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Temporal Relevance of Parent Qualities and Behaviors for Predicting Young Adults'

Emotion Regulation and Romantic Relationships

Saleena V. Wilson

A thesis submitted to the Graduate Faculty of

JAMES MADISON UNIVERSITY

In

Partial Fulfillment of the Requirements

for the degree of

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## Abstract

The present study sought to compare the utility of adolescents' parental relationship *qualities* and *behaviors* for predicting young adult emotion regulation as well as the mediating role of emotion regulation in the intergenerational transmission of relationship qualities and behaviors. Early adolescence is characterized by the emergence of new emotions, responsibilities, and budding romantic relationships. Parental relationships with positive *qualities* may provide a safe environment for teens to explore these unfamiliar experiences. In late adolescence, teens depend less on this secure base but benefit from the utilization of specific relationship *behaviors*, modeled to them by their parents, in increasingly important social and romantic relationships. Thus, relationship qualities and behaviors and emotion regulation likely also impact later romantic relationship functioning. A longitudinal, multi-method, and multi-reporter design was utilized in data collection to assess parent relationship qualities and behaviors in early and late adolescence, emotion regulation in young adulthood, and romantic relationship functioning in adulthood. A series of hierarchical multiple regression analyses revealed some evidence for a differential pattern of predictive utility of parent qualities and behaviors in early versus late adolescence. However, the direction of some relationships between parent relationship qualities and behaviors were unexpected. Evidence was less compelling regarding romantic relationships and the mediating role of emotion regulation. Future research may wish to further examine interparental relationships and peer relationships regarding opportunities for social and emotional learning. Implications for parenting and psychological practice are discussed.



## **Temporal Relevance of Parent Qualities and Behaviors for Predicting Young Adults' Emotion Regulation and Romantic Relationships**

Amid the demands of everyday life, emotion regulation plays an important role. Emotion regulation allows individuals to manage the cognitive and physiological responses that can be triggered by both extraordinary and routine stressors (Gross, 1998; Porges, 2007). Without the ability to moderate intense emotional reactions, acute emotional experiences can be damaging to individuals' physical and mental health and the quality of their relationships (Gross & Muñoz, 1995; Sapolsky, 2007; Tani et al., 2015). Indeed, emotion *dys*regulation represents a key feature of various psychiatric symptoms and disorders, in that it is defined by a pattern of these intense emotional experiences that interfere with goal directed behavior (Beauchaine & Gatzke-Kopp, 2012; Bradley et al., 2011). Because the need to regulate emotional experiences is so pervasive and vital across the lifespan, it represents an essential component of emotional development.

Emotional development takes place throughout childhood and into adolescence, though this process is not the same for everyone; individual differences including family environment, gender, culture, temperament, and peer and sibling relationships all play a part in each person's ability to accept, express, and manage emotions (Carrère & Bowie, 2012; Chaplin et al., 2005; Eisenberg et al., 1998; Fox & Calkins, 2003). While all the above-listed factors are meaningful, the effect of the family environment on emotional development is incredibly influential, in part, because of the large amount of time that children and adolescents spend in that environment. Further, while many of these above-mentioned factors are fixed, many elements of the family environment are sensitive to

change. Considering the relative impact that the family environment has, as well as the ability for clinicians to intervene within families to promote optimal child development, parent and familial factors, and their relationship with emotion regulation, are of particular interest to researchers.

Morris and colleagues (2007) introduced the tripartite model to outline exactly how parents and families contribute to child and adolescent development of emotion regulation. The authors posit three mechanisms through which children and adolescents learn about emotions: observation, emotion-related behaviors, and the family emotional climate. Specifically, children learn about emotions by observing emotion-related behaviors modeled to them by their parents (e.g., parent expressivity, emotion regulation strategies), based on the emotion-specific parenting behaviors of which they are on the receiving end (e.g., emotion coaching, reactions to children's emotions, teaching emotion regulation strategies), and in the context of the family emotional climate, which is, itself, affected by parenting style, parent-child attachment, and interparental relations (Morris et al., 2007). The value of understanding the ways in which parents impact the development of emotion regulation cannot be overstated. However, while lots of research has built on and supported the tripartite model, little research has compared these and other predictors of emotion regulation to determine which, and during what developmental periods, they may be most influential and perhaps therefore sensitive to intervention.

Given that a great deal of emotional development happens during childhood, much of the previous research on the topic has focused on this developmental period. Yet, developing emotion regulation in adolescence is crucial and warrants further study. The physical and cognitive growth that individuals undergo when entering adolescence is

consequential to practically all aspects of life (Eisenberg et al., 2010). With changes to the adolescent self come changes to their relationships with, and the expectations of, those around them. Early adolescence is fraught with complicated tasks like beginning to understand the unfamiliar world of romantic relationships, balancing responsibilities at home and in school, managing increasingly important social relationships, and handling newly influential social media (Christie & Viner, 2005; Meier & Allen, 2009).

Navigating these complicated tasks, and the distress that may come with them, would be challenging without the development of emotion regulation. Thus, the study of emotion regulation during adolescence, and factors which contribute to it, is crucial to understanding adolescent functioning in the midst of this complex transition laden with challenges.

Previous research supports the utility of parental relationships as a means of understanding and coping with the distress that accompanies the transition into adolescence. In early adolescence, an environment created by parental relationships with positive qualities allows teens to explore new emotions and experiences safely and comfortably (Henry, 1994). As adolescents grow and develop, however, they rely less on the secure base provided by their parents and more on their peer relationships for support (Hazan & Shaver, 1994; Morris et al., 2021). Though late adolescents do not have as great a need for this secure base, parental relationships still represent an essential source of emotional learning (Morris et al., 2017; Morris et al., 2021). The social-emotional behaviors that parents model in their marital and parent relationships provide a framework for how older adolescents may behave in their own romantic relationships (Bandura et al., 1961; Martin, 1990). The respective needs of early, as opposed to late,

adolescents, regarding the developmental tasks that teens are faced with, supports a differential pattern of temporal relevance from these factors to emotion regulation. Still, previous research has not yet examined these different needs as they relate to the development of emotion regulation. Rather, studies on the development of emotion regulation have primarily focused on childhood and early adolescence, under the assumption that the same parent and family factors affect emotion regulation from late childhood into adolescence, ignoring the vastly different needs and responsibilities of early adolescents compared to older adolescents.

The distinct emotional needs of early compared to late adolescents are well summarized by the differences between the respective romantic relationship experiences of individuals in these stages. In early adolescence, as individuals first begin to explore romantic relationships, their first interactions can be awkward due to this inexperience. However, with more familiarity, these relationships become a source of affiliation and companionship, marked by shared interests and time spent together (Berger et al., 2005; Furman & Wehner, 1994). As individuals mature into late adolescents, and they become more comfortable in their romantic relationships, and their relationships become more intimate, with communication marked by self-disclosure and support seeking becoming especially important (Feiring, 1999).

Though, for both early and late adolescents, socioemotional skills learned from parents prove to be important; emotion regulation, in particular, may be the vital skill that underlies romantic relationship satisfaction on both ends of adolescence. Accordingly, Kim and colleagues (2009) found that emotion dysregulation of parents in early adolescence had direct effects on the emotion dysregulation of sons in late adolescence,

which, in turn, had direct effects on sons' romantic relationship conflict in young adulthood. However, positive romantic relationship qualities are underrepresented in the literature, with most research primarily focused on the transmission of relationship conflict across generations. Few authors have explored links between emotion dysregulation and a lack of positive romantic relationship qualities; Tani and colleagues (2015) investigated and confirmed negative effects emotion dysregulation on intimacy in romantic relationships. Even so, more research on the ability of parents' positive relationship qualities to predict their children's subsequent relationship quality, as well as the role of emotional dysregulation, is warranted. Moreover, the transmission of positive, specific relationship behaviors has yet to be explored.

Normative socioemotional development provides some evidence to support that the strength of parental relationship qualities versus behaviors as predictors of later romantic relationship outcomes is dependent on the respective needs of early versus late adolescents in romantic relationships. Specifically, the different needs that are fulfilled by romantic relationships during each end of adolescence provide some evidence to support this idea. In early adolescence, affiliative romantic relationships are dependent on relationship quality and outside support to foster growth and success (Collins & Sroufe, 1999; Furman & Wehner, 1994). Parental relationships with positive qualities, like warmth, attachment, and agreement, may promote high quality affiliation and offer adolescents the support they require to navigate these relationships. Late adolescent, intimate romantic relationships, on the other hand, require specific skills for relationship growth and mutual partner satisfaction (Berger et al., 2005; Collins & Sroufe, 1999). Positive behaviors in parental relationships, like self-disclosure, support, communication,

engagement in joint activities, may promote the necessary skills for late adolescent romantic relationships (Feiring, 1999). To this date, however, there has been no research to explore specifically how parental relationship qualities and behaviors may be positive for later romantic relationship outcomes.

The current study seeks to fill these gaps in the literature. Comparisons between positive parental qualities and behaviors in early and late adolescence will be explored. Specifically, qualities of, and behaviors in, parents' relationships with one another and with their teen will be compared. Parental relationship qualities include parent-parent consensus and parent-teen valuing; parental relationship behaviors include parent-parent cohesion and parent-teen self-disclosure. Comparisons will be based on these factors' utility as predictors of later young-adult emotion regulation. Further, emotion regulation will be explored as a mediator in the relationship between parents' positive relationship qualities and behaviors and their children's subsequent romantic relationship qualities and behaviors.

### **Emotion Regulation Across Development**

The definition of emotion regulation has long been a topic of debate. What appears to be consistent across definitions, importantly, is that emotion regulation involves the management of internal emotion-related processes (Eisenberg et al., 2004). Still, some authors argue for the importance of intent (Thompson, 1994) and behavior in definitions of emotion regulation (Eisenberg et al., 1996; Gross, 2013). Perhaps one of the most comprehensive definitions of emotion regulation comes from Eisenberg and Spinrad (2004). These authors argue for an all-encompassing definition of emotion regulation that includes "initiating, avoiding, inhibiting, maintaining, or modulating the

occurrence, form, intensity, or duration of internal feeling states, emotion-related physiological, attentional processes, motivational states, and/or the behavioral concomitants of emotion,” (Eisenberg & Spinrad, 2004, p. 338). This comprehensive definition was not always the standard in emotion regulation research, however. The current path of emotion regulation research has been forged through many different directions, theoretical models, and perspectives.

Gross (1998, 2013), a researcher on the forefront of emotion regulation research, established perhaps one of the most referenced conceptualizations of emotion regulation with the process model, based on the modal model of emotion. The modal model of emotion posits that situations obtain individuals’ attention, compelling them to make appraisals of the situation, which elicit an emotional response (Gross, 2013). The process model of emotion regulation builds on this model by suggesting that, in each of the steps of the emotion elicitation process, there is opportunity for emotion regulation to take place. As such, the process model identifies five families of strategies through which individuals modulate their emotions: situation selection, situation modification, attentional deployment, cognitive change, and response modulation.

Within these response mechanism families lie the specific emotion regulation strategies that individuals enact to modify one of the steps of the emotion elicitation process. Examples of these specific strategies include avoidance, distraction and rumination, acceptance and cognitive reappraisal, and expressive suppression, representing the following mechanisms: situation selection, attentional deployment, cognitive change, and response modulation, respectively (McRae & Gross, 2020). These five greater mechanisms can be thought of as either antecedent or response focused

strategies (Gross, 1998). Antecedent strategies include those mechanisms which occur before a response is generated (i.e., situation selection, situation modification, attentional deployment, cognitive change), while the response focused strategies work to modify the response itself (Gross and Muñoz, 1995).

Gross and Muñoz (1995) were some of the first to argue for the widespread importance of emotion regulation, positing that emotion regulation plays an important role in everyday behavior across the lifespan. Over time, greater consensus regarding the importance of emotion regulation in mental and physical health outcomes resulted in more research on the construct. Some of this research has uncovered differences in the way that emotion regulation is socialized, and subsequently presents, across cultures. Though beyond the scope of this study, it is nevertheless important to note that researchers have uncovered differences in emotion regulation abilities based on differing attitudes, values, and behavioral conventions across cultures (e.g., Lamm et al., 2018).

This uptick in research on the construct also made it necessary to update the original process model. The extended process model (Gross, 2015) goes beyond the original model by delineating three overarching stages of the emotion regulation process: identification (whether to regulate the emotion), selection (how to regulate the emotion), and implementation (regulating the emotion). Further, the extended process model emphasizes the iterative nature of these emotion regulation processes, in which processes and situations are continuously monitored for success and the cycle continues.

While Gross' extended process model (2015) represents a more recent, but established, way of viewing emotion regulation, seminal psychological theorists like Freud (1961) with his psychodynamic theory, Erikson (1950) with the eight stages of



man, and early coping researchers (e.g., Folkman, 1984; Haan, 1963; Lazarus, 1966) also addressed the existence of self-regulatory processes. Notably, though, when emotion-specific regulation research gained traction, researchers primarily investigated emotion regulation in infancy and early childhood (Eisenberg et al., 2004). Emotion regulation in infancy and early childhood has likely captured the attention of researchers for a few reasons. First, a portion of the variability in emotion regulation can be attributed to inborn temperament and biology. In fact, researchers agree that emotion regulation, at a minimum, represents a key portion of what we typically define as temperament and, at a maximum, is synonymous with temperament (Cole et al., 2004; Kopala-Sibley et al., 2018). Further, researchers have found temperament to be present at birth and relatively stable through infancy (e.g., Bornstein et al., 2015; Casalin et al., 2012; Rothbart & Posner, 1985).

The existence of inborn, individual differences in regulation supports the contribution of a biological component to emotion regulation. Accordingly, studies have found this to be the case; suppression of vagal tone, or “the variability in heart rate that occurs at the frequency of breathing,” is commonly used as a measure of physiological regulation, indicative of biological, individual differences in emotion regulation (Fox & Calkins, 2003, p. 13). The study of these inborn differences is best conducted during early stages of development, when there has been little opportunity for alternate influences to have had an effect. This is because, as individuals mature from infancy to early childhood, their capacity for emotion regulation grows along with it.

As such, infants’ and children’s rapid cognitive development represents the second reason that a great deal of emotion regulation research happens during these

stages. Two of the five emotion regulation strategies (i.e., attentional deployment, cognitive change) identified by Gross (1998, 2013, 2015) involve active control of cognitive processes, and a third involves behavioral control, a higher-order skill that is made possible by certain cognitive developments. The cognitive abilities, like intentional direction of attention, executive functioning, self-awareness, and effortful control that make the employment of these strategies possible are not inborn like temperament, but begin to develop toward the end of the first year of life and continue developing throughout childhood (Fox & Calkins, 2003). Further, the development of these capacities, and emotion regulation, becomes all the more important from infancy into early childhood, as children first begin to manage more sophisticated social interactions outside of their family environments. Aply, researchers have found evidence to support a relationship between emotion regulation and social functioning; emotion regulation has been found to be both a positive predictor of social competence and a mediator in relationships between other predictors and children's social competence (e.g., Chang et al., 2012; Dollar & Stifter, 2012; Eisenberg et al., 2003; Monopoli & Kingston, 2012). Therefore, understanding emotion regulation capacities from infancy to early childhood may be of particular interest to researchers due to the cognitive developments that take place during this period, as well as their valuable implications for children's early social competence.

Some factors that contribute to emotional development, however, are not intrinsic at all. Consequently, the third reason emotion regulation research has historically and often focused on infancy and childhood relates to individuals' sensitivity to their environment during these stages, and, particularly, their family environment. In infancy,

the parent-child relationship offers individuals an initial, but formative, experience with social-emotional learning. Attachment theory, coined by Mary Ainsworth and John Bowlby (e.g., Ainsworth, 1989; Ainsworth & Bowlby, 1991; Bowlby, 1982), proposes a framework for understanding the nature of parent-child relationships from infancy to early childhood and longitudinal effects of these early relationships. Bowlby defines attachment behavior as “any form of behavior that results in attaining or maintaining proximity to some other clearly identified individual who is conceived as better able to cope with the world,” (Bowlby, 1982, p. 668). Attachment behavior is thought to be evolutionarily and biologically driven, as infants who sought proximity to their caregiver were more likely to survive (Ainsworth, 1989). However, though all infants innately seek out attachment relationships with their caregivers, their caregivers’ responses to these bids, particularly in times of distress, determine the nature of the attachment relationship.

To better understand differences in attachment styles, Ainsworth and Wittig conducted the strange situation experiment (Ainsworth & Wittig, 1969). In the study, Ainsworth observed the behavior of approximately one-year-old infants under several conditions, requiring their mothers and strangers to periodically enter and leave in an unfamiliar environment. The differences in the infants’ reactions to the departure and return of their mothers, as well as the stranger, were theorized to be related to their attachment to their mother. Infants whose mothers consistently reacted to signals of distress during the experiment were quick to be soothed and were more likely to explore the new environment; they had a secure base which they trusted to return to, and thus, these infants were deemed securely attached (Ainsworth & Bowlby, 1991). However, insecurely attached infants fell into two categories based on their reactions in the

experiment: avoidant children, who were unbothered by their mothers' departure and tended to avoid their mothers during the return condition, and ambivalent-resistant children, who experienced intense distress when their mothers departed, but were hesitant to approach when their mother returned.

Bowlby later theorized that these different attachment styles relate to, what he termed, infants' "internal working models" (Bowlby, 1982). Internal working models, he posited, represent the expectations that the infants had of their mothers' behavior in times of distress, based on how their mothers had regularly responded to them throughout their first year of life. Bowlby did not, however, ascertain that an infants' attachment style in their first year of life was completely fixed; he initially theorized that parents' responses to their infants during the first two years of life represented a critical period for infant attachment. However, this aspect of the theory was later revised to refer to the first *five* years of life as a *sensitive* period for attachment.

These early interactions between parent and infant prove to be incredibly impactful. Not only do strange situation experiments provide useful information about the parent-child attachment relationship, but they also provide useful information regarding the ways in which parent-child relationships can impact children's emotional expression and regulation. While the secure babies in Ainsworth and Wittig's experiment were able to be soothed rather quickly by their mothers, insecurely attached babies were resistant to this soothing and remained unregulated, even upon their mothers' return. Though most often studied in infancy and early childhood due to children's particular sensitivity during this time, these attachment styles are vital to understanding emotion regulation across development; attachment styles are not only illustrative of infants' emotion regulation but

have been shown to be predictive of later emotion expression and regulation (e.g., Contreras et al., 2000; Gilliom et al., 2002; Kochanska & Kochanska, 2001).

