.g., hands, eyes) are also considered. In the context of parent-child attachment, specific attention is given to how the child or adolescent depicts themselves in relation to the parent figure. Aspects like proximity, size differences, and the emotional tone of the drawing can provide insights into their attachment style and relational security.

In 1988, Jack A. Naglieri developed the Draw a Person: A Quantitative Scoring System (DAP:QSS) as an updated means of scoring the classic draw-a-person test. The DAP:QSS was designed to provide a more standardized and quantitative approach to the interpretation of the DAP test. It is a nonverbal measure that is not influenced by linguistic variables, making it a valuable tool for assessing individuals with diverse language backgrounds or those with language impairments.

The DAP:QSS uses a detailed scoring system that quantifies the individual elements of the drawing, such as specific body parts and clothing details. The scoring system is based on the premise that the ability to draw develops in a predictable sequence as cognitive and motor skills mature. Therefore, the presence and quality of specific drawing elements are thought to reflect the individual's cognitive development and intellectual functioning.

In the context of measuring intelligence, the DAP:QSS provides a numerical score that can be compared to normative data for the individual's age group. This allows for a more objective assessment of the individual's intellectual maturity compared to the more subjective interpretation of the original DAP test. Regarding assessing attachment, the DAP:QSS can provide additional insights beyond those obtained from the original DAP test. For example, the DAP:QSS scoring system includes criteria related to portraying emotions and interpersonal interactions, which can provide valuable information about the individual's attachment style and relational dynamics. However, it is important to note that while the DAP:QSS can provide helpful



information about attachment, it should not be used as the sole measure of attachment style. Instead, it should be considered as part of a comprehensive assessment that includes other measures and sources of information (e.g., Amod, Gericke & Bain, 2013; Naglieri & Maxwell, 1981; Scott, 1981; Ter Laak, de Goede, Aleva, & van Rijswijk, 2005; Troncone, Chianese, Di Leva, Grasso & Cascella, 2021; Williams, Wiener & MacMillan, 2005).

Overall, the DAP:QSS represents a significant advancement in the use of drawing tests as psychological assessment tools. By providing a more standardized and quantitative scoring system, the DAP:QSS enhances the utility of the DAP test for assessing cognitive development, intellectual functioning, and attachment. However, like all psychological assessments, the DAP:QSS should be used in conjunction with other assessment tools and clinical judgment to provide a comprehensive understanding of the individual's psychological state.

The **Separation Anxiety Test (SAT)** is a semi-projective assessment tool used to evaluate attachment relationships in adolescents by analyzing their responses to various separation scenarios. Initially developed by Hansburg in 1972, the SAT utilizes images that portray different situations involving both short-term and long-term separations from parents. These images are designed to direct the subject's focus on the separation scenario, rather than on the characters, which are depicted as expressionless and neutral. This neutrality is crucial as it introduces the ambiguity needed for a projective test to evoke authentic responses that reflect the subject's internal attachment representations. The test aims to explore how adolescents perceive and emotionally react to the concept of separation from their primary caregivers. By presenting scenarios that may resonate with the subject's personal experiences, the SAT facilitates the projection of their subconscious thoughts and feelings related to attachment.

The SAT was initially designed to assess attachment relationships in children aged 11 to 17 years. In 1976, Klagsbrun and Bowlby revised and adapted the test to be suitable for younger children, specifically those aged 4 to 7 years. This adaptation involved modifying the scenarios to be age-appropriate and relevant to the developmental stages of younger children. By doing so, the revised SAT ensures that the situations presented resonate with the experiences and emotional capacities of the



younger age group, allowing for accurate assessment of their attachment representations and responses to separation.

Further modifications were made by Attili in 2001, who developed a version of the Separation Anxiety Test (SAT) specifically for an Italian sample of children aged 4 to 9 years. Attili's adaptation involved creating scenarios that were culturally relevant and developmentally appropriate for young Italian children, ensuring that the test was both engaging and reflective of their everyday experiences. In 2005, Attili and Cesarini extended this version to include adult participants. This extension broadened the test's applicability, allowing it to be used across a wider age range and in diverse cultural contexts. By incorporating scenarios pertinent to adults, the revised SAT could assess attachment relationships throughout the lifespan, providing valuable insights into attachment styles and dynamics in various age groups.

The Separation Anxiety Test (SAT) comprises six illustrations, each depicting various episodes of parental separation. These scenarios range from short separations, such as parents going out for the evening, to longer separations, such as parents leaving for a two-week trip. Each illustration is accompanied by a series of questions designed to elicit the child's emotional and cognitive responses to the depicted separation. The questions include:

- *What do you think this child is feeling?*
- *Why do you think he feels this way?*
- *What do you think this child is doing now?*
- *What do you think this child will do when he sees his parents again?*

These questions aim to gather detailed information about the child's emotional responses to separation-induced stress and their coping mechanisms in potentially anxiety-inducing situations.

The use of the Separation Anxiety Test (SAT) in research has demonstrated its importance in evaluating attachment relationships. Studies such as those by Attili, Di Pentima, Toni, and Roazzi (2015, 2016) and Bizzi, Cavanna, Castellano, and Pace (2015) have highlighted its utility. For instance, Bizzi et al. (2015) used Attili's version of the SAT to assess children's mental representations related to separation anxiety. This study found significant differences in how children with Disruptive Behavior Disorders (DBD) and Somatic Symptom Disorders (SSD) responded to separation



scenarios. The findings indicated notable variances in the internal working models (IWMs) of attachment between these groups, emphasizing the SAT's effectiveness in distinguishing between different psychological profiles in clinical settings. In another investigation Attili, Di Pentima, Toni, and Roazzi (2018) explored the IWMs of patients with eating disorders. The study found that these patients predominantly exhibited insecure attachment styles, which is consistent with existing literature. Furthermore, the patients also presented extreme separation anxiety, supporting the hypothesis that high anxiety IWMs may reflect a pathological process contributing to the development of eating disorders. These studies underscore the SAT's relevance in clinical research, offering valuable insights into the complex interplay between attachment, anxiety, and psychological disorders.

Finally, Attili's work demonstrated the importance of cultural and developmental considerations in psychological assessments, enhancing the validity and reliability of the SAT. The adaptations made by Attili have ensured that the SAT remains a versatile and valuable tool for both clinical and research purposes, capable of providing deep insights into attachment-related issues across diverse populations.

Self-administered instrument to measure attachment

Among the self-administered instrument to measure attachment dynamics, it is possible to cite the ***Adolescent Attachment Questionnaire (AAQ)*** formulated by West, Rose, Spreng, Sheldon-Keller, & Adam (1998), focuses on the attachment adolescents form with their parents. Simultaneously, the ***Inventory for Parent and Peer Attachment (IPPA)*** developed by Armsden and Greenberg (1987) broadens this scope by assessing attachment relationships not only with parents but also within peer groups. These tools are instrumental in clinical settings, offering psychologists refined measures to evaluate attachment in adolescents (Westen, Nakash, Thomas & Bradley, 2006). The IPPA, in particular, is meticulously designed to dissect the affective and cognitive dimensions of attachment, capturing three critical aspects: the degree of mutual trust, the quality of communication, and the prevalence of anger and alienation.

This instrument comprises 75 items, divided equally among three domains: the adolescent's relationship with their mother, father, and peers. Each item is rated on a 5-point scale, providing a nuanced view of the adolescent's sense of security or



distress with their attachment figures. Secure attachment is indicated by perceptions of availability and sensitivity, whereas a sense of anger and despair marks the relationships where the attachment figure is seen as insensitive and inconsistent. Recent research underscores the importance of these attachment measures in predicting moral outcomes in adolescents. Securely attached individuals tend to exhibit stronger moral reasoning and behavior, a connection attributed to the foundational role of trust and effective communication in moral development (Li, Zhu, & Gummerum, 2014). Conversely, attachment insecurity, marked by high levels of anger and alienation, correlates with poor moral judgment and problematic behaviors, underscoring the significance of addressing attachment issues within therapeutic settings (Kruepke, Molloy, Bresin, Barbey & Verona, 2018).

In 1995, Cook and colleagues introduced a significant advancement in the measurement of attachment styles in children and preadolescents through the development of the *"People in My Life" (PIML)* questionnaire (Cook, Greenberg & Kusche, 1995). This instrument, inspired by the foundational principles of the Inventory for Parent and Peer Attachment (IPPA) established by Armsden and Greenberg in 1987, serves as a comprehensive tool to assess the internal representations of relationships with parents and peers. The PIML questionnaire is structured to evaluate three critical dimensions: Trust, Communication, and Alienation. Each dimension is designed to capture distinct aspects of the child's relationships:

- **Trust** measures the perceived reliability and supportiveness of parents and peers.
- **Communication** assesses the effectiveness and openness of the dialogue between the child and their significant relationships.
- **Alienation** gauges feelings of isolation and misunderstanding experienced by the child within these relationships.

