

The Influence of Secure Attachment on Empathy and Altruistic Behavior

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Abstract

Altruistic behavior refers to actions with the ultimate goal of increasing the welfare of other individuals. It is both an important research topic in the field of social psychology and a necessity for social harmony and stability. Empathy refers to the psychological process in which an individual perceives or imagines the emotions of others and partially experiences their feelings, serving as the intrinsic motivation for altruistic behavior. Existing research has demonstrated that secure attachment style and secure attachment priming have positive effects on individuals' empathy and altruistic behavior. Based on attachment theory and related literature, it can be speculated that emotion regulation and cognitive schemas may be two psychological mechanisms through which secure attachment influences individuals' empathy and altruistic behavior. Future research could explore the moderating role of the closeness of the relationship between the actor and recipient of altruistic behavior and the degree of matching between their attachment styles, further verify the psychological mechanisms through which secure attachment influences empathy and altruistic behavior, investigate the reciprocal promoting effect of altruistic behavior on secure attachment, and develop intervention programs for cultivating individuals' empathic capacity and altruistic behavior through secure attachment.

Full Text

Effects of Secure Attachment on Empathy and Altruistic Behavior

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Abstract

Altruistic behavior refers to actions whose ultimate goal is to increase the welfare of others. It represents both a significant research topic in social psychology and a prerequisite for social harmony and stability. Empathy involves perceiving or imagining another person's emotions and partially experiencing those feelings oneself, serving as the intrinsic motivation for altruistic behavior. Previous research has demonstrated that both secure attachment style and security priming positively influence individuals' empathy and altruistic behavior. Drawing on attachment theory and related literature, we propose that emotion regulation and cognitive schemas may constitute two psychological mechanisms through which secure attachment affects empathy and altruistic behavior. Future research should examine potential moderating effects, including the closeness between the provider and recipient of altruistic behavior and the degree of attachment style matching between them. Further investigation should verify the psychological mechanisms underlying the influence of secure attachment on empathy and altruistic behavior, explore the reciprocal promoting effect of altruistic behavior on secure attachment, and develop intervention programs that cultivate empathy and altruistic behavior through the enhancement of secure attachment.

Keywords: attachment style; security priming; empathy; altruistic behavior; emotion regulation; cognitive schema

Altruistic behavior is not only a crucial research topic in social psychology but also essential for social harmony and stability. It is defined as behavior whose ultimate goal is to increase the welfare of other individuals (Batson, 2010). Altruistic behavior plays a vital role in maintaining individual mental health, fostering positive interpersonal relationships, and promoting social harmony. Empathy, the intrinsic motivation for altruistic behavior, refers to the psychological process through which individuals perceive or imagine others' emotions and partially experience those feelings (Pan et al., 2013; Xiao, Zheng, & Chen, 2014). Empathy enables individuals to better understand and predict others' emotions and behaviors, facilitates altruistic and cooperative actions, and plays a critical role in interpersonal interactions. Recently, personality and social psychologists have examined empathy and altruistic behavior from the perspective of attachment theory, finding that individuals with secure attachment exhibit greater empathic capacity and altruistic behavior, while security priming can enhance empathy and selfless helping toward those in distress (Gross, Stern, Brett, & Cassidy, 2017; Shaver, Mikulincer, & Cassidy, 2019; Shaver, Mikulincer, Gross, Stern, & Cassidy, 2016). This paper reviews the effects of secure attachment on empathy and altruistic behavior and their underlying psychological mechanisms within the framework of attachment theory, aiming to provide a literature foundation for in-depth research on the relationship between secure attachment and these prosocial outcomes, and to offer scientific evidence for cultivating empathy and altruistic behavior to promote social harmony.