Though not as commonly addressed in the literature, parent factors may represent noteworthy contributions to children's later emotion regulation far beyond infancy and early childhood. In adolescence, a variety of parent factors contribute to the development and prediction of later emotion regulation. Researchers have found parental relationship qualities, like parenting style, psychological control, and parents' marital conflict, as well as specific parent behaviors, like parent expression of emotion and parents' teaching about emotions, to be predictive of later emotion regulation (Eisenberg et al., 1998; Morris et al., 2007; Steinberg et al., 1991; Stocker et al., 2007). Importantly, the neural development that takes place during adolescence contributes to individuals' abilities to regulate their emotions (Morris et al., 2007). During the transition to, and throughout adolescence, development of the prefrontal cortex, the brain region thought to be responsible for goal directed behavior and emotional processing, directly impacts emotion regulation abilities (Spear, 2000). With the further development of this brain region, individuals' capacity for higher-order processes that facilitate the regulation of emotions, like cognitive control, executive functioning, and selective attention, become stronger (e.g., Martin & Ochsner, 2016; Morris et al., 2007; Schweizer et al., 2020). It is likely that the salient cognitive maturation that takes place during this period renders adolescent emotion regulation development particularly sensitive to external factors, like parent relationship factors.

The development of emotion regulation skills during adolescence proves to be incredibly important as well. The transition from late childhood to adolescence is fraught

with new challenges (Christie & Viner, 2005). Adolescents are often faced with new demands at home and in school which may be unfamiliar and difficult to manage. Their lives are further complicated as they begin to place more importance on their social relationships, which can become conflictual and lead to distress. Additionally, early adolescents are just beginning to understand and navigate romantic feelings and relationships, charged with intense feeling and turbulence. Development of emotion regulation during this period allows adolescents to persist through these challenges with useful skills for modulating their behavioral reactions, supporting social and romantic relationships and emotional sensations, and supporting their identity development and self-esteem through challenges. Further study of parent factors impacting emotion regulation in adolescence, such as those listed above, is warranted because of the important tasks adolescents are faced with, as well as the implications of emotion regulation during this period for future functioning.

Considerations of innate biological and cognitive development are meaningful and offer important contributions to the literature on individual differences in emotion regulation. Because the literature has historically focused on these innate factors, researchers have been able to, and may continue to, achieve a more complete understanding of emotion regulation as a whole and delineate between what facets of the construct may be fixed. However, study of the parent and familial factors that contribute to the development of emotion regulation, including attachment style, is arguably just as or more valuable. An understanding of the parent factors that contribute to, and predict, difficulties in emotion regulation inform researchers and clinicians alike about potential opportunities for intervention. Interventions that target these parent factors, aligning them

with what research indicates have a positive influence on emotion regulation, can affect outcomes associated with emotion dysregulation, such as all-important consequences for mental and physical health and social functioning (Gross & Muñoz, 1995; Sapolsky, 2007; Tani et al., 2015).

### ***Summary***

Increased interest in emotion regulation since the 1990s has led to an upsurge in research on the topic. Much of the early, and current, research on the construct has primarily focused on its development in infancy and early childhood (Eisenberg et al., 2004). The current study proposes three reasons for researchers' fixation on early developmental periods, which represent three common lines of inquiry on the topic. First, emotion regulation researchers have been interested in understanding potentially innate characteristics of emotion regulation. Secondly, researchers have examined emotion regulation as it relates to rapid cognitive development in infancy and childhood. Finally, sensitivity to environmental and relational factors in infancy and childhood has been thoroughly studied.

However, far fewer researchers have examined the development of emotion regulation in adolescence. More emotion regulation research in this critical developmental stage is necessary and valuable, for some of the same, and for some different, reasons that infancy and childhood are valuable times to study emotion regulation. As in infancy and early childhood, there is a great deal of cognitive development that takes place in adolescence (Morris et al., 2007). Also, the complicated developmental tasks of adolescence necessitate the use of these skills. Emotion regulation skills, and protective factors thereof, allow adolescents to navigate through complicated

tasks on both ends of adolescence while maintaining positive relationships with friends, family, and romantic partners and moving toward larger life goals. Parent relationship factors at this time may represent protective or risk factors for adolescents' development of emotion regulation, to be discussed in-depth in the following section. Further study of these parental relationship factors is warranted because of the important developmental tasks that adolescents are facing. In particular, research has yet to explore how the different developmental tasks of individuals on opposite ends of adolescence may necessitate different protective parent factors and different emotion regulation capacities.

### **Parent Roles in Adolescent Emotional Development**

The impact of parents on their children's emotional development has been widely studied. Generally, parents' positive relationship qualities, such as warmth, satisfaction, and attachment security, as well as practical behaviors, such as communication, engagement, and constructive coping, have been considered advantageous for children's emotion regulation throughout development (Morris et al., 2007). In adolescence, the influence of parent relationships on emotion regulation is both more complex and even more vital. As mentioned previously, adolescents face many emotionally charged challenges during this transition that can be difficult to manage. While young children rely heavily on their parents to aid in their regulation of emotions, this shifts during the transition to adolescence. In adolescence, individuals begin to look outside of the home environment for guidance, often turning to peer relationships as a means of support instead of parents (Eisenberg & Morris, 2002).

Though adolescents may not be turning to their parents for support in the manner that they once did as children, they may be in search of a different type of guidance from



them. As adolescents develop more sophisticated cognitive and emotional skills, they benefit from similarly sophisticated help regarding emotion regulation (Morris et al., 2007). As such, support from parents in adolescence must consider some of the specific challenges of this developmental period, including achieving an appropriate balance of autonomy and connectedness (Morris et al., 2021). Failure to achieve this balance in parent-adolescent relationships may result in internalizing problems for those with difficulty achieving autonomy and externalizing problems for those who do not receive enough guidance and connectedness. Further, without a sufficient repertoire of emotion regulation strategies, adolescents face greater difficulties and less satisfaction in their increasingly important social relationships (Blair et al., 2015; Kouvava et al., 2022).

The tripartite model by Morris et al. (2007), introduced in a previous section, illustrates the manners in which families socialize emotion regulation. In sum, the model proposes three mechanisms through which parents and families influence children's emotion regulation: observation, parenting practices, and the emotional climate of the family. While Morris and colleagues classify the ways in which parents impact their children's development of emotion regulation in these three groupings, the factors which fall into these groupings can be more broadly represented in terms of behaviors versus qualities of parents' relationships. In terms of the tripartite model, then, much of the observational learning about emotion regulation that Morris et al. (2007) describes would represent specific behaviors, while parenting practices may fall into either behaviors or qualities and much of the family emotional climate is comprised of various qualities.

It is likely that qualities and behaviors differentially predict emotion regulation, depending on the end of adolescence which they fall (i.e., early or late). Parent-child

relationships during early adolescence are characterized by increased conflict with and decreased reliance on parents (Morris et al., 2007). Positive qualities in parent relationships, then, prove vital to adolescent emotional development as adolescents are less likely to rely on specific supportive behaviors, and positive relationship qualities may mitigate some of these adverse relationship behaviors during this period. Further, the challenges that early adolescents encounter, including increased responsibility at school and at home, complicated social dynamics, and unfamiliar romantic relationships, can be made even more difficult without a secure base, characterized by positive qualities in parents relationships, to turn to in times of need (Morris et al., 2021).

In late adolescence, individuals return to expecting the same level of support they received from parents before the start of adolescence (Steinberg & Silk, 2002). This support is likely to be more useful in the form of specific parent behaviors toward their adolescent, rather than relationship qualities, as the nature of their romantic relationships change during this period. Late adolescent romantic relationships are characterized by increased intimacy, as opposed to the primarily affiliative romantic relationships of early adolescence (Berger et al., 2005; Collins & Sroufe, 1999; Furman & Wehner, 1994). Specific parent behaviors, like emotional expression and use of emotion regulation strategies, can be utilized by late adolescents in these intimate relationships to facilitate mutual satisfaction (Feiring, 1999).

Some of these behaviors and qualities are related to parents' relationships with their children, while others are related to the parents' marital relationship. Both represent formative experiences for adolescents, shaping what children learn from their parents and the context in which they learn it. It is likely that parent relationships, with one another

and with their children, are impactful for the development of emotion regulation from infancy through adolescence.

Bowlby's (1973) seminal work on emotional security in the parent-child relationship provides another framework for understanding how the parent-child relationship, specifically, affects emotional development. In relation to his seminal work on attachment, Bowlby theorized that the level of responsiveness that children receive from caregivers beginning in infancy and through adolescence forms their attachment relationship (Bowlby, 1973). Emotional security, then, stems from this attachment relationship which is theorized to instill security or fear in children, depending on the level of responsiveness that they receive. The confidence or fear that results from these relationships is formative for emotional wellbeing and regulation. Insecurely attached children likely experience increased activation resulting from conflict, in fear that their needs will not be met; securely attached children are not as easily activated, as they have grown to trust that their needs will be met (Davies & Cummings, 1994). Attachment style and the attachment relationship is often characterized as more of a relationship quality or a characteristic of a relationship. However, the *actions* that parents take which form the attachment relationship are best described as behaviors.

Expanding upon Bowlby's (1973) work on emotional security in the parent-child relationship to include interparental relations, Davies and Cummings' (1994) emotional security hypothesis provides some evidence in support of the effect of interparental relationships on adolescent emotional development. Davies and Cummings (1994) extended Bowlby's emotional security hypothesis to the context of interparental relationships, proposing that these relationships also influence children's sense of

emotional security. Specifically, the authors theorize that some forms of family conflict threaten children's sense of emotional security, depending on the meaning of the conflict for family relations. The emotional security hypothesis builds upon Cummings and Cummings' (1988) process model which provides a means of understanding the effect that anger between adults has on children's emotional development. This model takes into consideration the context of the situation which elicits anger, child characteristics, and coping styles in determining how children will respond to adults' angry behaviors. The process model proposes that individual differences in children's intrapersonal characteristics may be protective against or compound with the effect of marital conflict on children.

Importantly, inextricably interwoven throughout parent-child relationships are the cultural norms at play within and surrounding the family system. The field of psychology has historically overrepresented WEIRD countries in research. The acronym, WEIRD, which stands for Western, educated, industrialized, rich, and democratic, was coined by Henrich and colleagues (2010) to signify that individuals from nations which match these characteristics, though they represent a majority of researchers and research participants, are actually rather unusual on a worldwide scale. Notably, Henrich et al. (2010) report significant differences in the psychological functioning individuals in WEIRD and non-Western countries. It would be expected, then, that individuals in these respective countries would have different childrearing practices.

One example of developmental research which has historically overrepresented a Westernized viewpoint is attachment theory. Attachment theory has come under some scrutiny as it relates to the insinuation that the theory can be universally applied. Specific

criticism of the theory relates to the design of the strange situation experiment (i.e., children in non-Western cultures do not innately exhibit stranger anxiety), the notion that there is one primary caregiver with whom children develop attachment relationships with (i.e., children in non-Western cultures may live in multigenerational households and have multiple caregivers sharing responsibilities), and the concept of responsiveness (i.e., responsiveness as conceptualized by Ainsworth assumes that children take the lead and caregivers follow by responding to children's needs, whereas some non-Western cultures emphasize the importance of parents leading children's attention) (Keller, 2018a, 2018b). Keller (2013, 2018) argues that much of what is theorized by Ainsworth and Bowlby as it relates to attachment theory cannot be applied cross-culturally and that the claim that it can be may have damaging implications. As such, Keller urges scholars to engage in attachment research with cross-cultural validity in mind, suggesting that defining attachment "from within cultural points of view," is the necessary first step of this process (Keller, 2013, p. 187). Still, while it is inarguable that parents' and caregivers' relationships with their children represent important considerations for children's subsequent social and emotional functioning, attachment theory and related research may not be the most inclusive representation of the impact of these relationships.

Bronfenbrenner's (1986) ecological systems theory provides a framework for understanding how important the context in which children and adolescents grow is to their development. Bronfenbrenner proposes five systems which interact with one another to influence development. The most immediate level is the microsystem, made up of an individual's family, peers, school, and neighborhood; these factors have the most direct impact on development. The next level is the mesosystem, which involves

interactions between factors within an individuals' microsystem, like a family's connection to a school or peers' connections to a neighborhood. The exosystem follows, which is comprised of social settings that do not involve the child; examples include a parent's workplace or local governing policies which may affect a child. After the exosystem, Bronfenbrenner describes the macrosystem, which includes larger cultural influences, societal beliefs, and customs that influence all preceding systems. Last is the chronosystem which includes all time-related factors that may influence an individuals' development over a lifetime, i.e., environmental events and transitions that happen throughout one's life.

The ecological systems theory provides a means of understanding the ways in which culture and other systems may impact children's development, as well as a means of understanding how qualities and behaviors may impact children's development. Whereas the most proximal system which Bronfenbrenner outlines (i.e., the microsystem) will include many behaviors enacted within specific relationships within a system, the more distal systems in the model influence (i.e., macrosystem) an individual on a grander level, likely impacting more trait-like, enduring qualities in relationships.

### ***Qualities of Parental Relationships***

A significant amount of research supports the value of parental relationship qualities for early adolescent emotional development and social outcomes. The emotional climate of the family, as conceptualized by Morris et al. (2007), is comprised of any number of qualities which impact the amount of positive and negative emotion expressed in a family. When the emotional climate is negative or unpredictable, children are at risk of displaying high levels of emotional reactivity (Davies & Cummings, 1994; Morris et

al., 2007). When the emotional climate is positive and consistent, however, children feel safe in expressing their emotions in a manner in which they feel secure certain that their needs will be met (Davies & Cummings, 1994). The emotional climate of the family is revealed through relationship qualities such as attachment, expressed emotion, parenting style, family expressivity, and marital relations. While, cross-culturally, these relationship qualities may look different, the impact of many of these notable qualities on children and adolescent socioemotional learning transcends culture, though the specific effects of such qualities may differ cross-culturally.

As was introduced in a previous section, attachment style developed in infancy and early childhood has implications for emotion regulation across development (e.g., Contreras et al., 2000; Gilliom et al., 2002; Kochanska & Kochanska, 2001). There is also evidence to suggest that attachment style continues to be relevant to emotion regulation into adolescence. Specifically, Pascuzzo and colleagues (2013) found that secure attachment orientation predicted the use of positive emotion regulation strategies in early adulthood. Other studies regarding *insecure* attachment styles in early adolescence find mixed results; Brenning and Braet (2013) found some evidence to support a predictive relationship between anxious attachment style and emotion dysregulation as well as between avoidant attachment and emotion regulation, though this was dependent on type of emotion (i.e., sadness versus anger).

Secure attachment relationships are often indicative of other commonly addressed constructs, parent warmth and support. Parental warmth generally represents a quality of interaction between parent and child, and, specifically, parents' tendency to respond positively to their child, in a supportive, approving, and affectionate manner (Eisenberg

et al., 2001). Parental warmth is also discussed within the context of Baumrind's (1967) parenting styles. Baumrind devised her theory of parenting styles when conducting research on antecedents of children's behavior in a preschool. In this study, she identified three distinct patterns of behavior, which she later linked to specific parenting styles based on home and laboratory observations and parent interviews. These three parenting styles were authoritative, authoritarian, and permissive. This theory was later expanded upon by Maccoby and Martin (1983), who described a two-dimensional a model of warmth/responsiveness and control/demandingness on the ends of which Baumrind's parenting styles fall; these authors further described a fourth parenting style: neglectful.

Since the Baumrind's (1967) conception of, and Maccoby and Martin's (1983) amendment to, the parenting style theory, a great deal of research has investigated outcomes related to these parenting styles. In general, authoritative parenting style, characterized by high warmth and high control, has been associated with positive developmental outcomes, while authoritarian and permissive parenting styles were associated with negative developmental outcomes (e.g., Power, 2013). However, these results were not consistent across different populations and did not hold true for low-income African American families, whose children experienced negative outcomes related to authoritative parenting (e.g., Lansford et al., 2004; LeCuyer et al., 2011).

Notably, a great deal of the research on parenting styles was conducted using Maccoby and Martin's (1983) dimensions, rather than parenting styles themselves. Accordingly, warmth has been found to be a notable quality within parents' interactions with their adolescents as it relates to creating a safe environment for adolescents to explore, understand, and express their emotions as well as in the expression of positive



emotion (Davies & Cummings, 1994; Eisenberg et al., 2001; Garner & Power, 1996). Research assessing the link between parent warmth and various indicators of self-regulation (i.e., emotion regulation, effortful control, decreased externalizing and internalizing problems) have generally found a positive relationship between the two across development (e.g., Garner & Power, 1996; van der Voort et al., 2014). Literature has found this to be true specifically in adolescence as well (e.g., Eisenberg et al., 2005; Kliewer et al., 2004; Pugh & Farrell, 2012). Further, researchers have also examined parental warmth as a mediator between parent emotion regulation and adolescent emotion regulation (Saritaş et al., 2013).

As suggested in the process model, and the emotional security hypothesis, marital relationship qualities also play a role in child and adolescent development of emotion regulation, through their effects on the emotional climate of the family and child and adolescent emotional security (Cummings & Cummings, 1988; Davies & Cummings, 1998). Specifically, marital conflict and satisfaction have been linked to emotion regulation, often in childhood and less frequently in adolescence. Volling and colleagues (2002) found that siblings' ability to regulate jealousy with one another in childhood was associated with positive marital relationship between parents.

Further, researchers have found emotion regulation to act as a buffer between marital conflict and negative outcomes. Davies and Cummings (1998) tested this idea, and the emotional security hypothesis in general, in a study assessing children's adjustment to marital conflict in parental relationships. The authors found evidence to support the emotional security hypothesis; individual differences in emotional reactivity, among other indicators of child emotional security, was found to be a mediator between

marital conflict and children's adjustment. Since this study was conducted, other researchers have found evidence that emotion regulation mediates and moderates relationships between marital conflict and other negative outcomes in childhood (e.g., Shaw et al., 1997). Some research has indicated similar patterns in adolescence, as well. In adolescence, there is evidence that emotion regulation can act as a mediator between parental conflict and later social functioning, internalizing, and externalizing variables (Buehler et al., 2007; Schulz et al., 2005; Schwarz et al., 2012). The ability of emotion regulation to protect or exacerbate the negative consequences of marital conflict on children and adolescents provides some evidence to support the existence a mediating role of emotion regulation in relationship qualities and behaviors from parents to their children's own, later romantic relationships.

