

Fall 12-16-2016

## Why are some parents more positive than others?: Clarifying mechanisms associated with positive parenting

Laura LaFleur  
*University of New Orleans*, lklafl1@uno.edu

Follow this and additional works at: <https://scholarworks.uno.edu/td>



Part of the [Developmental Psychology Commons](#)

---

### Recommended Citation

LaFleur, Laura, "Why are some parents more positive than others?: Clarifying mechanisms associated with positive parenting" (2016). *University of New Orleans Theses and Dissertations*. 2261.  
<https://scholarworks.uno.edu/td/2261>

This Dissertation is protected by copyright and/or related rights. It has been brought to you by ScholarWorks@UNO with permission from the rights-holder(s). You are free to use this Dissertation in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s) directly, unless additional rights are indicated by a Creative Commons license in the record and/or on the work itself.

This Dissertation has been accepted for inclusion in University of New Orleans Theses and Dissertations by an authorized administrator of ScholarWorks@UNO. For more information, please contact [scholarworks@uno.edu](mailto:scholarworks@uno.edu).

Why are some parents more positive than others?: Clarifying mechanisms associated with  
positive parenting

A Dissertation

Submitted to the Graduate Faculty of the  
University of New Orleans  
in partial fulfillment of the  
requirements for the degree of

Doctor of Philosophy  
in  
Applied Developmental Psychology

by

Laura K. LaFleur

B.S. Louisiana State University, 2010  
M.S. University of New Orleans, 2014

December 2016

## Table of Contents

List of Figures .....	iii
Abstract .....	iv
Chapter 1 .....	1
Introduction .....	1
Summary .....	13
Chapter 2 .....	15
Method .....	15
Participants .....	15
Procedure .....	17
Measures .....	19
Chapter 3 .....	23
Results .....	23
Descriptive Statistics and Correlations .....	25
Primary Analysis .....	27
Chapter 4 .....	36
Discussion .....	36
Strengths and Limitations .....	40
Future Directions .....	40
References .....	43
Vita .....	53

## List of Figures

Table 1 .....	26
Table 2 .....	29
Figure 1 .....	4
Figure 2 .....	28
Figure 3 .....	30
Figure 4 .....	31
Figure 5 .....	34
Figure 6 .....	36

## Dedication

To my parents,

Thank you for your endless love, support, and prayers throughout the years. I could not have made it this far without you.

To my siblings,

I have always looked up to each of you. Thank you for setting a great example for me to follow, and for your advice and support.

To Alex,

For your positivity and encouragement, especially in times when I needed it the most. Thank you for helping me put things in perspective.

## Acknowledgements

I would like to acknowledge Dr. Robert Laird and Dr. Laura Scaramella for your guidance, support, and reassurance throughout the years. Thank you for your patience and positivity, and for helping me believe in myself. Also, I would like to acknowledge Dr. Paul Frick, Dr. Elliott Beaton, and Dr. Kristen Callahan. Thank you for all of your help and encouragement each step of the way, and advice on my dissertation. You all have made a profound impact on my life, and

I feel very grateful to have had you as mentors, professors, and committee members.

## Abstract

The purpose of the current study was to replicate and extend existing research considering how positive parenting and family conflict impact positive parenting in future generations. Specifically, romantic conflict occurring in the family of procreation was expected to mediate the link between positive parenting in family of origin, and later parenting in family of procreation. This is one of the first studies to include both observational and direct forms of parenting. Data from the Family Transitions Project (FTP) was used in the study. A series of structural equation models were used to test each hypothesis. Results indicated that learning occurs through direct interactions and observations. When adolescents observed positive parenting towards siblings, they engaged in less conflictual romantic relationships in the future, and more positive parenting with their own children. However, when adolescents were directly experienced more family conflict, they were more likely to engage in conflict with romantic partners during adulthood, and use less positive parenting with their own children. Alternative models, future directions and limitations are discussed.

Keywords: positive parenting, family conflict, romantic conflict, intergenerational continuity

## Why are some parents more positive than others?: Clarifying mechanisms associated with positive parenting

Parenting interventions typically focus on teaching parents how to respond to children positively (e.g., positive reinforcement, explanations), yet little is known about why some parents engage in positive parenting strategies more readily than others. One possible explanation is that parents adopt parenting strategies that are consistent with their own experiences during childhood and adolescence. In other words, parenting of one generation mimics parenting in the previous generation. Research has considered the role of early life experiences on parenting practices in the next generation (e.g., Conger, Neppl, Kim, & Scaramella, 2003). Longitudinal studies have shown intergenerational transmission in harsh (e.g., Scaramella & Conger, 2003) and positive (e.g., Belsky, Hancox, Sligo, & Poulton, 2012) parenting practices. There are no known studies linking conflict within families to poor parenting in the next generation. However, there is some evidence that familial conflict is associated with problems in close relationships (e.g., Vairami & Vorria, 2007). Thus, parenting practices and interactions within the family are important because they equip children with skills that will impact future relationships.

