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An Investigation of Developmental Precursors and Consequences of Self-Sacrificing
Behaviors in Young Adult Romantic Relationships

Emme Lis

A thesis submitted to the Graduate Faculty of

JAMES MADISON UNIVERSITY

In

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FACULTY COMMITTEE:

Committee Chair: David Szwedo, PhD

Committee Members/ Readers:

Bryan Saville, PhD

Tracy Zinn, PhD

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Abstract

It has been well established that the early attachment relationship a child forms with their parent or caregiver is foundational in influencing subsequent relationships throughout life. Adolescence itself is also a critical developmental period for future relationship development. The current study therefore was interested in examining ways in which attachment orientations youth carry into adolescence combine with parental influences to shape teens' future relational behaviors and attitudes in young adulthood. Specifically, the parental influences of promotion of autonomy and positive relatedness, as well as parental valuing of prosocial behaviors and self-directed behavior during adolescence were investigated in interaction with early attachment orientations to gain a more nuanced understanding of motivations of self-sacrificing behaviors in young adult romantic relationships. Further, this study aimed to examine the subsequent consequences of self-sacrificing behaviors on overall romantic relational quality and personal well-being. Results suggest a mix of conflicting and corroborating evidence for the proposed hypotheses. The current findings have important implications for understanding the developmental effects that attachment orientations and parental influences have on future relational behavior and quality, as well as understanding the role of self-sacrificing behaviors on relationship and individual health.

Keywords attachment, adolescence, autonomy and relatedness, social consideration, self-direction, self-sacrificing behaviors, young adult romantic relationships, relationship satisfaction

Introduction

The primary attachment relationship between a child and his or her parent or caregiver during early childhood is instrumental in shaping a child's view of relationships throughout development. This initial attachment relationship creates a template of a child's expectations for how future relationships should operate outside of the parent-child relationship (Bowlby, 1969). This internalized template acts as a mental working model that serves to guide the child's behavior and beliefs in subsequent relationships across the lifespan (Bowlby, 1969; Steinberg, 2020). Such attachment orientations are therefore central considerations when investigating predictors of future relational quality, and particularly when considering approaches to romantic relationships (Hazan & Shaver, 1987).

Initial attachment orientations during early childhood are foundational for ensuing relationships throughout an individual's development. Specifically, the developmental period of adolescence can be viewed as a critical time period in influencing attachment orientations for young adulthood relationships. Beyond childhood and during adolescence, teens gain more independence from their parents and begin to form increased relationships of importance outside of their family, thereby activating their working models of relationships (Laursen & Collins, 2009). The attachment orientations that youth carry forward to adolescence, coupled with the ongoing interactions with their parents, likely continue to shape teens' expectations of and behaviors in future relationships. Indeed, parental behaviors such as promoting autonomy and positive relatedness, and valuing of prosocial behavior and self-interested behavior can also be influential in shaping a teen's expectations of relationships (Mikulincer & Shaver, 2015;

Oudekerk et al., 2014). Autonomy is characterized by feelings of self-sufficiency and the ability to behave independently as well as think for oneself, while positive relatedness focuses on feeling connected and having positive relationships with others (Ingulia et al., 2015; Steinberg, 2020). Prosocial behavior is social behavior focused on benefitting another person, rather than self-interested behavior, which focuses on individual benefits (Malti et al., 2009). Promotion or inhibition of the aforementioned values can further shape an adolescent's views of relationships and later relational behaviors. Such parental behaviors and promotion/inhibition of values in adolescence can therefore be viewed as developmental factors that are likely to interact with foundational attachment orientations to influence teens' behaviors and values in future relationships.

Behaviors in young adult romantic relationships may therefore be linked to both an individual's early attachment orientation, as well as parental behaviors and their promotion or inhibition of specific values during adolescence. The romantic behavior of self-sacrifice is of specific interest for this study. Self-sacrificing behaviors consist of acting in the interest of one's partner or overall relationship, at the expense of individual self-interest (Van Lange et al., 1997). Self-sacrificing behavior has previously been studied in relation to commitment to one's relationship as well as intention behind the sacrifice (Ruppel & Curran, 2012; Whitton et al., 2007), yet such relational behaviors can also be examined in the context of attachment orientations as well (Impett & Gordon, 2010). Self-sacrificing behavior is thus a concept that has significant implications for both relationship and individual health and well-being, making it important to understand its potential developmental antecedents and consequences.

The current study is therefore interested in investigating ways in which parental promotion of autonomy and positive relatedness, as well valuing of prosocial behavior vs. self-interested behavior interact with an adolescent's early attachment orientations, in order to gain a more nuanced understanding of motivations for self-sacrificing behaviors in young adult romantic relationships. Moreover, it seeks to examine the consequences of such self-sacrificing behaviors on overall romantic relational quality and personal well-being. The following thesis first discusses the origins of attachment theory and its implications for relationship development. It then discusses the unique adolescent developmental challenge of establishing autonomy and relatedness in parent-teen relationships, as well as how parents' values may shape expectations and behaviors in future relationships. Finally, self-sacrificing behavior is examined, including its potential benefits and costs to relationship quality and individual well-being.

Attachment in Childhood and Adolescence

Attachment in infancy is defined as a strong and enduring bond between infants and their primary caregivers (Ainsworth et al., 1978). Attachment Theory is grounded in the seminal work of John Bowlby (1969), who posited that human beings are biologically predisposed to pursue attachment relationships in infancy that create security in order to enhance chances of survival. While all infants are inherently wired to form these attachments to their mothers or primary caregivers, not all infants form the same type and quality of attachment relationships.

Bowlby theorized that infants develop these close relationships to their caregivers by behaving in ways that elicit proximity from their parents, particularly during times of distress, that allows parents to protect them from harm. This attachment relationship in

turn ensures the maximization of safety and protection for the infant during his or her development. An ideal secure relationship is characterized by a balance of the child feeling able to rely on a caregiver during times of stress while also participating in exploratory behaviors necessary for the development of autonomy (Bowlby, 1969).

Ainsworth, Blehar, Waters, and Wall (1978) extended Bowlby's theory of attachment into methodology to assess and classify an infant's attachment orientation based on observed interactions with their caregiver in an experimental setting. Termed the Strange Situation experiment, infants in a laboratory were separated from their primary caregiver for brief periods of time during play, and their reactions to their caregiver's absence and return were assessed and categorized. These studies produced three classifications of attachment orientations: secure, insecure-avoidant (also referred to as dismissive) and insecure-ambivalent (also referred to as preoccupied). During the experiment, securely attached children explored freely in the presence of their caregiver, showed signs of distress and ceased exploration when their caregiver left, and desired contact with their caregiver upon the caregiver's return. Insecurely attached children were classified as having either a dismissive or preoccupied attachment orientation. Dismissive infants explored freely in the presence of their caregiver, showed limited levels of distress when their caregiver left, and did not seek contact upon their return. Preoccupied infants showed limited exploration and clung to their caregiver and then showed high levels of distress at their caregiver's departure and ambivalence upon their return (Ainsworth et al., 1978).

As children grow and develop, these initial parental-child attachment experiences become the basis for internal working mental models that guide individual beliefs and

expectations about how relationships beyond the parent-child relationship should function (Steinberg, 2020). This internal working model of relationships is the sum of all interactions with an individual's caregiver over time and remains within the child to shape expectations in subsequent future relationships (Bowlby, 1969). Individuals whose caregivers are responsive and available during times of need therefore develop secure attachment orientations that become positive internal working models of relationships (McElhaney et al., 2009). Conversely, individuals whose caregivers are unresponsive, unavailable, or unreliable during times of need develop insecure and negative internal working models for relationships, which can lead to potentially less optimal strategies for coping with stressful situations and increased problems within subsequent relationships (Impett & Gordon, 2010).

Research on parent-child attachments since Bowlby's and Ainsworth's initial work has focused on examining the extent to which initial attachments in infancy are influential and predictive of relational behavior in adolescence and adulthood (Steinberg, 2020). Indeed, these early childhood attachments to caregivers have been shown to have longstanding and far-reaching implications for later development and future relationships. Secure attachment orientations have positive links with self-reliance, emotional regulation and social competence in longitudinal research (Sroufe, 2005). Moreover, adolescents' high ratings of satisfaction with help from parents and perceived secure attachment to parents has been found to positively relate to overall psychological health and well-being, more so than adolescents' ratings of satisfaction with help and attachment to their peers (Greenberg et al., 1983). Research has also shown individual differences in attachment security to remain largely stable throughout development.

Waters and colleagues (2000) contacted individuals who had participated in Ainsworth's Strange Situation experiment 20 years prior and found 72% of the infants to have the same attachment classification in early adulthood as in infancy. Such findings highlight the importance and potential permanence of initial parent-childhood attachment orientation throughout development.

An adolescent's conceptualization of attachment becomes far more complicated and nuanced than that of infancy and early childhood, with parent-adolescent relationships characterized by mutual reciprocity between the parent and adolescent (Laursen & Collins, 2009). Adolescence itself is a developmental period marked by intense changes. Teens experience drastic shifts in cognitive ability, new environmental challenges related to changing school settings, the development and maintenance of more nuanced and mature interpersonal relationships, physical changes to self-image resulting from puberty, potential familial conflict, and new developments relating to sexuality (Schumaker et al., 2009). Though relational bonds between parents and teens remain critical during this time, these accelerated changes coincide with an increased desire of autonomy from an adolescent's parents as well. Autonomy can be thought of as the need to organize behaviors and experiences independently and behave in ways that are consistent with an adolescents' sense of self and identity (Ingulia et al., 2015). As adolescents begin to shift away from their parents and move through the world with increasing autonomy, these internal working models of attachment begin acting as guides for forming future friendships and romantic relationships.

Due to the changing nature of adolescent relationships, attachment in adolescence is conceptualized and assessed differently than it is during infancy. In order to examine

adolescent and adult working internal models of attachment, George, Kaplan, and Main (1985) created the Adult Attachment Interview. This interview allows for an individual's internal working model of attachments to be assessed through asking individuals to describe their early childhood parental attachments in an interview format and how they believe these attachments have influenced their current personality and relationships (Main et al., 1985). Interviews are categorized and coded to assess an interviewee's overall coherence of the transcript and coherence of mind, defined as clear and realistic recollections of early attachment experiences that are characteristic of secure attachment. Inconsistent favorable portrayal of parents and insistence of lack of childhood memories are characteristic of dismissive attachment and angrily preoccupied speech and vague discourse usages are characteristic of preoccupied attachment (George et al., 1985).

Such attachment classifications have also been applied to young adult romantic relationships. Bartholomew and Horowitz (1991) expanded upon Bowlby's (1967) concept of internal working models of attachment, positing that such internal models actually consist of either positive or negative conceptualizations of both the self and of others. Individuals with a secure attachment orientation are comfortable with intimacy and autonomy and view themselves and others favorably, believing other people will respond positively to them. Individuals with a preoccupied attachment orientation view others positively, yet possess a negative perception of themselves and therefore may be preoccupied with seeking personal value from others in relationships. Individuals with a dismissive attachment orientation view others negatively, yet have a positive perception of themselves and therefore place less value on others and their relationships (Bartholomew & Horowitz, 1991).

Hazan and Shaver (1987) further used attachment orientation to classify adult romantic relationship attachments as well. They found that individuals with secure attachment orientations perceive romantic love positively yet realistically, whereas individuals with a dismissive attachment orientation are fearful of closeness with others, and individuals with a preoccupied attachment orientation view love in terms of jealousy, obsessiveness, and misunderstanding (Hazan & Shaver, 1987). These views of romantic relationships can be understood as a result of children's interactions with their caregivers in establishing internal working models of relationships. For example, children with insecure attachment orientations often experienced parental unavailability and inconsistency throughout their development. Children with dismissive attachment orientations may be reluctant to seek out their parents during times of need, due to previous experiences with rejection or punishment, which can translate into fear of closeness with romantic partners later in life (Moretti & Peled, 2004). Children with preoccupied attachment orientations may be extremely attentive about the whereabouts and availabilities of their parents with the hope of provoking parental attention, which can manifest into obsessive behaviors with future romantic partners (Moretti & Peled, 2004). Such evidence again suggests that early parental-child attachments create internal working models regarding how individuals perceive themselves and others that are powerful in influencing future romantic relationships.

Development of Autonomy and Relatedness during Adolescence

As previously mentioned, although bonds between parents and adolescents remain essential throughout development, it is also a fundamental aspect of adolescence for individuals to seek autonomy and to maintain positive relationships with their parents.

Adolescence is characterized by the desire for independence from one's parents, due in part to increased physical and cognitive changes, growth of new social relationships, and the attainment of new privileges and responsibilities (Ingulia et al., 2015). While this establishment of autonomy is necessary for successful and healthy adolescent development, parental relatedness has also been shown to be imperative as well.

Autonomy can be thought of as the desire to behave individually and in accordance with one's self-image, while relatedness refers to the desire to feel connected and to establish high quality positive relationships with others (Ingulia et al., 2015). Similar to an infant's need for security and exploration from their parent, the notion of a secure base in adolescent attachment can be conceptualized comparably where teens feel free to explore autonomously and also return to their caregivers during times of distress (Bowlby, 1969, 1973; Laursen & Collins, 2009).

This establishment of both positive autonomy and relatedness is crucial for successful relationships. Research has shown that adolescents who struggle to cultivate autonomy from their parents may be more likely to engage in increased problem behaviors and delinquency compared to their peers (Allen et al., 1990). In social relationships, adolescents who have the inability to express autonomy and relatedness may resort to unconstructive behaviors during disagreements such as aggression, disengagement, or submission, which do not foster positive relational quality (Oudekerk et al., 2014). Further, in marriage relationships high levels of reported positive autonomy and relatedness for husbands and wives have also been shown to be correlated with successful marital adjustment and overall relational satisfaction (Rankin-Esquer et al., 2007).

Such autonomous behaviors can also be traced back to initial attachment orientations with parents during childhood. For example, children with preoccupied attachment orientations tend to exhibit vigilance about their parents' whereabouts, which inhibits appropriate exploration of their environment. Children with dismissive attachment orientations tend to be reluctant to turn to their parents during times of distress, which may present as less-than-optimal high levels of autonomy (Moretti & Peled, 2004). Therefore, adolescents possessing a secure relationship with their parents are able to rely on this secure base and pursue other relationships autonomously while simultaneously maintaining positive relatedness with their parents. However, adolescents with preoccupied attachment orientations may be fearful of relationships and therefore behave less autonomously in their other relationships. Similarly, adolescents with dismissive attachment orientations may prematurely strive for independence from their parents and exhibit autonomy early in their development (Moretti & Peled, 2004).

Further research examined the extent to which parental influences of autonomy and relatedness can be understood in the context of parental-teen attachment orientations for predicting adolescent relational behavior. Allen and Hauser (1996) investigated maternal-adolescent interactions that were thought to be beneficial in fostering autonomy and relatedness in adolescence, as well as predictive of overall adolescent attachment security. Researchers hypothesized that adolescent autonomy-inhibiting behaviors would be indicative of later attachment insecurities and difficulties, due to inhibition of autonomy being oppositional to optimal developmental processes. Inhibition of autonomy was examined by measuring behaviors such as over-personalizing disagreements in relationships that are characteristic of preoccupied attachment orientations, or by

measuring distancing behaviors that are characteristic of dismissive attachment orientations. Results showed maternal promotion of autonomy and relatedness during early adolescence was related to later young adults' higher levels of secure attachment, as observed through attachment interviews. In addition, adolescents' autonomy-inhibiting behaviors were related to young adults' passivity of thought, which is indicative of insecure and preoccupied attachment (Allen & Hauser, 1996). Additional research has shown that this parental inhibition of autonomy and relatedness in early adolescence resulted in lower levels of autonomy and relatedness in romantic relationships during young adulthood (Oudekerk et al., 2014). Thus, while attachment orientations are thought to be relatively stable across development, additional factors such as familial promotion or inhibition of autonomy and relatedness can be influential in shaping the ways in which such internal attachment models are activated and presented in future relationships. Consideration of influential values during adolescence in conjunction with preexisting attachment orientations is therefore beneficial in allowing for designation of how such developmental processes affect future relational behavior.

Development of Prosocial and Self-Directed Behavior during Adolescence

Prosocial behavior is defined as social behavior that benefits another person (Malti et al., 2009). Throughout development, adolescents begin placing more value on prosocial behaviors driven by empathy rather than behaviors driven by self-serving goals (Eisenberg et al., 2009). While this development of prosocial values is the typical developmental trend, parental emphasis on these values also contributes significantly to the individual development of prosocial behavior in adolescents (Steinberg, 2020). Indeed, research has suggested that both conceptions of relationships (i.e. via parent-teen

attachment orientations) and specific familial behaviors during adolescence contribute to how teens come to prioritize prosocial values.

In primarily examining linkages between early parent-childhood attachment orientations and prosocial behavior, research suggests that a secure attachment orientation is predictive of prosocial development in childhood (Hastings et al., 2007). For example, research on infants with secure attachment orientations aged 12 to 18 months displayed increased sympathy and helping behavior towards their distressed peers when the children were three and a half years old, as compared to infants of the same ages with insecure attachment orientations (Waters et al., 1979).

This relation between attachment orientations and prosocial development beyond childhood can be examined through internal working models of relationships. As shown, a secure attachment in childhood towards one's caregiver may lead to increases in empathy and prosocial behavior (Hastings et al., 2007). This secure attachment can also be beneficial for the development of successful emotional regulation, resulting from responsive soothing from caregivers during times of distress in early childhood (Cassidy, 1994). A secure attachment orientation with one's caregiver during childhood may translate into an internal working model that allows an individual to become less upset upon seeing someone else in distress, therefore allowing for effective empathy and assistance (Hastings et al., 2007). Individuals lacking such secure attachment orientations and associated internal working models may then in turn experience feelings of personal distress and withdrawal when seeing someone else in distress, which may potentially hinder successful relational quality (Hastings et al., 2007).