### ***Behaviors in Parental Relationships***

While qualities of relationships between parents and their adolescent and parents themselves represent notable and important considerations for adolescent emotional development, these qualities are often indicative of or understood via larger patterns of specific behaviors in parent-child relationships. A specific behavior which may be representative of a positive quality and likely contributes to adolescents' emotion regulation is parents' own emotional expressiveness. Morris et al. (2007) argue that parents' own emotional displays provide a primary example of acceptable emotional reactions. Accordingly, researchers have found evidence to support the link between parents' own emotion regulation and children's self-regulatory behaviors (e.g., Meyer et al., 2014). The effects of the expression of these emotions, however, is likely dependent on the type of emotions being expressed; while the frequent expression of positive

emotion tends to have more adaptive outcomes, the frequent expression of negative emotion has been associated with negative developmental outcomes (Morris et al., 2007). Of particular interest to the current paper, however, is parents' verbal expressions of emotions or, simply, parents' talking about emotions.

Parental discussion of emotion is beneficial for children's awareness of emotional states, as well as communicating support to children regarding their emotions (Malatesta & Haviland, 1985). Eisenberg and colleagues (1998) posit that this discussion of emotion may set children up for greater social and emotional competence, as these children are likely to be more apt in communicating about their own emotions and may have a better understanding of others' emotions. Researchers have found evidence of such associations in infancy and childhood; mothers' use of emotionally descriptive language with their children and infants has been associated with their children's own use of emotional language in multiple studies (e.g., Denham & Auerbach, 1995; Dunn et al., 1987). Further, mothers' discussion of emotions with their children has also been linked to young children's increased awareness of emotions (Denham et al., 1994; Denham et al., 1994; Dunn et al., 1991; Dunn et al., 1991).

Little research, however, has investigated how the discussion of emotion may be beneficial for adolescent emotional development in this critical period. It is likely that adolescents would benefit from parent discussion of emotion as well, during a period of great emotional change. Further, little research has investigated how more general expression to children may affect adolescent emotional development. Specifically, while the research has thoroughly investigated adolescents' own self-disclosure to parents in the context of their emotional development, to this authors' knowledge, no research to

date has explored how parents' general self-disclosure to their children and adolescents may impact their emotional development. It stands likely that, given the effect of parent emotional expressiveness and the parent-child relationship quality has on emotion regulation, self-disclosure would have similarly positive effects.

Just as the qualities of parents' relationships with one another impact children's and adolescents' emotional development, the behaviors that parents engage in in their relationships with one another likely do as well. While it was previously discussed that a conflictual quality in marital relationships has been shown to have adverse effects on children and adolescents' emotion regulation, research on the impact of marital behaviors on emotion regulation suggests that cohesion in families may prove a positive influence. Cohesion represents closeness or bonding between family members, including time spent with one another (Houlberg et al., 2012). Specifically, in a longitudinal study of adolescents into early adulthood, Fosco and colleagues (2012) found family cohesion in adolescence to be predictive of effortful control in early adulthood. Further, in an inpatient population of adolescents, family cohesion has been associated with adaptive emotion regulation behaviors for girls with internalizing disorders and for all patients with externalizing disorders (Adrian et al., 2009).

The behaviors that are involved in family cohesion, particularly time spent with one another, may be valuable for emotion regulation of adolescents. Studies have found time spent with one another to be linked to general relationship satisfaction (Guerriero Austrom et al., 2003). Other studies are more specific about how this time is spent, indicating that it is engagement in joint activities in this time spent together, and the satisfaction with these leisure activities is important to marital satisfaction (Berg et al.,

2001; Johnson et al., 2006; Orthner, 1975). It is likely that factors that contribute to the marital satisfaction will positively influence emotion regulation, considering marital satisfaction itself has been positively associated with children's and adolescents' emotion regulation (Morris et al., 2007).

### *Summary*

Parental relationships represent a key source of socioemotional learning and development for adolescents. The specific factors in parents' relationships have been categorized and represented in a few different ways in the literature (e.g., tripartite model by Morris et al. 2007). The current study contends that qualities and behaviors predict emotion regulation differentially, based on the end of adolescence during which they occur. While the study of qualities and behaviors is not a new line of research, direct comparisons have not been made between the two. Further, research has yet to determine how the stage of development at which they are reported may contribute to their influence on social and emotional development.

Positive or negative qualities in the family relationships may impact children and adolescents' sense the emotional security and lead to decreased capacity for emotion regulation (Bowlby, 1973). In the parent-child relationship, prominent development theories (e.g., emotional security hypothesis, attachment theory, parenting styles) indicate that qualities of warmth and support in parent relationships contribute to positive emotional outcomes for children. In the interparental relationship, Cummings' and Cummings' (1988) process model provides support for the association between marital conflict and satisfaction and emotion regulation, though this research has been conducted less frequently in adolescence. The current paper contends that parental relationship

qualities will have a greater impact on the development of emotion regulation, through their effects on the family environment and parent-child relationships, when they occur in early adolescence as they impact early adolescents' secure base.

Specific behaviors modeled by parents to children are one of three ways in which Morris and colleagues (2007) hypothesize that children and adolescents learn about emotions in their tripartite model. In the parent-teen relationship, parents' discussion of emotions has been shown to provide an example for adolescents to utilize when thinking and talking about their emotions (e.g., Denham et al., 1994). Regarding behaviors within families and between parents, cohesion in adolescence has been associated with various self-regulatory outcomes (e.g., Adrian et al., 2009; Fosco et al., 2012). These parental behaviors are theorized to have a greater impact on the development of emotion regulation in late adolescence when individuals enter into intimate romantic relationships in which such behaviors are necessary for mutual satisfaction.

### **Young Adult Romantic Relationships**

A key developmental task of young adulthood is the attainment and maintenance of romantic relationships (Shulman & Connolly, 2013). These relationships are vital experiences during young adulthood, setting the stage for later relationship and parenting qualities (Feinberg, 2002; Xia et al., 2018). Accordingly, young adults who are not involved in romantic relationships report lower life satisfaction (Adameczyk & Segrin, 2016). Further, adult romantic relationships represent an entirely new developmental task than the romantic relationships of early and late adolescence. As discussed above, whereas the romantic relationships of early adolescents are primarily affiliative and the romantic relationships of late adolescents are more intimate, young adult relationships are

not as easily synopsisized (Berger et al., 2005; Feiring, 1999; Furman & Wehner, 1994).

The theory of emerging adulthood refutes outdated notions that young adults were likely to be established and settled down in their early twenties, arguing that the period from ages eighteen to twenty-nine is now more accurately characterized by exploration and instability (Arnett, 2000). This extends to romantic relationships; accordingly, the average age at which individuals get married in the United States has fallen back to ages 26.5 for women and 28.2 for men (U.S. Census Bureau, 2008, as cited in Shulman & Connolly, 2013). Still, young adults of this cohort still value romantic relationships and many still intend to get married at some point (Shulman & Connolly, 2013). The challenge, then, of procuring and maintaining romantic relationships, relates to all the other tasks that emerging adults are navigating during this period. Just as adolescents face many challenging developmental tasks discussed above, emerging adults are faced with another great transition fraught with challenges; emerging adults face important decisions regarding their studies, jobs, and careers (Shulman & Connolly, 2013). Considering the uncertainties that young adults are juggling, and the importance of romantic relationships during this period for life satisfaction, thorough consideration of the factors in might predict various romantic relationship functioning is vital.

Being that most individuals' primary experiences with romantic relationships occur during adolescence, many of the factors that occur during this period prove to be valuable predictors of later romantic relationship functioning. Accordingly, researchers have found many factors in adolescence to be predictive of later romantic relationship functioning. Firstly, and generally, romantic relationship experiences in adolescence are predictive of romantic relationship experiences in young adulthood (e.g., Meier & Allen,

2009; Rauer et al., 2013). Further, intrinsic and interpersonal factors in adolescence, like assertiveness, positive versus negative affect, peer relations, and aggression, have been shown to be predictive of later romantic relationship functioning (Boisvert & Poulin, 2016; Fosco et al., 2012; Kansky et al., 2019; Xia et al., 2018).

Of particular interest to the current study, however, are the family factors which contribute to young adults' romantic relationship functioning. As discussed in relation to emotion regulation, parents represent key figures for their children's later understanding of ideal romantic relationship qualities and behaviors. Additionally, while the literature confirms that relationship satisfaction is a variable of consideration during young adulthood, the prediction of satisfaction alone may not be sufficient for a comprehensive understanding functioning in romantic relationships. What is arguably more important to consider in establishing a more wholistic view of romantic relationship functioning are the specific qualities and behaviors in these relationships.

### ***Intergenerational Transmission of Romantic Relationship Patterns***

Family environmental factors provide the first prototype for how individuals should behave and what qualities are favorable in romantic relationships. From the beginning of development, the parent-child relationship is the first bond that individuals experience. This formative, attachment relationship between caregivers and their children sets expectations for all subsequent relationships (Ainsworth, 1989; Bowlby, 1973). Second to the impression left by the parent-child attachment relationship, often the first relationship that individuals experience solely as observers is the interparental relationship. This relationship has important implications for individuals' sense of security in their home environment as well as for the way individuals behave and the



qualities they exhibit in their own relationships (Davies & Cummings, 1994; Martin, 1990).

Drawing on what is known from attachment theory, as discussed above, the relationship between children and their parents has pervasive effects on children's functioning across the lifespan. The subsequent, young adult romantic relationships that individuals hold is no exception, and even represent one of the key findings of the effect of attachment theory. Among other studies which assess and provide evidence for this link, one of the strongest of such studies is by Simpson and colleagues (2007) and assesses this link using an over twenty-years long, longitudinal design. In this study, the data provided strong support for meaningful links between attachment experiences in infancy and emotions in adult romantic relationships (Simpson et al., 2007).

Further, other researchers have found evidence for associations in developmental periods which support the design of this particular study. In a longitudinal study beginning in adolescence and assessing parent-child conflict, this variable was found to differentiate between different romantic relationship patterns across the thirteen-year long study (Boisvert & Poulin, 2016). Similarly, in another longitudinal study, nurturant-involved parenting in adolescence predicted the romantic behaviors and qualities (i.e., warmth and support) of these individuals as young-adults. Lastly, the effect of parental divorce on daughters' young adult romantic relationships was shown to be mediated by the quality of father-daughter relationships in a longitudinal study (Lee, 2019). From this study, it is evident that both parental relationships, with children and with one another, has an effect on the subsequent romantic relationships of individuals.

Sometimes referred to as intergenerational transmission, the behaviors and qualities that children and adolescents learn from, and subsequently enact based on, their parents' marital relationship have been widely studied. Some of the literature in this realm has focused on romantic relationships of adolescents, while others have focused on those of adults. In general, researchers have found similar patterns of conflict between interparental relationships and adolescent romantic relationships (e.g., Martin, 1990). Some researchers, however, argue that this relationship may operate indirectly through parent-child relationship qualities (e.g., Reese-Weber & Bartle-Haring, 1998).

Regarding adult relationships, the literature reports more consistent findings. Using young adults' reports of the amount of conflict in their parents' marital relationship, researchers found a correlation between parental conflict and later romantic relationship conflict (Cui et al., 2008). Similarly, using adults' reports of their family of origin's child abuse and parental aggression, researchers found that husbands' reports of aggression in their family of origin predicted their use of aggression in their marital and parent-child relationships (Doumas et al., 1994). These results and methods are paralleled by other researchers; self-reported exposure to aggression in ones' own family of origin has been seen to be predictive of later romantic relationship aggression (Foo & Margolin, 1995). What is not as commonly addressed in the literature are longitudinal studies that begin with parents' own reports of such conflict when their children are adolescents and predict young adult romantic relationship patterns.

### ***Romantic Relationships and Emotion Regulation***

It should be no surprise that emotion regulation plays a role in the romantic relationships of young adults; functional romantic relationships are built upon optimal

discussion and expressions of emotion (Wachs & Cordova, 2007). Two specific emotion regulation strategies, cognitive reappraisal and expressive suppression, in particular, may be particularly useful in romantic relationships (Richards et al., 2003). Cognitive reappraisal is an antecedent emotion regulation strategy which involves the reinterpretation of emotional situations; expressive suppression is a response-focused emotion regulation strategy which involves the restraining of emotional expressions (Gross, 1998). These processes encourage positive interactions and communication between partners.

Accordingly, researchers have found evidence to support the usefulness of emotion regulation strategies during conflictual interactions in romantic relationships. In an experimental study, Ben-Naim and colleagues (2013) found that emotion regulation strategies used by one partner influenced the emotional experiences by the other partner in a romantic conflict interaction. Further, researchers have discovered links between emotion dysregulation and aggressive/conflictual behaviors in romantic relationships (e.g., Richards et al., 2003). More generally, though, emotion regulation and dysregulation have been shown to be predictive of romantic relationship functioning. In a sample of college students diagnosed with ADHD, a disorder in which individuals commonly have difficulties with emotion regulation, emotion dysregulation was negatively associated with romantic relationship satisfaction in women (Bruner et al., 2015). Similarly, Rellini and colleagues (2012) found that difficulties in emotion regulation significantly predicted greater sexual and relationship difficulties in a sample of young adult women.

Of interest to current study, some researchers have assessed how the

intergenerational transmission of relationship qualities and behaviors are mediated by socioemotional constructs, including emotion regulation. Specifically, the transmission of parents' relationship conflict in early adolescence to sons' later young adult relationship conflict was mediated by their late adolescent emotion dysregulation (Kim et al., 2009). This finding is valuable to the literature, considering the relationship between parent relationship behaviors and emotion regulation and the relationship between emotion regulation and romantic relationship functioning. More research which assesses this link is warranted to further understand and confirm these findings.

### ***Summary***

Attaining and maintaining romantic relationships is a key developmental task of young adulthood, and these relationships set the stage for subsequent romantic and parent-child relationships (Feinberg, 2002; Shulman & Connolly, 2013; Xia et al., 2018). Being that these first romantic experiences typically occur in adolescence, this period proves to be critical to later romantic relationship functioning (e.g., Meier & Allen, 2009; Rauer et al., 2013). Studies have found many parent-child relationship factors in adolescence to be predictive of later romantic relationship functioning (e.g., Simpson et al., 2007). However, little, if any, research has utilized parent reports of their own relationship functioning when studying intergenerational transmission of relationship factors, though these reports are likely more accurate. Further, few studies have examined the transmission of positive parent relationship behaviors; study of the transmission of positive behaviors would shed light into protective factors for negative relationship qualities and behaviors later in life.

Another avenue of research which has been inadequately studied and warrants more examination relates the role that emotion regulation plays in the intergenerational transmission of romantic relationship patterns. The research supports the utility of emotion regulation strategies in conflictual interactions in romantic relationships and for predicting romantic relationship functioning (e.g., Ben-Naim et al., 2013; Bruner et al., 2015; Rellini et al., 2012). Only one study, however, has assessed emotion regulation's role in the intergenerational transmission of romantic relationship qualities and behaviors (i.e., Kim et al., 2009). More research which confirms the role of emotion regulation is warranted to confirm these findings, considering the role that emotion regulation plays in romantic relationships and relationships seen between parent qualities and behaviors and emotion regulation.

### **The Present Study**

Researchers have established solid connections between parental relationship factors and emotion regulation. What is yet to be seen are comparisons of the temporal relevance of parental factors for emotion regulation development. Based on the review above, it is likely that qualities versus behaviors in parental relationships differentially predict emotion regulation, depending on which end of adolescence they occur. The current study seeks to compare these relationship qualities and behaviors, based on this notion, to determine when each may be most predictive of young adult emotion regulation. Further, researchers have established the importance of parental relationships and emotion regulation for later romantic relationship functioning.

The current study seeks to further previous research and assess both the importance of parental relationships for establishing a model for later romantic

relationships in young adulthood as well as the effect of emotion regulation on this association. Given the relationship between parental relationship factors and emotion regulation, the connection between parental relationships and their children's subsequent romantic relationships is likely mediated by emotion regulation. The following is hypothesized (see Figures 1 and 2 for reference):

**Hypothesis 1.** Positive qualities of parental relationships will predict more emotion regulation in young adulthood when they are reported in early adolescence.

**Hypothesis 2.** Positive parent behaviors in relationships will predict more emotion regulation in young adulthood when they are reported in late adolescence.

**Hypothesis 3.** Positive parent relationship behaviors and qualities, reported in adolescence, will be predictive of adolescents' own positive romantic relationship qualities and behaviors in adulthood.

**Hypothesis 4.** The relationships between parent relationship behaviors and qualities and children's subsequent young adult romantic relationships will be mediated by their emotion regulation.

## **Method**

### **Participants and Procedure**

Participants in this study are drawn from a larger, ongoing longitudinal study of adolescent and young-adult social and emotional development. Data collection for the larger study began in 1998, when participants were approximately 13 years old, and has continued a yearly basis. The sample is composed of 184 adolescents, 85 males and 99 females. The sample is diverse with respect to participant race/ethnicity (107 Caucasian, 53 African American, 2 Hispanic/Latino, 2 Asian American, 1 Native American, 15

mixed ethnicity, and 4 “other”) and socioeconomic status (median family income of \$40,000-\$60,000/yr., equivalent to about \$73,000-\$110,000/yr., when accounting for inflation) (*CPI Inflation Calculator*, n.d.).

Participants were recruited from a local middle school in the Southeastern United States that draws from suburban and urban populations. All parents of students in the seventh and eighth grades at the school were sent an initial mailing giving them the opportunity to opt out of further contact (N=298); 2% of parents opted out at this time. Families who indicated interest were then contacted by phone and, of those eligible, 63% agreed to participate as either a target participant or as a peer providing additional information about the target participant. The sample was comparable to the overall population of the school regarding racial/ethnic makeup and socio-economic status. All participants provided informed assent before each interview session, and parents provided active, informed consent. Parents, target adolescents, and peers were all paid for their participation. Transportation and childcare were provided, if necessary.