This tool is particularly valuable in exploring the psychosocial underpinnings of delinquent behaviors in preadolescents. By examining the quality of foundational relationships through these dimensions, researchers can gain insights into the developmental trajectories that predispose certain children to behavioral challenges. Recent studies have highlighted the correlation between compromised dimensions of trust and communication with an increased risk of delinquent outcomes in youth



(Probst, Nowack & Warneken, 2023; Kruepke et al., 2018). Moreover, the PIML has been utilized in various empirical studies to explore the broader implications of early interpersonal relationships on moral judgment and moral behavior in children. For instance, research indicates that children who experience high levels of alienation often exhibit poorer moral reasoning and are more prone to engage in antisocial behavior (Dahl & Killen, 2018; Beißert & Hasselhorn, 2016).

The **Security Scale** (Kerns, Klepac, & Cole, 1996) is a well-established self-assessment questionnaire designed to evaluate attachment in children and pre-adolescents. Comprising 15 items, this tool requires respondents to assign a score ranging from 1 to 4 for each item, thereby assessing the perceived security in their relationships with primary attachment figures. The Security Scale is specifically constructed to measure the perceived security of children in their relationships with their primary caregivers. This instrument has been validated through numerous studies and is widely recognized for its robust psychometric properties. Each item on the scale is meticulously crafted to capture the nuances of attachment-related security, with higher scores indicating a greater sense of security in the relationship with the attachment figure (Brumariu, Madigan, Giuseppone, Abtahi & Kerns, 2018; Kerns, Klepac, & Cole, 1996).

The **Relationship Questionnaire (RQ)**, developed by Bartholomew and Horowitz (1991), is a versatile instrument that, although initially designed for adult attachment measurements, is also applicable for adolescents. This tool assesses attachment patterns within the contexts of both friendship and romantic relationships, making it a valuable resource for understanding attachment dynamics during adolescence. The RQ consists of four succinct descriptions of attachment styles: secure, fearful-avoidant, preoccupied, and dismissing-avoidant. Participants are asked to rate how well each description matches their relationship style on a scale of 1 to 7. This rating system allows for a nuanced understanding of an individual's attachment style, providing insight into their interpersonal dynamics and emotional regulation within relationships. Recent studies have underscored the relevance of the RQ in assessing attachment in adolescents. For instance, research by Jewell et al. (2019) systematically reviewed the psychometric properties of various attachment measures,



highlighting the RQ's reliability and validity across different age groups, including adolescents.

The ***Relationship Scales Questionnaire (RSQ)***, developed by Griffin and Bartholomew (1994), is a widely utilized tool also designed to assess an individual's attachment style. This instrument evaluates how individuals relate to others they consider to be very close, such as friends or romantic partners. Although originally intended for use with adults, the RSQ has proven to be effective in measuring attachment styles in adolescents as well. The RSQ provides insight into various dimensions of attachment by asking participants to rate statements about their relationships on a Likert scale (Wilson & Wilkinson, 2012).

The ***Friendship and Peer Relations Interview (FPRI)***, developed by Zimmerman in 2004, is an important tool designed to explore attachment and relational dynamics in adolescents (e.g., Delgado et al., 2022; Erwin, 1993; Savin-Williams & Berndt, 1990). This semi-structured interview is closely related to the Adult Attachment Interview and delves into the nuances of adolescents' experiences and expectations in romantic and platonic relationships. The FPRI's comprehensive approach allows for a deep understanding of how adolescents regulate their emotions within these relationships, providing valuable insights for both research and clinical practice. The FPRI covers several key aspects of adolescent relationships, including:

- **Quality of Friendship:** This component examines the depth and significance of friendships, asking adolescents to reflect on their close friendships and describe what makes these relationships meaningful. Research has shown that the quality of adolescent friendships is closely linked to psychological well-being and social adjustment.
- **Concept of Friendship:** Adolescents are asked to articulate their understanding of what friendship means to them. This exploration helps to uncover the underlying values and beliefs that guide their social interactions. Studies indicate that adolescents' concepts of friendship evolve significantly during this developmental stage, influenced by their growing cognitive and emotional maturity.
- **Quality of Couple Relationships:** This section addresses adolescents' experiences and expectations in romantic relationships. It seeks to understand



how they navigate intimacy, trust, and conflict within these relationships. Research suggests that early romantic relationships play a crucial role in the development of future romantic attachment styles and emotional health.

- **Integration between Peers and in the School Context:** The FPRI also investigates how adolescents perceive their social integration within peer groups and the school environment. This aspect is critical as positive peer interactions and a sense of belonging in school are associated with better academic performance and lower levels of social anxiety.
- **Contact with Peers of the Same and Opposite Gender:** Understanding how adolescents interact with peers of different genders can provide insights into their social competence and comfort levels in diverse social settings. This component examines the frequency, quality, and nature of these interactions.
- **Way of Resolving Conflicts and Hostility:** This section focuses on how adolescents handle conflicts within their relationships. Effective conflict resolution is a critical skill for maintaining healthy relationships and is linked to lower levels of relational aggression and hostility.
- **Social Anxiety:** The FPRI assesses levels of social anxiety and how it affects adolescents' interactions with their peers. High levels of social anxiety can impede the formation and maintenance of meaningful relationships, impacting overall social development.

The FPRI's structured yet flexible format allows adolescents to provide for each subject area concrete examples from their own lives, facilitating a richer and more nuanced understanding of their relational experiences.

Another more recent and notable instrument that sheds light on this topic is the **ARA ("Attaccamento nelle Relazioni di Amicizia" in Italian and "Apego nas Relações de Amizade" in Portuguese)**, a questionnaire designed to measure attachment in adolescent friendship relationships. This tool focuses on how adolescents interact with their peers and how their attachment styles influence these interactions, capturing the nuances of adolescent friendships by assessing aspects such as trust, communication, and emotional support within these relationships. This questionnaire is tailored to explore attachment dynamics in the context of non-familial



peer relationships during adolescence—a critical development period marked by significant social changes.

It was initially developed in Italian by Vermigli and colleagues (Vermigli, Rossi & Barbabella, 2010). Simultaneously, a Portuguese version was produced in Brazil by Roazzi and colleagues (Roazzi, Vermigli & Roazzi, 2010; Mascarenhas, Roazzi & Silva, 2013). The ARA is a self-report questionnaire that measures attachment style in adolescents, investigating how they experience friendship relationships, which are particularly important during this development phase. The tool identifies two dimensions, anxiety and avoidance, corresponding to the four attachment styles proposed by Bowlby's theory: secure, avoidant, anxious, and disorganized. This makes it helpful in identifying maladaptive or dysfunctional relationship models, which can compromise an individual's existential well-being due to their cognitive, emotional, and social implications.

The ARA is a valuable resource for psychologists, researchers, teachers, educators, and others working with adolescents. It highlights crucial factors underlying psychological and relational problems in adolescence and aids in implementing adequate prevention and intervention strategies. The questionnaire helps researchers understand the attachment behaviors of adolescents with their friends, identifying different attachment styles and how they affect the individual's social development and psychological well-being during adolescence.

The significance of the ARA Questionnaire lies in its focus on a less explored area of attachment theory—friendship during adolescence. This period is pivotal for developing interpersonal skills and long-term psychological development. Researchers can gain insights into broader socio-emotional outcomes by assessing attachment in friendships and contribute to interventions to foster healthier adolescent development.

The ARA draws inspiration from the Experiences in Close Relationships (ECR) questionnaire, developed initially by Brennan, Clark, and Shaver in 1998 to assess attachment in romantic relationships among adults. Unlike the ECR, which focuses on romantic bonds, the ARA zeroes in on the unique attachment dynamics within adolescent friendships, providing a more comprehensive understanding of how these relationships shape adolescent development. The ARA offers a nuanced view of how



adolescents form and maintain relationships outside their families by focusing on attachment in friendships. This perspective is crucial for understanding the broader implications of attachment theory and developing interventions supporting healthy relational development during this formative period.

By examining attachment within the context of friendships, the ARA contributes to understanding how adolescents form and maintain social bonds. Researchers can use the ARA to investigate attachment-related behaviors, emotions, and coping strategies specific to peer relationships during this critical developmental stage. In summary, the ARA questionnaire provides a valuable tool for unraveling the intricacies of attachment in adolescent friendships. Its cross-cultural adaptations allow researchers to explore attachment dynamics in different contexts, enriching our knowledge of how young individuals navigate social connections beyond the family unit.

This article aims to validate the ARA further, initially referred to as the ERA (Escala das Relações Afetivas de Amizade) in its Portuguese version, through a comprehensive analysis of a robust sample. Traditional statistical techniques such as first- and second-order Factor Analysis and multidimensional analyses like Similarity Structure Analysis will be employed to ensure rigorous validation. The ultimate goal is to publish these findings in a scientific journal, thereby broadening the dissemination and scientific application of the ARA, which was previously available only as a research report. This effort will contribute significantly to the literature on adolescent attachment and provide a reliable tool for future research.