Mikulincer and Shaver (2015) further examined how specific prosocial values including empathy, compassion, generosity, and gratitude may be understood through the framework of internal working models of relationships. Individuals who experience insecure attachments to early attachment figures can have negative expectations of others and an inherent sense of distrust, which is hypothesized to interfere with prosocial motivations and behaviors (Bartholomew & Horowitz, 1991). Sommerfeld (2010) assessed the extent to which individuals are prosocially motivated when exhibiting generous behavior by measuring whether individuals felt a sense of burden, self-criticism/guilt or self-congratulation when behaving generously. Results showed that individuals with preoccupied attachment orientations reported more feelings of personal burden and self-criticism/guilt when acting generously. Individuals with preoccupied attachment orientations also reported less prosocial motivation when acting generously and increased feelings of personal burden (Sommerfeld, 2010).

The aforementioned research suggests that individuals with insecure attachment orientations may be more likely to experience the emotional costs of exhibiting generosity in relationships compared to individuals with secure attachment orientations. Specifically, individuals with preoccupied attachment orientations tend to experience increased self-criticism when acting generously, stemming from a negative sense of self in their internal working model of relationships (Bartholomew & Horowitz, 1991; Sommerfeld, 2010). Conversely, individuals with dismissive attachment orientations may exhibit less prosocial behavior and feel more personal burden when doing so, stemming from a negative view of others in their internal model of relationships (Bartholomew & Horowitz, 1991; Sommerfeld, 2010). Similar patterns of results have

been found with the prosocial attitude of gratitude as well. Mikulincer and Shaver (2009) examined gratitude in relation to attachment orientations and found that gratitude levels were lower when participants had preoccupied or dismissive attachment orientations. Conceptualizations of prosocial attitudes in an attachment framework are thus helpful in further examining relational behaviors that may be influenced by one's internal model.

The development of experiencing and exhibiting gratitude can result from feeling protected, accepted and valued by others. Positive and consistent interactions with responsive caregivers during childhood leads to secure attachments and internal working models and therefore makes it easier for children to feel grateful for others' kindness and generosity (Mikulincer & Shaver, 2007). Conversely, a dismissive attachment orientation may inhibit feelings of gratitude in relation to others generous behaviors. Individuals with dismissive attachment orientations possess a negative view of others and may doubt their good intentions (Mikulincer & Shaver, 2007; Ruppel & Curran, 2012). Furthermore, expressions of gratitude may be viewed as a sign of closeness or dependence by an individual with a dismissive attachment orientation, which is incongruent with their tendency to maintain emotional distance in relationships (Mikulincer & Shaver, 2007). Contrary, individuals with a preoccupied attachment orientation may interpret generous behaviors through a lens of fear and anxiety. Such individuals may worry that they do not deserve the kindness of others or that they may not be able to properly reciprocate this generosity due to their negative sense of self (Mikulincer & Shaver, 2007; Ruppel & Curran, 2012). Research suggests that individuals with insecure attachment orientations tend to be less satisfied with the support they receive from their partners, as well as find their partner's supportive behaviors to be less helpful (Ruppel & Curran, 2012).

Therefore, individuals with insecure attachment orientations may feel lower levels of gratitude in their romantic relationships than securely attached individuals.

Exhibiting prosocial behavior that benefits others is an important aspect of successful relationships. The ability to place importance upon and display values such as empathy, compassion, generosity and gratitude with others is an essential characteristics that benefits romantic relational quality. Such prosocial values can also be considered in conjunction with the development of autonomy and relatedness, in regard to how such values influence relational quality. Positive autonomy and relatedness are both associated with good qualities of romantic relationships, and a failure to develop a healthy balance of such values can lead to negative relational quality (Oudekerk et al., 2014). For example, adolescents who do not develop a proper sense of autonomy may learn to prioritize other's needs above their own self-directed needs (Oudekerk et al., 2014). This lack of autonomy may therefore be associated with higher levels of prosocial behavior and lower levels of self-directed behavior in relationships. Contrarily, positive relatedness has been associated with increased feelings of connectedness to others and therefore an increased value and prioritization of prosocial activities (Pavey et al., 2011).

As shown, the establishment of values such as autonomy and relatedness, prosocial values and consideration of others can all be viewed as developmental processes that influence how individuals relate to others and their own interests. Possessing the ability to behave autonomously in relationships while also maintaining positive relatedness, as well as exhibiting generous behaviors and responding to such behaviors with appropriate gratitude are important features of successful social relationships. The development and presentation of such values are influenced by

parentals instilling or emphasizing values during adolescence that later impact relational behaviors.

Self-Sacrificing Behavior in Romantic Relationships

Conflicts over individual interests are a natural occurrence in romantic relationships. Occasionally it may be fairly easy to coordinate behaviors that benefit both individuals, but often partners' interests may be at odds. When faced with these situations, individuals may choose to resolve the issue by sacrificing and acting in the interest of their partner or the overall relationship, at the expense of their own self-interest (Van Lange et al., 1997). Willingness to sacrifice is defined as the tendency to forfeit immediate personal self-interest to promote the well-being of one's partner or relationship and can include forgoing behaviors that may be desirable, engaging in behaviors that may be undesirable, or a mix of the two (Van Lange et al., 1997).

Developmental Predictors of Self-Sacrificing Behavior

As previously discussed, an individuals' attachment orientation may be a salient predictor of behavior in future relationships, including the frequency with which they engage in self-sacrificing behaviors and their perceptions of self-sacrificing behaviors within the relationship. Ruppel and Curran (2012) examined this possibility in a study in which participants in dating relationships reported their attachment orientation, daily relationship satisfaction, overall relationship satisfaction, daily number of sacrifices, and daily sacrifice difficulty every day for a week. Ruppel and Curran hypothesized that individuals possessing preoccupied or dismissive attachment orientations would benefit less from their partner's sacrifices than individuals with secure attachment, due to a tendency to be less satisfied with the support they received from their partner. It was also

hypothesized that participants with these insecure attachment orientations would view their partner's supportive behaviors as less helpful and calming than securely attached individuals. Results revealed that increased individual and partner engagement in difficult sacrifices was related to lower levels of relationship satisfaction overall. These associations between own sacrifice difficulty and low levels of relationship satisfaction were stronger for individuals with preoccupied attachment orientations. Associations between partner sacrifice difficulty and low levels of relationship satisfaction were stronger for individuals with dismissive attachment orientations (Ruppel & Curran, 2012). These findings suggest that an individual's attachment orientation can be influential in affecting perceptions of sacrifice and frequency of engaging in such behaviors.

Attachment orientations may be associated with specific motivations for sacrifice behavior, which could in turn help to explain individuals' frequency of and attitudes towards such behaviors. Motivations for sacrifice can be classified as either for approach goals or avoidant goals. Approach goals are concerned with sacrificing to make one's partner happy or to develop a closer relationship with their partner. Avoidant goals are concerned with sacrificing to avoid negative consequences with one's partner. Research examining self-sacrificing behaviors for young adults in dating relationships suggests both preoccupied and dismissive attachment orientations to be positively associated with avoidant sacrifice goals, such as avoiding partner's anger or avoiding conflict (Impett & Gordon, 2010). Findings also reveal that sacrificing for approach goals led to more positive emotions and satisfaction in relationships, while sacrificing for avoidant goals led to more negative emotions and conflict in relationships (Impett & Gordon, 2010).

Further examinations of attachment orientations and motivations for sacrifice show that individuals with dismissive attachment are less likely to sacrifice overall and particularly less likely to sacrifice for approach goals, such as to make their partner happy, compared to individuals with preoccupied attachment orientations (Impett & Gordon, 2010). Individuals with dismissive attachment orientations may adopt deactivating strategies in order to avoid intimacy and display a tendency to maintain distance from their partner, therefore providing less help in situations that might call for self-sacrificing. An individual with a dismissive attachment orientation may prefer distance and choose to not to give up their own self-interests in the face of potential relational conflict and rather choose to sacrifice only if necessary to avoid negative consequences (Impett & Gordon, 2010). Therefore, such individuals may engage in decreased self-sacrificing behaviors and perceive such behaviors as more harmful to their individual satisfaction.

Conversely, individuals with preoccupied attachment orientations may engage in increased self-sacrificing behaviors and potentially perceive such behaviors as less harmful to their partner or relationship, but they may experience increased negative personal costs from sacrificing. It may be that these individuals have learned in early childhood to engage in hyperactivating strategies characteristic of persistently seeking proximity and attention from their primary caregiver who was unreliable and inconsistent (Moretti & Peled, 2004). Such hyperactivating strategies may manifest as an obsessive need for intimacy, and potentially clingy and intrusive behaviors in romantic relationships (Impett & Gordon, 2010). Preoccupied individuals are also more likely than securely attached individuals to experience high levels of personal distress when faced

with conflict in relationships, and are more likely to experience greater feelings of hurt when faced with partner criticism or during discussions of conflict (Overall et al., 2014). Research on preoccupied attachment orientations and motivation suggest that such individuals may engage in self-sacrificing behaviors due to motivations to placate their partner and therefore bring them closer, stemming from fears of rejection (Impett & Gordon, 2010). Thus, these associations between attachment orientations and self-sacrificing behaviors again reveal the importance of an individual's internal working model of attachment for understanding their behavior in relationships.

Self-sacrificing behaviors in young adulthood can also be influenced by parental behaviors and values during adolescence that either promote autonomy or relatedness and prosocial or self-interested values. For example, adolescents who possess both positive autonomy and relatedness with their parents during adolescence feel understood and supported, and therefore more likely to have successful social relationships (Oudekerk et al., 2014). However, adolescents with higher levels of autonomy may be less likely to engage in self-sacrificing behaviors in their later romantic relationships due to increased independence, whereas adolescents who failed to establish a proper sense of autonomy may prioritize the needs of others over their own and engage in increased self-sacrificing behavior (Oudekerk et al., 2014). Conversely, adolescents with higher levels of positive relatedness may be more likely to engage in increased self-sacrificing behaviors in their later romantic relationships, as positive relatedness has been linked with increased valuing of social consideration and prosocial behavior (Pavey et al., 2011). Such findings suggest the potential for autonomy and relatedness behaviors and values from parents to

influence self-sacrificing behaviors in young adult romantic relationships, though studies to date have yet to examine these as long-term predictors of self-sacrificing behaviors.

Relationship and Individual Consequences of Self-Sacrificing Behavior

With regard to the effects of sacrificing behaviors on relationships, willingness to sacrifice has been found to be partly associated with overall increased couple functioning. For example, positive attitudes about sacrifice suggest marital successes in the early years of marriage, with higher satisfaction with personal sacrifices in one's relationship being predictive of positive marital adjustment and less relational distress years later (Stanley et al., 2006). Sacrifice can thus be seen as beneficial, in that setting aside one's own self-interests for the benefit of one's partner and the relationship can aid overall coordination within the relationship and show commitment to one's partner (Ruppel & Curran, 2012).

Indeed, this link between sacrifice and relationship satisfaction has been found to be mediated by commitment, with higher commitment to one's partner and relationship being predictive of lower perceived sacrifice harmfulness and an overall positive individual and couple functioning (Whitton et al., 2007). Individuals who are highly committed to their relationship may expect their relationship to last and therefore expect that the sacrifices they make now will be reciprocated later on by their partner in the future. Research has shown that perceptions of one's partner's sacrifices as beneficial increases trust in one's partner, which in turn increases commitment to the relationship (Wieselquist et al., 1999). Alternatively, these highly committed individuals may believe that they will personally benefit from their sacrifices through the increased overall relationship quality to which their sacrifice may be contributing. Interdependence theory further posits that as partners grow more dependent on each other during their

relationship, behavior prioritizing self-interest decreases and behavior prioritizing one's partner and overall relationship increases (Kelley & Thibault, 1978; Kelley, 1979). Such findings suggesting that individuals in long-term relationships who are highly committed to their partner may therefore be more likely to engage in self-sacrificing behaviors. Further, these individuals may view self-sacrificing behaviors as less negative and in a positive context of benefiting one's overall relationship, as such mediated by commitment levels (Kelley, 1979; Kelley & Thibault, 1978). Indeed, sacrifice may be seen as a tangible way to demonstrate commitment to one's partner and have beneficial effects on relational quality.

Conversely, perceptions of sacrifice as being harmful tend to be associated with lower relationship commitment, poorer couple functioning, and higher levels of depressive symptomatology (Whitton et al., 2007). Such negative effects of self-sacrificing behavior may be conceptualized as decreased relationship satisfaction and increased negative patterns of communication in one's relationship, as well as a potential increase in depressive symptomatology. Overall, research on whether self-sacrificing behavior is beneficial or negative to the relationship and to each partner individually is inconsistent and varied, suggesting that the effects of sacrificing behaviors are dependent upon a variety of individual and situational factors (Righetti & Impett, 2017). These factors are likely to include individuals' perceptions of relationships, influenced by one's attachment style and by parents' autonomy and relatedness behaviors and prosocial values and self-directed valuing. Thus, including these factors as potential moderators of links between self-sacrificing behaviors and relevant consequences is beneficial for

gaining a more nuanced understanding of the effects of self-sacrificing behaviors both for the relationship and the individual.

The Present Study

The current study seeks both to understand the developmental precursors of self-sacrifice behavior in romantic relationships and to better understand how these behaviors relate to relationship quality and personal well-being based on these developmental precursors. The initial attachment relationship between a parent and a child is influential in creating an internal working model that the child then uses to guide their perceptions of later relationships throughout life. Additional factors such as parental influences of valuing autonomy, relatedness and prosocial values during adolescence may further activate these initial parental-child attachment orientations and influence developing adults to perceive and behave in different ways in their subsequent relationships. Drawing upon previous literature regarding self-sacrificing behaviors in romantic relationships, the current research is thus interested in investigating specific parental behaviors and values during adolescent development that may interact with early adolescent attachment orientations to better understand how such developmental factors relate to self-sacrificing behaviors in future young adult romantic relationships. Moreover, the consequences of sacrificing behaviors on relational quality will also be examined in the context of relationship satisfaction, communication, and personal well-being. The following are hypothesized:

1. Teens with a a) more preoccupied attachment orientation, b) parents who promote more positive relatedness behaviors during adolescence, and c) parents who highly value social consideration during adolescence will be associated with higher

frequencies of self-sacrificing behaviors, and lower perceptions of self-sacrificing behavior as harmful. The strongest effects are hypothesized to be for interactions among teens with preoccupied attachment orientations and parents who promote more positive relatedness behaviors, and for teens with preoccupied attachment orientations and parents who highly value social consideration.

2. Teens with a) have a more dismissing attachment orientations, b) parents who promote more autonomy behaviors during adolescence, and c) parents who highly value self-directedness during adolescence will be associated with lower frequencies of self-sacrificing behaviors, and higher perceptions of self-sacrificing behavior as harmful. The strongest effects are hypothesized to be for interactions among teens with dismissive attachment orientations and parents who show promote more autonomy behaviors, and for teens with dismissive attachment orientations and parents who highly value self-direction.

3. Higher frequencies of self-sacrificing behavior will be positively associated with partner romantic relationship satisfaction and positive communication in the relationship, while negatively associated with individual romantic relationship satisfaction and positively associated with individual depressive symptomatology. These associations are hypothesized to be strongest for individuals with a preoccupied attachment orientation.

4. Higher perceptions of self-sacrificing behavior as harmful will be negatively associated with partner relationship satisfaction, as well as negatively associated with individual romantic relationship satisfaction, and positively associated with negative communication in the relationship and individual depressive symptomatology. These

associations are hypothesized to be strongest for individuals with a dismissing attachment orientation.

Method

Participants and Procedures

Data for this study were drawn from a long-term study of adolescent and young adult social and emotional development. Participants were 184 young adults (86 males, 98 females). The sample was racially/ethnically diverse (107 Caucasian, 53 African American, 2 Hispanic/Latino, 2 Asian American, 1 American Indian, 15 mixed ethnicity, and 4 “other”). The median socioeconomic annual income for the families of the participants was between \$40,000 and \$59,000. Participants were initially interviewed to be included in the study at approximately age 13 and then interviewed annually for 16 years. Initial recruitment of participants came from a public middle school consisting of suburban and urban populations in the southeastern United States. The students were recruited to participate via mailings to parents of all students in 7th and 8th grades of the middle school ($N= 298$). Parents were given the opportunity to opt out of further contact from the study, with 2% choosing to do so. Remaining families were subsequently contacted via phone, with 63% agreeing to participate. Racial/ethnic makeup of this sample was comparable to the overall population of the middle school (42% non-white in sample compared to 40% non-white in school population), as well as socio-economic status (mean household income of \$43,618 in the sample compared to \$48,000 for the broader community population).

The current data will examine four waves of measurement: ages 14, 16, 23-35 and 26-28. At age 14, interviews were conducted with participants in order to assess their

attachment orientations. At age 16, parental behaviors promoting autonomy and positive relatedness were obtained via coded observations of videotaped interaction, and parental reports of valuing of prosocial behavior versus self-interested behavior were assessed. At ages 23-25, self and romantic partner reports of self-sacrificing behaviors in romantic relationships were measured. At ages 23-25, and again at ages 26-28, self and romantic partner consequences of self-sacrificing behaviors were assessed, including relationship satisfaction, communication patterns in relationships, and depressive symptomatology.

Measures

Adolescent Attachment (14)

Adolescents' attachment orientations were assessed via the Adolescent Attachment Interview (AAI), modified from the Adult Attachment Interview for specific use with adolescent populations (Carlson, 1989; George et al., 1985). At age 14, adolescents participated in a semi-structured interview to investigate their attachment representations by providing descriptions of their early attachment relationships and specific memories regarding such relationships at age 14. Participants were asked to describe and explain their parents as caregivers, describe how their parents typically responded to their distress, and to discuss their current relationship with their parents. Participants were also asked to describe any significant losses and instances of abuse. Interviews typically lasted 1 hour and were recorded, transcribed and scored continuously based assessment of the participant's accessibility and coherence of early attachment experience memories. Participants were categorized as either dismissing, secure/autonomous, preoccupied or unresolved/disorganized. A secure attachment classification is characterized by valuing attachment experiences and the ability to

present such experiences consistently, clearly and relevantly. A dismissive attachment classification is characterized by insisting on a lack of memories of attachment experiences, or by providing descriptions that are unsupported or contradicted by memories. A preoccupied attachment classification is characterized by confused, angry or passive preoccupation with one's attachment experiences. An unresolved/disorganized attachment classification is characterized by frequent lapses in one's responses, particularly regarding potentially traumatic memories (George et al., 1985). Due to the rarity of unresolved/disorganized classifications, such categorizations will be excluded from the present analyses. Attachment classifications via the AAI have been shown to remain stable over time ($k = .79$) (Benoit & Parker, 1994). This construct has also demonstrated strong validity, and categorization has been shown to be unrelated to education level, intelligence, social desirability or memory in participants (Bakermans-Kranenburg & van IJzendoorn, 1993).