For the current study, data from three waves of study were utilized. In early adolescence, when participants were age 13, and in late adolescence, when participants were ages 17-19, their parents completed self-report measures regarding their marital relationship (i.e., consensus and cohesion) and participated in an interaction task with their adolescents, assessing parent-teen self-disclosure and valuing. When participants were aged 27, they completed self-report measures regarding their emotion regulation and coping behaviors. At ages 29-30, participants and their romantic partners completed a self-report measure regarding the qualities and behaviors in their relationship.

## **Measures**

### ***Marital Consensus and Cohesion***

The Dyadic Adjustment Scale (DAS) is a 32-item measure completed by parents when teens were aged 13 and 17-19 regarding their marital quality with their current partner (Spanier, 1976; see Appendix A). The consensus and cohesion subscales of the measure were utilized. The consensus subscale asks parents to rate how often they and their partner disagree about 15 different topics (finances, household tasks, goals, in-laws, etc.) on a 6-point Likert scale from 1, always agree, to 6, always disagree. The consensus scale was used as a marker of relationship quality. The cohesion subscale was also utilized, identified as parent behavior. The cohesion subscale first asks parents if they engage in outside interests together, on a 5-point Likert scale from 0, none of them, to 4, all of them. Additionally, the subscale utilizes 4 additional items that ask participants how often different events occur between them and their partner (laughing together, exchanging ideas, working together, calmly discussing), on a 6-point Likert scale from 1, “Never”, to 6, “More Often”. The DAS has shown great overall reliability, with Spanier (1976) reporting a total internal consistency of  $\alpha = .96$ .

### ***Parent Self-Disclosure and Parent-Teen Valuing***

The Supportive Behavior Task (SBT) is an 8-minute interaction task with teens and parents in which teens presented a problem to parents that they would like advice or support about. Common topics that teens brought to parents included dating, peer or sibling relationships, money, and sports teams. The coding manual for the measure, developed by Allen and Colleagues (n.d.) was created based on similar tasks and coding systems by Crowell et al. (1998), Julien et al. (1997), and Haynes and Fainsilber Katz



(n.d.) (see Appendix E). The coding manual and system returned four larger scales and several subscales; the four larger scales included affect codes, process of interaction codes, support codes, and overall quality of interaction codes.

The parent self-disclosure and valuing subscales of the measure were utilized, which fell under the process of interaction and affect coded scales, respectively. The self-disclosure subscale assessed parents' sharing of information about themselves that allowed the adolescent to know them better; self-disclosure was rated based on both the topic that parents self-disclosed as well as what was said about the topic. Coding of parents' self-disclosure ranged from 0, sharing briefly about likes and dislikes or one's day, to 4, sharing about areas not commonly shared between somewhat close friends, expressing strong feelings, or sharing unusual or embarrassing information about the self. The valuing subscale assessed the extent to which parents demonstrated that they care about, value, or genuinely like their adolescent. Valuing was coded in terms of non-verbal and verbal behavior (e.g., facial expressions, voice tone, touching, and verbal validation). Coding of parents' valuing ranged from 0, unclear whether the person likes the other, to 4, the parent's behavior is overall quite warm and fuzzy, the affection and liking is strong and clear, and the adolescent knows their parent really cares about them.

Parents' self-disclosure to teens during the interaction was identified as a specific behavior by parents, while parents valuing was utilized as a parental relationship quality. The scale included in this study was coded from interactions when teens were aged 13 and 17-19. Importantly, codes for dads' self-disclosure and valuing were not available when these variables were first assessed, when teens were aged 13. Therefore, dad self-

disclosure and valuing were not included in the analyses during this wave of data collection.

### ***Emotion Regulation***

The Difficulties in Emotion Regulation Scale (DERS) is a self-report questionnaire, completed by teens at age 27, measuring individual differences in difficulty regulating emotion (Gratz & Roemer, 2003; see Appendix B). The measure asks respondents to indicate how often 36 different statements apply to them on a 5-point Likert scale, from 1, almost never, to 5, almost always. The measure includes six subscales: nonacceptance of emotional responses, difficulty engaging in goal-directed behavior, impulse control difficulties, lack of emotional awareness, limited access to emotion regulation strategies, and lack of emotional clarity. The total score, a sum of all subscales, was utilized for the current study. The DERS has shown good reliability; Gratz & Roemer (2003) report an overall internal consistency of  $\alpha = .93$ .

### ***Acceptance and Denial***

Brief COPE (Carver, 1997; see Appendix C) is a condensed, 28-item version of the larger COPE inventory developed by Carver et al. (1989) to measure adaptive and dysfunctional responses to stress. For the purposes of this study coping is used as a proxy of emotion regulation. While studies suggest that these constructs are distinct, they share many similarities. A key distinction between the construct lies in types of emotional events that trigger emotional responses; while emotion regulation is an ongoing process in which emotions are regulation under stressful and non-stressful conditions, coping represents emotion regulation which occurs under stress (Compas et al., 2014). Still, both constructs represent regulatory processes, include purposeful efforts, and unfold and

change over time. The use of coping for a proxy of emotion regulation in this particular study is supported by the developmental period which is being assessed by the measure. While a great deal of research on emotion regulation has focused on infancy and early childhood, the construct of coping is typically studied in later childhood, adolescence, and adulthood. Further, the use of a coping measure in conjunction with an emotion regulation measure ensures that emotion regulation alone is adequately addressed, with coping contributing developmentally appropriate emotion regulation in response to stress.

At age 27, teens completed the self-report measure by rating what they usually do in response to experiencing stressful events on a 4-point Likert scale from 1, "I usually don't do this at all," to 4, "I usually do this a lot." The measure includes 15 subscales: Positive Reinterpretation and Growth, Mental Disengagement, Focus on and Venting of Emotions, Use of Instrumental Social Support, Active Coping, Denial, Religious Coping, Humor, Behavioral Disengagement, Restraint, Use of Emotional Social Support, Substance Use, Acceptance, Suppression of Competing Activities, and Planning. The Acceptance and Denial subscales of the measure were utilized for the current study. Importantly, acceptance represents a skill taught in both coping and emotion regulation interventions. For a brief measure, the Brief COPE has been seen to have adequate reliability of  $\alpha = .57$  for the acceptance subscale and  $\alpha = .54$  for the denial subscale.

### ***Qualities and Behaviors in Young-Adult Romantic Relationships***

The Network of Relationships Inventory (NRI) is a 45-item self- and other-report measure which examines a variety of relationship characteristics (Buhrmester & Furman, 2008; Furman & Buhrmester, 1985; see Appendix D). At ages 29 to 30, participants completed the measure regarding various relationships qualities and behaviors between

them and their current relationship partner; relationship partners also completed the measure. The measure asks participants to respond to statements regarding how often their partner engages in a particular behavior or portrays a particular quality on a 5-point Likert scale from 1, “Little or None,” to 5, “The Most.” For the current study, two different versions of the NRI, the Social Provision and the Relationship Qualities versions, were combined. All subscales of the Social Provision Version were used, while three subscales of the Relationship Quality Version were added. The measure administered in the current study includes 15 subscales: Companionship, Conflict, Instrumental Aid, Antagonism, Intimacy, Nurturance, Affection, Admiration, Relative Power, Reliable Alliance, Support, Criticism, Dominance, Satisfaction, and Punishment. The current study utilized the Companionship, Intimacy, Admiration, and Conflict subscales. The NRI has been shown to have good reliability, with an internal consistency of  $\alpha = .80$ .

### **Data Analysis and Interpretation**

Data analysis was conducted via computer software (SAS 9.4). Analyses controlled for demographic variables including participant gender and household income. Simple correlations between the predictors and the outcomes were examined between all variables of interest as preliminary analyses. A series of hierarchical linear regression models were used to test hypotheses. Regarding hypotheses one and two, stepwise linear regression analyses were conducted to determine the relative strength of parental qualities and behaviors as predictors of young adult emotion dysregulation. Specifically, three stepwise models were specified to predict emotion regulation outcomes in three steps. At the first step, income and gender were entered into the equations, predictors contrary

to the hypotheses followed (i.e., behaviors first in early adolescent models, qualities first in late adolescent models), and the last step included all predictors.

For hypothesis three, linear regression models were also created. Four models using parental relationship qualities and behaviors at age 13 and four using parental relationship qualities and behaviors at ages 17-19 were used to predict romantic each romantic relationship quality and behavior at ages 29-30. To assess hypothesis four, a final set of analyses will be conducted to assess the relationships between predictor variables and romantic relationship outcomes with emotion regulation also entered in the equation. The mediation of emotion regulation variables is supported if the relationship between emotion regulation and later romantic relationship factors remains significant after controlling for the earlier predictors, and the previously significant relationships between predictors and romantic outcomes are diminished.

## **Results**

### **Preliminary Analyses**

Tables 1-7 display the descriptive statistics (i.e., means, standard deviations, minimums, and maximums) and correlations for all study variables. Preliminary analyses found significant relationships between income and parent reports of their consensus in their relationship when teens were age 13 (mom-report:  $r = .32, p < .001$ ; dad-report:  $r = .43, p < .001$ ; see Table 4), mom valuing in interactions with teens aged 13 ( $r = .20, p = .010$ ; see Table 4), dad relationship variables with teens and relationship partners at ages 17-19 (valuing:  $r = .25, p = .045$ ; consensus:  $r = .23, p = .031$ ; see Table 5), and conflict in romantic relationships at ages 29-30 ( $r = -.22, p = .042$ ; see Table 5). Gender was only found to be negatively associated with intimacy in romantic relationships at

ages 29-30 ( $r = -.38, p < .001$ ; see Table 3), such that being female was associated with less intimacy reported in relationships. Because of the significant relationships found in preliminary analyses, gender and income were controlled for in all study analyses.

Significant correlations among predictor variables were also found (see Tables 4-6). Many interparental relationship variables reported at age 13 were significantly related to one another (see Table 4). Dad-reported consensus was significantly correlated with dad-reported cohesion ( $r = .36, p < .001$ ), mom-reported cohesion ( $r = .18, p = .046$ ), and mom-reported consensus ( $r = .46, p < .001$ ). Mom-reported cohesion was also related to dad-reported cohesion ( $r = .44, p < .001$ ) and mom-reported consensus ( $r = .50, p < .001$ ). The same was true of interparental relationship variables at ages 17-19 (see Table 5). Mom-reported cohesion was significantly related to dad-reported consensus ( $r = .34, p = .002$ ) and cohesion ( $r = .49, p < .001$ ). Dad-reported consensus was also related to dad-reported cohesion ( $r = .39, p < .001$ ). Some parent reports at age 13 were also correlated to their reports on the same construct at ages 17-19 (see Table 6). Dad-reported consensus at ages 13 and 17-19 were related ( $r = .36, p < .001$ ). Dad-reported cohesion at ages 13 and 17-19 were significantly correlated ( $r = .60, p < .001$ ). Mom-reported cohesion at ages 13 and 17-19 were associated ( $r = .54, p < .001$ ).

Some interparental relationships variables at age 13 were related to different interparental variables and/or different reporters at ages 17-19 (see Table 6). Dad-reported cohesion at age 13 was significantly correlated with mom-reported cohesion ( $r = .36, p = .002$ ) and dad-reported consensus at ages 17-19 ( $r = .41, p < .001$ ). Mom-reported cohesion at age 13 was associated with mom-reported consensus at ages 17-19 ( $r = .24, p = .020$ ). Some of these interparental relationship variables were further related

to parent-child relationship variables at various ages. Mom valuing at age 13 was significantly related to age 13 dad- and mom-reported consensus (dad:  $r = .23, p = .003$ ; mom:  $r = .21, p = .005$ ; see Table 4). Dad-reported consensus at age 13 was significantly correlated with mom valuing at ages 17-19 ( $r = .22, p = .025$ ; see Table 6). Mom-reported cohesion at age 13 was associated with mom and dad valuing at ages 17-19 (mom:  $r = .28, p = .010$ ; dad:  $r = .29, p = .023$ ; see Table 6).

Some parent-child interaction variables were significantly related, sometimes across ages. Mom valuing at ages 13 and 17-19 were significantly correlated ( $r = .23, p = .023$ ; see Table 6). Mom self-disclosure was associated with mom valuing at age 13 ( $r = .27, p < .001$ ; see Table 4) and ages 17-19 ( $r = .28, p = .005$ ; see Table 6). Mom valuing and self-disclosure at ages 17-19 were significantly correlated ( $r = .41, p < .001$ ; see Table 5). Dad self-disclosure and valuing at ages 17-19 were related ( $r = .32, p = .009$ ; see Table 5). At ages 17-19, some parent-child variables were significantly related to an interparental variable. Mom-reported consensus was associated with mom valuing ( $r = .32, p = .003$ ; see Table 5) and self-disclosure ( $r = .27, p = .013$ ; see Table 5).

There were also some significant relationships between emotion regulation outcomes (see Table 7). Emotion dysregulation had a negative association with acceptance ( $r = -.25, p = .002$ ) and a positive association with denial ( $r = .23, p = .005$ ). Between romantic relationship variables, companionship had significant positive correlations with intimacy ( $r = .50, p < .001$ ) and admiration ( $r = .40, p < .001$ ). Admiration was also associated positively with intimacy ( $r = .55, p < .001$ ) and negatively associated with conflict ( $r = -.31, p = .003$ ).

### **Primary Analyses**

*Hypothesis 1.* Positive qualities of parental relationships will predict more emotion regulation in young adulthood when they are reported in early adolescence.

Analyses first investigated the relative strength of the associations between parental relationship qualities and behaviors at ages 13 and 17-19 on emotion regulation outcomes at age 27 (see Table 2). Mom-reported consensus at age 13 was positively correlated with acceptance ( $r = .19, p = .022$ ). Dad-reported consensus at age 13 was negatively correlated with denial ( $r = -.21, p = .011$ ). No age 13 parental relationship behaviors (i.e., parent self-disclosure or parent-parent cohesion) correlated with any emotion regulation outcomes; no parental relationship qualities (i.e., parent-child valuing or parent-parent consensus) from ages 17-19 were significantly correlated with emotion regulation outcomes (see Table 2).

Hierarchical regression results revealed consistent findings. Gender and income were first entered in as covariates in all models, followed by predictors contrary to the hypotheses (i.e., behaviors first in early adolescent models, qualities first in late adolescent models); the last step included all predictors. Significant direct effects of mom-reported consensus on acceptance were found ( $\beta = .29, p = .026$ ), such that greater mom-reported consensus when teens were aged 13 predicted greater acceptance (see Table 8). Significant direct effects of dad-reported consensus on denial were also found ( $\beta = -.33, p = .015$ ). Greater dad-reported consensus when teens were aged 13 predicted less denial (see Table 9). No age 13 parental relationship behaviors (i.e., parent self-disclosure or parent-parent cohesion) were predictive of any emotion regulation outcomes.

The significance of a parental relationship quality, consensus, in predicting



emotion regulation outcomes at age 27 provides support for hypothesis 1. That is, mom-reported consensus at age 13 was a positive predictor of acceptance and dad-reported consensus at age 13 was a negative predictor of denial. The non-significance of any parental relationship behaviors from age 13 (i.e., self-disclosure and cohesion) in predicting acceptance, denial, or emotion dysregulation at age 27 also serves as evidence in support of hypothesis 1. In conflict with hypothesis 1, at age 13 there were no significant predictors of emotion dysregulation at age 27. Additionally, no parent-child relationship qualities at age 13 were predictive of any emotion regulation variables; that is, there were no parent-child relationship qualities observed at age 13 that predicted emotion dysregulation, acceptance, or denial at age 27.

***Hypothesis 2.*** Positive parent behaviors in relationships will predict more emotion regulation in young adulthood when they are reported in late adolescence.

Examining results in Table 2, mom-reported cohesion at ages 17-19 was negatively correlated with acceptance ( $r = -.22, p = .035$ ) and positively correlated with dysregulation ( $r = .32, p = .002$ ). Mom self-disclosure at ages 17-19 was positively correlated with acceptance ( $r = .31, p = .002$ ). Dad self-disclosure at ages 17-19 was positively correlated with dysregulation ( $r = .33, p = .012$ ). No ages 17-19 parental relationship qualities (i.e., parent-child valuing or parent-parent consensus) were significantly correlated with any emotion regulation outcomes. No age 13 parental relationship behaviors (i.e., parent self-disclosure or parent-parent cohesion) correlated with any emotion regulation outcomes (see Table 2).

Hierarchical regression results were conducted to further explore these findings, with gender and income entered in as covariates into the model. These analyses were

conducted in the same manner as specified above, in that predictors contrary to the hypotheses (i.e., behaviors first in early adolescent models, qualities first in late adolescent models) were entered into the model following gender and income, and the last step included all predictors.

Significant direct effects of mom self-disclosure and mom-reported cohesion at ages 17-19 on acceptance were found (see Table 10). Specifically, greater mom self-disclosure at ages 17-19 predicted greater acceptance ( $\beta=.30, p=.025$ ). Greater mom-reported cohesion at ages 17-19 predicted less acceptance ( $\beta=-.37, p=.017$ ). At step three of this analysis predicting acceptance, when parent behaviors were entered into the model, mom-reported consensus had a significant direct effect on acceptance ( $\beta=-.24, p=.026$ ). Specifically, greater mom-reported consensus at ages 17-19 was predictive of less acceptance. This direct effect was not significant at step two, when only gender, income, and parental relationship qualities were in the model (see Table 10).

Dad-reported cohesion at ages 17-19 had significant direct effects on denial, such that greater dad-reported cohesion was predictive of greater denial ( $\beta=.38, p=.034$ ; see Table 11). At step two of this analysis predicting denial, when only parent qualities and gender and income were entered into the model, mom valuing had a significant negative effect on denial ( $\beta=-.34, p=.004$ ). However, upon parent behaviors being entered into the model at step 3, this direct effect was no longer significant (see Table 11).

Finally, significant direct effects were found predicting dysregulation. Dad self-disclosure at ages 17-19 was found to have a significant direct effect on emotion dysregulation, such that greater dad self-disclosure in interaction tasks was predictive of greater dysregulation ( $\beta=.53, p<.001$ ; see Table 12). Mom-reported cohesion at ages 17-

19 also had significant direct effects on dysregulation; greater mom-reported cohesion in interparental relationships was predictive of greater dysregulation ( $\beta=.44, p=.002$ ; see Table 12). Neither dad-reported consensus nor dad valuing at ages 17-19 were predictive of any emotion regulation outcomes. No parental relationship behaviors at age 13 were predictive of any emotion regulation outcomes.