Children first learn socially adaptive skills in the family of origin. In fact, families are the first place children learn prosocial behaviors, which are voluntary actions that reflect a caring concern for another's well-being (Eisenberg, Fabes, & Spinrad, 2006). Prosocial behaviors can be learned through observation within the family or taught by parents. For instance, when parents model prosocial behavior, they encourage adolescents to engage in prosocial behaviors socially, and within the family (Eisenberg & Murphy, 1995; Carlo, McGinley, Hayes, Batenhorst, & Wilkinson, 2007). When children are equipped with prosocial behaviors, they may be more



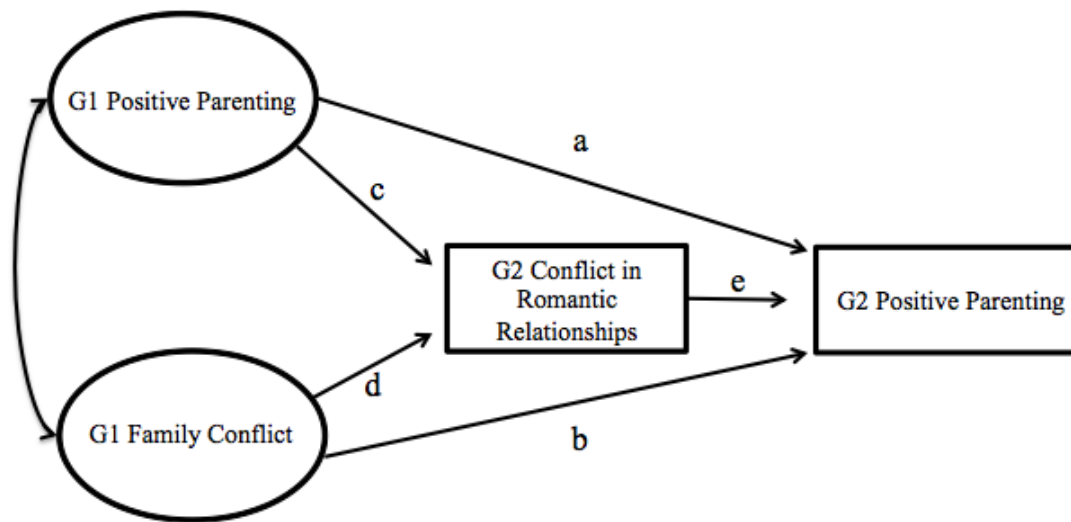
likely to form positive future relationships. For instance, when children learn how to negotiate and cooperate with others, they may be more likely to use these skills in the future while interacting with their own children as well as with romantic partners. Thus, learning adaptive skills in the family of origin has important implications for parenting practices and romantic relationships in the family of procreation.

Children's propensity to learn adaptive skills through interactions with family members likely varies among families. In families characterized by high levels of conflict, children may have fewer opportunities to learn adaptive skills, and may learn more maladaptive ways of interacting socially. In contrast, children who experience higher levels of positive parenting will likely have more opportunities to learn adaptive skills. In either case, children can learn these behaviors through interactions with multiple family members, and through parenting.

According to Crittenden's (1984) theory, which is grounded in the social learning theory (Bandura, 1977), children learn social interactional skills in the family of origin by directly observing parents' interactions with siblings, directly interacting with parents, and receiving coaching from parents on acceptable social interactional strategies to use with parents, teachers, siblings and peers. Thus, both observational and direct interactional approaches remain effective methods of influencing adolescents' development of future social interactional skills (Crittenden, 1984). Additionally, social learning theory suggests that conflict management skills enacted in marriage are first learned in the family of origin. Based on this theory, individuals learn certain behaviors through parenting, interacting with family members, and observing family interaction in the family of origin. Therefore, similar behaviors should be replicated in the family of procreation, both in romantic relationships and parenting. Thus, both parenting quality and

family relationship quality likely impact broad patterns of relationship quality in the family of procreation.

The proposed dissertation seeks to build upon existing research, including research using data from the Family Transitions Project (FTP), by considering how the quality of social interactions within the family of origin influences the quality of romantic relationships and parenting within the family of procreation. Using prospective, longitudinal data, the current study examines the extent to which parenting quality (see Figure 1, path a) and family conflict (Figure 1, path b) predict positive parenting in the next generation. Positive parenting and family conflict experienced in the family of origin are expected to influence both family relationships quality and parenting quality in emerging families of procreation by way of romantic relationship quality. That is, the links between G1 positive parenting and G2 positive parenting, and between G1 family conflict and G2 positive parenting were expected to be partially explained by G2 conflict in romantic relationships. When adolescents experience high levels of conflict and lower levels of positive parenting, they will likely have less exposure to adaptive skills, thus compromising their ability to develop warm and supportive romantic relationships (see Figure 1, paths c and d). Instead, when the child chooses a romantic partner, conflict in romantic relationships is expected to predict more family conflict with less positive parenting (see Figure 1, path e).



Developmental Timeline

Family of Origin: G2 Targets' Adolescence  
(9<sup>th</sup>/10<sup>th</sup> grade)

G2 Targets' Family of Procreation when G3 child is 2-3  
years of age

*Figure 1.* Intergenerational continuity of negative family relationships and positive parenting mediated by conflict in romantic relationships

The following sections will first describe how positive parenting and family conflict in the family of origin impacts quality of parenting and romantic relationships in the family of procreation. Then, research linking quality of romantic relationships to positive parenting and family conflict in the family of procreation will be discussed. The final section will describe statistical analyses, results, and discussion of research findings.