Autonomy and Relatedness (16)

The Autonomy and Relatedness Observational Coding Scheme (AR) was used to code parents' behaviors of autonomy promotion and positive relatedness toward their teens when teens were 16 years old. Behaviors promoting autonomy as well as inhibiting autonomy and relatedness in interactions between family members were assessed. Individuals were examined in dyads and participated in 8-min videotaped revealed differences tasks that discussed family and relationship issues where members of the dyad rated disagreements. Typical topics included money, grades, household rules, friends, and siblings. Two trained coders used both transcripts and videotapes to code each member of the dyad's interactions on subscales of behaviors promoting autonomy

and relatedness. Behaviors promoting autonomy included clearly stating reasons for disagreeing and expressing confidence in stating opinions. Behaviors promoting relatedness included asking questions, validating and agreeing with others, and engaging in interactions. Behaviors inhibiting relatedness included ignoring or cutting off others and including hostile or devaluing statements (Allen et al., 1996). The AR coding scheme has been demonstrated to be a reliable predictor of both family and adolescent functioning (Allen et al., 1994). Fathers' promotion of autonomy and positive relatedness behaviors were shown to have high intraclass correlations of .83 and .89, respectively. Teens' autonomy and positive relatedness towards their fathers were shown to have intraclass correlations of .86 and .76. Mothers' promotion of autonomy and positive relatedness behaviors also had high intraclass correlations of .72 and .94, respectively. Teens' autonomy and positive relatedness behaviors towards their mothers were shown to have intraclass correlations of .88 and .72.

Prosocial Values and Self-Directed Values (16)

The Parent Values Measure (PVM) was used to examine parents' values for their teens' behavior when teens were 16 years old. Parents were asked to rank their values of their teens' self-directive behaviors and socially considerate behaviors. Examples of self-directing items include "*To think for him/herself*" and "*To be able to look after him/herself*". Examples of social consideration items include "*To be kind and considerate*" and "*To be able to get along with people.*" Participants were then asked to rank items regarding self-direction and social consideration from 1 to 5 in order of importance (Kohn, 1969; Schaefer & Edgerton, 1985). The teen report of their personal

values, as well as the teen report of what they think their parents' values to be, does not follow this ranking system, but rather a 3-point Likert scale of the values.

Self-Sacrifice in Relationships (23-25; 26-28)

Self-sacrifice in relationships (SSR) was examined when participants were 23-25 years old via a questionnaire created by Whitton, Stanley and Markman (2007). The measure assessed how often individuals perform behaviors perceived as sacrifices to their romantic partners. The SSR also assesses the degree of harm individuals perceive such sacrifices to be to their self-interest. The measure is composed of two scales examining perceived sacrifice frequency, as well as perceived sacrifice harmfulness. Items on the perceived sacrifice frequency subscale were scored on a 4-point Likert scale (with 0 representing *Never*, and 3 representing *Very Often*) where participants were asked how often they performed such behaviors in the past month. Examples included “*I changed my plans for an evening or weekend based on what my partner wanted or needed*” and “*I performed a household task that neither of us enjoys, so my partner would not have to do it.*” Items on the perceived sacrifice harmfulness subscale were scored on a 4-point Likert scale (with 0 representing *Not at All*, and 3 representing *Very Harmful*) where participants were asked if they felt that performing such behaviors were harmful to their self-interest overall. Items on the perceived harmfulness subscale were the same as the perceived sacrifice frequency subscale. Higher responses indicating increased frequency and perceptions of harmfulness of self-sacrificing behaviors. The scale has been shown to demonstrate good reliability ($\alpha = .87$) (Whitton et al., 2007).

Relationship Satisfaction (23-25; 26-28)

Relationship satisfaction was examined when participants were 23-25 and again when they were 26-28 years old via the Network of Relationships Inventory (NRI). The NRI was designed to assess dimensions of relationships with romantic partners (Furman & Buhrmester, 1985). The NRI is composed of 5-point Likert scale (with 1 representing *Little or None*, and 5 representing *The Most*) examining satisfaction. Examples of questions included “*How happy are you with the way things are between you and this person?*” and “*How good is your relationship with this person?*” The scale has been shown to demonstrate good reliability ($\alpha = .80$) (Furman & Buhrmester, 1985).

Relationships Communication Patterns (23-25; 26-28)

Communication patterns in relationships were examined when participants were 23-25 and again when they were 26-28 via the Conflict in Relationships (CIR) measure. The CIR subscale used in this study measures total reports of positive and negative communication patterns in romantic relationships (Wolfe et al., 1994). Participants and their romantic partner answer 70 questions on a 4-point Likert scale (with 1 representing *Never*, and 4 representing *Often*). Questions are broken into two sections, where items focus on behaviors of the participant towards their romantic partner, as well as items that focus on the behaviors of romantic partners towards the participant. Examples of questions measuring positive communication included “*I offered a solution that I thought would make both of us happy*” and “*I agreed that my partner was partly right.*” Examples of questions measuring negative communication included “*I said things just to make my partner angry*” and “*I blamed my partner for the problem.*” The scale has been shown to demonstrate good reliability for both positive communication patterns ($\alpha = .78$) and negative communication patterns ($\alpha = .79$) (Wolfe et al., 1994).

Depressive Symptomatology (23-25; 26-28)

Depressive symptomatology was examined when participants were 23-25 and again when they were 26-28 years old via the Beck Depression Inventory (BDI). The BDI is a 21-item questionnaire (Beck et al., 1979) designed to assess the severity of depression in adolescents and adults (Beck & Steer, 1987). Participants self-report depressive symptoms for the past week on a 4-point Likert scale. BDI is one of the most widely accepted instruments for detecting possible depression in non-clinical populations (Steer et al., 1985) and has demonstrated good reliability and concurrent validity (Jolly et al., 1994).

Data Analysis and Interpretation

Data analysis was assisted by computer software (SAS 9.4). For descriptive purposes, simple correlations initially examined associations between all variables of interest. Hierarchical regression analyses were used to test the hypotheses of the study. All analyses controlled for participant gender and household family income to look at contributions of predictor variables on outcome variables. For Hypotheses 1 and 2, models were initially constructed to examine direct long-term predictions of attachment orientations, positive autonomy/relatedness and social consideration/self-directedness variables on self-sacrificing behaviors at ages 23-25. Next, interactions were added to the models between attachment and positive autonomy/relatedness variables and between attachment and social consideration/self-directedness variables to examine their added effects on self-sacrificing behaviors.

For Hypotheses 3 and 4, subsequent regression models examined the direct predictions of self-sacrificing behaviors at ages 23-25 on future individual and partner

relationship satisfaction, conflict in relationships, and depressive symptomology at ages 26-28, controlling for baseline outcome variables at ages 23-25. Finally, interactions between attachment and self-sacrificing frequency, and between attachment and self-sacrificing harmfulness, were included to examine their added effects on the aforementioned relationship and individual outcomes.

Results

Preliminary Analyses

Univariate and correlational analyses

Means and standard deviations for all primary variables are presented in Table 1. For descriptive purposes, correlations were examined between all key variables of interest and presented in Table 2 through Table 7. Gender was coded with 1 representing males and 2 representing females. Results of the correlational analyses revealed no significant correlations between gender and income and self-sacrificing behaviors, yet there were significant correlations between gender and attachment orientation, specifically dismissive attachment ($r = -.18, p = .02$) and preoccupied attachment ($r = .19, p = .01$). Household income was also correlated with secure attachment ($r = .28, p < .001$), dismissive attachment ($r = -.29, p < .001$), and preoccupied attachment ($r = -.31, p < .001$).

Further results revealed several significant associations between attachment orientations and familial behaviors during adolescence. There was a significant correlation between secure attachment orientation and teen's positive relatedness to mom ($r = .21, p = .015$). There was also a significant negative correlation between preoccupied attachment orientation and teen's positive relatedness to moms ($r = -.28, p < .001$).

Additionally, results revealed significant associations between attachment orientations at age 14 and familial values during adolescence at age 16. Of note, there were significant associations between secure attachment orientations and teens' valuing of social consideration ($r = .24, p = .002$), as well as moms' valuing of self-direction ($r = .33, p < .001$). There were also significant negative associations between dismissive attachment orientations and teen's valuing of social consideration ($r = -.22, p = .005$), as well as moms' valuing of self-direction ($r = -.31, p < .001$). Further, results revealed a significant negative association between preoccupied attachment orientations and mom's valuing of self-direction ($r = -.19, p = .02$).

Correlational analyses revealed no significant associations between attachment orientations and self-sacrificing behaviors. However, results did reveal several significant associations between self-sacrificing behaviors and relationship consequences at ages 26-28. Results revealed significant positive associations between romantic partner sacrifice frequency and individual positive communication ($r = .23, p = .049$). Results also revealed significant associations between individual sacrifice frequency and partner negative communication ($r = .23, p = .03$), partner positive communication ($r = .31, p = .004$), and individual depressive symptomology ($r = .24, p = .015$). Partner perception of sacrifice harmfulness was negatively associated with individual relationship satisfaction ($r = -.30, p = .01$), and positively associated with teen negative communication patterns ($r = .30, p = .01$).

Primary Analyses

Hypothesis 1. *Teens with a) more preoccupied attachment orientation, b) parents who promote more positive relatedness behaviors during adolescence, and c) parents*

who highly value social consideration during adolescence will be associated with higher frequencies of self-sacrificing behaviors and lower perceptions of self-sacrificing behavior as harmful. The strongest effects are hypothesized to be for interactions among teens with preoccupied attachment orientations and parents who promote more positive relatedness behaviors, and for teens with preoccupied attachment orientations and parents who highly value social consideration.

Results revealed no significant direct effects between attachment orientations and self-sacrificing behaviors, or between parental valuing in adolescence and self-sacrificing behaviors. However, results revealed several significant direct effects between parental behaviors in adolescence and self-sacrificing behaviors. Fathers' positive relatedness behaviors towards teens predicted higher teen sacrifice frequency ($\beta = .29, p = .03$), as well as a lower teen perception of sacrifice harmfulness ($\beta = -.27, p = .04$). Teens' positive relatedness towards mothers also predicted higher romantic partner perception of sacrifice harmfulness ($\beta = .27, p = .01$).

Results revealed no significant interactions between secure or preoccupied attachment orientations and familial behaviors and values. However, findings suggest a significant interaction between dismissive attachment orientations and maternal behaviors of positive relatedness predicting romantic partner sacrifice frequency ($\beta = .24, p = .03$); (see Figure 1, Table 8). Results also indicated a significant interaction between dismissive attachment orientations and paternal positive relatedness behaviors predicting romantic partner perception of sacrifice harmfulness ($\beta = .33, p = .04$); (see Figure 2, Table 9). Further, findings suggested a significant interaction between dismissive attachment orientations and maternal valuing of social consideration predicting romantic

partner perception of sacrifice harmfulness ($\beta = -.25, p = 0.4$); (see Figure 3, Table 10). Additionally, results indicated a significant interaction between dismissive attachment orientations and teen valuing of social consideration predicting romantic partner perception of sacrifice harmfulness ($\beta = .23, p = .02$); (see Figure 4, Table 11).

Hypothesis 2. *Teens with a) more dismissing attachment orientations, b) parents who promote more autonomy behaviors during adolescence, and c) parents who highly value self-directedness during adolescence will be associated with lower frequencies of self-sacrificing behaviors, and higher perceptions of self-sacrificing behavior as harmful. The strongest effects are hypothesized to be for interactions among teens with dismissive attachment orientations and parents who show promote more autonomy behaviors, and for teens with dismissive attachment orientations and parents who highly value self-direction.*

Results revealed no significant direct effects between attachment orientations and self-sacrificing behaviors. Results also revealed no direct effects between parental valuing in adolescence and self-sacrificing behaviors. However, results revealed one significant direct effect between parental behaviors in adolescence and self-sacrificing behaviors. Specifically, mother's positive autonomy behaviors towards teens predicted a greater teen perception of sacrifice harmfulness ($\beta = .25, p = .018$). No significant interactions were found between attachment orientation and promotion of positive autonomy to self-sacrificing behaviors.

Results also did not reveal any significant interactions between preoccupied attachment orientations and familial behaviors and values during adolescence on self-sacrificing behaviors.

Results indicated a significant interaction between secure attachment orientations and maternal valuing of self-direction predicting romantic partner sacrifice frequency ($\beta = -.25, p = 0.02$); (see Figure 5, Table 12). Results also indicated a significant interaction between dismissive attachment orientations and maternal valuing of self-direction predicting individual sacrifice frequency ($\beta = .23, p = 0.04$); (see Figure 6, Table 13).

Hypothesis 3. *Higher frequencies of self-sacrificing behavior were thought to be positively associated with partner romantic relationship satisfaction and positive communication in the relationship, while negatively associated with individual romantic relationship satisfaction and positively associated with individual depressive symptomatology. These associations were hypothesized to be strongest for individuals with a preoccupied attachment orientation.*

In final models, romantic partner sacrifice frequency predicted a relative increase in romantic partner positive communication, controlling for positive communication at ages 23-25 ($\beta = .21, p = .04$). Romantic partner sacrifice frequency also predicted a relative decrease in teen negative communication, controlling for teen negative communication at ages 23-25 ($\beta = -.23, p = .01$). Further, individual sacrifice frequency predicted a relative increase in teen positive communication, controlling for teen positive communication at ages 23-25 ($\beta = .26, p = .02$). Romantic partner sacrifice frequency also predicted relative increases in individual depressive symptomatology, controlling for depressive symptomatology at ages 23-25 ($\beta = .28, p < .0001$).

Results revealed no significant interactions between preoccupied attachment orientations and self-sacrificing behaviors on relationship consequences. However, results did indicate a significant interaction between secure attachment orientations and

individual sacrifice frequency on individual positive communication ($\beta = .28, p = .007$); (see Figure 7, Table 14). Results also revealed a significant interaction between dismissive attachment orientations and individual sacrifice frequency on individual positive communication ($\beta = -.22, p = .03$); (see Figure 8, Table 15).

Hypothesis 4. *Higher perceptions of self-sacrificing behavior as harmful will be negatively associated with partner relationship satisfaction, as well as negatively associated with individual romantic relationship satisfaction, and positively associated with negative communication in the relationship and individual depressive symptomology. These associations are hypothesized to be strongest for individuals with a dismissing attachment orientation.*

In final models, individual perception of sacrifice harmfulness predicted a relative decrease in individual relationship satisfaction, controlling for relationship satisfaction at ages 23-25 ($\beta = -.29, p = .003$). Romantic partner perception of sacrifice harmfulness also predicted a relative increase in partner relationship satisfaction, controlling for relationship satisfaction at ages 23-25 ($\beta = .22, p = .05$).

Results indicated a significant interaction between secure attachment orientations and individual sacrifice frequency on romantic partner relationship satisfaction ($\beta = .27, p = .02$); (see Figure 9, Table 16). Further, results indicated a significant negative interaction between secure attachment orientations and individual perceptions of sacrifice harmfulness on individual negative communication ($\beta = -.21, p = .04$); (see Figure 10, Table 17). Results also revealed a significant negative interaction between secure attachment orientations and partner perception of sacrifice harmfulness on individual negative communication ($\beta = -.32, p = .001$); (see Figure 11, Table 18).

Results indicated a significant negative interaction between dismissive attachment orientations and partner perception of sacrifice harmfulness on individual negative communication ($\beta = .30, p < .001$); (see Figure 12, Table 19). Results indicated a significant interaction between preoccupied attachment orientations and partner perception of sacrifice harmfulness on individual negative communication ($\beta = .22, p = .01$); (see Figure 13, Table 20). Results also indicated a significant negative interaction between preoccupied attachment orientations and individual perception of sacrifice harmfulness on individual negative communication ($\beta = .28, p = .01$); (see Figure 14, Table 21).

Discussion

The current research aimed to examine the effects of attachment orientations, familial behaviors promoting autonomy and relatedness, and familial values of self-directedness and social consideration during adolescence on self-sacrificing behaviors in young adulthood. Self-sacrificing behaviors were also considered as predictors of future relationship and personal outcomes. Results suggest a mix of corroborating and conflicting support for the proposed hypotheses, which are described in turn below.

Contrary to hypotheses, results revealed no direct effects of attachment orientations to frequency of self-sacrifice or perceptions of self-sacrificing behavior as harmful. Results also revealed no direct effects of familial valuing of social consideration to self-sacrificing behaviors or attitudes. However, father's promotion of positive relatedness behaviors was shown to be associated with higher individual sacrifice frequency, as well as a lower perception of sacrifice harmfulness. Positive relatedness has been associated with an increase in feelings of connectedness towards others and

valuing of prosocial behaviors, or social behaviors that benefit others (Pavey et al., 2011). The promotion of positive relatedness during adolescence from fathers could potentially facilitate prosocial behaviors in participants future relationships (Pavey et al., 2011). Therefore, such findings are consistent with the belief that positive relatedness is linked with a willingness to engage in sacrifice, as well as low perception of sacrifice harmfulness.

Yet high paternal promotion of positive relatedness behaviors in the context of a high dismissive attachment orientation was found to predict higher romantic partner perception of sacrifice harmfulness. Therefore, such individuals with a dismissive attachment orientation and fathers who highly value positive relatedness may tend to choose romantic partners who perceive self-sacrificing to be highly harmful. Individuals with dismissive attachment orientations are characterized as independent and avoidant in relationships and were therefore expected to sacrifice less and view sacrifice as increasingly harmful, due to their preference of maintaining distance from their partners (Impett & Gordon, 2010). Conversely, the promotion of positive relatedness was conceptualized through a prosocial lens, and therefore thought to predict a decrease in perceptions of self-sacrificing behavior as harmful (Pavey et al., 2011). Therefore, the current results may suggest that the effects of a father promoting positive relatedness will influence perceptions of sacrifice differently for adolescents with a dismissive attachment orientation. Or, perhaps the effect of positive relatedness on the perceptions of sacrifice harmfulness may be more nuanced than anticipated.