The significance of a parental relationship behavior, mom self-disclosure at ages 17-19, as a positive predictor of acceptance at age 27 provides support for hypothesis 2. The non-significance of some parental relationship qualities from ages 17-19 (i.e., dad valuing and dad-reported consensus) in predicting acceptance, denial, or emotion dysregulation at age 27 also serves as evidence in support of hypothesis 2. Providing mixed evidence regarding hypothesis 2, mom valuing at ages 17-19, a parental relationship quality, predicted less denial at age 27, contrary to hypothesis 2. However, this effect was no longer significant at step three, when parental relationship behaviors were added into the model.

There is a good deal of evidence in conflict with hypothesis 2. The direction of some relationships found at ages 17-19 and 27 were unexpected, in direct contrast with hypothesis 2; mom-reported cohesion negatively predicted acceptance and positively predicted dysregulation, dad-reported cohesion positively predicted denial, and dad self-disclosure positively predicted dysregulation. In neither conflict nor agreement with hypothesis 2, mom-reported consensus at ages 17-19 negatively predicted acceptance at age 27 at step 3. That is, when parental relationship behaviors were added into the model, the relationship between mom-reported consensus was stronger. The change in the significance of this parental relationship quality upon the addition of parental relationship

behaviors may indicate the existence of a suppression effect.

**Hypothesis 3.** Positive parent relationship behaviors and qualities, reported in adolescence, will be predictive of adolescents' own positive romantic relationship qualities and behaviors in adulthood.

Examining correlation results in Table 3, there were several significant relationships of note. Companionship was positively associated with many parental relationship predictors including mom- and dad-reported consensus at age 13 (mom:  $r = .28, p = .009$ ; dad:  $r = .22, p = .043$ ), mom-reported cohesion at age 13 ( $r = .36, p = .003$ ), and ages 17-19 ( $r = .27, p = .042$ ). Companionship was negatively associated with mom self-disclosure at age 13 ( $r = -.37, p < .001$ ) and mom-reported consensus at ages 17-19 ( $r = -.27, p = .045$ ). Intimacy was positively correlated with dad-reported consensus at age 13 ( $r = .28, p = .009$ ). Admiration had significant, positive relationships with mom-reported cohesion at age 13 ( $r = .26, p = .034$ ) and dad-reported cohesion at ages 17-19 ( $r = .33, p = .033$ ).

Hierarchical regression results were conducted to further explore these findings. For these analyses, gender and income were first entered into the equation to serve as covariates in the models. Subsequent predictors were entered into the models at step two. There were eight models specified: two models for each romantic relationship outcome variable, one with predictors from the earlier wave of measurement (i.e., age 13) and one with predictors from the later wave of measurement (i.e., ages 17-19).

Significant direct effects of mom-reported cohesion and mom self-disclosure at age 13 on companionship were found (see Table 13). Greater mom-reports of cohesion between parents at age 13 was predictive of greater reports of companionship by

relationship partners of participants ( $\beta=.38, p=.026$ ). Mom self-disclosure at age 13, on the other hand, negatively predicted companionship ( $\beta=-.31, p=.003$ ). No other parental relationship qualities or behaviors at age 13 were predictive of any other romantic relationship outcomes.

Examining regression models using predictors from ages 17-19, mom-reported consensus had a negative direct effect on companionship (see Table 14). Greater mom-reports of consensus between parents at ages 17-19 was predictive of lesser reports of companionship by relationship partners of participants ( $\beta=-.29, p=.036$ ). No other parental relationship qualities or behaviors at ages 17-19 were predictive of any other romantic relationship outcomes.

The significance of mom-reported cohesion at age 13 was a positive predictor of companionship at ages 29-30 provides support for hypothesis 3. This was the only evidence which provided direct support of hypothesis 3. There is a more evidence in conflict with hypothesis 3 than in agreement. In direct contrast with hypothesis 3, mom self-disclosure at age 13, as a significant, negative predictor of companionship at ages 29-30. A significant negative effect of mom-reported consensus at ages 17-19 on companionship at ages 29-30 was also in direct contrast with hypothesis 3. All nonsignificant predictors of companionship, and all other romantic relationship outcomes, provide evidence in opposition to hypothesis 3.

**Hypothesis 4.** The relationships between parent relationship behaviors and qualities and children's subsequent young adult romantic relationships will be mediated by their emotion regulation.

Correlations between emotion regulation, as the mediator, and romantic

relationship outcomes were first examined (see Table 7). Denial had a negative relationship with intimacy ( $r = -.32, p = .004$ ). There were no other significant correlations between emotion regulation mediators and romantic relationship outcomes. To explore the possibility that emotion regulation acts as a mediator between romantic relationship outcomes and parental relationship predictors, a third step was conducted in the above-noted analyses which used parental relationship factors to predict romantic relationship outcomes. Companionship was the only romantic relationship outcome which was significantly predicted by parental relationship qualities and behaviors; mediation analyses were only conducted on this outcome.

Table 13 displays the results of entering emotion dysregulation in the model using parental relationship qualities and behaviors at age 13. At step three of the analysis, there were only moderate changes to the overall model. Specifically, mom self-disclosure still had a significant direct effect on companionship, though this effect was somewhat smaller ( $\beta = -.30, p = .004$ ). The same was true of the effect of mom-reported cohesion on companionship ( $\beta = .35, p = .045$ ). Emotion dysregulation was not a significant predictor of companionship in this model ( $\beta = .11, p = .257$ ). The amount of variance explained was only marginally greater after emotion dysregulation was added to the equation ( $R^2 = .30$ ).

Table 14 displays the results of entering emotion dysregulation in the model using parental relationship qualities and behaviors at ages 17-19. At step three of this analysis, there were some noteworthy changes to the overall model. Specifically, while mom-reported consensus was a significant predictor before adding emotion dysregulation to the model, that predictor was no longer significant at step three ( $\beta = -.25, p = .093$ ). Emotion dysregulation itself was not a significant predictor of companionship in this model

( $\beta=.26, p=.289$ ). The amount of variance explained decreased from  $R^2=.40$  to  $R^2=.26$  after emotion dysregulation was added to the equation.

Evidence in support of hypothesis 4 was sparse. There was a change in significance, from significant to nonsignificant, of mom-reported consensus at ages 17-19 in predicting companionship at ages 29-30 when emotion regulation was added to the model. This may provide some support for emotion dysregulation as a mediator. Similarly, the predictors which were significant at ages 13 in predicting companionship (i.e., mom self-disclosure and mom-reported cohesion), while still significant upon the entering of emotion dysregulation in the model, had lower regression coefficients when emotion dysregulation was added. Evidence in direct conflict with hypothesis 4 can be found in the non-significance of emotion dysregulation as a predictor in any of the models predicting any romantic relationship factors.

### **Discussion**

The present study proposed four hypotheses regarding the predictive utility of parental relationship qualities and behaviors. It was hypothesized that parental relationship qualities would be stronger predictors of emotion regulation in young adulthood when reported in early adolescence; parental relationship behaviors were hypothesized to be stronger predictors of young adult emotion regulation when reported in late adolescence. Further, it was predicted that parental relationship qualities and behaviors would be predictive of participants' own, later romantic relationship qualities and behaviors. Lastly, emotion regulation was hypothesized to mediate the association between parental relationship predictors and romantic relationship outcomes. Study hypotheses were developed based on previous research on parent-child, interparental, and

romantic relationships, along with social and emotional development theory. Overall, the results this study provide mixed evidence regarding the hypotheses.

Attachment theory indicates that secure attachment relationships, characterized by warmth, provide a safe environment for infants and children to explore their unfamiliar and potentially frightening environments (e.g., Ainsworth, 1989; Ainsworth & Bowlby, 1991; Bowlby, 1982). The emotional security hypothesis added to attachment theory, adding the effect of interparental relationships on providing a safe environment and extending the theory into adolescence (Davies & Cummings, 1994). Developmental tasks of early adolescence require individuals to navigate many unfamiliar and potentially frightening experiences; early adolescents must navigate increased independence at home and at school, increasingly important social relationships, and the unknown world of romantic relationships (Christie & Viner, 2005). Gleaning evidence from attachment theory, the emotional security hypothesis, and early adolescent developmental tasks, positive qualities in parental relationships were posited to give early adolescents a safe environment to return to as they begin to explore unfamiliar romantic experiences and emotions. Thus, hypothesis 1 proposed that: positive qualities of parental relationships will predict more emotion regulation in young adulthood when they are reported in early adolescence.

Results from the current study provide some support for hypothesis 1. Both parent reports of consensus in early adolescence, an interparental relationship quality, were seen to predict emotion regulation outcomes in young adulthood in hypothesized directions. That is, mom-reported consensus in early adolescence predicted greater acceptance of emotions in young adulthood and dad-reported consensus in early adolescence predicted



less denial of emotions in young adulthood. Additionally, in alignment with hypothesis 1, parental relationship behaviors in early adolescence were not significant in predicting acceptance, denial, or emotion dysregulation in young adulthood. However, significant associations were not seen with parent valuing in early adolescence, a parent-child relationship quality, and any emotion regulation outcomes in young adulthood. This implies that, when early adolescents observe positive qualities in their parents' relationship, as opposed to when they experience positive qualities within their parent-child relationship, they are more likely to engage in positive emotion regulation strategies and less likely to engage in negative emotion regulation strategies. This may also imply that relationship qualities were overall stronger predictors of later emotion regulation in early adolescence, in alignment with hypothesis 1.

Regarding the lack of significant findings from parent-child relationships, there are few potential explanations for this. Generally, it's possible that parent-child relationship qualities and behaviors, as measured by the current study, were not accurate depictions of the parent-child relationship. First, parent-child relationship patterns may be already established by the time individuals enter adolescence, meaning that the specific relationship qualities and behaviors examined in the current study may not be related to emotion regulation due to the developmental period at which they were measured. Second, these parent relationships may no longer be large contributors to the maintenance of secure bases which individuals may return to after exploring unfamiliar environments. Essentially, it is possible that parents and their children establish their attachment relationship well before children enter into adolescence and the relationship qualities and behaviors that they engage in during adolescence, regardless of how positive they may

be, are not impactful for that relationship or indicative of larger relationship patterns. Attachment theory does provide some evidence in support of this; Bowlby and Ainsworth suggest that attachment relationships are formed in infancy and early childhood and the results of those relationships can be seen throughout an individuals' life (e.g., Ainsworth, 1989; Ainsworth & Bowlby, 1991; Bowlby, 1982). Alignment with this can also be seen in the relative stability of mom valuing in interaction tasks in the current study. Because of the potentially fixed nature of the parent-child relationship by the time individuals enter into adolescence, research like the present study may not find pronounced relationships between parent-child relationship qualities and behaviors and later outcomes; measures at this time may not be indicative of the social and emotional learning that already took place before adolescence and parent-child relationships may no longer be sources of learning in adolescence.

Parents relationships with one another, however, may not be as fixed as parent-child relationships, and therefore associations between these relationships in adolescence and later outcomes may be more pronounced, which is reflected in the results of the current study. Researchers find that marital satisfaction decreases after having children compared to couples without children and that this negative pattern continues for at least the first four years after birth (Doss et al., 2009). If interparental relationships are in flux during this period, the relationship qualities and behaviors that happen during adolescence may be particularly important for emotional security, as suggested in the emotional security hypothesis (Davies & Cummings, 1994). Uncertainty or security about the state of parent relationships may have implications for the maintenance of safe and secure family environments. Accordingly, researchers found significant relationships

between consensus and marital satisfaction, parenting alliance, and parenting stress (Camisasca et al., 2014). This may suggest that parent consensus, or lack thereof, is an indicator of larger issues within the marital relationship and the family environment; When these issues contribute to emotional insecurity, teens may not develop the emotion regulation skills they require. There is some support for parent consensus as an indicator of the family environment within the current sample; positive relationships between early adolescent records of mom valuing and both parents' reports of consensus can be seen. Researchers further indicate that marital relationships contribute to the emotional climate of the family (Morris et al., 2007). Negative and unpredictable climates put children at risk of becoming highly emotionally reactive and not utilizing emotion regulation strategies, while a positive and consistent climate allows for free expression of emotions and the ability to develop emotion regulation skills (Bowlby's, 1973; Davies & Cummings, 1994; Morris et al., 2007). The totality of the results and presented research suggest that interparental relationship qualities, as opposed to behaviors and parent-child relationship qualities, may be stronger predictors of emotion regulation when they occur in early adolescence.

Hypothesis 2 concerns late, as opposed to early, adolescence. Bandura's studies on modeling (e.g., 1961) revealed that children learn about how behave through observation and later utilize the behaviors they learn when interacting with their environment. Morris and colleagues' tripartite model (2007) subsequently integrated Bandura's findings into their theory of how children and adolescents learn to regulate their emotions, specifying that observation was one of three ways that families socialize emotion regulation. Developmental tasks of late adolescence require individuals to utilize

many learned behaviors to regulate their own emotions and maintain positive relationships; late adolescents must manage big life decisions about their school and careers and becoming financially independent, all while procuring and maintaining intimate romantic relationships (Christie & Viner, 2005). Modeling theory, the tripartite model, and late adolescent developmental tasks were taken together to jointly support the premise that positive behaviors in parental relationships provide examples for how late adolescents may behaviorally manage their emotions in their own intimate romantic relationships. Accordingly, hypothesis 2 suggested that: positive parent behaviors in relationships will predict more emotion regulation in young adulthood when they are reported in late adolescence.

The results of the current study provide a mix of evidence in agreement and evidence in conflict with hypothesis 2. First, regarding evidence which undoubtedly supports hypothesis 2, mom self-disclosure in late adolescence, a parent-child relationship behavior, was seen to positively predict acceptance in young adulthood. Additionally, in alignment with hypothesis 2, interparental consensus in late adolescence, an interparental relationship quality, was not significant in predicting acceptance, denial, or emotion dysregulation in young adulthood. This implies that, of the interparental relationship factors which were examined in this study, the factor which represented a behavior was a stronger predictor of emotion regulation in late adolescence.

Evidence regarding mom valuing, a parent-child relationship quality, was less clear. At step two of the stepwise model predicting denial in young adulthood using parental relationship factors from late adolescence, before parental relationship behaviors were added into the model, mom valuing was a significant, negative predictor of denial.

This would suggest that a parent relationship quality was still a strong predictor in late adolescence of emotion regulation outcomes. This effect was no longer significant, however, when parental relationship behaviors were added into the model at step three. This change in significance upon the addition of parental relationship behaviors in the model may support the notion that predictors added step three (i.e., parental relationship behaviors, and particularly dad-reported cohesion, being the significant predictor) better explain some of the variance previously explained by parental relationship qualities. That is, the significant amount of variance that was explained by parental relationship qualities before parental relationship behaviors were added into the model may have been due to spurious relationships with parental relationship behaviors, and not due to the strength of mom valuing as a predictor.

There was some evidence in direct conflict with hypothesis 2; this evidence related to the direction of the significant associations found. Specifically, mom-reported cohesion in late adolescence, an interparental relationship behavior, was a significant, negative predictor of acceptance and a significant, positive predictor of dysregulation in young adulthood. Dad-reported cohesion in late adolescence, another interparental relationship behavior, was a significant, positive predictor of denial in young adulthood. Lastly, dad self-disclosure in late adolescence, a parent-child relationship behavior, positively predicted dysregulation in young adulthood.

All evidence considered, there is considerable evidence to suggest that relationship behaviors were overall stronger predictors of later emotion regulation when they occurred in late adolescence. However, the direction of these relationships was not

as hypothesized. This finding will be discussed further below in conjunction with discussion about romantic relationship outcomes.

Adolescence is a key period for the development of romantic relationship patterns, with these patterns often precipitating similar patterns in adulthood (e.g., Meier & Allen, 2009; Rauer et al., 2013). Further, many studies have found parent relationship factors in adolescence to be predictive of later romantic relationship outcomes (e.g., Boisvert & Poulin, 2016; Lee, 2019; Simpson et al., 2007). Recent research has specifically addressed how different qualities and behaviors may transmit across generations from interparental relationships to individuals' own romantic relationships, referred to as intergenerational transmission (e.g., Boisvert & Poulin, 2016; Martin, 1990). Taking into consideration the utility of adolescent experiences, parent-child relationships, and interparental relationships for predicting later romantic relationship outcomes, hypothesis 3 proposed that: Positive parent relationship behaviors and qualities, reported in adolescence, will be predictive of adolescents' own positive romantic relationship qualities and behaviors in adulthood.

The results of the current study do not provide overwhelming support for hypothesis 3, with one notable exception. Cohesion reported by moms when teens were early adolescents was a significant, positive predictor of companionship in adulthood. This implies that cohesion between parents in early adolescence is a positive indicator for later optimal romantic relationship functioning as it relates to companionship between romantic partners. There were no other positive, significant predictors of romantic relationship outcomes, and none of the variance in other romantic relationship outcomes could be explained by any parent relationship predictors. Evidence in conflict with

hypothesis three was greater in number and similar to the conflictual evidence found in contrast of hypothesis 2. Specifically, both mom self-disclosure in early adolescence and mom-reported consensus in late adolescence were negative predictors of companionship in adulthood; that is, both theorized positive predictors were seen to have the opposite effect on romantic relationship outcomes.

Regarding self-disclosure, there are a few possible explanations for its unexpected relationships with emotion regulation and romantic relationship outcomes. The overarching explanation for this negative relationship is that parents' self-disclosure in interaction tasks was not appropriate. Though there has been little research conducted on the effect or process of parents' self-disclosure to children and adolescents, general self-disclosure research can be utilized to understand appropriate and inappropriate self-disclosure behaviors.