Proposed Study

The development of a new assessment scale, named “**Escala do Apego nas Relações de Amizade**” (ARA), (in English “**Attachment in Friendship Relationships**” - AFR) is primarily justified by the need for a culturally adapted and age-appropriate tool that addresses gaps in existing instruments. This scale aims to assess adolescent attachment in a manner that is directly relevant to their everyday peer relationships and is suitable for use in both educational and therapeutic settings.

Here a list of key advantages of the ARA/AFR instrument: (1) Relevance to age group: Teenagers are at a critical stage of emotional and relational development. A



tool like the ARA/AFR, validated for the 12 to 17 age group through multidimensional and factor analysis, provides a pertinent and culturally relevant self-assessment method; (2) Accessibility and applicability: The user-friendly format of the ARA/AFR allows for both individual and group administration, which is ideal for the diversity of settings in which adolescents are located. (3) Validation and theoretical structuring: The tool was validated showing a two-factor structure (Anxiety and Avoidance), consistent with the theoretical constructs of attachment. This ensures that it measures precisely what it sets out to assess. (4) Categorization into attachment styles: Based on normative scores, the ARA/AFR facilitates the categorization of subjects into classic attachment styles (secure, anxious, avoidant and fearful or disorganized). This expands its usefulness in diverse professional contexts, providing important insights for research, education, and therapeutic practice. (5) Addressing Existing Gaps: Unlike other tools that focus predominantly on attachment to parents or that are used in clinical settings, the ARA/AFR focuses on peer relationships, filling a significant gap in available attachment assessment tools, especially considering its direct applicability to the everyday experiences of adolescents.

In conclusion, the ARA/AFR is designed to provide an accurate and relevant evaluation of adolescent attachment, acknowledging the complexity of their experiences and the specific needs of this developmental stage. This tool not only enriches the assessment repertoire but also contributes significantly to understanding and supporting adolescent development.

Features of the ARA/AFR Questionnaire

Aims

Developing a self-assessment questionnaire to measure attachment in adolescents aims to create a tool that is easy to administer and score yet highly reliable and valid for both research and practical applications. This tool is intended to assist various professionals working with adolescents in addressing the challenges associated with this critical stage of development. Such a tool is necessary because of the limited availability of validated self-assessment instruments tailored to measuring adolescent attachment in the Brazilian context.



Description

The *Attachment in Friendship Relationships Scale - AFR* (*Escala do Apego nas Relações de Amizade - ARA*, reported in the Appendix), was developed by us through a study aimed at young people aged between 12 and 17 years. It consists of 36 items. The statements of the questionnaire Experience in Close Relationships (ECR) by Brennan et al. (1998), validated in Brazil by Roazzi et al. (2017), were adapted to the context of friendship relationships and included in the Attachment in Friendship Relationships Scale (AFR).

In order to assess a specific style of relational behaviour, it would appear more appropriate to refer to friendships in this particular age group, since sentimental and couple relationships, even when present, are rarely long-standing and fully consolidated.

In order to assess a specific style of relational behavior, it would appear more appropriate to refer to friendships in this particular age group since sentimental and couple relationships, even when present, are rarely long-standing and fully consolidated.

The items are distributed following the order of the ECR, which presents, alternately, 18 items describing situations in which the fear of losing the relationship with the other emerges, the need for closeness, sharing and reassurance that one's feelings (Anxiety) correspond and 18 items that represent the difficulty in maintaining too intimate emotional relationships, discomfort in confiding one's thoughts and feelings to the other person and establishing relationships that are too close (Avoidance).

Instructions

In the instructions provided with the questionnaire, it is specified that only truly significant emotional relationships with friends should be considered. Additionally, respondents are instructed to evaluate their general, habitual behavior within this type of relationship, not just any ongoing friendship.

Each statement is rated on a 7-point Likert scale, ranging from 1 (completely false) to 7 (completely true), to indicate the degree of agreement or disagreement.



Scoring and Calculation Criteria

The ARA consists of two constituent scales identified through factor analysis: the “Avoidance” scale, which includes the odd-numbered items, and the “Anxiety” scale, which includes the even-numbered items. The scoring process involves summing the scores of the items within each scale. It is important to note that the scores for items 3, 15, 19, 22, 25, 27, 29, 31, 33, and 35 need to be inversely coded (these are the reverse-scored items) because they are phrased in the opposite direction compared to the others. This is done to control for the tendency towards uniformity in responses and to avoid acquiescence bias.

Individuals who score high on the Anxiety scale tend to view their friendships with a degree of concern about its progression; they fear abandonment or not receiving the attention and support they need. They often experience intense feelings towards others and demonstrate unreserved emotional involvement.

On the other hand, individuals who score high on the Avoidance scale often show discomfort with physical and emotional intimacy. They emphasize their independence from their friends and appear to base their friendships primarily on maintaining a certain distance. Following this, a list of the 36 items from the ARA questionnaire scale is presented, with the Anxiety items highlighted in italics.

Items of the ARA Questionnaire

1. Prefiro não mostrar ao meu/minha amigo/a como me sinto realmente.
2. *Tenho medo de ser deixado/a.*
3. Sinto-me muito à vontade quando a amizade se torna mais estreita (**reverse-scored**).
4. *Preocupo-me muito com minha relação afetiva*
5. Logo que minha amizade começa a se tornar mais estreita, tenho a tendência de me afastar.
6. *Tenho medo de que meu/minha amigo/a não goste de mim, tanto quanto eu gosto dele/a*
7. Sinto desconforto quando minha amizade se estreita demais.
8. *Preocupo-me muito em perder meu/minha amigo/a.*
9. Tenho dificuldade em me abrir com meu/minha amigo/a.
10. *Com frequência desejo que os sentimentos de meu/minha amigo/a por mim sejam tão fortes quanto os meus por ele/a.*
11. Gostaria de ter relações afetivas mais profundas, mas sempre volto atrás.
12. *Com frequência gostaria de ter um relacionamento mais estreito com meu/minha amigo/a, mas isso às vezes, o/a amedronta e afasta*
13. Fico nervoso quando meus amigos se aproximam demais de mim.



14. *Tenho medo de ficar só.*
15. *Sinto-me confortável em compartilhar com meu/minha amigo/a os meus pensamentos e sentimentos mais pessoais (reverse-scored).*
16. *O meu desejo de estabelecer um relacionamento muito próximo amedronta e afasta as pessoas.*
17. *Procuo evitar uma proximidade excessiva no relacionamento com meu/minha amigo/a.*
18. *Preciso ter muita certeza de que meu amigo/a me quer bem.*
19. *Encontro bastante facilidade em estabelecer um relacionamento estreito com meu/minha amigo/a.*
20. *Às vezes, parece que estou forçando meu amigo(a) a ser mais afetuoso e atencioso comigo.*
21. *Tenho dificuldade em confiar totalmente no meu amigo/a.*
22. *Não me preocupo muito em ser deixado/a sozinho/a (reverse-scored).*
23. *Prefiro não me aproximar demais do meu/minha amigo/a.*
24. *Se não consigo fazer com que o meu/minha amigo/a demonstre interesse por mim, fico perturbado/a e com raiva.*
25. *Digo quase tudo ao/à meu/minha amigo/a. (reverse-scored).*
26. *Acho que meu/minha amigo/a não quer ter uma relação tão estreita comigo como eu gostaria.*
27. *Geralmente falo com meu/minha amigo/a sobre os meus problemas e as minhas preocupações. (reverse-scored).*
28. *Quando não mantenho uma relação de amizade profunda, sinto-me bastante ansioso/a e inseguro/a.*
29. *Sinto que posso confiar no meu/minha amigo/a. (reverse-scored).*
30. *Sinto-me frustrado quando meu/minha amigo/a não está presente da forma que eu gostaria*
31. *Não me importo em pedir conforto, conselho ou ajuda ao/à meu/minha amigo/a. (reverse-scored).*
32. *Sinto-me frustrado se meu/minha amigo/a não está disponível quando tenho necessidade dele/dela.*
33. *Me ajuda a procurar meu/minha amigo/a nos momentos difíceis. (reverse-scored).*
34. *Quando meu amigo/a me critica, sinto-me muito incomodado/a*
35. *Procuo meu amigo/a para muitas coisas, incluindo conforto e segurança. (reverse-scored).*
36. *Fico magoado quando meu/minha amigo/a não me procura.*

METHOD

Participants

The sample utilized for the validation of the ERF/ARA comprised 805 students from state schools. The participants were evenly distributed between genders, with 396 males and 409 females. The age of the participants ranged from 12 to 17 years, with an average age of approximately 14.73 years (SD 1.636). The age group with the

highest representation for both genders was 14 years, with 97 females (23.7% of the female participants) and 113 males (28.5% of the male participants). The distribution of participants by sex and age is detailed in Table 01.