1. Attachment Behavioral System and Caregiving Behavioral System

The attachment behavioral system refers to the evolutionary capacity of infants and young children, who lack mature abilities for locomotion, foraging, and self-protection, to seek proximity to caregivers. This behavior increases the likelihood of human survival (Bowlby, 1982). When attachment figures consistently provide physical and emotional protection while supporting children's exploration of the world and development of self-capabilities and personality, children develop a secure attachment orientation (Mikulincer, Shaver, & Pereg, 2003). The attachment behavioral system is not only crucial during early life but continues to influence individuals throughout their lifespan. Even fully mature and independent adults benefit from seeking and receiving care from others, particularly when facing crises, experiencing distress, or feeling lonely (Mikulincer & Shaver, 2007). In addition to the attachment system, humans are endowed with other behavioral systems, such as the caregiving behavioral system, sexual system, and exploration system. The fundamental function of the caregiving behavioral system is to respond to others' needs for help and to provide protection and support to those in distress (Mikulincer & Shaver, 2010). Caregiving is considered the prototype of empathy, altruistic behavior, and prosocial behavior (Shaver, Mikulincer, & Shemesh-Iron, 2010). What, then, is the relationship between the attachment behavioral system and the caregiving behavioral system?

2. The Relationship Between Secure Attachment Style and Empathy and Altruistic Behavior

Bowlby noted that attachment theory addresses both the dynamic characteristics of the attachment behavioral system and individual differences. The former describes information processing features following activation of the attachment system under threatening conditions, while the latter manifests as habitual attachment styles that represent stable traits formed through the gradual shaping of the attachment system's functional modules by specific social experiences (Li, Shi, Huang, & Ma, 2013). Current measurement of attachment style primarily relies on two dimensions: attachment avoidance and attachment anxiety. Attachment avoidance reflects individuals' distrust of others' goodwill and their efforts to maintain behavioral and emotional independence. High scores on this dimension combined with low scores on the other dimension indicate an avoidant attachment style. Attachment anxiety reflects individuals' concerns about not receiving help when needed and their desire for attention and support from others. High scores on this dimension combined with low scores on the other dimension indicate an anxious attachment style. When individuals score low on both dimensions, they are classified as having a secure attachment style (Erez, Mikulincer, van Ijzendoorn, & Kroonenberg, 2008). These two dimensions can be measured using the Experience in Close Relationships (ECR) self-report scale (Brennan, Clark, & Shaver, 1998).

Secure attachment style positively correlates with empathy and altruistic behavior. Previous research has found that securely attached individuals exhibit greater empathy toward those in need (Mikulincer et al., 2001), provide more timely and sensitive care and responsiveness to their spouses and strangers, and demonstrate greater inclusiveness toward outgroup members (Shaver et al., 2019). Studies have also shown that securely attached healthcare professionals are more likely to empathize with patients, which improves doctor-patient relationships and reduces stress in clinical settings (Khodabakhsh, 2012). Conversely, research indicates that attachment anxiety and avoidance negatively predict altruistic behavior (Mikulincer, Shaver, Gillath, & Nitzberg, 2005). Attachment avoidance is associated with fewer volunteer behaviors and altruistic motives, while attachment anxiety is linked to self-serving motivations for volunteering (Gillath et al., 2005). Further research has demonstrated that even after controlling for positive personality traits (emotional stability, extraversion, openness, conscientiousness, and agreeableness), attachment anxiety and avoidance still significantly negatively predict participation in volunteer services (Erez et al., 2008). Westmaas and Silver (2001) found that in situations where others need help, attachment anxiety predicts individuals' own anxiety levels, while attachment avoidance negatively predicts the likelihood of providing help to others. These consistent findings indicate that insecure attachment styles (anxious or avoidant) negatively predict empathy and altruistic behavior, thereby demonstrating that secure attachment style positively predicts these outcomes.

Parent-child attachment represents the stable attachment relationship formed between children/adolescents and their parents, with higher quality indicating greater security. Empirical research has demonstrated positive correlations between parent-child attachment quality and altruistic behavior in children and adolescents. A study of 607 Chinese adolescents found that individuals with higher parent-child attachment quality exhibited better self-control, which in turn led to more helping behavior (Nie, Li, & Vazsonyi, 2016). Other research has revealed significant positive correlations between parent-child attachment and adolescent prosocial behavior (Hou et al., 2018; Wang et al., 2017; Pan et al., 2017). Additionally, international studies have found that secure attachment in children aged 3-5 is significantly positively correlated with helping, comforting, and sharing behaviors (Beier et al., 2019). These results collectively indicate a positive relationship between secure attachment and altruistic behavior in children and adolescents.