The first potential reason that self-disclosure may have been inappropriate in some way relates to the nature of these particular parent-child relationships. Research suggests that self-disclosure within a close relationship has an appearance of warmth and is seen as appropriate to those who received the self-disclosure, while self-disclosure to individuals with whom one does not share a close relationship (i.e., strangers and acquaintances) was seen as inappropriate and maladjusted by those who received such self-disclosure (Chaikin & Derlega, 1974). These effects held true across different topic of disclosure, though not across levels of intimacy of the topic disclosed. This suggests that, if parent-child dyad did not have close relationships before the interaction tasks, self-disclosure may have been viewed as inappropriate and actually harmed the parent-child relationship. Alternatively, the potentially inappropriate self-disclosure may have

been indicative of an already negative parent-child relationship dynamic.

Another potential explanation for the negative effect of dad self-disclosure on later emotion regulation relates to the nature of what was disclosed to participants. Support for this theory comes from a study on the development of an attachment-based family therapy intervention by Stern and colleagues (2023). In this study, three sessions of the intervention were conducted and two of three were successful in repairing attachment relationships. Within the intervention, both parents and their adolescents were required to engage in self-disclosure toward the goal of repairing their relationship. In successful sessions, this self-disclosure was viewed by raters as warm, disclosing, and expressing; in the unsuccessful session, parents' self-disclosure was rated as hostile, sulking, and scurrying (Stern et al., 2023). It is possible that self-disclosure in interaction tasks within the current study may have been of similar nature that is, the self-disclosure by parents in the Supportive Behavior Task, which predicted greater emotion dysregulation and less companionship, may have been damaging to parent-child relationships, rather than offering an opportunity to teach teens about positive emotion-related and relationship behaviors, as hypothesized. Alternatively, these hostile self-disclosures from parents to adolescents in the interaction task may not have actually been harmful, but indicative of an already harmful relationship dynamic between parents and teens. In either case, it self-disclosure would not prove to be the positive relationship behavior and learning opportunity that it was proposed to be and would not be expected to be predictive of adaptive functioning in adulthood.

Potential explanations for the unexpected results regarding the direction of relationships between cohesion and consensus in predicting emotion regulation and



romantic relationships outcomes in late adolescence are less straightforward. However, a simple rationale for these findings can be found in further examination of this developmental period. While the effects of parent relationships on early adolescents' emotional development have well been documented, the same cannot be said of late adolescence. In late adolescence, individuals rely much less on their parent relationships than they once did, as they are developing social autonomy and attempting to establish financial independence (Christie & Viner, 2005). Accordingly, research indicates that adolescents spend more time alone and with peers than they do with their parents, with whom they experience increased conflict (Steinberg & Morris, 2001).

It is possible that individuals in this time period do not rely on their parents in the same way that they once did, particularly as it relates to their social and emotional development. Thus, the effects of parent relationships may have already been determined by late adolescence and no longer impact individuals in the same manner. Studies also indicate that the social support received from peers and from parents is different as it relates to social and emotional learning, with peers being less likely to encourage use of positive emotion regulation strategies (Opitz et al., 2012). Further, the SOC-ER framework provides evidence that individuals in adolescence are less likely to use emotion regulation strategies, as they do not have the same resources as young adults to enact them (Opitz et al., 2012; Urry & Gross, 2010). Laboratory studies indicate that emotional responses of older adolescents have categorically different emotional reactions than younger adolescents as it relates to pupillary reactivity, reaction times, memory for emotional stimuli, and increases in defensive motivation (Quevedo et al., 2009; Silk et al., 2009).

The specific parent relationship behaviors used in the current study are also notable regarding their hypothesized direction to the development of emotion regulation strategies. Specifically, while the research is clear regarding how negative interparental relationship qualities and behaviors impact emotion regulation and later romantic relationship outcomes of children and adolescents, there is less evidence to say that the opposite is true. That is, there is little evidence to support the positive effects of interparental relationship on emotion regulation or romantic relationship functioning. Much of the research on interparental relationships and children and adolescent functioning has focused on interparental conflict or lack of, rather than positive qualities like cohesion or consensus (e.g., Kim et al., 2009). While it was assumed that these relationships would work in the opposite manner, that is, that positive relationship qualities and behaviors between parents would predict positive outcomes for children and adolescents, just as negative interparental relationship qualities and behaviors have been seen to predict negative outcomes, little research has been done to support this. It may be that positive relationship qualities and behaviors are not as influential for teens as would be negative qualities and behaviors, or that conflict in a home is simply more apparent and disrupting to teens, while cohesion in the home may be less obvious and impactful. These positive relationship qualities and behaviors, therefore, may not represent the positive influences on social and emotional learning that they were hypothesized to.

Because the totality of results surrounding this construct are not supported by the literature, potential explanations of these findings represent only conjecture. Given the found negative associations between cohesion in interparental relationships and negative emotion regulation outcomes, it may be that parents involvement with one another was at

the expense of their relationships with their teens. It is possible that, as teens were navigating a challenging time in their development, parents paid so much attention to their relationship with one another that teens' emotional needs were ultimately unmet. Unmet emotional needs may contribute to a negative attachment relationship between teens and parents and emotional insecurity which, then, may have contributed to an impaired ability for teens to regulate emotions later on.

All of the above being said, there is support in the literature for there being nonsignificant results regarding perceived positive relationship qualities and behaviors between parents (i.e., cohesion and consensus) being predictive of outcomes related to dysregulation and romantic relationships. However, the results above are not nonsignificant, and are, in fact, large significant, negative relationships between a theorized positive relationship factor and later emotion regulation and romantic relationship outcomes. Ultimately, it is not clear why cohesion or consensus between parents in late adolescence was found to be a negative predictor of emotion regulation and companionship.

Univariate analyses with the construct were additionally unusual. Other study relationships with cohesion and consensus in late adolescence were of note. Small nonsignificant, but negative, relationships were found between mom-reported cohesion in late adolescence and mom-reported consensus in late adolescence as well as between dad-reported cohesion in late adolescence and mom-reported consensus in early adolescence. Relying only on conjecture, it may be that interparental relationships when teens are late adolescents have a unique pattern of characteristics not seen in when teens are early adolescents. There are a few ways of characterizing these unique patterns, in

which cohesion and consensus have a negative correlation and similarly negative associations with later outcomes. First, it's possible that cohesion between parents represents a sort of façade of positivity in the relationship; that is, parents' lives are intertwined, they are engaging in activities with one another, but this positivity is contingent upon parents not discussing issues on which they do not agree. This would suggest a sort of surface level relationship that parents may be involved in. Alternatively, the opposite may be true. Parents may feel comfortable discussing a variety of topics, share a great deal of agreement about those topics, and yet not engage with one another's lives in a positive manner. This may suggest that parents live essentially parallel lives, as conceptualized by Gottman (2000). Either way it is conceptualized, it would appear that parents of late adolescents may either achieve consensus or cohesion, but possibly not both.

If parent relationships are not overall as positive as would be expected, based on the presence of these positive relationship qualities and behaviors, it would make sense that these positive qualities and behaviors would not be predictive of other positive emotional or relationship outcomes for teens later in life. Teens may have observed positive relating between parents, in their agreement or in their engagement with one another, but they may experience a lack of the other positive quality or behavior, which may fail to teach them positive emotion regulation and relationship skills and contribute to a sense of emotional insecurity in the home.

Still, these associations are highly unusual within the Dyadic Adjustment Scale (DAS) (Spanier, 1976). The external and internal reliability of the measure has been shown to be good across multiple studies, and relationships between these particular

scales have been seen to be large and positive (e.g., Cuenca Montesino et al., 2013; Graham et al., 2006). The relationships found between the cohesion subscale, other DAS subscales, and emotion regulation outcomes, as well as between the consensus subscale, other DAS subscales, and romantic relationship outcomes, suggest that this developmental period, in particular, may have atypical relations for this construct and that there may be specific developmental changes that take place during this period which make the measure less reliable. No such negative relationships between scales were found when the measure was conducted in early adolescence. For the above, and potentially unknown reasons, these subscales may not be reliable measures of parents' positive relationship behaviors when their teens are in late adolescence, as was hypothesized. Therefore, results related to the DAS in this developmental period should be reviewed with caution.

Researchers have repeatedly found various parent-child and interparental relationship factors to be associated with emotion regulation outcomes (Morris et al., 2007). Countless researchers have developed theories in attempt to understand how parental relationship factors impact children and adolescents' development of emotion regulation (e.g., Ainsworth & Bowlby, 1991; Baumrind, 1967; Davies & Cummings, 1994; Cummings & Cummings, 1988). These parent relationship factors have also been seen to predict later romantic relationship outcomes (e.g., Boisvert & Poulin, 2016; Lee, 2019; Simpson et al., 2007). The role of emotion regulation in romantic relationship functioning is also supported in the literature (e.g., Bruner et al., 2015; Rellini et al., 2012). The combination of the effects parent qualities and behaviors on emotion regulation development and emotion regulation on romantic relationships provides

support for emotion regulation playing a mediation role in the transmission of relationship behaviors across generations. For that reason, hypothesis 4 suggested that: The relationships between parent relationship behaviors and qualities and children's subsequent young adult romantic relationships will be mediated by their emotion regulation.

Unfortunately, there was little evidence to support hypothesis 4. However, there were some changes in the models upon the addition of emotion regulation, the hypothesized mediator. Mom-reported consensus in late adolescence, a significant predictor of companionship in young adulthood in step two of the stepwise regression model, was no longer significant when emotion dysregulation was added to the equation. It may be that the addition of emotion dysregulation in the model accounted for additional variance that was previously accounted for by mom-reported consensus; this provides support for emotion dysregulation as a mediator. In early adolescent models, there were less conclusive yet still noteworthy changes to models predicting companionship. Mom self-disclosure and mom-reported cohesion, while still significant at the third step of the equation, had smaller regression coefficients in the full mediation model. It is possible that the addition of emotion dysregulation in the model accounted for additional variance that was previously accounted for by these variables, which would provide some support for the hypothesis that emotion regulation acts as a mediator between parental relationship factors and later romantic relationship factors.

None of this evidence was entirely conclusive in support of emotion regulation mediating these relationships. For this evidence to conclusively support the notion that emotion regulation acts as a mediator in the intergenerational transmission of parent

relationship qualities and behaviors, all previously significant predictors of companionship would no longer be significant upon the addition of emotion dysregulation in the model. Further, the nonsignificance of emotion dysregulation as a predictor in any of these models predicting romantic relationship factors implies that the data do not overwhelmingly support its role as a mediator, contrary to the hypothesis.

Insufficient power may be to blame for the lack of strong, definitive evidence in support of hypothesis 4. Power relates the ability of a study to find an effect should an effect exist. As it relates to this hypothesis, power is the ability to find statistically significant parent relationship predictors of romantic relationship outcomes, should these predictors be significant, and the ability to find statistically significant relationships between emotion regulation and romantic relationships outcomes, should emotion regulation explain a significant proportion of the variance in romantic relationship outcomes. Higher power means that you are more likely detect true effects, should they exist, while insufficient power may lead to insignificant results when an effect truly exists. Having a small sample size and small effect size are two factors which contribute to insufficient power in a study.

In the current study, small samples sizes may have led to insufficient power and, subsequently, inconclusive results regarding emotion regulation as a mediator of the intergenerational transmission of parental relationship qualities and behaviors. While there are a total of 184 participants in the entire sample, not all participants were present and participated in every wave or measure in the study. Later waves like the waves of measurement chosen to examine emotion regulation and romantic relationships, measures utilizing partner reports like measures of romantic relationship outcomes, and many

measures completed by dads have smaller samples sizes. When analyzing data with smaller sample sizes, larger effect sizes are needed to find significant results, and, while some results were found to support hypothesis 4, there were not enough conclusive results to provide conclusive evidence, suggesting that power may have been an issue.

Further, model specification may have been a concern in the current study.

Models are considered over specified when they include many predictors in the model, some of these predictors are redundant, and, especially, when there are not individuals in the sample. When model overspecification occurs, the model begins to fit to random error in the model and regression coefficients may represent noise, rather than genuine relationships in the population. Model overspecification further harms the generalizability of the model, as the model has been made to fit individual idiosyncrasies of the data, making results unlikely to be replicated in another sample. Evidence for an overfit model can be seen in inflated r-squared values.

### **Strengths and Limitations**

There were several strengths in the design of this study. The use of multiple reporters and methods, as well as the longitudinal data collection methods were notable strengths. The use of multiple reporters in assessing interparental relationship factors provided the opportunity to examine how each parents' report of their dyadic relationship may provide different information about dyadic qualities and behaviors which may have differentially impacted teens' social and emotional development. In examining romantic relationship outcomes, relationship partner reports were used to provide a more objective, outside source of information about participants' qualities and behaviors in these relationships, signifying another strength. The use of interaction tasks to assess parent-



child relationships means that these subscales may be more accurate depictions of how parents interact with their children on a day-to-day basis, than parents' or teens' perceptions of their interactions would be. As it relates to data analysis, potential correlates (i.e., gender and income) were controlled for in all study analyses to account for any possible demographic factors that might have contributed to greater or less capacity for emotion regulation and more use of specific romantic relationship qualities and behaviors.

In addition to its strengths, this study also had several limitations that are important to consider. While longitudinal designs were a strength in being able to measure change in study variables in real time, causal claims cannot be drawn from naturalistic, longitudinal studies and, therefore, it is possible that significant findings from this study are due to the effect of other characteristics on outcomes. Further some study variables were measured based upon self-report, which may bias or contribute to general inaccuracies in the data. Additionally, recent directions in relational research have emphasized the bidirectional nature of all of the relationships examined in the current study. It is suggested that parent-child and romantic partner relationships are bidirectional in nature, meaning that one individual's report of relationship functioning may not be sufficient to understand how individuals in these relationships dually influence one another (Morris et al., 2021). This research suggests that disagreement in reports within dyads may mean that neither report is an accurate depiction that construct, meaning that parents' reports of their dyadic functioning in and of themselves may not provide a complete understanding of relationship qualities and behaviors within the dyad. Another limitation relates to the ages at which study variables were measured. Study

variables were only assessed at specific ages during the developmental stages which results are applied to. That is, early adolescent variables utilized only reports from age 13 and late adolescent variables utilized only reports from ages 17-19. While the study aims to generalize these findings to these larger developmental stages, caution is necessary until findings have been replicated across different ages in each developmental stage. Further, regarding the generalizability of the study, the sample lacks Hispanic and Asian representation, and, therefore, generalizability of study findings to these populations is dubious. External validity is also limited due to the small geographic region in which the data were collected; study findings may not generalize outside of the Southeast region of the United States.

There were several challenges associated with the dataset utilized by the current study which may have led to inflated Type I and/or Type II errors, through model overspecification and/or lack of power, as discussed above. Notably, dad-report and dad interaction variables had much lower N's than other variables utilized in the study, making results related to dads challenging to interpret and generalize. Moreover, the overall sample size of the study may not have been sufficient, given the number of variables of interest and the number of variables necessary to sufficiently address research questions of interest.

### **Implications and Future Directions**

The results from the present study have important implications for understanding how parent relationships impact adolescent development of emotion regulation and romantic relationship outcomes. Findings do suggest that parental relationship qualities and behaviors differentially predict emotion regulation outcomes, depending on the end

of adolescence which they occur. While the directions of every one of these relationships were not as hypothesized, patterns of predictions on different ends of adolescence were clear; parent relationship qualities were stronger predictors in early adolescence than were parent relationship behaviors, and parent relationship behaviors were stronger predictors in late adolescence than were parent relationship qualities. Future research may choose to follow up on findings as it relates to interparental relationships, rather than parent-child relationship qualities and behaviors. The findings of the current study did not show a large effect parent-child relationship qualities or behaviors on emotion regulation outcomes and may indicate that parent-child relationships patterns are fixed by adolescence, with little left to offer individuals in terms of social and emotional learning. Researchers attempting to continue the line of research regarding the relative predictive utility of parental relationship qualities and behaviors may wish to utilize different measures and indicators of parent relationship qualities and behaviors if examining the late adolescent time period to see if patterns found in the current study are similar to and can be generalized to other factors. Additionally, it may be that parent-teen do not represent significant sources of social-emotional learning during adolescence. Researchers may wish to examine peer relationships in adolescence and their relationship with later emotion regulation.

Further research should include examination of consensus and cohesion in late adolescence as predictors of later emotion regulation and romantic relationship outcomes. These constructs, as they were measured in the current study, had extremely unusual results compared to those commonly seen in the literature and this warrants greater investigation to confirm or deny such results. Additionally, future research examining

interparental relationships may choose to examine how different parent reports differ, i.e., how mom and dad reports on the same construct align or do not align.

Findings regarding romantic relationship outcomes and the utility of parent relationships and emotion regulation as predictors of these outcomes was not in alignment with previous literature. Previous research indicates that interparental relationship patterns and parent-child attachment relationships are often predictive of later romantic relationship behaviors. This was not overwhelmingly the case in the current study. The developmental time period at which these predictors were assessed, and the particular predictors that were used, may have been detrimental to finding such results. Future research should continue to look at this time period to confirm the effects of the current study and determine whether parent relationship qualities and behaviors can act as predictors in late adolescence. A previous study found emotion regulation to act as a mediator in the intergenerational transmission of romantic relationship factors; this was not the case in the current study. However, power was likely an issue in the current sample and more research on this phenomenon is still warranted to confirm or deny such findings either way.

Generally, future research regarding parent qualities and behaviors and differential patterns of prediction of emotion regulation would benefit from much larger sample sizes. Considering the amount of study variables needed to adequately compare parent qualities and behaviors across parent-child and interparental relationships, a larger sample would decrease the likelihood of overspecification and lack of power harming the generalizability of results. Greater sample sizes would provide an overall more robust analysis of the research questions in the current study. Particular attention should be paid

to sample sizes in dad qualities and behaviors in relationships, as dads have often been underrepresented in emotional socialization research. The results of the current study do warrant further analysis, given the unique pattern of findings and inconsistencies with previous research.

The results of the current study may extend to practical application in the areas of parenting and psychological practice. Individuals who work with adolescents should consider how parents engage with their adolescents and the qualities and behaviors they engage in at different developmental stages. Parents of adolescents may consider engaging in relationship building with their partners when teens are younger and consider modeling appropriate relationship behaviors to older teens. Practitioners may encourage parents to utilize such types of specific social and emotional learning during the relative developmental stages at which they were found to have the strongest effect.