The Relationship Questionnaire (RQ), developed by Bartholomew and Horowitz (1991), was administered to the participants to analyze concurrent validity. Additionally, to assess the relationships with attachment, the entire sample was also given four supplementary psychometric tools: the Perceptions of Parents Questionnaire (PPQ), the Life Satisfaction Scale, the Positive and Negative Affect Scale, and the Subjective Vitality Scale.

Table 01. Sex by Age groups of the participants.

Sex / Age Groups		12	13	14	15	16	17	Total
Female	n	39	35	97	92	64	82	409
	%	9.5%	8.6%	23.7%	22.5%	15.6%	20.0%	100.0%
Male	n	44	32	113	85	67	55	396
	%	11.1%	8.1%	28.5%	21.5%	16.9%	13.9%	100.0%
Total	n	83	67	210	177	131	137	805
	%	10.3%	8.3%	26.1%	22.0%	16.3%	17.0%	100.0%

Procedures

During school hours, the questionnaire was administered within each class by a specially trained person, who provided a brief presentation of the research, explaining its objectives and significance.

Student participation in the research was voluntary, and complete anonymity was assured. Although there was no time limit for completion, it did not exceed 30 minutes in practice.

Instruments

In addition to the ARA, the following tools were used.

- **The Relationship Questionnaire (RQ)** by Bartholomew and Horowitz, developed in 1991, is a self-report measure designed to assess adult attachment styles. The RQ categorizes individuals into one of four



attachment styles: (1) Secure: Comfortable with intimacy and autonomy in relationships; (2) Fearful-Avoidant: Fears rejection and avoids close relationships due to mistrust; (3) Anxious-Ambivalent: Desires closeness but is anxious and dependent on others; (4) Dismissing-Avoidant: Prefers independence and often dismisses the importance of relationships. Each attachment style is described through a series of statements, and respondents rate how much each statement reflects their typical feelings about relationships. The questionnaire provides insights into the respondent's relational patterns and attachment behaviors, making it a valuable tool for both clinical and research settings.

- **Perceptions of Parents Questionnaire** (PPQ, Pasquali, Gouveia, Santos, Fonseca, Andrade, & Lima, 2012): The PPQ created by Pasquali, et al. in 2012, is an instrument designed to evaluate young individuals' perceptions of their parents' behaviors and attitudes, specifically focusing on two critical factors: Responsiveness and Demand. In this study, participants completed the PPQ-20-M, a version comprising 20 items to assess the perceptions of their mothers. Respondents rated each item on a five-point Likert scale ranging from 0 (Not at all applicable) to 4 (Completely applicable). This method allows for a detailed assessment of perceived parenting styles, contributing valuable insights into the effects of parental behaviors on child development. Responsiveness refers to the degree of warmth, support, and acceptance parents show towards their children, while Demand pertains to the extent to which parents set expectations and enforce rules.
- **Life Satisfaction Scale** (*Escala de Satisfação com a Vida - ESV*): This is an instrument proposed by Diener, Emmons, Larsen, and Griffin (1985), being adapted for Brazil by Gouveia, Milfont, Fonseca, & Coelho, (2009). This scale is used to measure participants' cognitive judgments of their overall satisfaction with life, providing insights into the subjective well-being of individuals. Studies have attested to the adequacy of its psychometric parameters (Pavot & Diener, 1993). This measure consists of five items (e.g., In most aspects, my life is close to my ideal; To the extent possible, I



have achieved the important things I want in my life). Responses are graded on a scale ranging from 1 = Completely disagree to 7 = Totally agree.

- **Positive and Negative Affect Scale (PANAS):** The PANAS assesses the frequency of positive and negative emotional experiences, offering a balanced view of participants' emotional states. This is a scale that was initially developed by Diener and Emmons (1984) with the purpose of evaluating the level of affective states experienced. Studies have proven the adequacy of its psychometric parameters (Diener & Biswas-Diener, 2000; Lucas, Diener & Suh, 1996; Omodei & Wearing, 1990; Sheldon & Kasser, 1995). This scale is originally formed by ten adjectives, which indicate affective states, four of which are positive (happy, cheerful, satisfied, and fun) and five are negative (depressed, worried, frustrated, angry and unhappy). An adjective was added by Chaves (2003) to represent positive affect: optimistic. The instrument assesses how much the participant has experienced each of these affects in the last few days, using a seven-point response scale, ranging from 1 = Not at all to 7 = Extremely.
- **Subjective Vitality Scale – SVS** (Escala de Vitalidade Subjetiva, EVS, developed by Ryan and Frederick, 1997, adapted for Brazil by Gouveia, Milfont, Gouveia Medeiros, Vione, & Soares, 2012) measures individuals' feelings of aliveness and energy, contributing to the understanding of their overall psychological health. Specifically, the instrument aims to assess how the participant feels in the last few days regarding physical, mental, and alert vigor. Studies have demonstrated that its psychometric parameters are adequate (Kasser & Ahuvia, 2002; Nix, Ryan, Manly & Deci, 1999). This measure consists of seven items (for example, I have energy and energy; I feel alive and full of vitality), which must be answered according to a seven-point scale, ranging from 1 = Not at all to 7 = Completely True.



Multidimensional Validity

The statistical validation of the ARA questionnaire was conducted using a Multidimensional Scaling (MDS) approach, specifically through Smallest Space Analysis (SSA) or Similarity Structure Analysis (Guttman, 1968, 1971, 1982; Levy, 1993; Roazzi, Souza, & Bilsky, 2015; Roazzi & Souza, 2019). As the evaluation measure in the ECR questionnaire is ordinal, we employed an appropriate coefficient for such data—the non-parametric coefficient of monotonicity. It is crucial to emphasize that correlations measured at the ordinal level, like the monotonicity coefficient, differ in interpretation from those at the interval level using parametric coefficients. Parametric coefficients, such as Pearson's linear correlation coefficient, impose several restrictions. In contrast, monotonicity indices indicate that positive correlations correspond to simultaneous increases in the values of X and Y, while negative correlations reflect the opposite. This approach is not limited by the nature of relationships between variables, allowing for both linear and non-linear relationships with any distribution (Gaussian or otherwise).

Figure 1 illustrates the SSA computed using the non-parametric monotonicity coefficient. The two-dimensional projection yields an Alienation Coefficient of .137, signifying an adequate fit of the data within the multidimensional projection space, with an axial partitioning of the data. The multidimensional space is organized into two distinct regions, with all items from the Anxiety scale on the left side and those related to the Avoidance scale on the right side.