### **Intergenerational continuity in positive parenting**

Parenting requires ongoing adaptation and recalibration to children's developmental needs and skills. For instance, during toddlerhood, increases in children's language skills (Ainsfeld, 1984) and expectations for emotion regulation (Kopp, 1989) means that parents begin to expect children to comply with their requests (Kochanska, 1995). Middle childhood is a period

of growth in cognitive competence, knowledge, and transition to more extensive social contexts (Colin, Madsen, & Susman-Stillman, 2001). Moreover, during middle childhood, children gain autonomy and engage more with peers and various contexts (Raikes & Thompson, 2005; Rubin, Bukowski, & Parker, 2006). Consequently, children during middle childhood are often exposed to more peer conflicts, requiring parents to coach children on how to navigate through conflictual situations. Adolescence is a developmental period in which children undergo immense psychological and physical changes (Arnett, 1999), and seek more autonomy and spend increasingly more time with peers than family members (Steinberg & Morris, 2001). Thus, throughout middle childhood and adolescence, parents are required to remain actively involved by providing coaching and promoting children to accomplish skills on their own.

It becomes increasingly more challenging for parents to modify their own parenting behaviors and expectations to match their children's emerging competencies and skills. Positive parenting is not just the absence of harsh or abusive parenting (Belsky, Jaffee, Sligo, Woodward, & Silva, 2005; Chen & Kaplan, 2001). Rather, positive parenting is characterized by high levels of responsiveness, support, acceptance, and engagement (Schofield, Conger & Neppl, 2014). Positive parenting is operationalized to include the use of clear and direct communication, positive reinforcement (e.g., Maccoby, 1992), explanations, and consistent discipline within an atmosphere of acceptance, warmth, and support (Rohner, 1986). While the overall definition of positive parenting remains consistent across child development, parents and children frequently renegotiate rules and expectations to match children's changing skills and maturation. Such a process of refining and renegotiating expectations teaches children prosocial behaviors and, eventually, the skills needed to parent their own children.

During infancy, parents engage in positive parenting when they sensitively respond to infant cries and distress cues in a prompt, effective, and warm manner (De Wolff & van IJzendoorn, 1997). The transition into the toddler period requires parents to adapt their pattern of responsiveness such that parents help children regulate intense emotions, navigate conflicts, and cooperate with others (Shaw et al., 2000). Positive parenting practices during toddlerhood include the use of positive reinforcement, explanations, and commands; such parenting preserves children's autonomy while teaching children cause and effect (Gardner, Sonuga-Barke, & Sayal, 1999). By middle childhood, parents and children increasingly rely on verbal communication. As a result, positive parenting involves explanations, communication of demands, and reasons for decisions (Baumrind, 1989; Maccoby and Martin, 1983; Maccoby, 1992). Given increases in autonomy during adolescence (Steinberg & Morris, 2001), positive parenting during the adolescent stage of development involves discussions of adolescents' independence, responsibility, and standards for acceptable behavior (Noack & Kracke, 1998).

Intergenerational studies have shown that children and adolescents who are exposed to positive parenting are more likely to use positive parenting strategies with their own children. Empirical investigations examining the impact of social interactions on adjustment typically measure direct social interactions within the parent-child relationship because this relationship provides the clearest evidence of parental socialization. For instance, positive parenting strategies used in early childhood (Belsky, Hancox, Sligo, & Poulton, 2012; Belsky et al., 2005), middle childhood (Belsky, et al., 2012; Belsky et al., 2005; Neppl, Conger, Scaramella, & Ontai, 2009), and adolescence (Belsky et al., 2012; Belsky et al., 2005; Brook, Lee, Finch, & Brown, 2012; Chen & Kaplan, 2001; Friesen, Woodward, Horwood, & Fergusson, 2013; Spillman et al., 2013) in the family of origin also are used by same children, now adults, during interactions with

their own children. Using data from the FTP, Spillman and colleagues (2013) found that G1 positive parenting towards G2 targets during their adolescence predicted G2's positive parenting towards their G3 child when the G3 children were about 2 years of age (mean = 2.2 years), when controlling for G2 religiosity measured during adolescence. In the Spillman and colleagues (2013) study, G1 positive parenting was measured across the adolescent period (i.e., 1991, 1992, 1994) using the observational codes of communication, prosocial behavior, assertiveness, and hostility, antisocial behavior, and angry coercion (reverse coded).

In a rare observational study examining the intergenerational transmission of positive parenting, Belsky and colleagues (2005) measured childrearing history across three developmental periods: early childhood (ages 3 to 5), middle childhood (ages 7 to 9) and early adolescence (ages 13 to 15). Parenting during early childhood focused on mothers' use of support, autonomy-promoting, and clear communication, as well as their level of over-control and demandingness. Middle childhood parenting consisted of negative discipline and positive family climate. Parenting during early adolescence involved positive family climate, and parenting during adolescence consisted of trusting and communicative parenting. To measure the target adults' interactions with their children, a semi-structured interview involving free play and teaching tasks was used. Both parent and child behavior were recorded and coded. Results indicated that children who received less over-control and demandingness during early childhood with more positive family climates during middle childhood had relationships with parents characterized by high levels of trust, communication, and closeness during adolescence. In addition, as parents, these same participants used more positive parenting practices with their own children when the children were three years of age (Belsky, Jaffee, Sligo, Woodward, & Silva, 2005).

In sum, positive parenting strategies change throughout the course of child development. Parents who utilize positive parenting strategies are able to adapt to children's needs at each developmental stage and use non-controlling, positive tactics to guide child behavior. Children who are exposed to more positive parenting strategies are more likely to use positive parenting strategies with their own children (e.g., Belsky et al., 2005).