## **Conclusions**

Parent relationships represent an important opportunity for adolescents to learn emotion regulation and romantic relationship skills. Subsequently, parent relationships have been extensively studied in the literature as it relates to their predictive utility in infancy, childhood, and adolescence for later life outcomes. Developmental theory suggests that the different types of factors in parental relationships may have differential effects on teens, depending on which end of adolescence they occur. Thus, it may be important to utilize research designs which consider qualities and behaviors separately for their potentially disparate predictive utility. The present study was aimed at examining the relative importance of parent relationship qualities and behaviors at different periods of adolescence in predicting emotion regulation in young adulthood.

Additionally, the current study considered how these parent relationship qualities and behaviors may also predict romantic relationship outcomes and the mediating effects of emotion regulation in these relationships.

Findings from this study highlight the importance of examining parent relationship qualities and behaviors as distinct categories of predictors with distinct sensitive periods in development. The study also highlighted interesting findings regarding the complexities of studying social and emotional development in adolescence, particularly as it relates to parents. Findings are, thus, representative of the complicated nature of this developmental period and parent relationships, though they provide interesting implications for further study of adolescence and the effect of parent relationships at this stage of development, which may be utilized by future researchers.

## Tables and Figures

**Table 1**

*Descriptive statistics for study variables.*

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
Gender (85 male, 99 female)	184	-	-	-	-
Income	184	\$40-60k/yr.	-	<\$5k/yr.	<\$60k/yr.
<b>Age 13 Predictors</b>					
Mom-reported consensus	184	41.37	13.16	24	65
Dad-reported consensus	184	38.68	11.90	27	65
Mom-reported cohesion	128	15.24	4.22	4	24
Dad-reported cohesion	99	14.64	3.46	6	23
Mom valuing	168	2.00	0.99	0	4
Mom self-disclosure	168	0.50	0.75	0	4
<b>Ages 17-19 Predictors</b>					
Mom-reported consensus	108	44.90	11.97	14	65
Dad-reported consensus	85	48.77	8.53	13	65
Mom-reported cohesion	109	16.17	4.76	4	26
Dad-reported cohesion	82	14.90	3.96	6	24
Mom valuing	103	2.10	0.80	0	4
Dad valuing	66	1.95	0.72	0.5	4
Mom self-disclosure	103	0.27	0.51	0	2
Dad self-disclosure	66	0.23	0.46	0	1.75
<b>Age 27 Outcomes</b>					
Acceptance	150	4.35	1.38	0	6
Denial	150	0.55	1.05	0	4
Emotion Dysregulation	155	65.04	17.67	36	119
<b>Ages 29-30 Outcomes</b>					
Companionship	88	12.20	1.95	6	15
Intimacy	87	12.70	2.41	6	15
Admiration	88	12.78	1.73	8	15
Conflict	88	7.10	2.13	3	13

**Table 2***Correlations between study variables and emotion regulation variables.*

	<b>Acceptance</b>	<b>Denial</b>	<b>Emotion Dysregulation</b>
Gender (85 male, 99 female)	-.02	.13	-.06
Income	.01	-.08	-.06
<b>Age 13 Predictors</b>			
Mom-reported consensus	.19*	-.08	-.05
Dad-reported consensus	.02	-.21*	-.00
Mom-reported cohesion	-.05	-.10	-.04
Dad-reported cohesion	-.04	-.04	-.03
Mom valuing	-.01	.02	-.08
Mom self-disclosure	.03	.09	-.05
<b>Ages 17-19 Predictors</b>			
Mom-reported consensus	-.08	.07	-.14
Dad-reported consensus	-.03	-.04	.02
Mom-reported cohesion	-.22*	.01	.32**
Dad-reported cohesion	.03	.07	.03
Mom valuing	.08	-.19	-.07
Dad valuing	.12	.10	.06
Mom self-disclosure	.31**	-.07	-.07
Dad self-disclosure	-.08	.14	.33*

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



**Table 3***Correlations between predictors and romantic relationship variables.*

	<b>Companionship</b>	<b>Intimacy</b>	<b>Admiration</b>	<b>Conflict</b>
Gender	-.19	-.38***	-.18	-.06
Income	.11	.17	.05	-.22*
<b>Age 13 Predictors</b>				
Mom-reported consensus	.28**	.18	.13	-.12
Dad-reported consensus	.22*	.28**	.07	-.14
Mom-reported cohesion	.36**	.17	.26*	.03
Dad-reported cohesion	.18	.11	.16	.06
Mom valuing	.02	-.02	-.10	-.01
Mom self-disclosure	-.37***	-.08	-.04	.14
<b>Ages 17-19 Predictors</b>				
Mom-reported consensus	-.26*	-.13	.03	.08
Dad-reported consensus	.23	.05	.19	-.24
Mom-reported cohesion	.27*	.09	.16	.11
Dad-reported cohesion	.28	.27	.33*	.05
Mom valuing	-.04	.15	.14	.06
Dad valuing	.23	.23	.19	.04
Mom self-disclosure	.05	.19	.27	-.08
Dad self-disclosure	.06	-.34	-.11	.03

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

**Table 4***Correlations between age 13 predictors.*

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
1. Gender	-							
2. Income	-.12	-						
3. Mom-reported consensus	.12	.32***	-					
4. Dad-reported consensus	-.07	.43***	.46***	-				
5. Mom-reported cohesion	-.00	.02	.50***	.18*	-			
6. Dad-reported cohesion	.01	.05	.15	.36***	.44***	-		
7. Mom valuing	-.01	.20*	.21**	.23**	.17	-.03	-	
8. Mom self-disclosure	.09	-.03	-.03	.06	-.03	.15	.27***	-

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

**Table 5***Correlations between ages 17-19 predictors.*

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
1. Gender	-									
2. Income	-.12	-								
3. Mom-reported consensus	-.01	-.13	-							
4. Dad-reported consensus	-.01	.23*	.08	-						
5. Mom-reported cohesion	.06	.14	-.17	.34**	-					
6. Dad-reported cohesion	-.04	.20	-.06	.39***	.49***	-				
7. Mom valuing	.04	.09	.32**	-.09	-.08	.09	-			
8. Dad valuing	.02	.25*	.08	.01	.15	.10	.25	-		
9. Mom self-disclosure	-.18	-.11	.27*	.11	-.12	.04	.41***	.21	-	
10. Dad self-disclosure	-.03	-.03	-.01	-.24	.03	.07	-.02	.32**	.19	-

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

**Table 6***Correlations between age 13 and ages 17-19 predictors.*

<b>Predictors Age 13</b>	<b>Predictors Ages 17-19</b>							
	1	2	3	4	5	6	7	8
1. Mom-reported consensus	.01	.19	.16	-.19	-.02	.11	.06	-.02
2. Dad-reported consensus	-.09	.36***	.17	.11	.22*	.22	-.00	.14
3. Mom-reported cohesion	.24*	.21	.54***	.13	.28**	.29*	.07	.11
4. Dad-reported cohesion	.07	.41***	.36**	.60***	.20	.14	.19	.08
5. Mom valuing	.05	.08	.09	-.03	.23*	.15	.05	-.10
6. Dad valuing	-	-	-	-	-	-	-	-
7. Mom self-disclosure	.01	.14	-.01	-.02	.28**	.06	.13	-.00
8. Dad self-disclosure	-	-	-	-	-	-	-	-

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

**Table 7***Correlations between outcomes and mediators.*

	1	2	3	4	5	6	7
<b>Age 27 Outcomes</b>							
1. Acceptance	-						
2. Denial	-.15	-					
3. Emotion dysregulation	-.25**	.23**	-				
<b>Ages 29-30 Outcomes</b>							
4. Companionship	.14	-.10	.17	-			
5. Intimacy	.15	-.32**	.09	.50***	-		
6. Admiration	.13	-.08	.11	.40***	.55***	-	
7. Conflict	-.08	-.06	.14	-.19	-.11	-.31**	-

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

**Table 8***Parental relationship qualities and behaviors at 13 as predictors of acceptance.*

	Acceptance (27)			R <sup>2</sup>
	$\beta$ entry	$\beta$ final	95% CI	
<i>Step 1</i>				.00
Gender	-.03	-.06	-.23, .11	
Income	.00	-.07	-.24, .11	
<i>Step 2</i>				.01
Mom self-disclosure	.04	.08	-.10, .27	
Dad-reported cohesion	-.02	-.18	-.52, .15	
Mom-reported cohesion	-.05	-.05	-.37, .27	
<i>Step 3</i>				.07
Mom valuing	-.06	-.06	-.24, .12	
Dad-reported consensus	.05	.05	-.21, .31	
Mom-reported consensus	.29*	.29*	.03, .55	

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

**Table 9***Parental relationship qualities and behaviors at 13 as predictors of denial.*

	Denial (27)			R <sup>2</sup>
	$\beta$ entry	$\beta$ final	95% CI	
<i>Step 1</i>				.02
Gender	.12	.10	-.06, .27	
Income	-.06	.01	-.16, .19	
<i>Step 2</i>				.04
Mom self-disclosure	.08	.05	-.14, .24	
Dad-reported cohesion	.04	.26	-.10, .62	
Mom-reported cohesion	-.14	-.17	-.50, .15	
<i>Step 3</i>				.10
Mom valuing	.09	.09	-.09, .26	
Dad-reported consensus	-.33*	-.33*	-.59, -.06	
Mom-reported consensus	.06	.06	-.20, .33	

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

**Table 10***Parental relationship qualities and behaviors at 17-19 as predictors of acceptance.*

	Acceptance (27)			R <sup>2</sup>
	$\beta$ entry	$\beta$ final	95% CI	
<i>Step 1</i>				.00
Gender	-.03	.05	-.12, .22	
Income	.00	-.07	-.31, .16	
<i>Step 2</i>				.03
Mom valuing	.07	-.02	-.25, .21	
Dad valuing	.14	.21	-.09, .51	
Dad-reported consensus	-.04	-.05	-.34, .25	
Mom-reported consensus	-.11	-.24*	-.45, -.03	
<i>Step 3</i>				.24
Mom self-disclosure	.30*	.30*	.04, .57	
Dad self-disclosure	.16	.16	-.56, .23	
Dad-reported cohesion	.18	.18	-.17, .52	
Mom-reported cohesion	-.37*	-.37*	-.66, -.07	

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



**Table 11***Parental relationship qualities and behaviors at 17-19 as predictors of denial.*

	Denial (27)			R <sup>2</sup>
	$\beta$ entry	$\beta$ final	95% CI	
<i>Step 1</i>				.02
Gender	.12	.09	-.09, .27	
Income	-.06	-.13	-.38, .11	
<i>Step 2</i>				.13
Mom valuing	-.34**	-.24	-.51, .02	
Dad valuing	.17	.09	-.21, .38	
Dad-reported consensus	-.02	.04	-.26, .35	
Mom-reported consensus	.15	.11	-.12, .33	
<i>Step 3</i>				.25
Mom self-disclosure	-.14	-.14	-.44, .15	
Dad self-disclosure	.28	.28	-.06, .62	
Dad-reported cohesion	.38*	.38*	.03, .73	
Mom-reported cohesion	-.25	-.25	-.56, .06	

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

**Table 12***Parental relationship qualities and behaviors at 17-19 as predictors of dysregulation.*

	Dysregulation (27)			R <sup>2</sup>
	$\beta$ entry	$\beta$ final	95% CI	
<i>Step 1</i>				.01
Gender	-.07	-.03	-.20, .15	
Income	-.07	-.11	-.33, .12	
<i>Step 2</i>				.07
Mom valuing	-.01	-.03	-.25, .19	
Dad valuing	.16	-.05	-.31, .21	
Dad-reported consensus	.05	.10	-.16, .36	
Mom-reported consensus	-.20	-.06	-.28, .16	
<i>Step 3</i>				.41
Mom self-disclosure	-.04	-.04	-.29, .21	
Dad self-disclosure	.53***	.53***	.27, .79	
Dad-reported cohesion	-.16	-.16	-.46, .14	
Mom-reported cohesion	.44**	.44**	.16, .72	

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

**Table 13**

*Parental qualities and behaviors at 13 as predictors and emotion dysregulation at 27 as a mediator of companionship.*

	Companionship (29-30)			R <sup>2</sup>
	$\beta$ entry	$\beta$ final	95% CI	
<i>Step 1</i>				.06
Gender	-.20	-.18	-.36, .00	
Income	.11	.06	-.14, .27	
<i>Step 2</i>				.29
Mom valuing	-.02	-.01	-.22, .20	
Mom self-disclosure	-.31**	-.30**	-.51, -.10	
Dad-reported consensus	.12	.11	-.14, .37	
Mom-reported consensus	-.05	-.04	-.35, .28	
Dad-reported cohesion	-.06	-.05	-.38, .28	
Mom-reported cohesion	.38*	.35*	.01, .70	
<i>Step 3</i>				.30
Emotion dysregulation	.11	.11	-.08, .29	

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

**Table 14**

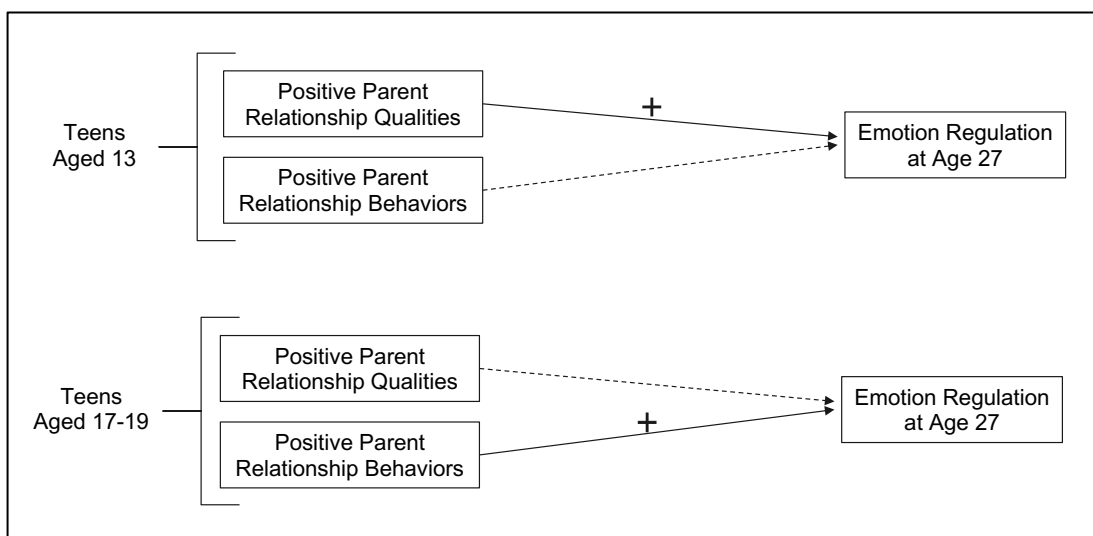
*Parental qualities and behaviors at 17-19 as predictors and emotion dysregulation at 27 as a mediator of companionship.*

	Companionship (29-30)			<i>R</i> <sup>2</sup>
	$\beta$ entry	$\beta$ final	95% CI	
<i>Step 1</i>				.06
Gender	-.20	-.19	-.42, .04	
Income	.11	-.02	-.32, .28	
<i>Step 2</i>				.40
Mom valuing	.08	.05	-.29, .38	
Dad valuing	.10	.03	-.49, .55	
Mom self-disclosure	-.01	.02	-.34, .38	
Dad self-disclosure	.42	-.29	-1.02, .44	
Dad-reported consensus	.23	.09	-.35, .51	
Mom-reported consensus	-.29*	-.25	-.54, .04	
Dad-reported cohesion	-.02	.25	-.36, .87	
Mom-reported cohesion	.11	-.08	-.62, .45	
<i>Step 3</i>				.26
Emotion dysregulation	.26	.26	-.22, .74	

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

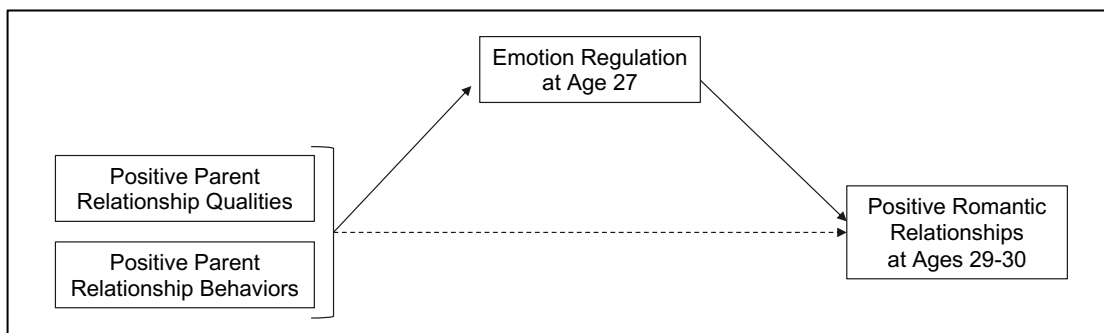
**Figure 1.**

*Heuristic Representation of Hypotheses 1 and 2.*



**Figure 2.**

*Heuristic Representation of Hypotheses 3 and 4*



## Appendix A

### Dyadic Adjustment Scale

Most persons have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list. Circle the number under one answer for each item.