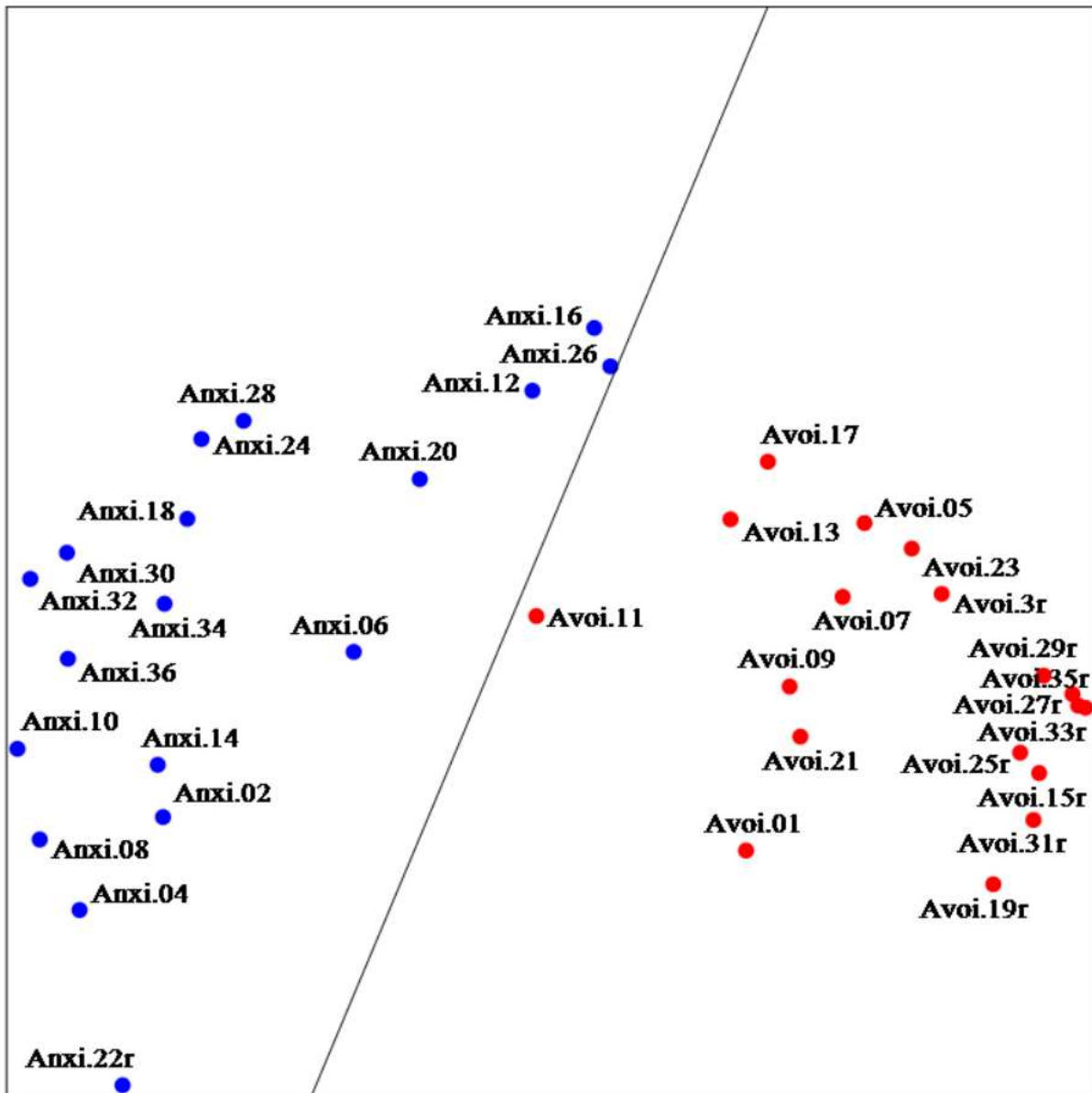


Figure 01. SSA of the 36 items of the ARA questionnaire using the non-parametric monotonicity coefficient. (Two-dimensional projection, Coefficient of alienation 0.137).

This clear division indicates that the two regions correspond to the two scales targeted in the construction of the questionnaire. Each item is positioned in the multidimensional space according to its corresponding scale, confirming that the two-dimensional structure of the ECR questionnaire is reproduced with sufficient stability. However, specific details within each region deserve attention.

In the Avoidance region, two distinct clusters of items are visible. The nine non-reverse items are at the top and left side (11, 13, 17, 05, 23, 07, 09, 21, 01). At the



bottom are the remaining nine reverse items (3r, 15r, 19r, 25r, 27r, 29r, 31r, 33r, 35r). This clustering suggests a nuanced internal structure within the Avoidance scale, with clear separations between non-reverse and reverse items.

In the Anxiety region, all items except one are located together. The only reverse item, item 22 ("I don't often worry about being abandoned"), is positioned at the extreme lower part of this region. This placement indicates a unique characteristic in its response pattern compared to other Anxiety items. The centrality of avoidance item 11 ("I want to get closer to my partner, I am always retreating") is near the center, close to the boundary between the Anxiety and Avoidance regions. This position may indicate its dual relevance to both scales, reflecting the complexity of attachment behaviors.

Factor Validity

The 36 items underwent a preliminary exploratory factor analysis using the Principal Component Analysis method. The decision on the number of factors to extract, seven, was based on the scree-test criterion: components after the seventh fell below the line drawn through the minor components on the scree-plot. Subsequently, a first-order, seven-factor, oblique rotation Oblimin factor analysis was conducted. The seven extracted factors, saved as variables, underwent a second-order factor analysis with Varimax rotation. The final number of factors to extract, two, was identified through principal component analysis based on the eigenvalue criterion greater than 1.

The seven factors extracted in the first analysis account for 49.3% of the total variance. The individual variables are well defined by the factorial solution as indicated by the high average commonality values. The factorial solution is well interpretable and responds to the criterion of simple structure with few multifactorial items (saturating more than one factor), as shown in **Table 02**, in which the variables have been grouped according to their respective factors and the factorial saturation coefficients below .20 have been omitted for clarity of reading.

Regarding the second-order factor analysis, which used the factors as variables, the factor scores were first subjected to an exploratory analysis of the principal components. By adopting the Kaiser and Guttman rule as the extraction criterion and

using the scree test, the number of factors to extract was equal to two, as there were two components with high and very similar eigenvalues (2.325 and 2.144, respectively). Consequently, two factors were extracted using the principal factor method. The two factors, which account for 63.8% of the total variance, were subjected to orthogonal rotation with the Varimax method, obtaining a solution that satisfies the simple structure criteria. The first factor corresponds to the "Avoidance" dimension, as it has high saturations in factors I (saturation = 0.75), IV (0.74), and VII (0.69) of the previous analysis. The second factor instead corresponds to the "Anxiety" dimension, being saturated by factors V (saturation = 0.73), VI (0.65), II (0.57), and III (0.52) from the previous analysis.

Table 02. Factor structure of the ARA questionnaire.

	1	2	3	4	5	6	7	Uniformity ^a
Avoi.35r	.794							70
Avoi.27r	.691							66
Avoi.29r	.563							67
Avoi.25r	.562						-.251	79
Avoi.33r	.493							61
Avoi.15r	.390							75
Avoi.19r	.363							86
Avoi.31r	.298					.277	-.269	69
Anxi.12		.671						54
Anxi.16		.571						56
Anxi.26		.379						65
Anxi.20		.368						65
Anxi.18		.331						86
Anxi.28		.298						80
Anxi.06								84
Anxi.22r			.666					74
Anxi.14			.516					78
Anxi.02			.508					85
Anxi.08			.332			-.320		62
Avoi.13				-.658				67
Avoi.07				-.621				67
Avoi.05				-.592				62
Avoi.23				-.563				79



Avoi.17									-0.532	78
Avoi.3r									-0.318	64
Anxi.32									.685	78
Anxi.30									.535	80
Anxi.36									.475	85
Anxi.24		.295							.329	78
Anxi.34									.274	84
Anxi.04									-.424	85
Anxi.10									-.380	82
Avoi.01									-.448	72
Avoi.09									-.414	64
Avoi.21									-.394	75
Avoi.11									-.250	72
% of Var.	16.90	13.13	4.74	4.24	3.97	3.43	2.92			

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

Note: ^a Coefficients of distribution uniformity on each variable

Reliability

Scale Internal Homogeneity

The homogeneity of the scales was assessed by calculating Cronbach's alpha coefficient, as shown in Table 03. Additionally, within each scale, the potential presence of non-homogeneous items was examined by calculating the item-total correlation for each item, corrected by excluding the item in question from the calculation, and the value of Cronbach's alpha coefficient that would result if the item were omitted from the scale. Overall, both scales demonstrated satisfactory homogeneity, with Cronbach's alpha coefficients of 0.854 for the Avoidance scale and 0.801 for the Anxiety scale. Concerning the homogeneity of individual items with the total scale, the item-total correlations were high, and it was verified that excluding any item did not increase Cronbach's alpha coefficient. This indicates that each item contributes to the internal consistency of the respective scales, supporting their reliability.

Internal consistency ensures that the items within a scale measure the same construct, reflected in the high Cronbach's alpha values obtained. Cronbach's alpha measures internal consistency, indicating how closely related a set of items are as a

group. A high alpha coefficient suggests that the items measure the same underlying concept, which is essential for the validity of a psychometric scale. The item-total correlation further supports this by showing how well each item correlates with the sum of the remaining items, highlighting the contribution of each item to the overall scale's reliability (e.g., Tang, Cui & Babenko, 2015; Tavakol & Dennick, 2011).

The Cronbach's alpha values exceeding 0.70 are typically deemed acceptable, while values surpassing 0.80 indicate strong internal consistency. Consequently, the outcomes for both the Avoidance and Anxiety scales indicate that the items within these scales effectively gauge the intended constructs. This is important in the context of attachment theory, where reliable measurement of avoidance and anxiety dimensions can provide insights into individuals' attachment styles and their impact on relationships.