### **Family conflict in the family of origin undermines positive parenting in the next generation**

In addition to positive parenting, experiencing family conflict within the family of origin is predicted to negatively impact target participants' capacity to use positive parenting strategies in the next generation. Family conflict is conceptualized as the extent to which family members display harsh, coercive, aggressive behaviors towards one another. Conflictual interactions may occur between parents, parents and siblings, or between target adolescent and parents or siblings (Bryant & Conger, 2002). Thus, target children may be both directly, as participants, and indirectly, as witnesses, impacted by family conflict.

Although there are no known studies linking family conflict to less positive parenting in the next generation, there are several studies that link various forms of family conflict with problems in peer relationships. Importantly, positive peer relationships during childhood (i.e. family of origin) has been linked with more positive parenting in the family of procreation (Shaffer, Burt, Obradović, Herbers, & Masten, 2009). When children and adolescents are exposed to interparental conflict, they are more likely to be rejected by peers (MacKinnon-Lewis & Lofquist, 1996; Strassberg, Dodge, Bates, & Pettit, 1992; Vairami & Vorria, 2007), and have conflictual peer relationships (Stocker & Youngblade, 1999), poor quality friendships (Lindsey, Colwell, Frabutt, & MacKinnon-Lewis, 2006; Underwood, Beron, Gentsch, Galperin, & Risser, 2008; Parke et al., 2001) and engage in less prosocial behavior (Ladd & Profilet, 1996). For

instance, Underwood et al., (2008) found that when children (ages 9 and 10) were exposed to mothers' interparental conflict strategies (i.e., verbal and physical aggression, triangulation, stonewalling) was associated with more social and physical aggression with peers longitudinally. In addition to observing interparental conflict, when target children observe conflict between parent and sibling, they experience more peer difficulties. Though no study has tested this link specifically, parent-child conflict impacts how siblings manage conflict with siblings. For instance, parenting-sibling conflict has shown to impact how children manage sibling conflict (Perlman, Garfinkel, & Turrell, 2007). The authors concluded that if poor modeling occurs during conflict resolution between parents and siblings, the target child will likely enact those same behaviors during conflict with siblings (Perlman, Garfinkel, & Turrell, 2007).

When children engage in conflict with siblings or parent, this may lead to problems in peer relationships. Children's first experience with interpersonal conflict occurs within the sibling relationship in particular (Dunn & Munn, 1987; Perlman & Ross, 1997). When children or adolescents engage in conflict with siblings, they experience more difficulty with peers (Bank, Burraston, & Snyder, 2004), and aggression towards peers (Criss & Shaw, 2005). For instance, Bank, Burraston, and Snyder (2004) found that coercive sibling conflict during early and middle adolescence uniquely predicts peer difficulties longitudinally. Moreover, conflict between parents and children have also resulted in poor social development. More hostile parent-adolescent interactions have been associated with more conflict between adolescents and peers (Baril, Julien, Chartrand, & Dube, 2007). In a sample of adolescents, Paley, Conger, and Harold (2000) found that parental hostility predicted aversive behaviors towards peers, and peer difficulties. Although there are no studies linking parent-child conflict to less positive parenting in the next generation, there is some evidence that when children are exposed to negative



parenting in the family of origin, they are more likely to engage negative parenting with their own children (e.g., Neppl, Conger, Scaramella, & Ontai, 2009; Scaramella & Conger, 2003). For example, in an ongoing longitudinal study using observational data, Scaramella and Conger (2003) found that harsh G1 parenting towards the G2 adolescent was significantly linked with harsher G2 parenting toward the G3 child (at least 18 months old).

While no known FTP study has linked family conflict, measured using hostility, angry coercion, and antisocial codes rated from the family problem solving task, directly with G2 positive parenting, several FTP studies have demonstrated that observed negativity in the family of origin negatively impacted parenting quality in the next generation. For instance, target adolescents who received negative parenting in the family of origin were found to engage in negative parenting with their own children (e.g., Conger, Schofield, Neppl, & Merrick, 2013; Neppl, Conger, Scaramella, & Ontai, 2009; Scaramella & Conger, 2003). It is not clear that these same participants also engaged in less positive parenting, or if family conflict predicts more negative parenting, which are research questions to be addressed in the proposed dissertation.

In sum, through indirectly observing interparental conflict, or conflict between parents and siblings, or by directly engaging in conflict with parents or siblings, children may be more likely to experience difficulties in peer relationships. If family conflict is linked with poor peer relationships, it is likely that children may continue to engage in maladaptive patterns of conflict, and develop poor social skills, which will generalize to the next generation and impact how target parents interact with children.

### **Mediating role of conflict in romantic relationships**

Experiences in the family of origin may not directly influence parenting but may indirectly impact parenting by influencing the quality of romantic relationships. In other words,

when adolescents experience more positive parenting, they may be less likely to have conflictual relationships with future romantic partners. Furthermore, experiencing more family conflict within the family of origin may increase the likelihood that adolescents experience more conflict within their own romantic relationship. As a result, romantic conflict may interfere with target adults' ability to engage in positive parenting.