3. Effects of Secure Attachment Priming on Empathy and Altruistic Behavior

Attachment style can be modified to some extent (Mikulincer & Shaver, 2007). Researchers have employed experimental methods to temporarily activate individuals' secure attachment mental representations, eliciting a range of positive effects associated with secure attachment. This process is known as security priming (Mikulincer & Shaver, 2015). Security priming is divided into two

types: supraliminal and subliminal, distinguished by whether the stimulus material is consciously perceived. If undetected, it constitutes subliminal security priming; if detected, it constitutes supraliminal security priming. Subliminal priming typically presents attachment-related words or pictures for 20-50 ms, while supraliminal priming uses attachment-related pictures, words, or other stimuli presented for 500 ms or longer, or guides participants to read attachment-related stories, recall or imagine secure attachment experiences, and write about them (Guo, Chen, & Yang, 2011; Zhang et al., 2018).

Security priming can enhance individuals' attachment security, leading to more positive evaluations of others and the environment, which in turn promotes altruistic behavior. It can also increase endorsement of self-transcendent values such as benevolence and universalism, which facilitate altruistic behavior. A review of research found that security priming produces healing and soothing effects on emotion, improves individuals' evaluations of themselves and others, reduces ingroup hostility, and increases willingness to empathize with and help others (Mikulincer & Shaver, 2007). Through a series of security priming experiments, Mikulincer and colleagues found that both supraliminal and subliminal security priming increased empathy toward others' needs while reducing focus on personal distress, thereby promoting altruistic behavior tendencies (Mikulincer et al., 2001; Mikulincer et al., 2005). Recent research has further shown that after security priming, individuals with different attachment styles all exhibit greater empathy toward those in disadvantaged situations. Security priming weakens defensive mechanisms that hinder helping behavior, reducing both caregiving avoidance and caregiving anxiety. In other words, security priming makes individuals more willing to attend to others' needs, more confident in their ability to help others, and more trusting in their capacity to provide appropriate assistance (Cassidy, Stern, Mikulincer, Martin, & Shaver, 2018). Additionally, Carnelley and Rowe (2007) found that repeatedly activating secure attachment representations can improve individuals' beliefs about intimate relationships over extended periods, leading to more positive self-evaluations, greater trust in relationship partners, and more positive expectations regarding partners' behaviors. Domestic research has also found that security priming significantly enhances interpersonal trust, an effect independent of positive emotion (Li, Sun, Tuo, & Liu, 2016). Another domestic study revealed that help-seekers with high facial trustworthiness receive significantly more helping behavior than those with low facial trustworthiness, but security priming can effectively mitigate the decline in helping behavior caused by low facial trustworthiness (Wang, Wang, Han, Liu, & Zhang, 2018). These findings consistently demonstrate that security priming promotes empathy and altruistic behavior.

4. Psychological Mechanisms Through Which Secure Attachment Influences Empathy and Altruistic Behavior

Although the influence of secure attachment on empathy and altruistic behavior has been established, the psychological mechanisms underlying this relationship

remain underexplored in empirical research both domestically and internationally. Investigating these mechanisms can enhance our understanding of the relationship between secure attachment and these outcomes while providing scientific evidence for cultivating empathy and altruistic behavior. Based on attachment theory and related literature, we propose that secure attachment primarily influences empathy and altruistic behavior through two mechanisms: an affective mechanism and a cognitive mechanism.