Table 03. Homogeneity indices of the Avoidance and Anxiety dimensions

Items of the Avoidance Dimension	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Items of the Anxiety Dimension	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Avoi.01	.361	.850	Anxi.02	.475	.785
Avoi.3r	.456	.846	Anxi.04	.314	.796
Avoi.05	.472	.845	Anxi.06	.440	.788
Avoi.07	.498	.844	Anxi.08	.395	.791
Avoi.09	.463	.846	Anxi.10	.451	.787
Avoi.11	.268	.854	Anxi.12	.294	.797
Avoi.13	.421	.847	Anxi.14	.521	.782
Avoi.15r	.445	.846	Anxi.16	.212	.802
Avoi.17	.363	.850	Anxi.18	.456	.787
Avoi.19r	.397	.848	Anxi.20	.366	.793
Avoi.21	.443	.846	Anxi.22r	.228	.802
Avoi.23	.521	.843	Anxi.24	.427	.789
Avoi.25r	.548	.842	Anxi.26	.221	.801
Avoi.27r	.527	.843	Anxi.28	.418	.790
Avoi.29r	.506	.844	Anxi.30	.443	.788
Avoi.31r	.444	.846	Anxi.32	.439	.788
Avoi.33r	.496	.844	Anxi.34	.297	.797
Avoi.35r	.569	.841	Anxi.36	.435	.788
Cronbach's Alpha	= .854		Cronbach's Alpha	= .801	

Concurrent Validity

Concurrent validity was assessed using the Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991) as a criterion. The convergent validity of the ARA was evaluated on a subsample of 260 subjects from the more extensive study presented in

this article, which included 805 participants. Pearson's r-coefficient was calculated between the corresponding measures of the ARA Anxiety and Avoidance measures and the four items of the RQ Questionnaire (Table 04). The results indicate a high correspondence between the ARA Avoidance dimension and the RQ items Dismissing ($r = 0.172$, $p = .003$) and Fearful ($r = 0.131$, $p = .022$). Similarly, the ARA Anxiety dimension significantly correlated with the RQ item Fearful ($r = 0.119$, $p = .048$), and Preoccupied ($r = 0.247$, $p = .001$). These findings support the convergent validity of the ARA, suggesting that it effectively measures constructs like those assessed by the RQ. These significant correlations in this study highlight the robustness of the ARA in measuring attachment-related constructs, aligning well with established instruments like the RQ.

Table 04. Pearson Correlation Coefficients (r) between Anxiety and Avoidance scores and the four Relationship Questionnaire Styles

ARA Dimensions		Secure	Preoccupied	Dismissing	Fearful
Avoidance	r	-.099	.061	.172	.131
	p	.083	.289	.003	.022
Anxiety	r	-.075	.247	.081	.119
	p	.194	.001	.159	.048

Normative Values and Gender Differences

The results in Table 05 present the means and standard deviations of the Avoidance and Anxiety dimensions of the ARA attachment scale and analyze variance (ANOVA) to verify differences between the two sexes across three age groups and the total sample. The Avoidance dimension shows that males score higher than females across all age groups. Specifically, in the 12–13-year age group, males scored a mean of 67.18 while females scored 63.64. In the 14–15-year age group, males scored 65.15 and females 51.50, with a significant F value of 58.342 ($p < .001$). For the 16–17-year age group, males scored 54.97 and females 46.26, with a significant F value of 13.693

($p < .001$). The total scores for Avoidance were 61.89 for males and 52.25 for females, with an overall significant F value of 56.60 ($p < .001$).

In the Anxiety dimension, females consistently scored higher than males. For the 12–13-year age group, females scored a mean of 73.18 compared to 66.59 for males, with a significant F value of 7.220 ($p < .008$). In the 14–15-year age group, females scored 72.41 and males 65.01, with a highly significant F value of 19.624 ($p < .001$). For the 16–17-year age group, females scored 74.78 and males 67.90, with an F value of 10.460 ($p < .001$). The total Anxiety scores were 73.29 for females and 66.34 for males, with an overall significant F value of 35.835 ($p < .001$).

These results demonstrate significant gender differences in both Avoidance and Anxiety attachment dimensions across different age groups, with males scoring higher in Avoidance and females scoring higher in Anxiety. The ANOVA confirms these differences, particularly in the older age groups (14-15 and 16-17 years), where the differences are more pronounced. These findings support the validation of the ARA attachment scale by highlighting its sensitivity to gender and age-related variations in attachment dimensions. Research has consistently shown that gender differences in attachment dimensions can be attributed to socialization processes and developmental factors. Males typically develop higher avoidance due to societal expectations of independence and emotional restraint, while females tend to exhibit higher anxiety due to a greater emphasis on relational interdependence and emotional expressiveness (Weber, Eggenberger, Stosch & Walther, 2022; Sechi & Vismara, 2023).

Table 05. Normative values and gender differences in avoidance and anxiety attachment dimensions among adolescents by age groups.

Attachment / Age Groups	Sex	N	Mean	SD	F	p
AVOIDANCE						
12-13 y.	Male	73	67.18	11.067	3.050	.083
	Female	76	63.64	13.461		
	Total	149	65.38	12.432		
14-15 y.	Male	183	65.15	15.779	58.342	.000
	Female	194	51.50	18.703		
	Total	377	58.13	18.622		

16=17 y.	Male	142	54.97	19.380	13.693	.000
	Female	120	46.26	18.517		
	Total	262	50.98	19.446		
Total	Male	398	61.89	17.231	56.60	.001
	Female	390	52.25	18.711		
	Total	788	57.12	18.603		
ANXIETY						
12-13 y.	Male	73	66.59	15.012	7.220	.008
	Female	76	73.18	14.944		
	Total	149	69.95	15.289		
14-15 y.	Male	181	65.01	15.388	19.624	.000
	Female	192	72.41	16.812		
	Total	377	68.82	16.536		
16=17 y.	Male	142	67.90	16.785	10.460	.001
	Female	120	74.78	17.550		
	Total	262	71.05	17.447		
Total	Male	396	66.34	15.851	35.835	.000
	Female	388	73.29	16.690		
	Total	788	69.78	16.630		

The categorization of attachment styles involves using two scales, Anxiety and Avoidance, derived from the ARA questionnaire. These scales can be utilized as continuous measures of attachment style, proving valuable for research purposes by allowing the analysis of potential correlations with other variables. Additionally, this tool facilitates categorizing subjects into distinct attachment styles based on the classic four-category model proposed by Bartholomew and Horowitz (1991). The mean scores observed in our sample serve as normative values for the anxiety and avoidance scales, enabling the assignment of a corresponding attachment profile to each subject to the test.

Given the observed differences in the mean scores between males and females on the two scales, as detailed previously, it was essential to avoid aggregating the data to prevent skewed parameters. This decision stems from the tendency for women to exhibit higher levels of anxious attachment and for men to display higher levels of avoidant attachment. Studies have consistently shown that gender differences significantly influence attachment styles (e.g., Sechi et al., 2023; Weber et al., 2022).



These gender-specific tendencies in attachment styles underline the importance of disaggregated data analysis to ensure accurate representation and interpretation of attachment dimensions. This approach aligns with the broader literature on attachment, which emphasizes how gender influences attachment behaviors and patterns (Çelik & Tanriverdi, 2023; Gugová & Heretik, 2011). By considering these gender differences, the analysis can more effectively capture the complex dynamics of attachment and provide a clearer understanding of the underlying patterns.

Therefore, based on the data reported in Table 05, by comparing the score of each subject to that of the reference mean of his or her group, a cut-off score was established for the two scales, corresponding to the mean plus one standard deviation, above which a subject is classified as insecure. This method aligns with standard psychometric practices aimed at maintaining conservative thresholds to minimize false positives, thereby ensuring that secure subjects are not misclassified as insecure. This approach reduces the margin of error and enhances the reliability of the classification system. Research supports using such criteria for classifying attachment styles, ensuring that the designation of insecurity is rigorous and statistically sound (Bartholomew & Horowitz, 1991; Kidd, Hamer & Steptoe, 2011). The attachment literature consistently emphasizes the importance of robust cut-off scores to delineate attachment categories accurately (Shaver & Mikulincer, 2007).

Table 06 provides a detailed summary of the methods used to assign the four attachment profiles for both males and females across three age groups. This table comprehensively shows how attachment styles are determined according to predefined thresholds. It features the cut-off scores that classify individuals into secure, ambivalent, avoidant, and disorganized attachment styles, varying by age group and gender. Finally, the cut-off scores are calculated as the mean plus one standard deviation, establishing a conservative threshold to reduce the likelihood of false positives.

Table 06. Categorization of Attachment Styles by Gender and Age Groups with Corresponding Cut-Off Scores

Age Groups		Male Avoidance	Anxiety	Female Avoidance	Anxiety
12-13 y.	Cut-off score	78.24	81.60	77.10	88.12
	Secure	=<	=<	=<	=<
	Ambivalent	=<	>	=<	>
	Avoidant	>	=<	>	=<
	Disorganized	>	>	>	>
14-15 y.	Cut-off score	80.93	80.39	70.20	89.22
	Secure	=<	=<	=<	=<
	Ambivalent	=<	>	=<	>
	Avoidant	>	=<	>	=<
	Disorganized	>	>	>	>
16-17 y.	Cut-off score	74.35	84.68	64.78	92.28
	Secure	=<	=<	=<	=<
	Ambivalent	=<	>	=<	>
	Avoidant	>	=<	>	=<
	Disorganized	>	>	>	>
Total	Cut-off score	79.12	82.19	70.96	89.98
	Secure	=<	=<	=<	=<
	Ambivalent	=<	>	=<	>
	Avoidant	>	=<	>	=<
	Disorganized	>	>	>	>

The categorization of attachment styles using the Anxiety and Avoidance scales derived from the ARA questionnaire in Table 06 illustrates the cut-off scores for categorizing individuals into secure, ambivalent, avoidant, and disorganized attachment styles across different age groups and genders. These categorizations and cut-off scores align with the established literature on attachment styles, ensuring a robust and statistically sound classification system. The method reduces the likelihood of misclassifying secure individuals as insecure, thus enhancing the reliability of the attachment style assignments (Bartholomew & Horowitz, 1991; Shaver & Mikulincer, 2007; Kidd et al., 2011).