Interestingly, similar patterns emerged for high dismissive attachment and high teen valuing of social consideration in also predicting higher romantic partner perception

of sacrifice harmfulness. As discussed, individuals with dismissive attachment orientations have been shown to sacrifice less due to their preference for distance and independence within relationships (Impett & Gordon, 2010). These patterns of findings may suggest that adolescents possessing a dismissive attachment orientation (and therefore a lower focus on others) and who also express a higher valuing of social consideration would therefore choose future romantic partners who perceive sacrifice to be highly harmful. This finding yielding similar patterns as the interaction of dismissive attachment and high paternal promotion of positive relatedness. Therefore, it may be possible that individuals with a dismissive attachment orientation and high prosocial influences during adolescence tend to choose partners similar to them. These romantic partners may value both independence, as well as getting along with others. Such values may be at odds, and partners could want to sacrifice due to their prosocial values, but also not want to due to their dismissive attachment. Romantic partners could also view sacrifice as highly harmful because individuals with dismissive attachment orientations may not be sacrificing or responding to such sacrifices in positive or beneficial ways. Research suggests that individuals with insecure attachments tend to be less satisfied with the support they receive from their partners, as well as view their partners supportive behaviors as less helpful, which could perhaps affect romantic partner's attitudes regarding self-sacrifice (Ruppel & Curran, 2012). Overall, such findings specifically for dismissive attachment and influences from fathers during adolescence has important implications for dismissive youth.

However, additional interactions examining dismissive attachment orientations and maternal behaviors and values during adolescence revealed different patterns of

findings. High dismissive attachment and high maternal promotion of positive relatedness behaviors predicted higher romantic partner sacrifice frequency. Therefore, individuals possessing a dismissive attachment orientation and a mother who promotes positive relatedness behaviors during adolescence may tend to choose romantic partners who engage in increased self-sacrificing behaviors. Additionally, high dismissive attachment and high maternal valuing of social consideration was found to predict lower romantic partner perception of sacrifice harmfulness. These combined results are consistent with the expected effects of high social consideration leading to a decreased perception of sacrifice harmfulness, as high social consideration would elicit more prosocial behavior, or sacrificing to benefit others. Such findings also indicate that individuals with a preexisting dismissive attachment orientation whose mothers placed increased value on social consideration during adolescence may therefore choose partners who sacrifice frequently and do not view self-sacrifice as increasingly harmful. Such combinations of maternal influences may lead dismissive youth to choose romantic partners who similarly value prosocial behaviors and attitudes. While these findings were expected given the prosocial nature of positive relatedness and social consideration, it is interesting that such effects emerged only for dismissive youth with these maternal influences in adolescence. Results of these current findings pertaining to the first hypothesis therefore suggest that further research into the specific differences between the influences of mothers and fathers during adolescence is warranted. Indeed, some developmental research indicates that fathers tend to be less involved in parenting during adolescence than mothers, suggesting that perhaps examination of the magnitude of familial influences should also be considered (Williams & Kelley, 2005). Research also shows that mother-child and

father-child relationships do tend to vary into adolescence, with increased dysfunction common for same-sex dyads (Collins & Russel, 1991). The current study focused on self-sacrificing behaviors in the context of developmental predictors including attachment orientation and parental behaviors and values present during adolescence. However, investigation of such familial influences from a gendered lens may also be helpful in understanding what specific influences from fathers and mothers are affecting a teen's development. Perhaps also an adolescent's observations of their mother or father's sacrifice behaviors and attitudes may be more influential in affecting their own future relationships. While familial behaviors and values present during adolescence were examined and provided interesting results, it may be that an adolescent's socialization regarding of sacrificing behaviors could be more influential in understanding future predictions of such relational behaviors. Indeed, research suggests that parental behaviors affect the values a child attributes to their parents more so than value congruency between parent and child (Whitbeck & Gecas, 1988). The importance of values a parent has for their children is influential in adolescence, yet socialization may be a critical component to better understanding the role such values have on future development and relational outcomes.

Overall, the lack of findings for such interactions with preoccupied attachment orientations and solely for dismissive attachment orientations was not expected. Previous research has indicated that individuals possessing a dismissive attachment orientation tend to be fearful of closeness with others and tend to prefer distance in their relationships (Hazan & Shaver, 1987). Conversely, individuals with a preoccupied attachment orientation have been shown to feel an obsessive need for intimacy from their

romantic partner and fears of rejection stemming from early insecure attachments with their parents (Impett & Gordon, 2010). Such individuals were therefore hypothesized to engage in increased self-sacrificing behavior due to motivations to placate their partner and maintain intimacy due to a negative self-concept and placing increased importance on one's romantic partner or relationship (Hazan & Shaver, 1987). This lack of findings may suggest that individuals with a dismissive attachment orientation could be more susceptible to external familial influences. Or perhaps the specific promotion of positive relatedness and valuing of social consideration are not particularly influential for preoccupied or secure attachment orientation. Additionally, these examinations of dismissive attachment orientations also revealed patterns solely for romantic partner sacrificing behaviors and attitudes, rather than individual sacrificing behaviors and attitudes. Therefore, it may be that dismissive individuals and the role of their familial influences during adolescence are especially important for predicting their future romantic partners. For this potential reason, further research suggestions include examining the attachment orientations of romantic partners. Such classifications would also be beneficial to gain a clearer picture of self-sacrificing behavior in the context of attachment orientations. Some research suggests that individuals tend to be most attracted to individuals with similar attachment orientations (Frazier et al., 1996). Therefore, examining both individual and romantic partner attachment orientations will have important implications for understanding both partner's sacrifice behaviors and attitudes beyond the scope of the current results.

Examinations regarding the second hypotheses of parental promotion of autonomy behaviors and valuing of self-direction on self-sacrificing behaviors also

revealed interesting findings. No direct effects of attachment orientation or parental valuing of self-directedness were found to be predictive of self-sacrificing behavior or attitudes. There was a direct effect of mother's promotion of positive autonomy behaviors on high individual perception of sacrifice harmfulness. This finding is consistent with the hypothesis, in suggesting that individuals whose parents promote autonomy behaviors would view self-sacrificing behavior as harmful due to an increased desire for independence. However, results revealed no significant interactions between such familial promotion of positive autonomy and attachment orientations on self-sacrificing behavior.

In examining interactions between familial values and attachment, low secure attachment coupled with lower maternal valuing of self-direction was predictive of lower romantic partner sacrifice frequency. Further, when considering dismissive attachment orientations, low dismissive attachment and high maternal valuing of self-direction was found to be predictive of lower individual sacrifice frequency. These patterns of findings suggests that parental values of self-direction seem to play a larger role in influencing future relational behaviors when adolescents were less extreme in terms of attachment security or insecurity. Thus, valuing of self-direction appears to be most influential when individuals are low secure or low dismissive (conceptualized as a slightly insecure), rather than very secure or very insecure. Such a finding may indicate that parental influences during adolescence could be more influential when individuals do not possess high level of either attachment orientation. Interestingly, interactions were only found specifically for mother's valuing of self-direction as well, suggesting that there may be particular differences between mother and father valuing of self-direction during

adolescence. Again, such findings point to potential differences between the effects of mother and father behaviors during adolescence, as discussed previously. Of additional note is that familial valuing of self-direction did not have any effects on sacrifice perceptions of harmfulness, but rather individual and romantic partner sacrifice frequency. Therefore, considerations of the role of self-direction as influencing behaviors rather than attitudes are noteworthy.

An additional aim of the current study was to examine the frequency of self-sacrificing behaviors in prediction of future relationship and personal outcomes, including relationship satisfaction, conflict in communication patterns, and depressive symptomatology. Such analyses revealed several direct effects between variables. Primarily, romantic partner sacrifice frequency was found to predict a relative increase in romantic partner positive communication, as well as a decrease in individual negative communication. Similarly, individual sacrifice frequency also predicted a relative increase in individual positive communication. Therefore, both individuals and partners self-sacrificing tends to be predictive of future positive communication within their relationships.

This particular finding was also seen across both secure and dismissive attachment orientations, suggesting that sacrifice frequency overall tends to be predictive of increasing positive communication. This finding is in support of the beneficial components of self-sacrifice frequency demonstrated in previous literature (Ruppel & Curran, 2012; Wieselquist et al., 1999). Indeed, individuals with a high secure attachment orientation and high sacrifice frequency were found to predict a relative increase in individual positive communication. Such individuals with a secure attachment orientation

are thought to have the ideal balance and perceive themselves and their relationships positively and realistically (Bartholomew & Horowitz, 1991; Hazan & Shaver, 1987). Secure attachment orientations have been extensively demonstrated as having increased positive relational and personal outcomes (Sroufe, 2005). These findings are consistent with the notion that secure individuals are well-adjusted and when they engage in self-sacrificing behavior for the benefit of their relationship, increased positive communication may follow. It may be possible that securely attached individuals who sacrifice more frequently understand their reasons for doing so, or sacrifice often because they want to, and therefore are able to articulate about such with their partners in positive and healthy ways.

Similar patterns were also consistent when examining interactions between dismissive attachment orientation and self-sacrificing behavior. Low dismissive attachment and high individual sacrifice frequency was found to predict a relative increase in individual positive communication. Of interest is that low dismissive attachment and high individual sacrifice frequency yielded similar patterns as secure attachment and high individual sacrifice frequency. Such consistencies may be attributed to individuals with a low dismissive attachment being conceptualized as less insecure, therefore indicating that individuals who are less dismissive (and therefore closer to secure) would behave similarly as the highly secure individuals discussed prior. Overall, these combinations of findings across attachment orientations suggest that individuals who sacrifice more in their romantic relationships tend to have increased positive communication patterns.

However, results suggest that not all sacrifice frequency may have positive outcomes. Specifically, romantic partner sacrifice frequency was also found to predict a relative increase in individual depressive symptomatology. This finding is particularly noteworthy and may suggest that a romantic partner engages in increased sacrifice frequency due to an individual's feelings of depression. This increased sacrifice frequency may therefore not have the expected positive effects, and rather lead to a worsening of depressive symptoms. Or perhaps, a depressed individual may feel guilty or unsatisfied with their partners' sacrifices which therefore leads to an increase in depressive symptomatology. Previous feminist research has suggested that societally enforced gender schemas may lead to increased self-sacrificing and vulnerability to depression in women (Jack, 1991). While these particular results were not found in the current study, sex differences should be examined in relation to self-sacrificing behaviors to understand such behaviors further. The current research found no significant associations between gender and self-sacrifice. Therefore, future investigations into self-sacrificing behaviors in regard to depression is important for better understanding the direction and cause of such effects.

A final aim of the current study was examining perceptions of self-sacrificing behaviors in prediction of future relationship and personal outcomes. This particular research question yielded the most findings. Initial direct effects suggested that individual perception of sacrifice harmfulness predicted a relative decrease in individual relationship satisfaction. However, romantic partner perception of sacrifice harmfulness predicted a relative increase in romantic partner relationship satisfaction. It was thought that an increased perception of self-sacrifice harmfulness would be negatively associated with

both partner and individual relationship satisfaction. Such findings are complicated, yet it may be possible that romantic partners perceive self-sacrificing behavior as harmful and therefore do not engage in such behaviors, which in turn leads to greater relationship satisfaction. Indeed, more factors may be affecting sacrifice attitudes and relationship satisfaction than the current study can shed light on. Subsequent interactions discussed highlight the important role that context may play on sacrificing behaviors and attitudes affecting outcomes. Additionally, as previously mentioned, gaining an understanding of romantic partner's attachment orientation may also be beneficial in further teasing apart some of these findings.

Results also suggested that low secure attachment and high individual perception of sacrifice harmfulness was predictive of lower romantic partner relationship satisfaction. Therefore, such individuals who are highly secure and perceive sacrifice to be less harmful will experience greater romantic partner relationship satisfaction. This could suggest that these individuals do not believe the sacrifices they engage in to be of large detriment to themselves or their relationship, which in turn makes their romantic partner more satisfied with such sacrifices. Consistently, results found that low secure attachment and both high individual and romantic partner perception of sacrifice harmfulness predicted a relative increase in individual negative communication. Therefore, believing that engagement of such behaviors is harmful will lead to increased negativity regarding in ones' relationship for individuals with less secure attachments, as well as high insecure attachments. Examinations including dismissive and preoccupied attachment orientations yielded similar results, where both high dismissive and high preoccupied attachment orientations and high romantic partner perception of sacrifice

harmfulness was found to be predictive of increased negative communication. Thus, it appears that increased partner perception of sacrifice harmfulness seems to be largely associated with increased negative communication patterns in less secure individuals. Secure individuals are thought to possess the ideal attachment, and possess a positive and realistic view of oneself, one's romantic partners, and one's relationships (Bartholomew & Horowitz, 1991) Therefore, it is not surprising that more insecurity (or less security) would yield increased negative relationship outcomes.

Limitations and Future Research

The largest consistent patterns of findings of this study overall were between high partner perceptions of self-sacrificing behaviors as harmful and increased negative communication. It is also noteworthy to mention that examinations between the perception of sacrifice harmfulness revealed many more findings on relational and personal outcomes than the frequency of self-sacrifice. Therefore, it may be that the perceptions of self-sacrifice are more influential in predicting future consequences than the actual engagement in sacrificing behaviors. Perceptions of sacrifice should be examined in greater detail and on additional dimensions in the context of predicting future relational quality. Particularly, investigations of self-sacrificing should be further examined in terms of either sacrificing for approach or avoidant goals. Previous research has examined motivations for sacrifice in the context of attachment orientations and may be helpful in revealing a fuller picture of sacrificing behaviors (Impett & Gordon, 2010). It has also been suggested that in romantic relationships where a partner behaves with avoidance goals in mind, their partner tends to display increased negative communication (Kuster et al., 2015). It may be the case that individuals are highly reactive towards their

partners' avoidant goals, which then increases negative communication. Therefore, examining these potential motivations may give a clearer understanding of the current findings and reveal how perceptions about self-sacrifice affect negative communication.

Past research has also found self-sacrificing behaviors and relationship outcomes to be mediated by ones' commitment level to the relationship (Whitton et al., 2000). The current study did not possess information regarding such motivations for self-sacrifice, but rather only reports of sacrifice frequency and perceptions sacrifice of harmfulness to self-interest. Therefore, sacrifice frequency and perceptions of sacrifice should also be considered in the context of commitment for added understanding of motivations for such behaviors. In addition to goals of sacrifice and commitment to one's relationship, emotional regulation may also an important aspect to consider when further examining self-sacrificing behaviors. Research has suggested that increased emotional suppression while sacrificing leads to a decrease in feelings of authentically, and in turn poorer well-being and romantic relational quality (Impett et al., 2012). Given the large pattern of current results relating to perceptions of sacrifice as harmfulness and negative communication in this study, additional future considerations of such emotional aspects of sacrifice are warranted.

Additionally, research has been done suggesting that the role of ones' parents' tactics is also influential in affecting an adolescents' future relational behavior and quality (Crocket & Randall, 2006). Self-sacrifice could be considered as a behavior that avoiding conflict, or as a behavior that may lead to conflicts. Further, theories regarding sacrifice in relation to power dynamics may also partially explain such behaviors as well. Research has suggested that increased power in relationships is associated with increased

self-oriented behaviors (Righetti et al., 2015). While positive and negative communication patterns were investigated in the present study as outcomes of self-sacrificing behaviors, additional research examining such relationships is influential in creating a more dynamic understanding of such behaviors. Therefore, incorporating such components into future investigations of developmental predictors of self-sacrificing behaviors will be beneficial in gaining a clearer picture of such behaviors.

While the influence of attachment orientations and familial influences during adolescence was assessed in this study and has been extensively documented throughout developmental research (Laursen & Collins, 2009; Steinberg, 2020), additional considerations of the role of peers in influencing an adolescent are also important. Indeed, while research has suggested that attachment to parents is more influential in predicting well-being than attachment to peers during adolescence (Greenberg et al., 1982), the effects of such peer relationships should not be discounted. Future research examining the influence of peers in the context of predicting self-sacrificing behaviors will be important in providing a clearer picture of what specific developmental predictors affect such behaviors. Further, while attachment has been shown to be relatively stable across the lifespan, research does suggest that such attachments to an individual's parent may differ than attachment to peers or romantic partners (Waters et al., 2000; Hudson et al., 2015). While the current study was focused on examining developmental predictors of self-sacrificing behavior, it may be that current assessments of attachment at times of such romantic relationships take precedent in affecting relational behaviors.

Conclusion

Social relationships are foundational aspects of our lives, and romantic relationships are inherently complex and nuanced. The effect of parents and caregivers throughout development have been extensively documented throughout developmental research and will continue to be examined. Attachment orientations are influential in creating working models within individuals about how relationships should and could operate (Bowlby, 1969; Steinberg, 2020). Additional promotion of behaviors or increased valuing from ones' family during adolescence continues to interact with an adolescents' view of relationships. This current study sought to further examine the role of such developmental influences on the specific relational behavior of self-sacrifice. Several relationships were revealed, particularly of note are differences regarding mother and father influences during adolescence impact self-sacrificing behaviors and attitudes. Parental values during adolescence seemed to play larger roles in influencing future relational behaviors when adolescents were less extreme in terms of attachment security or insecurity. In examining outcomes of self-sacrificing behaviors, less secure attachment and high insecure attachment orientations interacted with increased perceptions of sacrifice harmfulness to predict future negative relationship communication patterns. The current findings have important implications for understanding the developmental effects that attachment orientations and familial influences have on future relational behavior and quality, as well as in understanding the role of self-sacrificing behaviors on relationship and individual health.

Table 1.
Descriptive statistics for all study variables.