Empirical evidence shows that children exposed to negative (Whitton et al., 2008) and positive (Conger, Cui, Bryant, & Edler, 2000; Masarik et al., 2013; Whitton et al., 2008) parenting during adolescence were found to replicate such negativity or positivity in future romantic relationships, respectively. Using a prospective, longitudinal design, Whitton and colleagues (2008) examined the quality of the interaction between romantic partners as a mechanism to explain intergenerational parenting continuities. Specifically, Whitton and colleagues argued that children adopt conflict management skills learned within the family of origin and use them in peer and romantic relationships. Hostility and positive engagement during family interactions were assessed when target adolescents were 14 years of age during family conflict resolution tasks. Later, marital interaction patterns were measured when the target adult was 31 years of age and coded for positive and negative emotions and behaviors. More hostility in the family of origin was associated with more marital hostility and less marital positive engagement. In contrast, positive engagement within the family of origin predicted more positive parenting in the family of procreation (Whitton et al., 2008).

While the Whitton and colleagues (2008) study provides some evidence that direct exposure to family conflict and parenting influences later romantic relationship quality, studies from the FTP have provided some of the most compelling evidence that G1 parenting quality and family conflict affects the quality of G2's later romantic relationships and parenting. For

instance, G1 positive parenting towards G2 adolescents has been linked to later positive interactions within the G2's romantic relationship (Masarik et al., 2014). Likewise, G1 negative parenting has been associated with more negative interactions within the G2 romantic relationship (Cui et al., 2010; Masarik et al., 2014). Bryant and Conger (2002) examined the quality of interactions between multiple family members (i.e., interparental, sibling and target, sibling and parent, parent and target). Results showed that positive family relationships within the family of origin (*M* age of target adult = 21 years) predicted more positivity within G2's romantic relationship and more relationship satisfaction (Bryant & Conger, 2002). Finally, Masarik and colleagues (2014) found that exposure to hostile and positive parenting when adolescents were in ninth grade predicted similar hostile and positive interactions with a partner 16 years later.

Having a romantic partner who is fully engaged in family relationships is a critical parenting resource. Romantic relationships that are highly conflictual have been linked to poor parenting quality during early childhood both concurrently (Low & Stocker, 2005) and longitudinally (Harold, Shelton, Goeke-Morey, & Cummings, 2004; Gerard, Krishnakumar, & Buehler, 2006; Rhoades, Leve, Harold, Neiderhiser, Shaw, & Reiss, 2011). Using data from FTP, Conger, Schofield, Neppl, and Merrick (2013) found that G2 romantic relationships that were characterized by low levels of positivity (i.e., warmth, affection, and positive communication) also were rated as more harsh in their parenting (i.e., hostility, angry coercion, physical attacks, and antisocial behavior) towards their G3 children (*M* age = 2.31 years).

Chen, Liu, and Kaplan (2008) provided initial support for the hypothesis that conflict in romantic relationships mediates intergenerational continuities of parenting. In a prospective, longitudinal study, Chen, Liu, and Kaplan (2008) examined the influence of intergenerational

parenting using self-report questionnaires and at-home interviews. Adolescents who experienced more positive relationships with parents in the family of origin were more likely to use positive, constructive parenting with their own children in adulthood (i.e., mid-30's to early 40's). Positive marital relationships measured earlier in adulthood (i.e., late 20's to early 30's) mediated parenting continuities across generations. Thus, marital satisfaction in family of procreation served as a mediating mechanisms for the intergenerational transmission of constructive parenting (Chen, Liu, & Kaplan, 2008). The question remains as to whether more conflictual G2 romantic relationships is associated with less positive parenting at the same point in time.

### **Methodological considerations in the study of intergenerational processes**

Intergenerational continuity involves the extent to which parenting behaviors and family conflict in the family of origin are reproduced in the family of procreation. The current study is proposing intergenerational continuity in positive parenting. van IJzendoorn (1992) described necessary criteria to study intergenerational continuities. Specifically, to control for biases and to better detect cause-effect relationships, data should be collected prospectively, with comparable measures for each study construct. The current study meets all of the methodological requirements. For instance, G1 positive parenting and G1 family conflict were assessed during G2 target's adolescence. G2 conflict in romantic relationships and G2 positive parenting were measured several years later when G2 became a parent.

### **Summary and Hypotheses**

The purpose of the current study is to determine why some parents more readily engage in positive parenting practices than others. Using observational measures, this study is the first to include both direct and observed measures of parenting and family conflict on G2's observed

parenting behaviors. Second, while previous studies have considered components of the proposed theoretical model, none of them have considered the simultaneous influences of positive parenting and family conflict on G2 positive parenting by way of romantic relationship quality. That is, we argue that all families likely experience some degree of conflict, yet exposure to positive parenting, both directly and indirectly, may minimize the impact of family conflict on the intergenerational transmission of parenting by way of romantic relationship quality. That is, family members who experience conflict and who are able to resolve conflict also may be more likely to communicate effectively, clearly and assertively with each other and with romantic partners at a later point in time. In contrast, adolescents who reside in families who engage more intense conflict and whose parents use very little positive parenting may have very few models of interactional competence. Such adolescents may be ill-prepared to support partners during times of stress (e.g., like raising a toddler aged child) or may be ineffective in communicating in a supportive and positive manner with partners. When romantic relationships are conflictual, G2 parents may be less able to use positive parenting strategies. Thus, G2 romantic relationship quality may mediate the direct associations between G1 parenting and family conflict on G2 positive parenting.

