# The impact of attachment orientations on empathy in adults: Considering the mediating role of emotion regulation strategies and negative affectivity

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## ABSTRACT

The current studies explored whether individual differences in emotion regulation strategies and negative affectivity would mediate the relationship between attachment security and empathy. Attachment theory was used as a framework to examine the influence of both dispositional and experimentally enhanced attachment security. In Study 1, attachment security predicted cognitive empathy through the mediation of reappraisal. In Study 2, we experimentally enhanced attachment security. This priming led to lower suppression, rumination, and negative affectivity, but did not increase empathic responding. Mediation analyses showed that attachment security promoted cognitive empathy through reappraisal, suppression, and rumination. Overall, these results support the notion that more securely attached persons are able to experience greater levels of cognitive empathy due to reappraising their emotions, rather than suppressing or ruminating on them.

In today's world, burdened by many conflicts, social skills and empathic responding to other person's needs are gaining in importance. If people feel safe, they are able to notice and react to other people's sufferings. Within the past decades, attachment theory has become one of the most comprehensive and popular theories in modern psychology. It represents an ideal and important framework for exploring and understanding psychological development, including psychological processes, such as emotion regulation and empathy (Bowlby, 1982). The ability to empathize is already establishing in infancy and childhood. Among neurodevelopmental factors and temperament, the parent-child-relationship quality and maternal warmth have been found to be a crucial factor in developing empathy (McDonald & Messinger, 2011). Individuals who experienced and benefited from optimal working attachment and caregiving systems have reduced needs for self-protection and self-enhancement. Therefore, attachment security provides a solid foundation for empathy. Indeed, there is empirical and theoretical support for the relationship between attachment and empathy, and empathy is seen as a potential motivator for helping others in distress (Bowlby, 1982; Mikulincer et al., 2001; Van der Mark, van Ijzendoorn, & Bakermans-Kranenburg, 2002).

Unfortunately, less is known about how attachment orientations influence individual differences in empathic responding. Wei, Liao, Ku, and Shaffer (2011) showed that affective empathy mediated the relationship between attachment avoidance and subjective well-being. Boag and Carnelley (2016) identified empathy as a mediator of the relationship between attachment security and prejudice. It is also

known that attachment patterns are linked with emotion regulation strategies (e.g., Goodall, Trejnowska, & Darling, 2012; Karreman & Vingerhoets, 2012). Finally, Panfile and Laible (2012) investigated the relationship between attachment security and empathy through the mediation of emotion regulation skills and negative affectivity in children and adolescents (see also Panfile, Laible, Augustine, & Robeson, 2015). They found that attachment security is linked with greater levels of emotion regulation, which led to higher levels of empathy.

Considering attachment theory and the results found by Panfile and Laible (2012), there are different theoretical and empirical reasons that attachment security and emotion regulation strategies may be related to cognitive and affective empathy. However, to the best of our knowledge, no research has investigated the underlying relationship between all three concepts in adults. In the two studies reported here, we aimed to find support for the relationship between attachment, emotion regulation strategies, and empathy. In Study 1, we used a correlational design and investigated two different emotion regulation strategies—suppression and reappraisal—as mediators of the relationship between attachment security and cognitive and affective empathy. In Study 2, employing an experimental design, we tested the causal directions.

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# 1. Literature review

## 1.1. Attachment

According to attachment theory (Bowlby, 1982), every human being is considered to be innately equipped with behavioral systems of attachment and caregiving. Bowlby (1982) regarded the need for closeness and security as one fundamental human need. The possibility to rely on a "safe haven" fosters a person's growth and development and is meant to be a key predictor of healthy social and emotional development (Collins & Feeney, 2000; Panfile et al., 2015). Moreover, attachment security serves as a foundation for compassion and caregiving (Mikulincer & Shaver, 2005), well-functioning relationships (Holland, Fraley, & Roisman, 2012), well-being (Karreman & Vingerhoets, 2012), and greater resilience when in distress (Mikulincer, Ein-Dor, Solomon, & Shaver, 2011).

An individuals' social experiences with important others, primarily with early caregivers, influence how the attachment and caregiving system operate and result in significant individual differences concerning attachment security (Bowlby, 1982). Depending on these attachment experiences, internal working models are formed, which contain attachment representations and one's attachment organization. Due to their dynamic nature, internal working models are modified repeatedly across one's lifetime through different interactions with important persons. Fraley (2002) ascertained in a meta-analysis that attachment security is moderately stable across the first 19 years of life. Although one's level of attachment security may fluctuate and environmental factors can increase or decrease the feeling of stability, the level tends to fluctuate around the security level established in childhood (Fraley, 2002; Jones et al., in press). If significant others are available and responsive, the attachment system works in an optimal way and positive internal working models of the self and of others are formed over time (Mikulincer & Shaver, 2005).