Variable	N	M	SD	Min	Max
Gender	184	-	-	1=Male	2=Female
Income	181	40K-60K	-	-	-
Secure Attachment Orientation (14)	174	0.03	0.04	-0.62	0.80
Dismissive Attachment Orientation (14)	174	0.05	0.04	-0.61	0.83
Preoccupied Attachment Orientation (14)	174	0.05	0.04	-0.37	0.76
Dad Positive Autonomy to Teen (16)	74	2.92	0.57	1.58	4
Dad Positive Relatedness to Teen (16)	74	2.07	0.67	0.54	3.50
Teen Positive Autonomy to Dad (16)	74	2.39	0.06	0.87	4
Teen Positive Relatedness to Dad (16)	74	1.76	0.52	0.75	2.87
Mom Positive Autonomy to Youth (16)	136	3.00	0.58	0.50	4
Mom Positive Relatedness to Youth (16)	136	1.86	0.63	0.18	3.50
Teen Positive Autonomy to Mom (16)	136	2.31	0.08	0.00	3.87
Teen Positive Relatedness to Mom (16)	136	1.55	0.58	0.12	3
Dad Social Consideration (16)	81	10.03	2.35	6	15
Dad Values Self-Direction (16)	83	21.46	3.92	13	27
Mom Values Social Consideration (16)	141	10.43	2.27	5	15
Mom Values Self-Direction (16)	143	20.27	3.81	11	27
Youth Values Social Consideration (16)	168	7.79	1.36	3	9
Youth Values Self-Direction (16)	170	15.93	1.87	11	18
Romantic Partner Sacrifice Frequency (23-25)	98	14.92	6.56	0	30
Romantic Partner Perceived Sacrifice Harmfulness (23-25)	91	0.16	0.21	0	1.25
Individual Sacrifice Frequency (23-25)	104	14.39	5.45	0	26
Individual Perceived Sacrifice Harmfulness (23-25)	103	0.13	0.19	0	0.91
Romantic Partner Relationship Satisfaction (26-28)	98	13.19	2.39	3	15
Individual Relationship Satisfaction (26-28)	107	13.34	2.32	5	15
Individual Negative Communication Patterns (26-28)	108	34.02	7.03	27	57
Individual Positive Communication Patterns (26-28)	109	20.23	5.36	8	34
Romantic Partner Negative Communication Patterns (26-28)	98	35.46	7.83	27	59
Romantic Partner Positive Communication Patterns (26-28)	97	20.37	5.59	8	32
Individual Depressive Symptomology (26-28)	170	5.07	5.54	0	40

Note. Numbers in parenthesis indicate ages at which participants were assessed.

Table 2.
Correlations between attachment orientation and familial behaviors in adolescence.

	1	2	3	4	5	6	7	8	9	10	11
1. Secure Attachment (14)	-										
2. Dismissive Attachment (14)	-0.94***	-									
3. Preoccupied Attachment (14)	-0.55***	0.46***	-								
4. Dad Positive Autonomy to Teen (16)	0.03	0.03	-0.12	-							
5. Dad Positive Relatedness to Teen (16)	0.09	-0.03	-0.17	0.14	-						
6. Teen Positive Autonomy to Dad (16)	0.18	-0.10	0.001	0.15	0.28*	-					
7. Teen Positive Relatedness to Dad (16)	0.18	-0.18	-0.11	0.30*	0.49***	0.36**	-				
8. Mom Positive Autonomy to Teen (16)	0.05	-0.05	-0.12	0.06	-0.04	-0.03	0.07	-			
9. Mom Positive Relatedness to Teen (16)	0.14	-0.11	-0.24*	0.05	0.38**	0.07	0.29*	0.002	-		
10. Teen Positive Autonomy to Mom (16)	0.12	-0.09	-0.09	0.11	-0.04	0.42***	0.11	-0.01	0.26**	-	
11. Teen Positive Relatedness to Mom (16)	0.21*	-0.28**	-0.28**	0.31*	0.26*	0.03	0.45***	-0.01	0.61***	0.34***	-

Note. Numbers in parenthesis indicate ages at which participants were assessed.
 * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 3.
Correlations between attachment orientation and familial valuing in adolescence.

	1	2	3	4	5	6	7	8	9
1. Secure Attachment (14)	-								
2. Dismissive Attachment (14)	-0.94***	-							
3. Preoccupied Attachment (14)	-0.55***	0.46***	-						
4. Teen Values Self Direction (16)	0.13	-0.13	-0.08	-					
5. Teen Values Social Consideration (16)	0.24**	-0.22**	-0.15	0.42***	-				
6. Dad Values Self Direction (16)	0.07	-0.08	0.009	0.09	-0.16	-			
7. Dad Values Social Consideration (16)	0.05	-0.004	-0.12	0.19	0.25	0.25*	-		
8. Mom Values Self Direction (16)	0.33***	-0.31***	-0.19*	0.19*	-0.06	-0.06	0.09	-	
9. Mom Values Social Consideration (16)	0.03	-0.03	-.014*	0.17*	0.25**	0.06	0.34**	-0.06	-

Note. Numbers in parenthesis indicate ages at which participants were assessed.
 * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 4.
Correlations between attachment orientations and self-sacrificing variables.

	1	2	3	4	5	6	7
1. Secure Attachment (14)	-						
2. Dismissive Attachment (14)	-0.94***	-					
3. Preoccupied Attachment (14)	-0.55***	0.46***	-				
4. Individual Sacrifice Frequency (23-25)	-0.05	0.07	0.02	-			
5. Individual Perception of Sacrifice Harmfulness (23-25)	0.07	-0.08	-0.01	-0.04	-		
6. Partner Sacrifice Frequency (23-25)	0.11	-0.07	-0.07	0.22*	-0.07	-	
7. Partner Perception of Sacrifice Harmfulness (23-25)	0.10	-0.07	-0.001	0.01	0.12	-0.04	-

Note. Numbers in parenthesis indicate ages at which participants were assessed.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 5.*Correlations between self-sacrificing variables and familial values during adolescence.*

	1	2	3	4	5	6	7	8	9	10
1. Individual Sacrifice Frequency (23-25)	-									
2. Individual Perception of Sacrifice Harmfulness (23-25)	-0.04	-								
3. Partner Sacrifice Frequency (23-25)	0.22*	-0.07	-							
4. Partner Perception of Sacrifice Harmfulness (23-25)	0.01	0.12	-0.04	-						
5. Teen Values Social Consideration (16)	-0.05	-0.08	0.00	0.02	-					
6. Teen Values Social Consideration (16)	0.08	-0.03	-0.05	0.07	0.44***	-				
7. Dad Values Self Direction (16)	-0.12	-0.12	0.12	.007	0.09	-0.16	-			
8. Dad Values Social Consideration (16)	0.06	0.05	-0.13	0.07	0.19	0.25*	-0.29**	-		
9. Mom Values Self Direction (16)	-0.25*	-0.03	0.16	-0.13	0.19*	-0.06	0.44***	0.09	-	
10. Mom Values Social Consideration (16)	.008	0.05	0.07	0.05	0.17*	0.25*	0.06	0.34**	-0.06	-

Note. Numbers in parenthesis indicate ages at which participants were assessed.* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 6.
Correlations between self-sacrificing variables and familial behaviors during adolescence.

	1	2	3	4	5	6	7	8	9	10	11	12
1. Individual Sacrifice Frequency (23-25)	-											
2. Individual Perception of Sacrifice Harmfulness (23-25)	-0.04	-										
3. Partner Sacrifice Frequency (23-25)	0.22*	-0.07	-									
4. Partner Perception of Sacrifice Harmfulness (23-25)	0.1	0.12	-0.04	-								
5. Dad Positive Autonomy to Teen (16)	-0.01	-0.17	-0.11	0.19	-							
6. Dad Positive Relatedness to Teen (16)	0.23	-0.32*	-0.01	-0.05	0.13	-						
7. Teen Positive Autonomy to Dad (16)	-0.06	-0.00	-0.14	0.08	0.15	0.28	-					
8. Teen Positive Relatedness to Dad (16)	-0.05	-0.03	0.18	0.19	0.30**	0.49***	0.36	-				
9. Mom Positive Autonomy to Teen (16)	0.12	0.19	0.13	0.88	0.06	-0.04	-0.03	0.08	-			
10. Mom Positive Relatedness to Teen (16)	0.00	0.02	0.08	0.09	0.05	0.38**	0.06	0.29*	0.00	-		
11. Teen Positive Autonomy to Mom (16)	0.08	0.02	0.02	0.05	-0.04	-0.04	0.42**	0.11	-0.01	0.26**	-	
12. Teen Positive Relatedness to Mom (16)	0.04	-0.12	0.09	0.23*	0.26*	0.26*	0.03	0.45**	-0.01	0.61***	0.34***	-

Note. Number in parenthesis indicate ages at which participants were assessed.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 7.*Correlations between self-sacrificing variables and relationship outcome variables.*

	1	2	3	4	5	6	7	8	9	10	11
1. Individual Sacrifice Frequency (23-25)	-										
2. Individual Perception of Sacrifice Harmfulness (23-25)	-0.04	-									
3. Partner Sacrifice Frequency (23-25)	0.22*	-0.07	-								
4. Partner Perception of Sacrifice Harmfulness (23-25)	0.009	0.12	-0.04	-							
5. Individual Relationship Satisfaction (23-25)	-0.12	-0.30**	-0.02	-0.02	-						
6. Partner Relationship Satisfaction (23-25)	-0.06	-0.17	0.14	0.19	0.44***	-					
7. Teen Report of Partner Negative Communication (23-25)	0.18	0.12	0.23*	0.01	-0.27**	-0.27**	-				
8. Teen Report of Partner Positive Communication (23-25)	0.06	-0.008	0.31**	-0.04	0.17	0.43***	0.44***	-			
9. Partner Report of Teen Negative Communication (23-25)	0.22	0.29*	-0.14	0.08	-.017	-0.31**	0.44***	0.18	-		
10. Partner Report of Teen Positive Communication (23-25)	0.23*	-0.05	0.19	-0.05	-0.03	0.18	0.20*	0.42***	0.36**	-	
11. Depressive Symptomatology (23-25)	-0.12	0.10	0.24*	0.07	-0.10	-0.04	0.19*	0.03	0.80	-0.04	-

Note. Number in parenthesis indicate ages at which participants were assessed.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 8.

Predicting Romantic Partner Sacrifice Frequency from Dismissive Attachment Orientations and Maternal Promotion of Positive Relatedness Behaviors.

Variable	Romantic Partner Sacrifice Frequency (23-35)			R^2
	β initial	β final	95% CI	
<u>Step I</u>				0.0
				3
Gender	-	-	[-0.36, 0.01]	
Income	0.17	0.18	[-0.18, 0.22]	
<u>Step II</u>				0.0
				4
Dismissive Attachment Orientation (14)	-	-	[-0.26, 0.16]	
Mother Positive Relatedness Behaviors (16)	0.08	0.12	[-0.10, 0.33]	
<u>Step III</u>				0.0
				8
Dismissive Attachment x Maternal Positive Relatedness Behaviors	0.24 *	0.24 *	[0.02, 0.44]	

Note. Numbers in parenthesis indicate ages at which participants were assessed.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 9.

Predicting Romantic Partner Perception of Sacrifice Harmfulness from Dismissive Attachment Orientations and Paternal Promotion of Positive Relatedness Behaviors.

	Romantic Partner Perception of Sacrifice Harmfulness (23-25)			R^2
	β initial	β final	95% CI	
Step I				0.02
Gender	-0.12	-0.11	[-0.36, 0.01]	
Income	-0.07	0.003	[-0.18, 0.22]	
Step II				0.03
Dismissive Attachment Orientation (14)	-0.11	-0.03	[-0.26, 0.16]	
Father Positive Relatedness Behaviors (16)	-0.02	0.09	[-0.10, 0.33]	
Step III				0.09
Dismissive Attachment x Paternal Positive Relatedness Behaviors	0.33*	0.33*	[0.02, 0.44]	

Note. Numbers in parenthesis indicate ages at which participants were assessed.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 10.

Predicting Romantic Partner Perception of Sacrifice Harmfulness from Dismissive Attachment Orientations and Maternal Valuing of Social Consideration.

	Romantic Partner Perception of Sacrifice Harmfulness (23-25)			
	β initial	β final	95% CI	R^2
Step I				0.02
Gender	-0.12	-0.11	[-0.30, 0.08]	
Income	-0.07	-0.10	[-0.31, 0.10]	
Step II				0.03
Dismissive Attachment Orientation (14)	-0.12	-0.06	[-0.28, 0.15]	
Mother Valuing of Social Consideration (16)	0.09	0.05	[-0.17, 0.28]	
Step III				0.08
Dismissive Attachment x Mom Valuing of Social Consideration	-0.25*	-0.25*	[-0.48, -0.01]	

Note. Numbers in parenthesis indicate ages at which participants were assessed.
* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 11.
Predicting Romantic Partner Sacrifice Harmfulness from Dismissive Attachment Orientations and Teen Valuing of Social Consideration.

	Romantic Partner Perception of Sacrifice Harmfulness (23-25)			
	β initial	β final	95% CI	R^2
Step I				0.01
Gender	-0.12	-0.19	[-0.38, 0.009]	
Income	-0.07	-0.10	[-0.28, 0.08]	
Step II				0.04
Dismissive Attachment Orientation (14)	-0.09	-0.06	[-0.27, 0.14]	
Teen Valuing of Social Consideration (16)	0.13	0.08	[-0.13, 0.29]	
Step III				0.10
Dismissive Attachment x Teen Valuing of Social Consideration	0.23*	0.23*	[0.03, 0.43]	

Note. Numbers in parenthesis indicate ages at which participants were assessed.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 12.

Predicting Romantic Partner Sacrifice Frequency from Secure Attachment Orientations and Maternal Valuing of Self Direction.

	Romantic Partner Sacrifice Frequency (23-25)			
	β initial	β final	95% CI	R^2
Step I				0.03
Gender	-0.17	-0.14	[-0.32, 0.04]	
Income	0.26	-0.07	[-0.29, 0.15]	
Step II				0.06
Secure Attachment Orientation (14)	0.08	-0.01	[-0.23, 0.21]	
Mother Valuing of Self Direction (16)	0.19	0.25*	[0.01, 0.47]	
Step III				0.14
Secure Attachment x Maternal Valuing of Self Direction	-0.25*	-0.25*	[-0.47, -0.03]	

Note. Numbers in parenthesis indicate ages at which participants were assessed.
 * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 13.

Predicting Individual Sacrifice Frequency from Dismissive Attachment Orientations and Maternal Valuing of Self Direction.

	Individual Sacrifice Frequency (23-25)			
	β initial	β final	95% CI	R^2
Step I				0.05
Gender	-0.12	-0.08	[-0.27, 0.11]	
Income	-0.19*	0.00	[-0.25, 0.25]	
Step II				0.07
Dismissive Attachment Orientation (14)	-0.02	0.04	[-0.19, 0.27]	
Mother Valuing of Self Direction (16)	-0.23	-0.21	[-0.48, 0.04]	
Step III				0.12
Dismissive Attachment x Mom Valuing of Self Direction	0.23*	0.23*	[0.01, 0.46]	

Note. Numbers in parenthesis indicate ages at which participants were assessed.
* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 14.

Predicting Relative Changes in Individual Positive Communication from Secure Attachment Orientations and Individual Sacrifice Frequency.

	Individual Positive Communication (26-28)			
	β initial	β final	95% CI	R^2
Step I				0.04
Gender	-0.09	-0.12	[-0.29, 0.06]	
Income	0.17	0.23**	[0.06, 0.41]	
Step II				0.19
Individual Positive Communication (23-25)	0.38***	0.31***	[0.12, 0.51]	
Step III				0.27
Secure Attachment (14)	0.03	0.05	[-0.14, 0.24]	
Individual Sacrifice Frequency (23-25)	0.25*	0.24*	[0.03, 0.46]	
Step IV				0.33
Secure Attachment x Individual Sacrifice Frequency	0.28**	0.28**	[0.07, 0.48]	

Note. Numbers in parenthesis indicate ages at which participants were assessed.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 15.

Predicting Relative Changes in Individual Positive Communication from Dismissive Attachment Orientations and Individual Sacrifice Frequency.

	Individual Positive Communication (26-28)			
	β initial	β final	95% CI	R^2
Step I				0.04
Gender	-0.09	-0.11	[-0.28, 0.07]	
Income	0.17	0.25**	[0.08, 0.43]	
Step II				0.19
Individual Positive Communication (23-25)	0.38***	0.32***	[0.13, 0.52]	
Step III				0.27
Dismissive Attachment (14)	0.02	0.02	[-0.17, 0.22]	
Individual Sacrifice Frequency (23-25)	0.25*	0.23*	[0.01, 0.45]	
Step IV				0.32
Dismissive Attachment x Teen Sacrifice Frequency	-0.22*	-0.22*	[-0.43, -0.02]	

Note. Numbers in parenthesis indicate ages at which participants were assessed.
* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 16.

Predicting Relative Changes in Romantic Partner Relationship Satisfaction from Secure Attachment Orientations and Individual Sacrifice Frequency.

	Romantic Partner Relationship Satisfaction (26-28)			
	β initial	β final	95% CI	R^2
<u>Step I</u>				
Gender	0.08	0.05	[-0.14, 0.25]	0.03
Income	0.17	0.05	[-0.16, 0.26]	
<u>Step II</u>				
Romantic Partner Relationship Satisfaction (23-25)	0.13	0.13	[-0.10, 0.36]	0.04
<u>Step III</u>				
Secure Attachment (14)	0.15	-0.14	[-0.06, 0.34]	0.08
Individual Sacrifice Frequency (23-25)	-0.12	-0.24*	[-0.47, -0.01]	
<u>Step IV</u>				
Secure Attachment x Individual Sacrifice Frequency	0.27*	0.27*	[0.04, 0.49]	0.14

Note. Numbers in parenthesis indicate ages at which participants were assessed.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 17.

Predicting Relative Changes in Individual Negative Communication from Secure Attachment Orientations and Individual Perceptions of Sacrifice Harmfulness.