1. Positive parenting during G2's adolescence will be associated with more positive parenting during G2's parenting (Figure 1, path a)
2. Family conflict during G2's adolescence will be associated with less positive parenting during G2's parenting (Figure 1, path b)
3. Positive parenting during G2's adolescence will be associated with more conflict in romantic relationships during G2's parenting (Figure 1, path c)

4. Family conflict during G2's adolescence will be associated with more conflict in romantic relationships during G2's parenting (Figure 1, path d)
5. G2 conflict in romantic relationships during G2's parenting will be associated with less G2 positive parenting (Figure 1, path e)
6. G2 conflict in romantic relationships will mediate the link between (a) G1 positive parenting and G2 positive parenting, and (b) G1 family conflict and G2 positive parenting such that G2 conflict in romantic relationships explains any association between G1 positive parenting and G2 positive parenting, and G1 family conflict and G2 positive parenting.

## **Method**

### **Participants**

Participants were part of the Family Transitions Project (FTP), a prospective, longitudinal study of 551 target adolescents, parents, and close relationships. Beginning in 1989, 450 seventh grade target adolescents (G2 = generation 2), their two-biological parents (G1 = generation 1), and close-aged siblings (within +/- 4 years) were asked to participate in in-home interviews that lasted 2-3 hours. Families were interviewed annually. In 1991, an additional 107 single-parent families were added to the study. These families were recently divorced families with a target adolescent in the ninth grade (same age as the target adolescents in the primary study). The G2 target adolescents' biological mother (G1) and close-aged sibling (within +/- 4 years) also participated in annual assessments. Data were collected annually from 1989 through 1994 (target = twelfth grade). In order to maximize the sample size, data from the 1991 and 1992 assessment periods, or when G2 participants were in ninth and tenth grades will be used in the proposed study. Of the original families, 107 adolescents came from single, mother-headed families, while

the remainder came from two-parent families. Participants from the FTP were recruited from eight rural Iowa counties to examine family and developmental impacts of the economic downturn in agriculture of the 1980s. The ethnic/racial background of the original sample was predominately European-American and accurately reflected the demographics of rural Iowa. Thus, approximately 1 percent of the children were from minority families. All participants were in primarily working-class or middle-class families. In the family of origin, twenty-five percent of families were single parent homes, and the average household consisted of 4.6 members. G1 parents had an average education of 12.8 years, and average per capita income of \$8,096.

Beginning in 1995, the focus of the study began to shift from the family of origin to the target participants' emerging families of procreation. Beginning in 1995, romantic partners were recruited to participate in the FTP. In 1997, the oldest third generation children (G3 = generation 3) of the G2 target participants were recruited and participated. Biological G3 children were eligible to participate when they were at least 18 months old and if they lived with the G2 target participant for at least 2 weekends a month. Data from G3's first assessment when they were 2 or 3 years of age were used in the current study. Data collection years range from 1997 through 2003.

Demographic characteristics were collected at G3 children's first assessment, at 2 years of age. Of the G2 parents, most were married (46.5%) or cohabiting (14.8%) with the G3 children's other biological parenting. The additional G2 target parents were dating (11.9%) or had no contact with G3 children's biological parents. The average household consisted of 3.57 members ( $SD = 1.20$ ), as reported by G2 participants. G2 parents had an average of 13.19 years of education ( $SD = 1.59$ ) and most were not enrolled in school (83.2). Of the G2 participants, 5 percent did not graduate from high school, 39 percent completed high school, 44.7 percent

completed some college, and 12 percent graduated from college. G2 participants reported an average income of \$21,397 (SD = \$19,267).

## **Procedures**

### *1991-1992: Families of Origin*

When adolescents were in the ninth and tenth grades, trained interviewers visited families on two separate days for about two hours for each visit. Family members completed questionnaires during the first visit and interaction tasks during the second visit. In the second visit, family members were videotaped completing four structure interaction tasks. The proposed study used data collected from two interaction tasks: a family discussion task (25 minutes) and family problem-solving task (15 minutes). All residing family members participated in the interactional tasks. During the family discussion task, family members were presented with a series of discussion questions which addressed daily living issues, such as parenting, household responsibilities, and school performance. Prior to completing the family problem-solving task all family members completed a brief screener in which they identified the three topics that their family disagreed about most. Trained interviewers selected the top three hot topics. Beginning with the “hottest” topic, or the topic that all members agreed was a problem, family members attempted to resolve the problem during the 15 minutes. If family members finished discussing the first conflict, they were instructed to move on to the second and third topics, in that order, and continue discussing until the interviewer returned.

Later, the family discussion and family problem-solving tasks were coded by trained observers using Iowa Family Interaction Rating Scales (Melby & Conger, 2001). Relevant to the current study, parenting was measured using G1 mother’s parenting behavior towards G2 target adolescent during the family discussion task both tasks. Conflict scores were derived from the



family problem solving tasks and scores from all participants were used to measure family level conflict. Importantly, both the family discussion task and family problem-solving task were rated by independent observers.

#### *1997-2005: Families of Procreation*

Beginning in 1997, G2 participants began participating with a romantic partner and an eligible G3 biological child. The G2 participants and their partners completed two in home visits following the same procedures as described for the families of origin. In addition to the discussion and problem solving tasks, couples also completed a task which focused on their relationship (25 minutes). During the couple relationship task, couples discussed issues of their relationship including enjoyment of the time spent together, conflicts and disagreements, and future plans.