4.1 Emotion Regulation

Emotion regulation refers to the process by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions. It involves not only reducing negative emotions but also enhancing positive emotions (Gross, 1998). First, securely attached individuals possess superior emotion regulation abilities. On one hand, compared to insecurely attached individuals, they acquire more experience in alleviating distress from attachment figures, master more emotion regulation techniques, and experience fewer negative emotions. Attachment theory posits that children's emotion regulation abilities originate from caregivers' sensitive responses to children's distress and considers emotion regulation a primary internal mechanism through which early experiences influence later functioning (Calkins & Leerkes, 2011; Mikulincer et al., 2003). Empirical research has demonstrated that securely attached infants, children, and adolescents can better regulate emotional arousal (Kerns, Abraham, Schlegelmilch, & Morgan, 2007; Leerkes & Wong, 2012; Sroufe, 2005). On the other hand, individuals with different attachment styles employ different attachment strategies, which entail distinct emotion regulation strategies. Securely attached individuals typically use primary attachment strategies—that is, seeking proximity to attachment figures when needed. These primary strategies, also known as secure attachment strategies, primarily function to reduce personal distress, build personal resources, and broaden perspectives (Mikulincer et al., 2003). Insecurely attached individuals generally rely on secondary attachment strategies that involve means other than proximity-seeking. These secondary strategies aim to manage activation of the attachment system and alleviate distress caused by frustrated proximity-seeking by either hyperactivating or deactivating the attachment system. Anxiously attached individuals typically employ hyperactivating strategies, urgently seeking maximum proximity, support, and care from others while lacking confidence in obtaining these resources, resulting in poor self-regulation of emotions. Avoidantly attached individuals typically use deactivating strategies, striving to suppress proximity-seeking tendencies, deny attachment needs, maintain emotional and cognitive distance from others, and rely solely on themselves for protection, which also leads to low emotion regulation capacity (Mikulincer & Shaver, 2010). In summary, securely attached individuals possess strong emotion regulation abilities, whereas insecurely attached individuals (whether anxious or avoidant) exhibit low emotion regulation capacity.

Second, emotion regulation ability significantly influences empathy and altruistic behavior. Individuals with poor emotion regulation, unable to soothe their own negative emotions, are more likely to experience personal distress. In contrast, those with strong emotion regulation abilities can adjust their emotional responses behaviorally and cognitively, making them more likely to show emotional concern for others in distress and consequently more likely to engage in altruistic behavior. Empirical research has found that behavioral and physiological indicators of self-emotion regulation correlate with children's empathy and altruistic behavior, whereas personal distress (i.e., self-focused attention and abnormal negative emotion regulation) correlates negatively or not at all with empathy and altruistic behavior (Eisenberg, 2000; Eisenberg & Fabes, 1995). Therefore, we can hypothesize that emotion regulation may serve as one psychological mechanism through which secure attachment influences empathy and altruistic behavior.

Moreover, empirical research has found that emotion regulation mediates the relationship between secure attachment and empathy in children (Panfile & Laible, 2012). This study surveyed 63 three-year-old children and their mothers, with mothers reporting on children's secure attachment, emotion regulation, and empathy. The results revealed that children's secure attachment indirectly influenced empathy through emotion regulation: children with higher levels of secure attachment showed better emotion regulation, which in turn led to higher empathy. This study directly demonstrates that emotion regulation may constitute one internal mechanism through which secure attachment influences children's empathy.

4.2 Cognitive Schemas

According to attachment theory, individuals' early interactions with attachment figures gradually become internalized as internal working models (IWM). These attachment internal working models represent cognitive schemas that significantly influence specific behaviors. Internal working models consist of self-models and other-models. Securely attached individuals hold positive self-models, viewing themselves as valuable and worthy of love, and positive other-models, perceiving others as well-intentioned and trustworthy. The positive other-model leads securely attached individuals to view those in distress as deserving of sympathy and support, while the positive self-model fosters confidence in their ability to meet others' needs and effectively manage their own negative emotions (Shaver et al., 2016). Anxiously attached individuals possess negative self-models, forming negative self-perceptions that cause them to focus more on personal distress when faced with others' needs. Avoidantly attached individuals hold negative other-models, maintaining negative views of others, fearing rejection, and avoiding intimacy, thereby exhibiting fewer helping behaviors (Shaver et al., 2016). Previous research has found that insecurely attached individuals hold negative cognitive schemas regarding threatening events (Ein-Dor, Mikulincer, & Shaver, 2011). Similarly, insecurely attached individuals may

hold negative cognitive schemas about those in distress, whereas securely attached individuals may hold positive cognitive schemas—believing that those in distress need and deserve help and that they themselves are capable of providing appropriate assistance. Therefore, based on attachment internal working model theory, we hypothesize that secure attachment can influence empathy and altruistic behavior through cognitive schemas.