	Individual Negative Communication (26-28)			R^2
	β initial	β final	95% CI	
Step I				0.01
Gender	0.06	-0.00	[-0.17, 0.17]	
Income	-0.10	0.16	[-0.01, 0.34]	
Step II				0.31
Individual Negative Communication (23-25)	0.59***	0.53***	[0.36, 0.70]	
Step III				0.36
Secure Attachment (14)	-0.16	-0.15	[-0.33, 0.03]	
Individual Perception of Sacrifice Harmfulness (23-25)	0.19*	0.28**	[0.09, 0.48]	
Step IV				0.39
Secure Attachment x Individual Perception of Sacrifice Harmfulness	-0.21*	-0.21*	[-0.42, -0.01]	

Note. Numbers in parenthesis indicate ages at which participants were assessed.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 18.

Predicting Relative Changes in Romantic Partner Negative Communication from Secure Attachment Orientations and Romantic Partner Perceptions of Sacrifice Harmfulness.

	Romantic Partner Negative Communication (26-28)			R^2
	β initial	β final	95% CI	
Step I				0.01
Gender	0.06	-0.001	[0.90, -0.16]	
Income	-0.10	0.12	[-0.05, 0.28]	
Step II				0.31
Romantic Partner Negative Communication (23-25)	0.59***	0.59***	[0.44, 0.73]	
Step III				0.36
Secure Attachment (14)	-0.16	-0.24**	[-0.41, -0.69]	
Romantic Partner Perception of Sacrifice Harmfulness (23-25)	0.11	0.28**	[0.08, 0.48]	
Step IV				0.49
Secure Attachment x Romantic Partner Perception of Sacrifice Harmfulness	-0.32***	-0.32***	[-0.52, -0.12]	

Note. Numbers in parenthesis indicate ages at which participants were assessed.
* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 19.

Predicting Relative Changes in Individual Negative Communication from Dismissive Attachment Orientations and Romantic Partner Perception of Sacrifice Harmfulness.

Individual Negative Communication (26-28)				
	β initial	β final	95% CI	R^2
Step I				0.01
Gender	0.06	0.01	[-0.15, 0.16]	
Income	-0.10	0.11	[-0.05, 0.28]	
Step II				0.32
Individual Negative Communication (23-25)	0.59***	0.59***	[0.45, 0.74]	
Step III				0.35
Dismissive Attachment (14)	0.14	0.21*	[0.04, 0.39]	
Romantic Partner Perception of Sacrifice Harmfulness (23-25)	0.11	0.22*	[0.04, 0.41]	
Step IV				0.48
Dismissive Attachment x Romantic Partner Perception of Sacrifice Harmfulness	0.30***	0.30***	[0.12, 0.48]	

Note. Numbers in parenthesis indicate ages at which participants were assessed.
* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 20.

Predicting Relative Changes in Individual Negative Communication from Preoccupied Attachment Orientations and Romantic Partner Perception of Sacrifice Harmfulness.

	Individual Negative Communication (26-28)			
	β initial	β final	95% CI	R^2
Step I				0.01
Gender	0.05	-0.05	[-0.22, 0.12]	
Income	-0.10	0.13	[-0.04, 0.30]	
Step II				0.31
Individual Negative Communication (23-25)	0.59***	0.59***	[0.45, 0.75]	
Step III				0.34
Preoccupied Attachment (14)	0.16***	0.15	[-0.02, 0.32]	
Romantic Partner Perception of Sacrifice Harmfulness (26-28)	0.08	0.12	[-0.07, 0.30]	
Step IV				0.43
Preoccupied Attachment x Romantic Partner Perception of Sacrifice Harmfulness	0.22**	0.22**	[0.05, 0.41]	

Note. Numbers in parenthesis indicate ages at which participants were assessed.
* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 21.

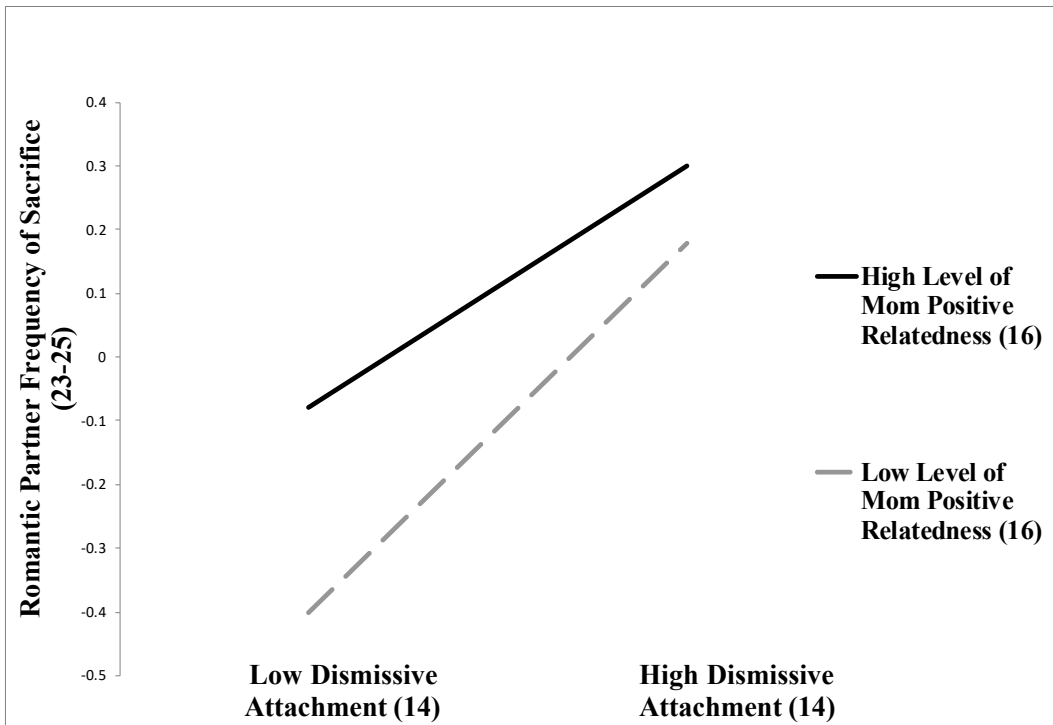
Predicting Relative Changes in Individual Negative Communication from Preoccupied Attachment Orientations and Individual Perception of Sacrifice Harmfulness.

	Individual Negative Communication (26-28)			
	β initial	β final	95% CI	R^2
Step I				0.01
Gender	0.06	-0.07	[-0.24, 0.09]	
Income	-0.10	0.17*	[-0.002, 0.34]	
Step II				0.31
Individual Negative Communication (23-25)	0.59***	0.45***	[0.25, 0.63]	
Step III				0.36
Preoccupied Attachment (14)	0.17*	0.18*	[0.02, 0.360]	
Teen Perception of Sacrifice Harmfulness (26-28)	0.18*	0.29**	[0.11, 0.48]	
Step IV				0.41
Preoccupied Attachment x Individual Perception of Sacrifice Harmfulness	0.28**	0.28**	[0.08, 0.47]	

Note. Numbers in parenthesis indicate ages at which participants were assessed.
* $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 1.

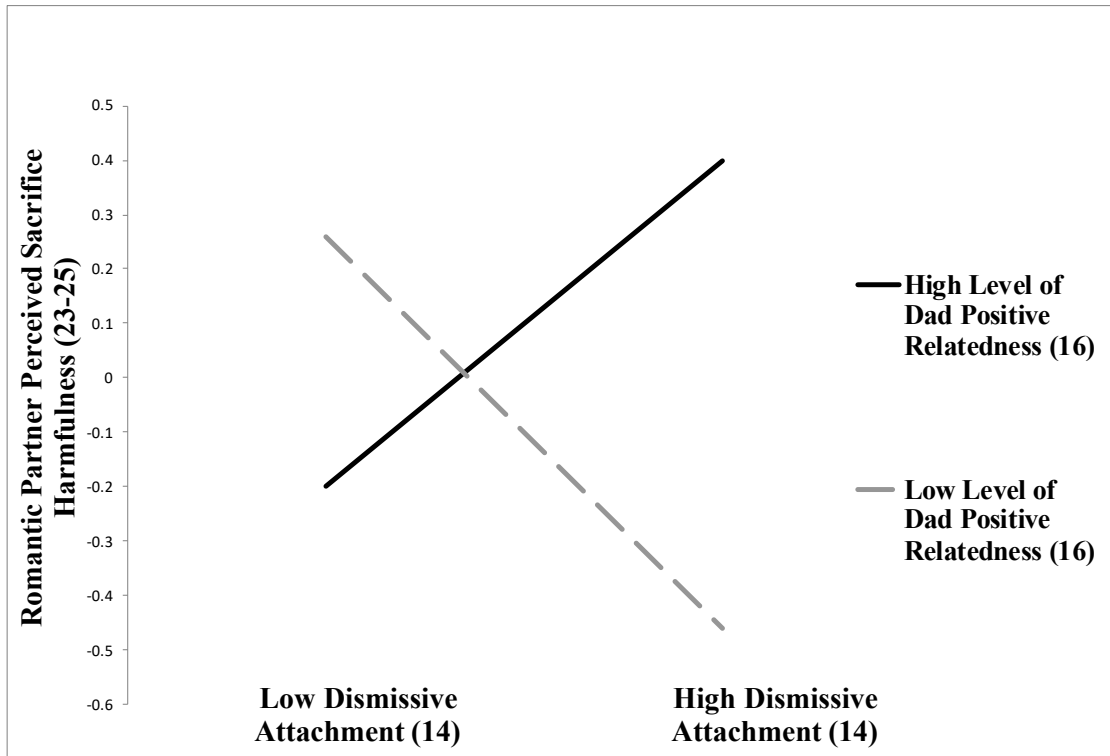
Interaction between Dismissive Attachment Orientation and Maternal Promotion of Positive Relatedness Behaviors on Romantic Partner Sacrifice Frequency.



Note. High and low represent one standard deviation above or below the means.

Figure 2.

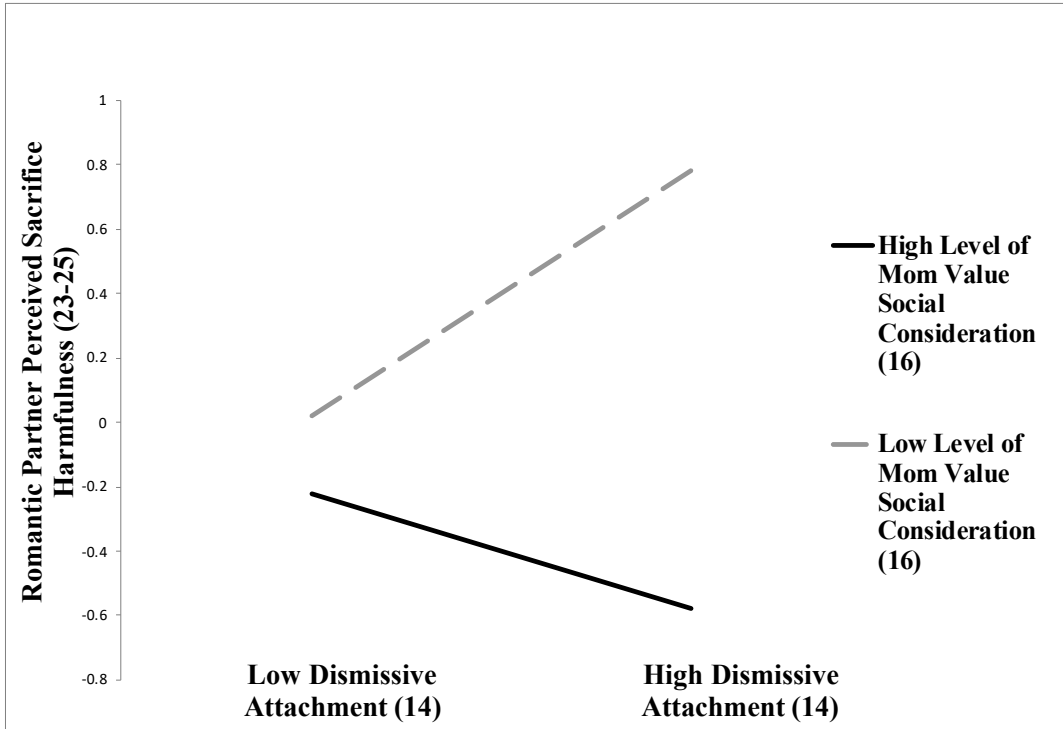
Interaction between Dismissive Attachment Orientation and Paternal Promotion of Positive Relatedness Behaviors on Romantic Partner Perception of Sacrifice Harmfulness.



Note. High and low represent one standard deviation above or below the means.

Figure 3.

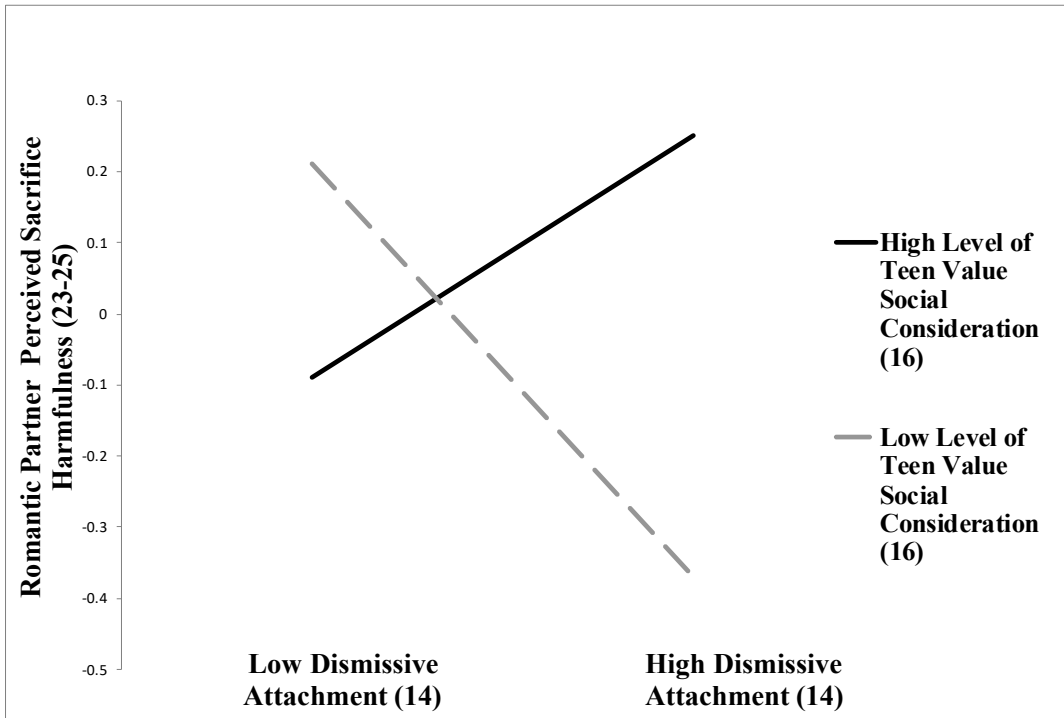
Interaction between Dismissive Attachment Orientation and Maternal Valuing of Social Consideration on Romantic Partner Perception of Sacrifice Harmfulness.



Note. High and low represent one standard deviation above or below the mean.

Figure 4.

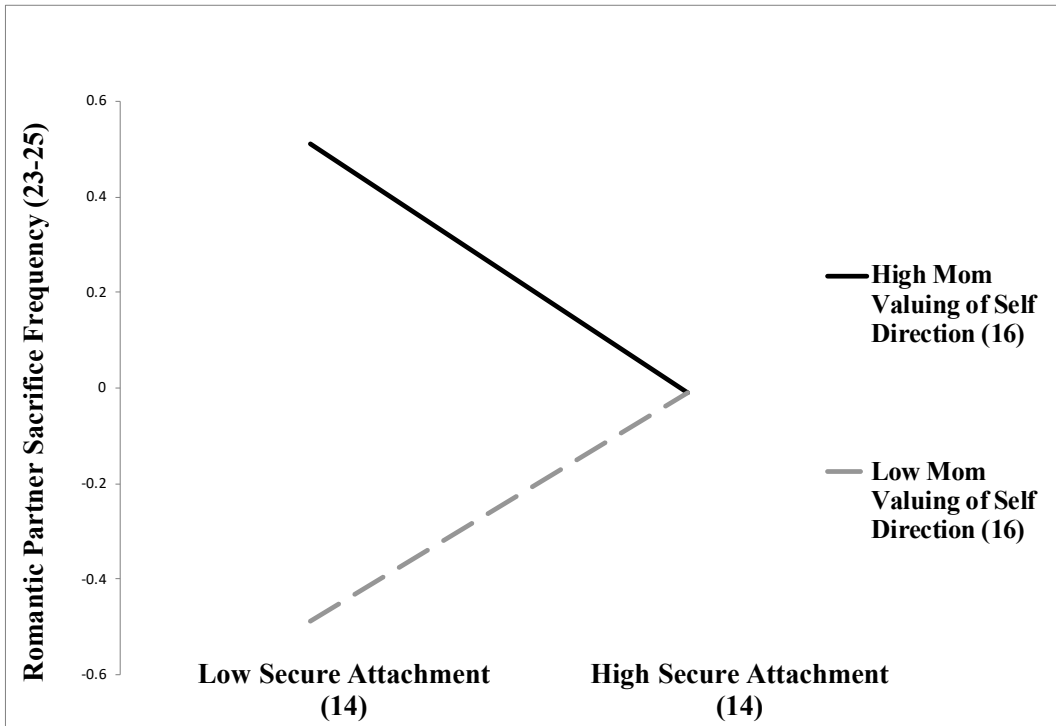
Interaction of Dismissive Attachment Orientation and Teen Valuing of Social Consideration on Romantic Partner Perception of Sacrifice Harmfulness.



Note. High and low represent one standard deviation above or below the mean.

Figure 5.