On the basis of these positive 'images' in their internal working models, individuals value relationships as worthwhile and positive and they do not worry about being abandoned, but mobilize problem-solving strategies and may reappraise stressful situations (Pascuzzo, Cyr, & Moss, 2013). Negative working models arise and a sense of insecurity emerges when attachment figures are not sensitive, caregiving, and available. If nobody regulates the infant's affects and responds to its attachment behavior appropriately, the child develops secondary strategies for regulation on its own, namely, hyperactivation or deactivation of the attachment system. Individuals who use hyperactivating strategies are high on the attachment anxiety dimension and constantly try to gain closeness to attachment figures and seek to ensure their attention. They are continuously worried about being abandoned or rejected and ruminate on personal weaknesses and possible threats of relationships. In addition, hyperactivating strategies correspond to a focus on negative emotions. Individuals often wonder whether they are loved because of their negative self-image. By contrast, individuals who rely on deactivating strategies and therefore are high on the attachment avoidance dimension tend to avoid proximity and suppress the activation of the attachment system to protect themselves from further rejection. Moreover, they strive for self-reliance, experience discomfort when getting close to others, and often suppress distressing thoughts (Fraley, Waller, & Brennan, 2000; Mikulincer & Shaver, 2005).

The need for a feeling of security is considered to be universal, but depending on their attachment orientation individuals regulate their feelings in distress in different ways. These different reactions reflect underlying differences in internal working models of the self and others, which are considered to be relatively stable across one's lifetime (Collins & Feeney, 2000). Therefore, attachment researchers (e.g., Collins & Feeney, 2000; Fraley, 2002) assume that one's attachment history—the affective events during childhood between the caregiver and the child—influences the nature and quality of adult relationships. Attachment security may influence the development of empathy in different ways. Sensitive caregivers model empathy for their children, which is then integrated in the children's internal working models as a script of responding to others in need. In addition, infants are not able to regulate their emotions yet; therefore, they need sensitive caregivers that assist them with coping. Over repeated instances, children learn how to regulate their emotions (Mikulincer, Shaver, & Pereg, 2003). Due to secure children experiencing more interactions with their caregivers calming their distress, they have greater emotion regulation skills (Davidov & Grusec, 2006; Sroufe, 2005). Greater levels of emotion regulation allow the individual to experience higher levels of empathy, because they are able to cope with negative emotions. Insecurely more than securely attached children are susceptible to experiencing negative emotions or negative affectivity, due to dismissing or inconsistent responses provided by the caregivers (Bowlby, 1982). Triggered by emotional overarousal, insecure individuals are overwhelmed with negative affect and therefore need their resources to reduce their own distress. Securely attached individuals, who are highly regulated and thus can modulate their own emotional reaction, are able to experience empathy (Eisenberg & Fabes, 2006). Moreover, Murphy, Laible, Augustine, and Robeson (2015) found that higher levels of attachment security are associated with lower levels of negative affectivity (see also Van Buren & Cooley, 2002).

## 1.2. Cognitive and affective empathy

Davis (1983) defined empathy either as a personality trait or as a stable ability, which consists of cognitive and affective components. The cognitive aspect of empathy, which is often described as perspective-taking or theory of mind, comprises the ability to take another person's points of view (Britton & Fuendeling, 2005). The affective part of empathy encompasses empathic concern (Britton & Fuendeling, 2005; Gilin, Maddux, Carpenter, & Galinsky, 2013; Jolliffe & Farrington, 2006). Although cognitive and affective empathy are associated, they have different correlates (Jolliffe & Farrington, 2006).

Even though many empirical investigations verified the relationship between attachment security and empathy (e.g., Boag & Carnelley, 2016; Britton & Fuendeling, 2005; Panfile et al., 2015), the underlying processes accounting for this relationship are still unclear. To our knowledge, no one has examined the relationship between attachment and empathy in adults, considering emotion regulation strategies and negative affectivity as mediators. Therefore, we examined whether this relationship would be mediated by different emotion regulation strategies. We assumed that secure attachment would be linked with greater emotion regulation strategies, which should lead to higher levels of empathy.

## 1.3. Emotion regulation strategies

Emotion regulation is defined as the ability to cope with emotions constructively and includes conscious and non-conscious strategies to influence an emotional response (Shaver & Mikulincer, 2007). Gross (2001) described a process model of emotion regulation that distinguishes two major kinds of emotion regulation, namely, antecedent-focused and response-focused emotion regulation. Antecedent-focused strategies operate before response tendencies get fully activated and change our physical responses and behavior, whereas response-focused strategies refer to strategies we use after response tendencies have been generated and emotions are already elicited. Gross (2001) focused on two specific emotion regulation strategies to down-regulate emotions: suppression and reappraisal. Suppression is a response-focused strategy and down-regulates negative emotions by modifying behavioral aspects of emotional response tendencies (Voon, Hasking, & Martin, 2014). Reappraisal is an antecedent-focused strategy and reduces negative emotions by intervening before emotional response tendencies appear. In addition, reappraisal reduces the emotional salience of a situation