The relationships of Attachment with four supplementary psychometric tools

The relationships of Attachment with four supplementary psychometric tools were assessed using a subsample of the participants (N = 306). The supplementary tools included the Perceptions of Parents Questionnaire (PPQ), the Life Satisfaction Scale,



the Positive and Negative Affect Scale, and the Subjective Vitality Scale. These instruments were selected to comprehensively evaluate how attachment styles correlate with various aspects of psychological well-being and emotional regulation.

The results presented in Table 07 provide a detailed analysis of the Pearson correlations between the ARA dimensions (Avoidance and Anxiety) and several psychometric tools, namely the Perceptions of Parents Questionnaire (PPQ), Life Satisfaction Scale, Positive and Negative Affect Scale, and Subjective Vitality Scale. These correlations offer insights into how attachment styles relate to various aspects of well-being and perceived parental behaviors.

The correlations with the Perceptions of Parents Questionnaire (PPQ) suggest a complex relationship. For instance, Avoidance is negatively correlated with PPQ - Responsiveness ($r = -.152$, $p = 0.008$), implying that higher levels of Avoidance are associated with lower perceived parental responsiveness (Mikulincer & Shaver, 2016). Conversely, Anxiety shows a positive correlation with PPQ - Demand ($r = .165$, $p = 0.004$), which aligns with previous findings that anxious individuals often perceive their parents as demanding or controlling (Brennan & Bosson, 1998).

The Positive and Negative Affect Scale reveals another layer of complexity. Avoidance is significantly negatively correlated with Positive Affect ($r = -.182$, $p = 0.001$), echoing research indicating that avoidant individuals often report lower positive emotions due to their defensive suppression of emotional experiences (Mikulincer & Shaver, 2007). On the other hand, both Avoidance and Anxiety exhibit positive correlations with Negative Affect.

The Life Satisfaction Scale unveils a negative correlation between Life Satisfaction and both Avoidance and Anxiety dimensions. This complements existing literature, highlighting that insecure attachment styles can be detrimental to overall well-being and life satisfaction due to persistent internal conflicts rooted in early attachment experiences (Feeney & Noller, 1990).

Lastly, the Subjective Vitality Scale shows a significant negative correlation between vitality and Avoidance ($r = -0.179$, $p = 0.002$). This is consistent with studies illustrating how avoidant individuals often feel drained or lack energy due to their constant effort to suppress emotions and maintain distance in relationships (Fraley, Garner & Shaver, 2000). At the same time, the positive correlation of vitality with

Anxiety ($r = 0.128$, $p = 0.026$) indicates that individuals with higher vitality report higher Anxiety.

These findings align with existing literature on attachment theory, which suggests that secure Attachment is generally associated with better emotional well-being and higher life satisfaction. In contrast, insecure attachment styles (avoidant and anxious) are linked to various negative outcomes. For instance, research has shown that avoidant individuals often struggle with emotional regulation and intimacy, leading to lower positive affect and life satisfaction (Mikulincer & Shaver, 2007). On the other hand, anxiously attached individuals may experience heightened emotional responses and a greater sense of vitality, albeit often accompanied by higher negative affect (Wei, Russell, Mallinckrodt, & Zakalik, 2004).

Table 07. Pearson Correlations of ARA Dimensions (Avoidance and Anxiety) with the Perceptions of Parents Questionnaire (PPQ-Mother Scale), Life Satisfaction Scale, Positive and Negative Affect Scale, Subjective Vitality Scale

		Avoidance	Anxiety
Perceptions of Parents Questionnaire (Mother Scale)			
PPQ - Responsiveness	r	-.152	.146
	p	.008	.011
PPQ - Demand	r	-.012	.165
	p	.831	.004
Positive and Negative Affect Scale			
Positive Affect	r	-.182	.072
	p	.001	.207
Negative Affect	r	.135	.139
	p	.018	.015
Life Satisfaction Scale			
Life Satisfaction	r	-.131	-.028
	p	.022	.623
Subjective Vitality Scale			
Vitality	r	-.179	.128
	p	.002	.026



DISCUSSION

The ARA scale, with its robust psychometric properties of validity and reliability, emerges as a reliable instrument for gauging attachment styles, especially during adolescence (Justo-Núñez & Morris, 2024). Adolescence, a transformative phase of life, is characterized by shifting reference points. During this period, familial ties often challenge the burgeoning desire for autonomy and independence, yet paradoxically, they also serve as a safety net in times of distress (Pollard & Bucci, 2024).

During this period, the peer group becomes particularly significant during adolescence. According to Sherif and Sherif (1954, 1964), the peer group is a social laboratory where adolescents can experiment with autonomous choices and behaviors. Peers are identified as the most important objects of social comparison in constructing identity. Within the peer group, notable synergies are created with one or more members, who may be regarded on the same level as the family. These peers become vital points of reference from an emotional and affective standpoint, providing help and protection (Sherif & Sherif, 1964).

Furthermore, love relationships in adolescence are often transient and discontinuous. They introduce changes in the representation of the self and how others perceive the adolescent. Experiencing these transitions inevitably involves destabilization, even if temporary. Until there is a reasonable adjustment and the achievement of psychological and psychosocial well-being, love relationships do not fulfill one of the main developmental tasks characteristic of adolescence, which is building an adult identity (Vagos & Carvalhais, 2020).

On the other hand, friendships in adolescence, unlike love relationships, have a more continuous character and are distinguished by the support and intimacy they offer. This can increase psychological well-being regarding general self-satisfaction and confidence in the future (Meeus, 1994). Relationships with friends represent the appropriate context for the development of coping strategies, thanks to the confrontation of one's problems with others (e.g., Farrell, Murrihy & Essau, 2023; Gupta, 2023). These friendships, therefore, configure themselves as contexts of growth and sharing, performing protective functions for the psychological well-being of individuals. Such friendships do not compete with couple relationships, continuing to



promote well-being and reduce psychological distress at a younger age, even when love relationships are established. The latter, in fact, initially instills fears and feelings of insecurity. However, they arise from the need to establish other types of meaningful relationships with peers in addition to those of friendship (Lim, 2021).

The fundamental role of attachment styles, widely recognized by developmental scholars, in shaping an individual's personality and life choices has led to the creation of a questionnaire that addresses adolescents' particular emotional and affective needs. Awareness of the role of insecure attachment as a psychosocial risk factor makes developing tools for classifying attachment configurations even more relevant. Therefore, a questionnaire such as the ARA, which can measure the attachment style of adolescents, is proposed as a handy tool for educators, psychologists, and researchers working with children (Delgado, Serna, Martínez & Cruise, 2022).

It is crucial to consider that even though the discomforts often experienced within the family or school context are part of the normal development of the adolescent, the potential risk linked to conditions in which these discomforts can give rise to severe psychological disorders should not be overlooked (Tursz, 1989). These disorders can include depression, eating disorders, dissociative disorders, or borderline personality disorders (Jewell, Gardner, Susi, Watchorn, Coopey, Simic, Fonagy & Eisler, 2019). Studies have shown that insecure attachment in adolescents is a significant predictor of such psychological issues, highlighting the importance of early identification and intervention (Wilkinson, 2011).

Understanding the origins of these discomforts becomes crucial in light of these considerations. This understanding allows for implementing prevention or intervention strategies and programs that can assist adolescents in overcoming growth-related problems constructively and effectively. These initiatives can help adolescents navigate their developmental challenges effectively, promoting better psychological and emotional well-being. Recent studies have corroborated the role of secure attachment and self-compassion as therapeutic targets against mental health difficulties (e.g., Amari, Martin, Mahoney, Peacock, Stewart & Alford, 2023; George & Aikins, 2023; Nasika, Wiart, Bonvarlet, Guillaume, Yavchitz, & Tereno 2023). In fact, recognizing and addressing insecure attachment early on is crucial for mitigating psychological risks and promoting healthier developmental outcomes.



CONCLUSIONS

In conclusion, the ARA questionnaire and its application in adolescent psychology significantly advance our understanding of the complex dynamics of attachment during this critical developmental stage. The tool's ability to measure attachment styles provides invaluable insights that can guide research, practical applications, and interventions aimed at promoting healthier relationships and overall well-being among adolescents (Delgado, Serna, Martínez & Cruise, 2022).

By leveraging this tool, professionals can more effectively address the complex emotional and psychological needs of adolescents, fostering healthier developmental outcomes and stronger interpersonal relationships. Moreover, recognizing the potential risks associated with insecure attachment underscores the importance of early identification and intervention. Understanding the origins of these discomforts and implementing appropriate strategies can help adolescents navigate their developmental challenges effectively, ultimately promoting better psychological and emotional well-being (Amari et al., 2023).