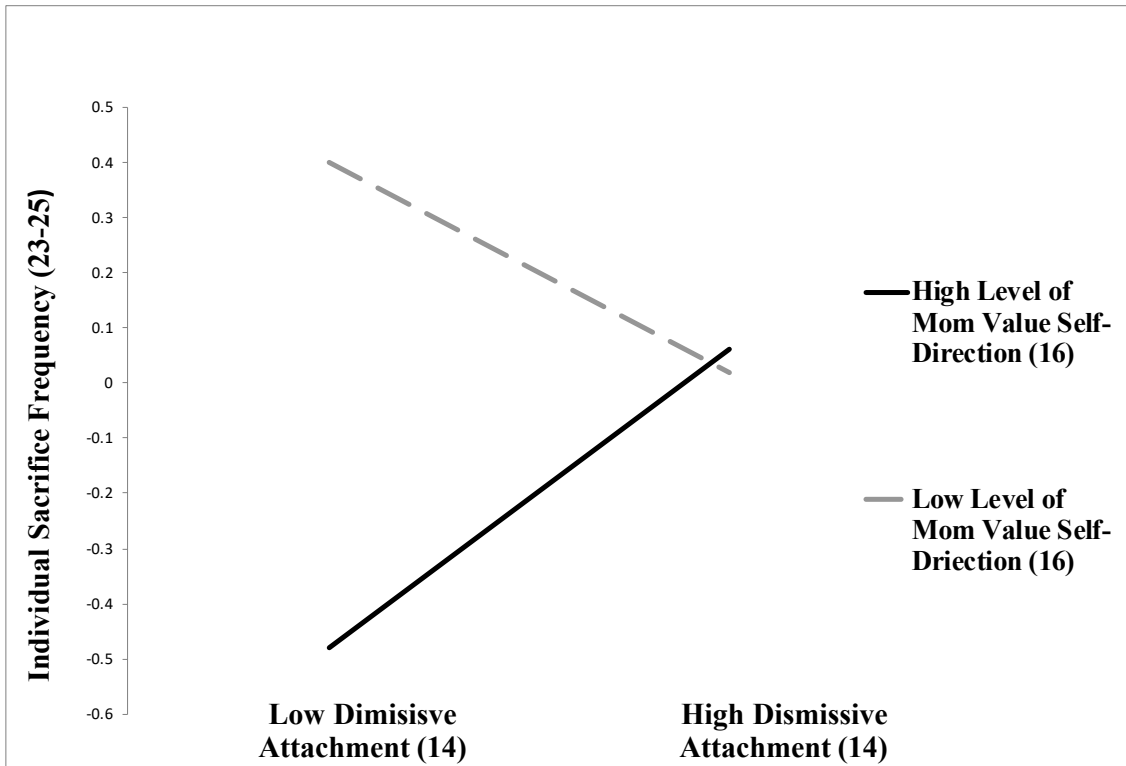
Interaction of Secure Attachment Orientation and Maternal Valuing of Self Direction on Romantic Partner Sacrifice Frequency.



Note. High and low represent one standard deviation above or below the mean.

Figure 6.

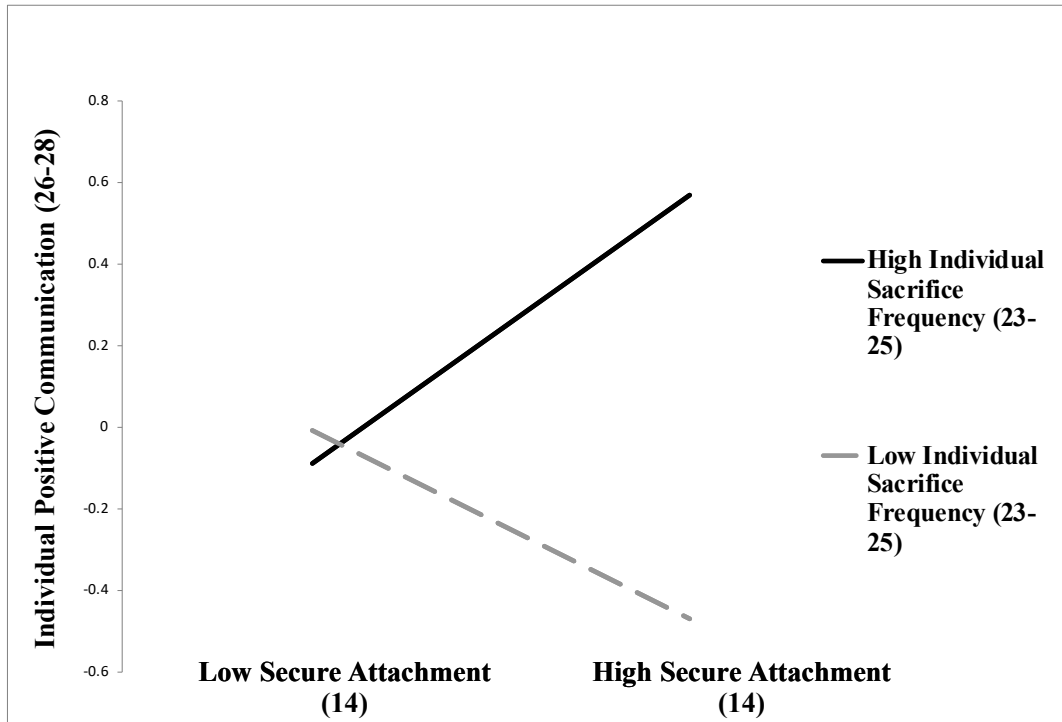
Interaction between Dismissive Attachment Orientation and Maternal Valuing of Self-Direction on Individual Sacrifice Frequency.



Note. High and low represent one standard deviation above or below the mean.

Figure 7.

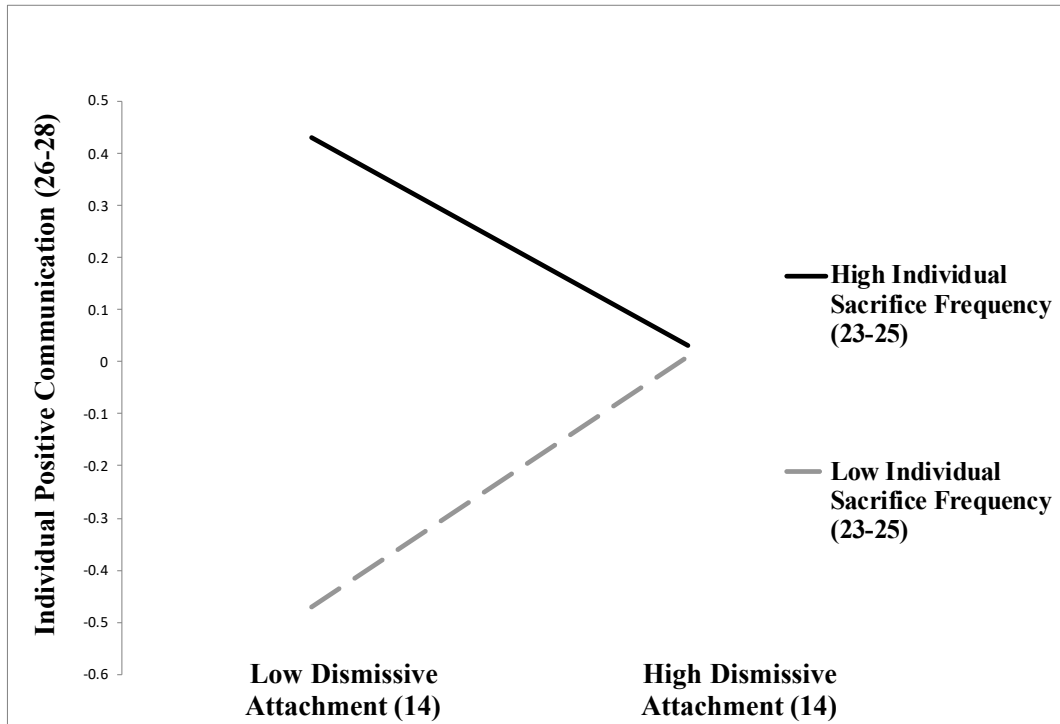
Interaction between Secure Attachment Orientation and Individual Sacrifice Frequency on Individual Positive Communication.



Note. Analysis controlled for outcome variables at age 23-25. High and low represent one standard deviation above or below the means

Figure 8.

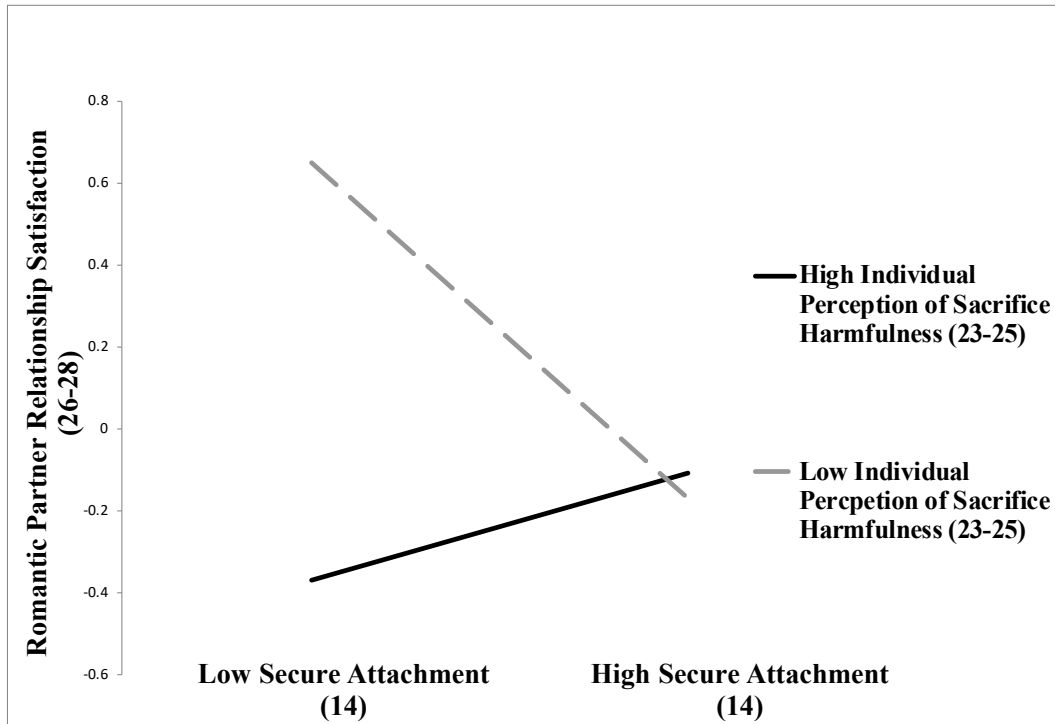
Interaction between Dismissive Attachment Orientation and Individual Sacrifice Frequency on Individual Positive Communication.



Note. Analysis controlled for outcome variables at age 23-25. High and low represent one standard deviation above or below the mean.

Figure 9.

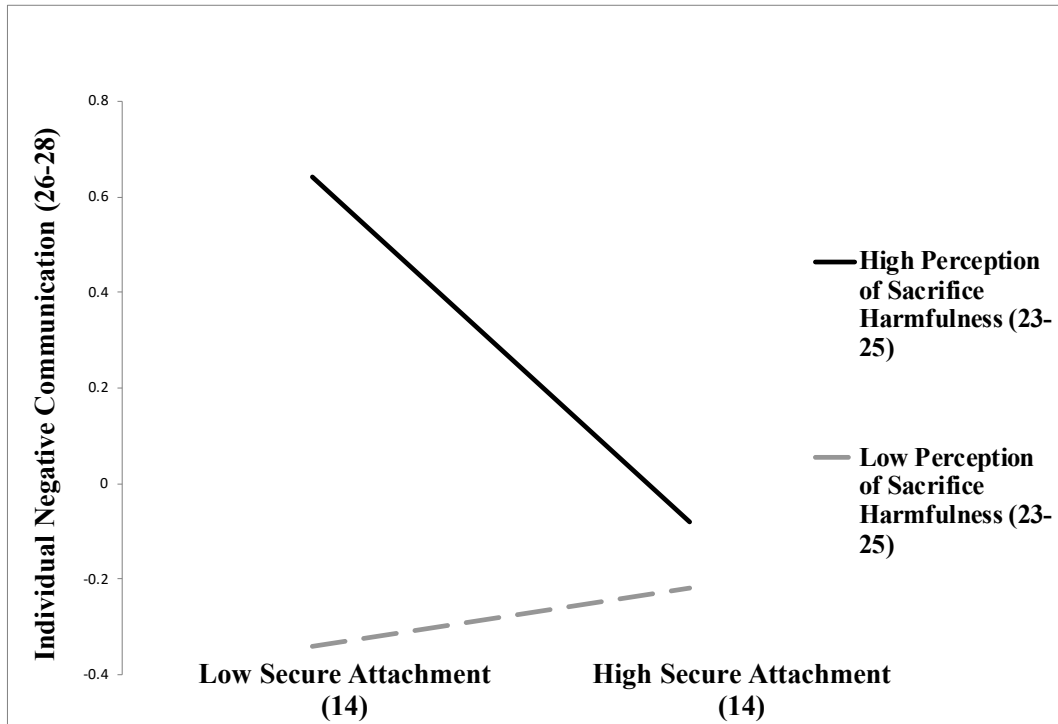
Interaction between Secure Attachment Orientation and Individual Perception of Sacrifice Harmfulness on Romantic Partner Relationship Satisfaction.



Note. Analysis controlled for outcome variables at age 23-25. High and low represent one standard deviation above or below the mean.

Figure 10.

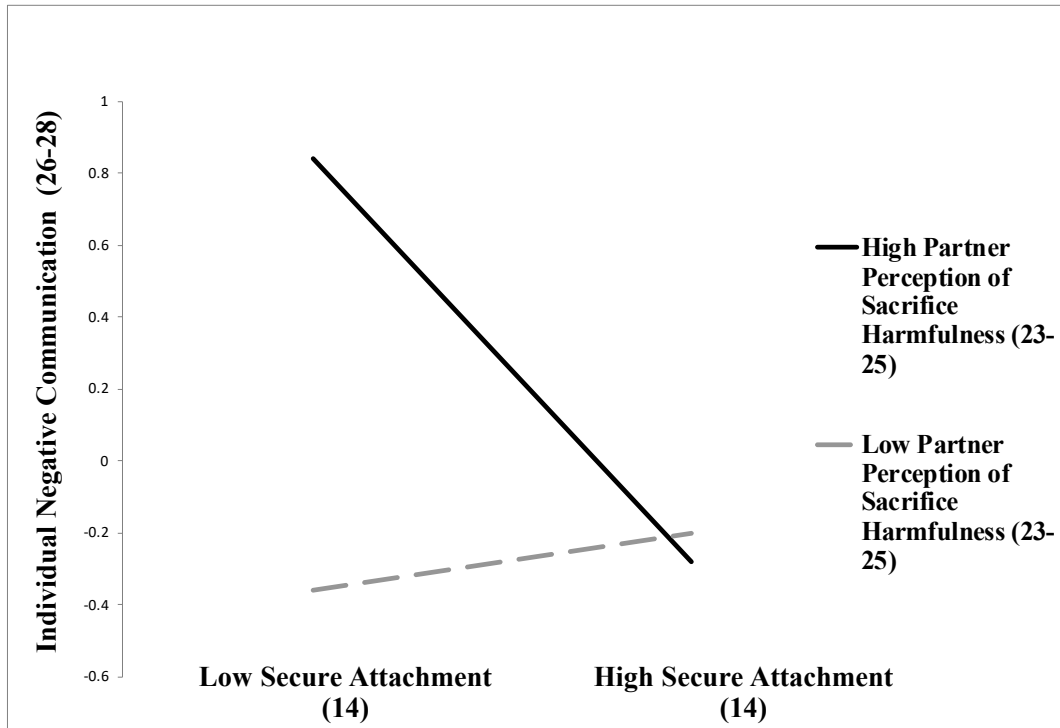
Interaction between Secure Attachment Orientation and Individual Perception of Sacrifice Harmfulness on Individual Negative Communication.



Note. Analysis controlled for outcome variables at age 23-25. High and low represent one standard deviation above or below the mean.

Figure 11.

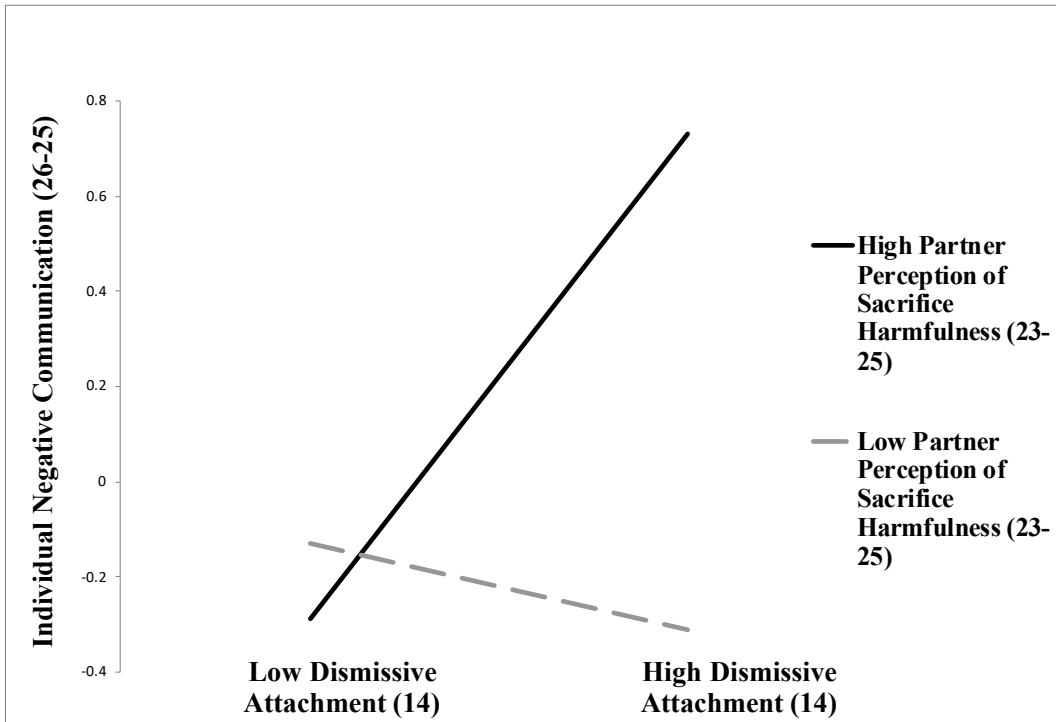
Interaction between Secure Attachment Orientation and Romantic Partner Perception of Sacrifice Harmfulness on Individual Negative Communication.