In addition to the two home visits, G2 participants (and partners) completed a third in-home visit which focused on the G3 children and their parenting of the G3 children. G3 children were videotaped completing about 60 minutes of activities, some of which involved their parents. Relevant to the proposed study, G2 parents and their partners were videotaped completing a set of interactional tasks with their G3 child. The G2 parent completed two 5-minute interactional tasks, a puzzle and clean up task. In the puzzle task, G3 children were given a puzzle to complete that was too difficult to complete on their own and G2 parents were instructed to give their children any help deemed necessary. The clean-up task occurred at the end of the 60 minute assessment. The G3 child played with toys alone for 6 minutes, then the interviewer played with the G3 child for 5 minutes. The interviewer used this time to insure that children had examined all of the toys. The interviewer dumped out any unexplored toys and encouraged children to play with these other toys as well. This strategy was used to make sure

that all children had similar quantities of toys to clean up. After the 5 minutes, interviewers instructed the G2 parents that G3 children needed to clean up the toys; G2 parents could offer any help needed, but children needed to clean up independently.

Both interactional tasks were later coded by trained observers using the Iowa Family Interaction (Melby & Conger, 2001). Independent teams of coders rated each task. Scores from the codes were used to measure G2 parents' positive parenting. Importantly, these codes include some of the same codes used to measure G1 parents' positive parenting to G2 participants. Each scale demonstrates adequate validity and reliability (see Melby & Conger, 2001 for review).

## **Measures**

**G1 positive parenting.** Positive parenting was characterized by high levels of responsiveness, support, warmth towards children. Positive parents also use assertive communication, listening and responding to their children in respectful ways. Trained observers rated G1 mothers and fathers on measures of warmth, prosocial behavior, communication, listener responsiveness, and assertiveness. Observer ratings of G1 mothers and fathers (when available) parenting behavior directed towards the G2 participant and towards G2 siblings were used to measure positive parenting. Parents were coded separately, but the same coder rated mothers' and fathers' (when available) behavior towards the G2 participant. Each behavior was rated on 9-point scale from 1 (*not at all characteristic*) to 9 (*mainly characteristic*).

The communication, listener responsiveness, assertiveness, prosocial behavior, and warmth codes that include target adolescents were averaged to create the measure of direct positive parenting. These codes included mother, father (when available) behavior towards the target. An indirect positive parenting measure was created by aggregating all codes for mother and father (when available) behavior towards sibling. These codes were summed across the 1991

and 1992 periods. Both “direct” and “observed” measures were used as indicators on a latent positive parenting variable.

Warm parenting was defined as the degree to which parents express care and concern for children. Warm behaviors include: nonverbal communication (i.e., affectionate touching, kissing, smiling), supportiveness (i.e., showing concern for another’s welfare, offering encouragement and praise), and content of statements (i.e., using statements of empathy, liking, appreciation, care, concern, or affirmation). Prosocial behavior was defined as the extent to which parents are sensitive and cooperative, and treat children with respect. Prosocial behaviors include: cooperation, sensitivity, helpfulness, and willingness to comply or change behavior for the benefit of another. Parental communication was defined as the degree to which parents provide explanations and validate children’s point of view while responding in a patient, supportive manner. Communication behaviors include: the use of explanations, reason, consideration for child’s point of view, encouragement of children’s point of view, and responses that are appropriate. Listener responsiveness was defined as the extent to which parents attend to and communicates interest in their children’s comments. Listener responsive behaviors include: orienting towards children, validating children’s suggestions or comments, and communicating interest in the children’s comments. Parental assertiveness was defined as the degree to which parents express personal views in a nonthreatening, confident way rather than in a hostile way. Assertive behaviors include: how parents respond to children’s opposition of parents’ assertions as well as nonverbal communication, like maintaining eye contact and orienting body towards children.

**G1 Family conflict.** Family conflict was conceptualized as the degree to which family members display harsh, coercive, aggressive behaviors towards one another. Family level

conflict was measured using codes derived from the family problem solving task. Trained observers rated family members on measures of hostility, antisocial, and angry-coercion and rated 3 conflict codes separately for each participant and for each receiver. For instance, for each observational code, G1 mothers received a rating for their behavior towards the G1 father (when available), G2 target adolescent, and G2 sibling. G1 fathers received a rating for their behavior towards the G1 mother, G2 target adolescent, and G2 sibling. G2 sibling received a rating for their behavior towards G1 mother, G1 father, and G2 target adolescent. G2 target adolescent received a rating for their behavior towards G1 mother, G1 father, and G2 sibling. As a result, each participant had 2 to 3 ratings per code capturing observed behavior to all of the participating family members. Each observational code was rated on a 9-point Likert scale, ranging from 1 (*not at all characteristic*) to 9 (*mainly characteristic*). The same coder rated all family members.

The codes used to measure family conflict include: hostility, antisocial, and angry-coercion. Hostility was defined as the extent to which family members displayed angry, hostile, disapproving and/or rejecting behavior towards another family member. Hostile behaviors include: nonverbal communication (i.e., angry facial expressions and threatening body posture), emotional expressions (i.e., irritable tone of voice, ignoring one another, showing disgust, ignoring another's needs), and content of statements (i.e., complaints or critical remarks). Antisocial behavior was defined as the extent to which family members demonstrated age inappropriate behaviors, such as being noncompliant, insensitive or obnoxious, uncooperative and unsociable. Angry-coercive was defined as the degree to which family member attempted in controlling or changing another's behavior in a hostile way. Angry-coercive behaviors include: using hostile commands, demands, power plays, resistance, obstinate, contingent physical or verbal threats, and forcing ones opinions on others.