	Always Agree	Almost Always Agree	Occasionally Disagree	Frequently Disagree	Almost Always Disagree	Always Disagree
1. Handling family finances	1	2	3	4	5	6
2. Matters of recreation	1	2	3	4	5	6
3. Religious matters	1	2	3	4	5	6
4. Demonstrations of affection	1	2	3	4	5	6
5. Friends	1	2	3	4	5	6
6. Sex relations	1	2	3	4	5	6
7. Conventionality (correct or proper behavior)	1	2	3	4	5	6
8. Philosophy of life	1	2	3	4	5	6
9. Ways of dealing with parents or in-laws	1	2	3	4	5	6

10. Aims, goals, and things believed important	1	2	3	4	5	6
11. Amount of time spent together	1	2	3	4	5	6
12. Making major decisions	1	2	3	4	5	6
13. Household tasks	1	2	3	4	5	6
14. Leisure time interests and activities	1	2	3	4	5	6
15. Career decisions	1	2	3	4	5	6
	All the time	Most of the time	More Often than Not	Occasionally	Rarely	Never
16. How often do you discuss, or have you considered divorce, separation, or termination of your relationship?	1	2	3	4	5	6
17. How often do you or your mate leave the house after a fight?	1	2	3	4	5	6
18. In general, how often do you think that things between you and your partner are going well?	1	2	3	4	5	6



19. Do you confide in your mate?	1	2	3	4	5	6
----------------------------------	---	---	---	---	---	---

20. Do you ever regret that you married (or lived together)?	1	2	3	4	5	6
--	---	---	---	---	---	---

21. How often do you and your partner quarrel?	1	2	3	4	5	6
--	---	---	---	---	---	---

22. How often do you and your mate get on each other's nerves?	1	2	3	4	5	6
--	---	---	---	---	---	---

23. Do you kiss your mate?	Every Day	Almost Every Day	Occasionally	Rarely	Never
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24. Do you and your mate engage in outside interests together?	All of Them	Most of Them	Some of Them	Very Few of Them	None of Them
--	-------------	--------------	--------------	------------------	--------------

<b>How often do the following occur between you and your mate?</b>	Never	Less Than Once a Month	Once Or Twice a Month	Once Or Twice a Week	Once a Day	More Often
--	-------	------------------------	-----------------------	----------------------	------------	------------

25. Have a stimulating exchange of ideas	1	2	3	4	5	6
--	---	---	---	---	---	---

26. Laugh together	1	2	3	4	5	6
--------------------	---	---	---	---	---	---

27. Calmly discuss something	1	2	3	4	5	6
------------------------------	---	---	---	---	---	---

28. Work together on a project	1	2	3	4	5	6
--------------------------------	---	---	---	---	---	---



## Appendix B

### Difficulties in Emotion Regulation Scale

Please read each item below and indicate to what extent you feel the statement describes you.

	Almost Never	Sometimes	About Half the Time	Most of the Time	Almost Always
1. I am clear about my feelings.	1	2	3	4	5
2. I pay attention to how I feel.	1	2	3	4	5
3. I experience my emotions as overwhelming and out of control.	1	2	3	4	5
4. I have no idea how I am feeling.	1	2	3	4	5
5. I have difficulty making sense out of my feelings.	1	2	3	4	5
6. I am attentive to my feelings.	1	2	3	4	5
7. I know exactly how I am feeling.	1	2	3	4	5
8. I care about what I am feeling.	1	2	3	4	5
9. I am confused about how I feel.	1	2	3	4	5
10. When I'm upset, I acknowledge my emotions.	1	2	3	4	5
11. When I'm upset, I become angry with myself of feeling that way.	1	2	3	4	5
12. When I'm upset, I become embarrassed for feeling that way.	1	2	3	4	5

13. When I'm upset, I have difficulty getting work done.	1	2	3	4	5
14. When I'm upset, I become out of control.	1	2	3	4	5
15. When I'm upset, I believe that I will remain that way for a long time.	1	2	3	4	5
16. When I'm upset, I believe that I'll end up feeling very depressed.	1	2	3	4	5
17. When I'm upset, I believe that my feelings are valid and important.	1	2	3	4	5
18. When I'm upset, I have difficulty focusing on other things.	1	2	3	4	5
19. When I'm upset, I feel out of control.	1	2	3	4	5
20. When I'm upset, I can still get things done.	1	2	3	4	5
21. When I'm upset, I feel ashamed of myself for feeling that way.	1	2	3	4	5
22. When I'm upset, I know that I can find a way to eventually feel better.	1	2	3	4	5
23. When I'm upset, I feel like I am weak.	1	2	3	4	5
24. When I'm upset, I feel like I can remain in control of my behaviors.	1	2	3	4	5
	1	2	3	4	5

25. When I'm upset, I feel guilty for feeling that way.					
26. When I'm upset, I have difficulty concentrating.	1	2	3	4	5
27. When I'm upset, I have difficulty controlling my behaviors.	1	2	3	4	5
28. When I'm upset, I believe that there is nothing I can do to make myself feel better.	1	2	3	4	5
29. When I'm upset, I become irritated with myself for feeling that way.	1	2	3	4	5
30. When I'm upset, I start to feel very bad about myself.	1	2	3	4	5
31. When I'm upset, I believe that wallowing in it is all I can do.	1	2	3	4	5
32. When I'm upset, I lose control over my behaviors.	1	2	3	4	5
33. When I'm upset, I have difficulty thinking about anything else.	1	2	3	4	5
34. When I'm upset, I take time to figure out what I'm really feeling.	1	2	3	4	5
35. When I'm upset, it takes me a long time to feel better.	1	2	3	4	5
36. When I'm upset, my emotions feel overwhelming.	1	2	3	4	5

## Appendix C

### Brief COPE

The following statements describe what some people might do when they experience stressful events. Please check one box for each item to show how much you *usually* do the following when you are under a lot of stress.

	Not at all	A little bit	A medium amount	A lot
1. I usually concentrate my efforts on doing something about the situation I am in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I usually take action to try to make the situation better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I usually try to come up with a strategy about what to do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I usually think hard about what steps to take	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I usually try to see it in a different light, to make it seem more positive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I usually look for something good in what is happening	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I usually accept the reality of the fact that it has happened	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I usually learn to live with it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I usually make jokes about it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I usually make fun of the situation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I usually try to find comfort in my religious or spiritual beliefs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I usually pray or meditate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I usually get emotional support from others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. I usually get comfort and understanding from someone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. I usually try to get advice or help from other people about what to do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. I usually get help and advice from other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. I usually turn to work on other activities to take my mind off things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. I usually do something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping or shopping)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I usually say that “this isn’t real”	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. I usually refuse to believe that it has happened	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. I usually say things to let my emotions escape	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. I usually express my negative feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. I usually use alcohol or other drugs to makes myself feel better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. I usually use alcohol or other drugs to help me get through it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. I usually give up trying to deal with it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. I usually give up the attempt of coping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. I usually criticize myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. I usually blame myself for things that happened	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Appendix D

### Network of Relationships Inventory

We are interested in the different kinds of things adults experience in romantic relationships. Please answer the following questions as they relate to your partner. Please check the box that best describes your relationship:

	Never/ None	A Little	Somewhat	Quite a Bit	Extremely Much
1. How much free time do you spend with this person?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. How much do you play around and have fun with this person?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. How often do you go places and do enjoyable things with this person?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. How much do you and this person get upset with or mad at each other?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. How much do you and this person disagree and quarrel?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. How much do you and this person argue with each other?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. How much does this person teach you how to do things that you don't know how to do?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. How much does this person help you figure out or fix things?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. How often does this person help you when you need to get something done?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. How much do you and this person get on each other's nerves?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



11. How much do you and this person get annoyed with each other's behavior?

---

12. How much do you and this person hassle or nag each other?

---

13. How much do you talk about everything with this person?

---

14. How much do you share your secrets and private feelings with this person?

---

15. How much do you talk to this person about things that you don't want others to know?

---

16. How much do you help this person with things s/he can't do by him/herself?

---

17. How much do you protect and look out for this person?

---

18. How much do you take care of this person?

---

19. How much does this person like or love you?

---

20. How much does this person really care about you?

---

21. How much of a strong feeling of affection (loving or liking) does this person have toward you?

---

22. How much does this person treat you like you're admired or respected?

23. How much does this person treat you like you're good at many things?

---

24. How much does this person like or approve of the things you do?

---

25. How much do you tell the other person what to do (more than they tell you what to do)?

---

26. Between you and this person, how much do you tend to be the boss in the relationship?

---

27. In your relationship with this person, how much do you tend to take charge and decide what should be done?

---

28. How sure are you that this relationship will last no matter what?

---

29. How sure are you that your relationship will last in spite of fights?

---

30. How sure are you that your relationship will continue in the years to come?

---

31. How often do you turn to this person for support with personal problems?

---

32. How often do you depend on this person for help, advice, or sympathy?

---

33. When you are feeling down or upset, how often do you depend on this person to cheer you up?

---

34. How often does this person point out your faults or put you down?                             

---

35. How often does this person criticize you?                             

---

36. How often does this person say mean or harsh things to you?                             

---

37. How often does this person get his/her way when you two do not agree about what to do?                             

---

38. How often does this person end up being the one who makes the decisions for both of you?                             

---

39. How often does this person get you to do things his/her way?                             

---

40. How satisfied are you with your relationship with this person?                             

---

41. How good is your relationship with this person?                             

---

42. How happy are you with the way things are between you and this person?                             

---

43. How much does this person punish you?                             

---

44. How much does this person discipline you for disobeying him/her?                             


---

45. How much does this person scold you for doing something you are not supposed to do?



## Appendix E

### Supportive Behavior Task Manual: Valuing and Self-Disclosure Scales

#### Coding for Valuing:

- 0  You can't tell if the person likes or cares about the other, or they seem ambivalent, or worse (example: strangers sitting on a bus and having a conversation, where they really have no interest in each other). For parents: there's no behavior in the interaction that shows they like their kid (even if we assume they must because they're a parent and they may not be openly hostile).
- OR**
- There are a very few small signs of liking in an otherwise neutral (or negative) interaction, but these don't really change the tone of the interaction from primarily neutral/ambivalent or negative.
- 0.5 Tone is friendly, but nothing else.
- 1.0 The person seems to like (and/or for peers care about) the other but you are not necessarily sure how genuine or deep the positive/warm feelings are. There is some positive tone and warmth, it is very subtle and could be missed.
- OR**
- There could be a lot of animation (consistent enjoyment of the interaction), but no real sense of or demonstration of warmth, like, or valuing of the other. Here, the interaction seems fine, but it's difficult to judge the closeness of the friendship or relationship.
- OR**
- Placating that may not be honest
- OR**
- Brief demonstrations or very implicit demonstrations of showing valuing of the other
- 1.5 Person doesn't demonstrate any warmth (beyond what nice people generally show to strangers) BUT in other ways shows that s/he is a good friend (i.e., "I don't have any friends at the dance so I might not go." A: "What am I chopped liver? We're friends, we could hang out.") Shows the friendship (and thus the valuing) but without using warmth to do it.
- OR**
- The person seems to be demonstrating that he/she is a good friend to the other without demonstrating any warmth. Sincere placating: The speaker really wants the other person to feel OK. The speaker is trying to be genuine; though it is difficult to gauge the depth and sincerity of the positive expression.

**\*\* Scores above a 2 must have demonstrated signs of warmth/complements. These signs may either be direct/intentional OR indirect/implicit.**

- 2.0  Consistent enjoyment of the interaction AND Showing valuing/warmth is present but inconsistently or ambiguously. Some clear positive tone and warmth, but pretty implicit. The listener would suspect that the other cares about them. You feel like you know the positive feelings are genuine – but there are no CLEAR demonstrations of the positive feelings, valuing, or warmth.  
**OR**  
 Non-incident touching that's not affectionate (i.e., grabbing person's shoe to show them something about it, where they didn't need to do this).
- 2.5 Definitely wouldn't miss the warmth, but not bowled over by it.  
**OR**  
 Clearly caring rule setting (by a parent) ...must clearly show the teen that the parent is setting the rules because they care about the kid in order to be scored. Simply setting rules that *imply* that the parent cares (or why else would they set them) does not count. The caring must come through to the teen in the ACT of setting the rule. Simple rule setting without this would be a "0".  
**OR**  
 Invitation to do something specific together "Do you want to go look at drums together after this?"  
**OR**  
 More flippant, less than convincing complement.  
**OR**  
 Touching in a grooming way (i.e., touching that's a bit more intimate than grabbing a shoe, but not mainly affectionate—See romantic partner exception above).
- 3.0  The speaker is not totally warm and fuzzy, or showing valuing of the other. Real, honest, substantial, non-trivial amount of warmth. The listener would definitely know that the other is on his/her side and that the positive feelings are genuine. There are clear demonstrations of positive feelings/valuing.  
**OR**  
 Sincere complementary statement: statement that shows they really care about friendship.  
**OR**  
 "Do you want to hang out together after this?" (Less task specific than 2.5 example). [NOTE: this works for friendships; but by itself might not mean anything for a romantic relationship. Because we assume they spend time together, and have some commitment, it takes an active statement of interest in the other person not just commitment to the relationship to count here as warmth/valuing. An equivalent statement for a romantic

relationship might be: “I want to plan ways we can be spending more time together”].

**OR**

Touching in an affectionate way (but see romantic partner exception above).

4.0



The speaker’s behavior overall gives a quite warm and fuzzy feeling to the interaction, is showing real affection, valuing and liking the other is strong and clear. The listener knows that the other REALLY cares about him/her.

#### Coding for Self-Disclosure:

0

Brief or non-controversial likes and dislikes or wants or needs are expressed. (i.e., “I like video games.”). Talking about your day in a way that doesn’t tap into higher scores.

EXAMPLE: Teen to Peer: “Susan came and told me she had this problem (explains problem). What would you do if you were her?”

EXAMPLE: Parent to Teen: “I’m worried that you’re gonna not be very happy with your grades if you keep going like this” (said without any real evidence of anxiety, but more as a statement the kids’ behavior is out of line).

0.5

EXAMPLE: “Boy, I’m gonna fail this Spanish test.”

EXAMPLE: “I need some money to buy some sneakers, I don’t know how to get it.” (Not about poverty, just about how to raise money)

EXAMPLE: Teen to Parent: “I’m annoyed with my sister for picking on me.”

EXAMPLE: Parent to Teen: “I’m worried that you’re being controlled by your boyfriend” (said without any real evidence of anxiety, but more as a statement the kids’ behavior is out of line). [NOTE: in general, parental worries about their child are not that disclosing, and can range from non-disclosing expressions of wanting a kid to change behavior, to moderately disclosing statements of concern about hot topics where real anxiety is conveyed.]

1.0

Personal opinions, not necessarily controversial but still going out on a limb a bit.

Feelings that are non-controversial and pretty readily expressed (or stated very implicitly). There may be a little bit of affect, but it is run of the mill affect.

**OR**

Facts about self: some potential to be embarrassing One could make fun of someone for saying this, but probably wouldn’t.

EXAMPLE: “I’m worried that I’m gonna fail this Spanish test.” Said matter of factly, as if it wasn’t a big deal. This adds an element of emotion to the .5 example above)

EXAMPLE: Peer to Teen: Peer is talking about a friend who keeps accusing her of flirting with her boyfriend. “I’m getting tired of it.” Expressed with mild annoyance.

EXAMPLE: Teen to Peer: Teen says, “I don’t like coach, he gets on my nerves.” Teen readily expresses his annoyance with coach.

EXAMPLE: Teen to Parent: “Do you think I could get into any college with my grades?”

EXAMPLE: Parent to Teen: “I’m worried that you’re gonna find yourself pregnant one day” (said without any real evidence of anxiety, but more as a statement the kids’ behavior is out of line). [this is like the .5 example but with a more charged topic]

1.5 Here the speaker is going out a little more on the limb.

**OR**

The information may be a bit more embarrassing, but it is presented in a way that minimizes the vulnerability.

EXAMPLE: Teen to Parent: “He kind of makes me feel uncomfortable” (teen statement about a potential employer that parent knows)

EXAMPLE: Teen to Peer: “This girl’s been harassing me, and I think she likes me” (at age 13, because at this age, we’re taking this to mean “I’m getting pushed into romantic stuff and its uncomfortable and being uncomfortable is not that self-disclosing.”)

EXAMPLE: Peer to Teen: Peer says, “You’ll like him, he’s short, but cute.” (This really expressed a personal opinion, plus the sentiment: I’m a little worried you won’t like him.)

EXAMPLE: Teen at age 20: “I’m really worried about a lot of stuff with my cousin” (said with real feeling).

If someone in essence says “me too” to a highly disclosing statement, without adding other information, it usually will get a maximum of a 1.5 no matter how said or in what context (except in cases where the material is extremely self-disclosing—e.g., revealing a history of sexual abuse).

2.0 Relatively controversial opinions. Expressing feelings that are socially acceptable but not always readily expressed. Also coded here are things that might be a bit more embarrassing, things that someone might think the speaker is a little silly for saying.

EXAMPLE: Peer to Teen: Teen anxiously says, “I don’t know my way around the school. How are we supposed to know where the classrooms are?”

EXAMPLE: Parent to Teen: The essence of the conversation is: “I’m worried about you having sex because there are a lot of diseases out there” (said with the anxiety being clear, not said as simply a way of saying “don’t have sex.”).

EXAMPLE: Parent: “I’ve learned that *sometimes* just liking someone is more fun than going further with them.”

**\*\*Higher than a 2 is getting into areas that are not commonly shared with strangers or others and are more difficult to say. \*\***

[NOTE: in general, parental worries about their child are not that disclosing, and can range from non-disclosing expressions of wanting a kid to change behavior, to moderately disclosing statements of concern about hot topics where real anxiety is conveyed.]

- 2.5           EXAMPLE: Teen to Parent: “Larry keeps picking on me” (w/ no follow-up). (a low 2.5)  
EXAMPLE: Teen to Peer: “Dave told me I was fat and looked like I was pregnant” (said in a light tone). (a high 2.5)
- 3.0           Expressing strong feelings that are less socially acceptable (e.g., embarrassed (for 13-year-old); for age 21: “I feel like I need more of your time right now.”).  
**OR**  
Revealing facts about self that are a little strange to reveal to a stranger, a little potentially embarrassing. The information that is revealed has some emotional content and seems to be important to the speaker.  
  
EXAMPLE: Teen to Parent: “Kids are teasing me.” (Worse than Larry picking on me, because implies something more embarrassing, i.e., a *group* is making fun of me vs. 1 person acting like a jerk).  
EXAMPLE: Teen to Parent “I was worried about you when you fell, and the ambulance came to get you.” (For 13-year-old)  
EXAMPLE: Teen to Mother: “Dad doesn’t want to talk to me, he never says anything to me, he doesn’t understand me.”
- 3.5           EXAMPLE: Teen to Peer: “You’re my best friend AND I really care about our friendship” (said with feeling) (second half must be either explicitly stated or unmistakably implied).
- 4.0           Areas not commonly shared even between somewhat close friends.  
Expressing strong feelings (other than socially acceptable feelings, such as anger at something outrageous), e.g., sadness, fear, loneliness, anxiety.  
**OR**



Describing experiences or facts about self that would be very strange (and embarrassing) to tell a stranger.

EXAMPLE: Teen to Peer “My parents are divorced, they fight in front of me, it’s so embarrassing, they drag me into it.”

EXAMPLE: (Peers, not parents or romantic partners): “I love you and I really care about you”

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