Note. Analysis controlled for outcome variables at age 23-25. High and low represent one standard deviation above or below the mean.

Figure 12.

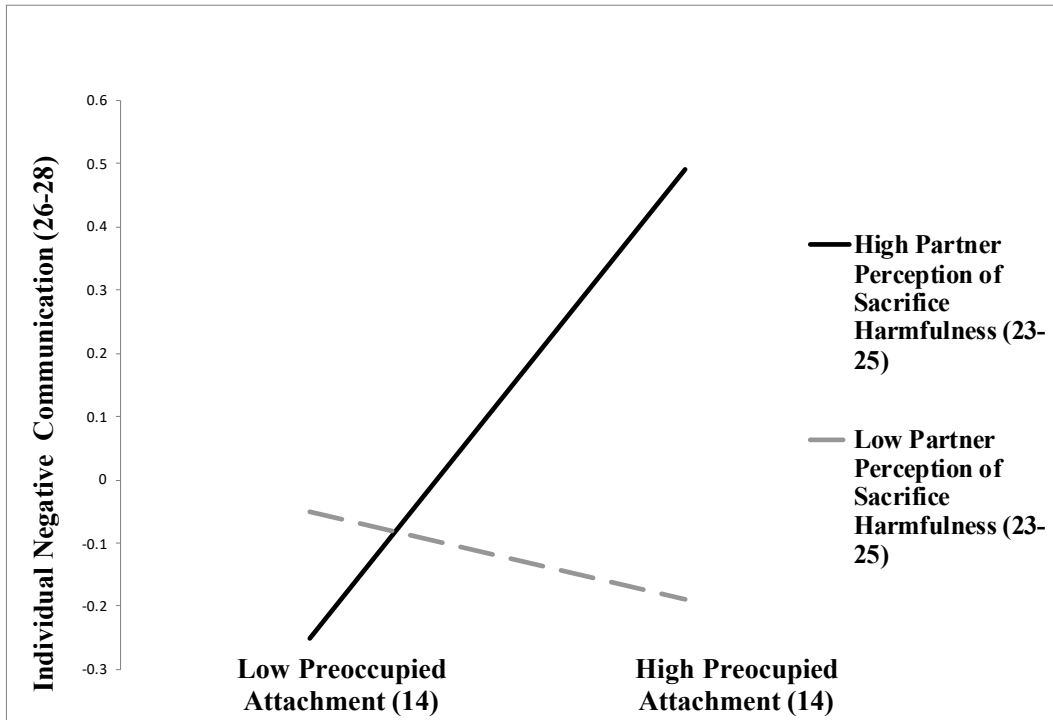
Interaction between Dismissive Attachment Orientation and Romantic Partner Perception of Sacrifice Harmfulness on Individual Negative Communication.



Note. Analysis controlled for outcome variables at age 23-25. High and low represent one standard deviation above or below the mean.

Figure 13.

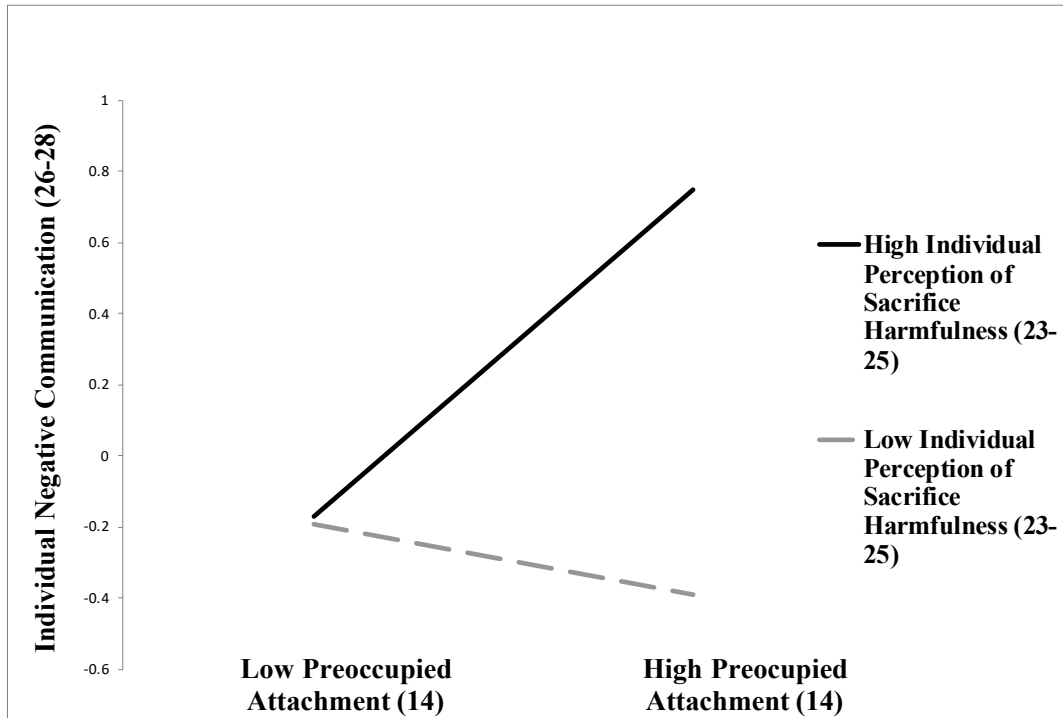
Interaction between Preoccupied Attachment Orientation and Romantic Partner Perception of Sacrifice Harmfulness on Individual Negative Communication.



Note. Analysis controlled for outcome variables at age 23-25. High and low represent one standard deviation above or below the mean.

Figure 14.

Interaction between Preoccupied Attachment Orientation and Individual Perception of Sacrifice Harmfulness on Individual Negative Communication.



Note. Analysis controlled for outcome variables at age 23-25. High and low represent one standard deviation above or below the mean.

References

- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Lawrence Erlbaum.
- Allen, J.P., Aber, J.L., & Leadbeater, B.J. (1990). Adolescent problem behaviors: The influence of attachment and autonomy. *Psychiatric Clinics of North America*, *13*, 455-467.
- Allen, J.P., Hauser, S., Bell, K., & O'Connor, T. G. (1994). Longitudinal assessment of autonomy and relatedness in adolescent-family interactions as predictors of adolescent ego-development and self-esteem. *Child Development*, *65*, 179-194.
- Allen, J.P. & Hauser, S.T. (1996). Autonomy and relatedness in adolescent-family interactions as predictors of young adults' states of mind regarding attachment. *Development and Psychopathology*, *8*, 793-809.
- Allen, J.P. Hauser, S., Bell, K. L., Boykin, K.A., & Tate, D.C. (1996). *Autonomy and relatedness coding system manual*. Unpublished manuscript. University of Virginia, Charlottesville.
- Bakermans-Kranenburg, M.J., & van IJzendoorn, M. H. (1993). A psychometric study of the Adult Attachment Interview: Reliability and discriminant validity. *Developmental Psychology*, *29*(5), 870-879.
- Bartholomew, K. & Horowitz, L.M. (1991). Attachment styles among young adults: A test of four-category model. *Journal of Personality and Social Psychology*, *61*(2), 226-244.
- Beck, A. T., & Steer, R. A. (1987). *Beck Depression Inventory Manual*. New York: Psychological Corporation.
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression*. New York: Guilford Press.
- Benoit, D., & Parker, K. C. (1994). Stability and transmission of attachment across three generations. *Child Development*, *65*, 1444-1456.
- Bowlby, J. (1969). *Attachment and loss. Vol 1: Attachment*. New York, NY: Basic Books.
- Bowlby, J. (1973). *Attachment and loss. Vol. 2: Separation: anxiety and anger*. New York, NY: Basic Books.

- Carlson, E. A. (1989). *Individual differences in quality of representational organization of attachment of high risk adolescent mothers*. Unpublished doctoral dissertation, Columbia University, New York, New York.
- Cassidy, J. (1994). Emotion regulation: influences of attachment relationships. *Monographs of the Society for Research in Child Development*, 59 (2/3), 228-249.
- Crockett, L.J. & Randall, B.A. (2006). Linking adolescent family and peer relationships to the quality of young adult romantic relationships: The mediating role of conflict tactics. *Journal of Social and Personal Relationships* 23(5), 761-780.
- Eisenberg, N., Fabes, R.A. & Spinrad, T.L. (2007). Prosocial development. *Handbook of Child Psychology*.
- Eisenberg, N., Morris, A., McDaniel, B., & Spinrad, T. (2009). Moral cognitions and prosocial responding in adolescence. In R. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology* (3rd ed., Vol. 1, pp. 229-265). New York: Wiley.
- Frazier, P.A., Byer, A. L, Fischer, A.R., Wright, D.M. & DeBord, K.A. (1996). Adult attachment style and partner choice: Correlational and experimental findings. (1996). *Personal Relationships*, 3(2), 117–136.
- Furman, W. & Buhrmester, D. (1985). Children's perceptions of the personal relationships in their social networks. *Developmental Psychology* 21, 1016-1022.
- George, C., Kaplan, N., & Main, M. (1985). *The Attachment Interview for Adults*. Unpublished manuscript, University of California, Berkeley.
- Greenberg, M.T., Siegel, J.M. & Leitch, C.J. (1983). The Nature and importance of attachment relationships to parents and peers during adolescence. *Journal of Youth and Adolescence* 12(5).
- Greenberg, G.C. & Greenberg, M.T. (1987). The Inventory of parent and peer attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence* 16(5), 427-454.
- Hastings, P.D., Utendale, W.T. & Sullivan, C. (2007). The Socialization of prosocial development. In J.E. Grusec and P.D. Hastings (Ed.). *Handbook of Socialization: Theory and Research*. New York : Guilford Publications.
- Hazan, C. & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52(3), 511-524.
- Hudson, N.W., Fraley, C., Chopik, W.J. & Heffernan M.E. (2015). Not all attachment relationships develop alike: Normative cross-sectional age trajectories in attachment to

romantic partners, best friends, and parents. *Journal of Research in Personality* 59, 44-55.

Ingulia, C., Ingoglia, S., Liga, F., Lo Coco, A. & Lo Cricchio, M.G. (2015). Autonomy and relatedness and emerging adulthood: relationships with parental support and psychological distress. *Journal of Adult Development*, 22, 1-13.

Impett, A. & Gordon, A. (2010). Why do people sacrifice to approach rewards versus to avoid costs? Insights from attachment theory. *Personal Relationships*, 17(2).

Impett, E. A., Kogan, A., English, T., John, O., Oveis, C., Gordon, A., & Keltner, D. (2012). Suppression sours sacrifice: Emotional and relational costs of suppressing emotions in romantic relationships. *Personality and Social Psychology Bulletin*, 38, 707-720.

Jack, D. C. (1991). *Silencing the self: Women and depression*. Harvard University Press.

Jolly, H. B., Wiesner, D.C., Wherry, J. N., Jolly, J. M. (1994). Gender and the comparison of self and observer ratings of anxiety and depression in adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, 33, 1284-1288.

Kelley, H. H., & Thibaut, J. (1978). *Interpersonal relations: A theory of interdependence*. New York: Wiley.

Kelley, H. H. (1979). *Personal relationships: Their structures and processes*. Hillsdale, NJ: Erlbaum.

Kohn, M.L. (1969). *Class and conformity: A study in values*. Homewood, IL: Dorsey Press.

Kuster, M., Bernecker, K., Backes, S., Brandstätter, V., Nussbeck, F. W., Bradbury, T. N., Martin, M., Sutter-Stickel, D., & Bodenmann, G. (2015). Avoidance orientation and the escalation of negative communication in intimate relationships. *Journal of Personality and Social Psychology*, 109(2), 262-275.

Laursen, B. & Collins, W.A. (2009). Parent-child relationships during adolescence. In R. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology* (3rd ed., Vol. 2, pp. 3-42). New York: Wiley.

Main, M., Kaplan, N. & Cassidy, J. (1985). Security in infancy, childhood and adulthood: A move to the level of representation. *Monographs of the Society of Research in Child Development*, 50(1/2), 66 -104.

Malti, T., Gummerum, M., Keller, M., Buchmann, M. (2009). Children's moral motivation, sympathy and prosocial behavior. *Child Development*, 80(2), 442-460.

McElhaney, K. B., Allen, J. P., Stephenson, J. C., & Hare, A. L. (2009). Attachment and autonomy during adolescence. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of*

adolescent psychology: Individual bases of adolescent development (p. 358–403). John Wiley & Sons Inc.

Mikulincer, M., & Shaver, P.R. (2007). *Attachment in adulthood: Structure, dynamics and change*. New York, NY: Guilford Press.

Mikulincer, M., & Shaver, P. R. (2009). Does gratitude promote prosocial behavior? The moderating role of attachment security. In M. Mikulincer & P. R. Shaver (Eds.), *Prosocial motives, emotions, and behavior: The better angels of our nature* (p. 267–283). American Psychological Association.

Mikulincer, M., & Shaver, P. R. (2015). An attachment perspective on prosocial attitudes and behavior. In D. A. Schroeder & W. G. Graziano (Eds.), *Oxford library of psychology. The Oxford handbook of prosocial behavior* (p. 209–230). Oxford University Press.

Moretti, M. M., & Peled, M. (2004). Adolescent-parent attachment: Bonds that support healthy development. *Pediatrics & Child health, 9*(8), 551–555.

Oudekerk, B.A., Allen, P.A., Hessel, E.T. & Molloy, L.E. (2014). The Cascading development of autonomy and relatedness from adolescence to adulthood. *Child Development, 86*(2), 472-485.

Overall, N.C., Girme, Y.U., Lemay, E.P. Jr. & Hammond, M.D. (2014). Attachment anxiety and relations to relationship threat: The benefits and costs of inducing guilt in romantic partners. *Personality and Social Psychology 106*(2), 235-256.

Pavey, L., Greitmeyer, T. & Sparks, P. (2011). Highlighting relatedness promotes prosocial motives and behavior. *Personality and Social Psychology Bulletin 37*(7), 905-917.

Rankin-Esquer, L.A., Burnett, C.K., Baucom, D.H. & Epstein, N. (2007). Autonomy and relatedness in marital functioning. *Journal of Marital and Family Therapy, 23*(2), 175-190.

Righetti, F., Luchies, L.B., van Gils, S., Slotter, E.B., Witcher, B. & Kumashiro, M. (2015). The Prosocial versus proself power holder: How power influences sacrifice in romantic relationships. *Personality and Social Psychology Bulletin, 41*(6), 779-790.

Righetti, F. & Impett, E. (2017). Sacrifice in close relationships: Motives, emotions and relationship outcomes. *Social and Personality Psychology Compass, 1*-11.

Ruppel, E. K., & Curran, M. A. (2012). Relational sacrifices in romantic relationships: Satisfaction and the moderating role of attachment. *Journal of Social and Personal Relationships, 29*(4), 508–529.

- Schaefer, E.S. & Edgerton, M. (1985). Parent and child correlates of parental modernity. In I.E. Sigel (Ed.) *Parental belief systems: The psychological consequences for children* (pp. 287-318). Hillsdale, NJ: Lawrence Erlbaum Assoc.
- Schumaker, D.M., Deutsch, R.M., & Brenninkmeyer, L. (2009). How do I connect? Attachment issues in adolescence. *Journal of Child Custody*, 6, 91-112.
- Sommerfeld, E. (2010). The subjective experience of generosity. In M. Mikulincer & P. R. Shaver (Eds.), *Prosocial motives, emotions, and behavior: The better angels of our nature* (p. 303–323). American Psychological Association.
- Sroufe, L.A. (2005). Attachment and development: A prospective, longitudinal study from birth to adulthood. *Attachment & Human Development*, 7(4), 349-367.
- Stanley, S.M., Whitton, S.W., Sadberry, S.L., Clements, M.L. & Markman H.J. (2006). Sacrifice as a predictor of marital outcomes. *Family Processes*, 45(3).
- Steer, R. A., Beck, A. T., & Garrison, B. (1985). Applications of the Beck Depression Inventory. In N. Sartorius & T. A. Ban (Eds.), *Assessment of depression* (pp.121-142), New York: Springer-Verlag.
- Steinberg, L.A. (2020). *Adolescence: Twelfth Edition*. McGraw Hill Education.
- Van Lange, P.A.M., Rusbult, C.E., Drigotas, S.M., Arriaga, X.B., Witcher, B.S. & Cox, C.L. (1997). Willingness to sacrifice in close relationships. *Journal of Personality and Social Psychology*, 72(6), 1373-1395.
- Waters, E., Wippman, J. & Sroufe, L.A. (1979). Attachment, positive affect and competence in peer group: Two studies in construct validation. *Child Development*, 50(3), 821-829.
- Waters, E., Merrick S, Treboux D., Crowell, J. & Albersheim L. (2000). Attachment security in infancy and early adulthood: A Twenty-year longitudinal study. *Child Development*, 71(3), 684-689.
- Whitbeck, L.V. & Gecas, V. (1988). Value attributions and value transmission between parents and children. *Journal of Marriage and Family*, 50(3), 829-840.
- Whitton, S.W., Stanley, S.M. & Markman, H.J. (2007). If I help my partner, will it hurt me? Perceptions of sacrifice in romantic relationships. *Journal of Social and Clinical Psychology*, 26, 64-92.
- Williams, S. K. & Kelley, D.F. (2005). Relationships among involvement, attachment, and behavioral problems in adolescence: Examining father's influence. *The Journal of Early Adolescence*, 25(2), 168-196.

Wieselquist, J., Rusbult, C. E., Foster, C. A., & Agnew, C. R. (1999). Commitment, pro-relationship behavior, and trust in close relationships. *Journal of Personality and Social Psychology*, 77(5), 942–966.

Wolfe, D.A., Reitzel-Jaffe, D., Gough, R., & Wekerle, C. (1994) *Conflicts in relationships: Measuring physical and sexual coercion among youth*. Unpublished manuscript. Available from the Youth Relationships Project, Department of Psychology, the University of Western Ontario, London, Canada, N6A 5C2.