In exploring the intricacies of adolescent attachment, tools like the AFR/ARA questionnaire play a pivotal role. They not only provide a means of quantifying and classifying attachment styles but also offer a pathway toward understanding the broader implications of these styles on an individual's psychological health and well-being. As such, the continued use and refinement of these tools, coupled with ongoing research into adolescent attachment, will be instrumental in shaping the future of adolescent psychology. Future research should explore the ARA scale's applications in diverse adolescent populations, further enhancing our understanding of attachment dynamics during this critical stage of life.

In conclusion, the ARA questionnaire is a significant advancement in adolescent psychology, offering a reliable and culturally relevant tool for assessing attachment styles. This instrument not only enhances our understanding of adolescent attachment dynamics but also provides practical applications for educators, therapists, and researchers. By facilitating early identification and intervention, the ARA helps mitigate psychological risks and fosters healthier developmental outcomes. Future research should continue to explore the ARA scale's diverse applications to provide deeper



insights and more effective strategies for supporting adolescent well-being.

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APPENDIX

ARA: Apego nas Relações de Amizade

Questionário sobre as Relações Afetivas de Amizade

Instruções para respostas

O Seguinte questionário se refere à como você vivência sua relação afetiva com aquele amigo ou aquela amiga verdadeiramente significativo/a para você. Portanto, quando falamos de amigo não estamos nos referindo aos amigos em geral, mas ao amigo próximo, considerado “do coração”. Podem ser também mais de um e de sexo masculino ou feminino indiferentemente. Nesta versão da escala, os itens serão elaborados considerando tanto o gênero masculino quanto o feminino. Estamos interessados no teu modo geral de vivenciar este tipo de relação, não somente ao que está acontecendo naquela que atualmente está ocorrendo.

Ao responder, considere que as palavras “estreito” e “próximo” se referem à proximidade psicológica ou emocional (por exemplo, abrir-se, confiar, compartilhar emoções e experiências) e não à física a e/ou sexual.

Leia cada afirmação, e escreva ao lado o número que melhor descreva o quanto você está de acordo ou não está de acordo com tal afirmação. O número “1” indica completamente falso ou um completo desacordo ou, enquanto o número “7” indica completamente verdadeiro ou um completo acordo.

1	2	3	4	5	6	7
Completamente falso	Bastante falso	Um pouco falso	Nem verdadeiro, Nem falso	Um pouco verdadeiro	Bastante verdadeiro	Completamente Verdadeiro

1.	Prefiro não mostrar ao meu/minha amigo/a como me sinto realmente.	
2.	Tenho medo de ser deixado/a.	
3.	Sinto-me muito à vontade quando a amizade se torna mais estreita	
4.	Preocupo-me muito com minha relação afetiva	
5.	Logo que minha amizade começa a se tornar mais estreita, tenho a tendência de me afastar.	
6.	Tenho medo de que meu/minha amigo/a não goste de mim, tanto quanto eu gosto dele/a	
7.	Sinto desconforto quando minha amizade se estreita demais.	
8.	Preocupo-me muito em perder meu/minha amigo/a.	
9.	Tenho dificuldade em me abrir com meu/minha amigo/a.	
10.	Com frequência desejo que os sentimentos de meu/minha amigo/a por mim sejam tão fortes quanto os meus por ele/a.	
11.	Gostaria de ter relações afetivas mais profundas, mas sempre volto atrás.	
12.	Com frequência gostaria de ter um relacionamento mais estreito com meu/minha amigo/a, mas isso às vezes, o/a amedronta e afasta	



13.	Fico nervoso quando meus amigos se aproximam demais de mim.	
14.	Tenho medo de ficar só.	
15.	Sinto-me confortável em compartilhar com meu/minha amigo/a os meus pensamentos e sentimentos mais pessoais.	
16.	O meu desejo de estabelecer um relacionamento muito próximo amedronta e afasta as pessoas.	
17.	Procuo evitar uma proximidade excessiva no relacionamento com meu/minha amigo/a.	
18.	Preciso ter muita certeza de que meu amigo/a me quer bem.	
19.	Encontro bastante facilidade em estabelecer um relacionamento estreito com meu/minha amigo/a.	
20.	Às vezes, parece que estou forçando meu amigo(a) a ser mais afetuoso e atencioso comigo.	
21.	Tenho dificuldade em confiar totalmente no meu amigo/a.	
22.	Não me preocupo muito em ser deixado/a sozinho/a	
23.	Prefiro não me aproximar demais do meu/minha amigo/a.	
24.	Se não consigo fazer com que o meu/minha amigo/a demonstre interesse por mim, fico perturbado/a e com raiva.	
25.	Digo quase tudo ao/à meu/minha amigo/a.	
26.	Acho que meu/minha amigo/a não quer ter uma relação tão estreita comigo como eu gostaria.	
27.	Geralmente falo com meu/minha amigo/a sobre os meus problemas e as minhas preocupações.	
28.	Quando não mantenho uma relação de amizade profunda, sinto-me bastante ansioso/a e inseguro/a.	
29.	Sinto que posso confiar no meu/minha amigo/a.	
30.	Sinto-me frustrado quando meu/minha amigo/a não está presente da forma que eu gostaria	
31.	Não me importo em pedir conforto, conselho ou ajuda ao/à meu/minha amigo/a.	
32.	Sinto-me frustrado se meu/minha amigo/a não está disponível quando tenho necessidade dele/dela.	
33.	Me ajuda a procurar meu/minha amigo/a nos momentos difíceis.	
34.	Quando meu amigo/a me critica, sinto-me muito incomodado/a	
35.	Procuo meu amigo/a para muitas coisas, incluindo conforto e segurança.	
36.	Fico magoado quando meu/minha amigo/a não me procura.	



English Version of the ARA

AFR/ARA: Attachment in Friendship Relationships

Questionnaire on Attachment Friendship Relationships

Response Instructions

The following questionnaire refers to how you experience your affective relationship with that friend who is truly meaningful to you. Therefore, when we speak of a friend, we are not referring to friends in general but to a close friend, considered "of the heart." There can also be more than one male or female indifferently. We are interested in your general way of experiencing this type of relationship, not just what is happening in the one that is currently occurring.

When answering, consider that the word "close" refers to psychological or emotional closeness (e.g., opening up, trusting, sharing emotions and experiences) and not physical and/or sexual.

Read each statement and write next to the number that best describes how much you agree or disagree with that statement. The number "1" indicates completely false or complete disagreement, while the number "7" indicates completely true or complete agreement.

1	2	3	4	5	6	7
Completely False	Mostly False	Somewhat False	Neutral, Neither false, Nor true	Somewhat True	Mostly True	Completely True

1.	I'd rather not show my friend how I really feel.	
2.	I'm afraid of being left_	
3.	I feel very comfortable when the friendship becomes closer.	
4.	I care a lot about my affective relationship.	
5.	As soon as my friendship begins to grow closer, I tend to drift away.	
6.	I worry that my friends won't care about me as much as I care about them.	
7.	I feel uncomfortable when my friend wants to be very close.	
8.	I worry a lot about losing my friend.	
9.	I have a hard time opening up to my friend.	
10.	I often wish that my friend's feelings for me were as strong as my feelings for him/her.	
11.	I would like to have deeper affective relationships, but I keep pulling back.	



12.	I often wish I had a closer relationship with my friends, but this sometimes scares them away.	
13.	I get nervous when my friends get too close to me.	
14.	I worry about being alone.	
15.	I feel comfortable sharing my most personal thoughts and feelings with my friend .	
16.	My desire to establish a very close relationship frightens and pushes people away.	
17.	I try to avoid getting too close to my friend.	
18.	I need to be very sure that my friend cares about me.	
19.	I find it quite easy to establish a close relationship with my friend.	
20.	Sometimes it feels like I'm forcing my friend to be more affectionate and considerate of me.	
21.	I have a hard time fully trusting my friend.	
22.	I don't worry too much about being left alone.	
23.	I prefer not to get too close to my friend.	
24.	If I can't get my friend to show interest in me, I get upset and angry.	
25.	I tell almost everything to my friend.	
26.	I don't think my friend wants to have as close a relationship with me as I would like.	
27.	I usually discuss my problems and concerns with my friends.	
28.	When I don't have a close friendship, I feel somewhat anxious and insecure.	
29.	I feel like I can trust my friend.	
30.	I get frustrated when my friend is not around as much as I would like	
31.	I don't mind asking my friend for comfort, advice, or help.	
32.	I get frustrated if my friend is not available when I need him/her.	
33.	It helps to turn to my friend in times of need.	
34.	When my friend disapprove of me, I feel really bad about myself	
35.	I turn to my friend for many things, including comfort and safety.	
36.	I resent it when my friend doesn't look for me.	

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