5. Summary and Future Research Directions

Existing research has demonstrated that both secure attachment style and security priming positively influence individuals' empathy and altruistic behavior. Furthermore, based on attachment theory and related literature, we propose that emotion regulation and cognitive schemas may constitute two psychological mechanisms through which secure attachment influences empathy and altruistic behavior. Future research can advance in the following directions:

5.1 Moderating Effects of Relationship Closeness and Attachment Style Matching Between Givers and Receivers

The caregiving system is inherently altruistic, initially targeting primarily children, siblings, and blood relatives (Gillath et al., 2005). When individuals face crises in life, friends and family typically provide effective support and assistance, whereas strangers more often display avoidance and discomfort, reducing expectations for subsequent contact (Westmaas & Silver, 2001). Future research should further investigate whether the influence of secure attachment on empathy and altruistic behavior is moderated by the degree of closeness between the provider and recipient of altruistic behavior.

Generally, when the attachment styles of care recipients and providers match, negative responses from providers decrease; when their attachment styles differ substantially, rejection responses become more likely. For example, when an individual desiring intimacy interacts with an avoidantly attached individual, it exacerbates the avoidant individual's discomfort in social interactions. However, if both individuals are avoidantly attached, they exhibit less rejection. Attachment style matching affects the psychology and behavior of both interaction partners. Future research should examine whether the relationship between secure attachment and empathy/altruistic behavior is moderated by the degree of attachment style matching between the provider and recipient of altruistic behavior.

5.2 Further Verification of Psychological Mechanisms

Although this paper hypothesizes based on attachment theory and related literature that emotion regulation and cognitive schemas may be the psychological mechanisms through which secure attachment influences empathy and altruistic behavior, existing evidence remains insufficient, particularly regarding cognitive schemas. Future research should conduct more investigations and experimental

studies to verify these mechanisms. For instance, longitudinal survey research could explore relationships among attachment style, emotion regulation ability, empathy, and altruistic behavior. Experimental methods could also examine the short-term effects of security priming on emotion regulation and cognitive schemas and their subsequent influence on empathy and altruistic behavior.

5.3 Investigating the Reciprocal Promoting Effect of Altruistic Behavior on Secure Attachment

Numerous studies have demonstrated that secure attachment promotes altruistic behavior. Conversely, can altruistic behavior influence secure attachment? Based on empirical research, Xie and colleagues proposed a dual-pathway model of how altruistic behavior increases helpers' adaptability. This model suggests that altruistic behavior not only benefits others but also promotes positive interactions between the helper's mind and body through self-motivating internal processes, thereby enhancing adaptability (Xie, Wang, Gu, & Li, 2017). Previous research has also found that for insecurely attached individuals with negative self- and other-models, helping others can foster more positive views of themselves and their self-worth while improving their trust in others. Additionally, participating in volunteer services significantly reduces interpersonal problems (e.g., loneliness, hostility, lack of confidence), particularly among anxiously attached individuals (Gillath et al., 2005). Future research should deeply explore the effect of altruistic behavior on secure attachment and clarify the reciprocal relationship between secure attachment and altruistic behavior.

5.4 Developing Intervention Programs to Cultivate Empathy and Altruistic Behavior Through Secure Attachment

Research has shown that security priming shifts individuals' focus from themselves to others, increasing empathy and altruistic behavior tendencies. These findings have important practical implications: intervention programs that enhance individuals' secure attachment levels can subsequently cultivate empathy and altruistic behavior. The primary goal of correcting insecure attachment is to restore secure attachment and promote the formation of secure emotion regulation strategies. For anxiously attached individuals, interventions should aim to improve their cognitions of helplessness and fear of isolation while emphasizing the development of self-management skills. For avoidantly attached individuals, interventions should work to eliminate their perception of proximity-seeking as unresponsive or even punitive and restore emotional connections with attachment figures (Mikulincer et al., 2003). Additionally, cultivating empathy and altruistic behavior through secure attachment should consider the underlying psychological mechanisms—namely, developing emotion regulation abilities and shaping positive cognitive schemas. In summary, future research should develop and evaluate intervention programs that cultivate empathy and altruistic behavior through secure attachment, providing scientific evidence for fostering these prosocial capacities.

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