Consistent with the procedure used to create direct and observed parenting scores, all of the hostility, antisocial, and angry coercion codes that include target adolescents were aggregated to create a measure of direct family conflict. These scores used observed hostility, antisocial, and angry coercion codes measured in 1991 and 1992 during the problem solving task. The direct family conflict score included an average all of the codes which involved target adolescents. Specifically, target adolescents' behaviors directed towards their mothers, fathers (when available), and siblings as well as mothers', fathers' (when available), and siblings' behavior toward the target adolescents were used to create the direct family conflict score. An observed conflict score was created by averaging all hostility, antisocial, and angry coercion scores that involved mothers, fathers, and siblings but which were directed towards each other and not target participants.

**G2 positive parenting.** Positive parenting towards young toddler aged children was defined as high levels of observed responsiveness, support, and warmth towards children. Like the G1 positive parenting, positive parenting observed by G2 also included assertive communication and listening to or responding to their children in respectful ways. Observer ratings were used to assess G2 target parents' positive parenting behaviors during the puzzle and clean-up tasks when the G2 children were 2 or 3 years of age. Trained observers rated the same behaviors as G1 positive parenting which included: communication, listener responsiveness, assertiveness, prosocial behavior, and warmth. Each parenting behavior was rated on 9-point scale from 1 (*not at all characteristic*) to 9 (*mainly characteristic*). Level of communication, listener responsiveness, assertiveness, prosocial behavior, and warmth of G2 target parents towards G3 children during the puzzle and clean-up tasks were averaged to create the G2 positive parenting variable.

**G2 Romantic Relationship Conflict.** Romantic relationship conflict was defined as the extent to which target parents and their romantic partner evidenced harsh, coercive, and aggressive behaviors towards one another. Using observer ratings during a discussion task which involved only the target parents and the romantic partners, trained observers rated G2 target parents and G2 romantic partners on the same measures rated in G1 family conflict: hostility, antisocial, and angry coercion. Observers rated the conflict behaviors separately for each participant and for each receiver. For instance, three codes reflected G2 parents' hostility, angry coercion, and antisocial behavior towards their romantic partner. Additionally, three codes captured the extent to which romantic partners interacted with the G2 parents using hostility, angry coercion, and antisocial behavior. All of the hostility, antisocial, and angry coercion codes were aggregated to create a measure of romantic conflict. Ratings were used to assess target adults' and romantic partners' conflictual behaviors during the discussion task.

Each observational code was rated on a 9-point Likert scale, ranging from 1 (*not at all characteristic*) to 9 (*mainly characteristic*). Ratings on each of the 6 codes were averaged to create the G2 romantic relationship conflict variable. In a study conducted by Lorenz, Conger, Melby and Bryant (2005), observer ratings were significantly correlated with targets' self report of conflict towards partner ( $r = .24, p < .01$ ) and romantic partner's report of conflict towards target ( $r = .34; p < .01$ ).

## **Results**

### **Data Analytic Plan**

First, means, standard deviation, skewness and kurtosis were computed to ensure that all variables were normally distributed. Then, bivariate correlations among variables were calculated to confirm that the pattern of associations among indicators were consistent with

expectations. Lastly, structural equation modeling (SEM) was used to test study hypotheses. Models were fit using full information maximum-likelihood (FIML) estimation; FIML maximizes sample size by including respondents with partially complete data (Muthén & Muthén, 1998).

Three different models were estimated to test each hypothesis: a direct effect, full effect and model with constrained direct paths were tested. The fit of each of the three models was evaluated using the chi-square statistic, the root mean square error of approximation (RMSEA) statistic, and the comparison fit index (CFI). The chi-square statistic provides an index of the degree to which data differed from the estimated model. A statistically non-significant chi-square means that the structural model does not differ from the data and offers an acceptable explanation of the data. The RMSEA is adjusted for sample size and is based on the noncentrality parameter (Kline, 2005). A model with a RMSEA of less than .05 is considered well-fitting. The CFI rewards models for parsimony and a value greater than .95 is considered to be a well-fitting model (Kline, 2005).

To evaluate the mediational hypothesis, the recommendations of Holmbeck, (1997) were followed. The direct-effect model involved regressing G2 positive parenting onto G1 positive parenting and G1 family conflict without the presence of the mediator (i.e., G2 conflict in romantic relationship) to demonstrate that G1 positive parenting and G1 family conflict predicted G2 positive parenting. Next, the full structural model depicted in Figure 1 was estimated which included G2 romantic relationship. That is, in addition to the main effects of G1 positive parenting and G1 family conflict on G2 positive parenting, the paths from G1 positive parenting and G1 family conflict to G2 romantic conflict and from G2 romantic conflict to G2 positive parenting were estimated. In the third model, the two direct paths from G1 positive parenting

and G1 family conflict to G2 positive parenting were removed. Fit indices were compared across the model without direct paths and the full structural model to evaluate fit. Since the two models were nested, the chi-square statistics could be compared. The chi-square statistic and the degrees of freedom obtained from the model without direct paths were subtracted from the chi-square statistic and degrees of freedom obtained from the full model. A non-statistically significant chi-square would confirm expectations and indicate that model without direct paths provided a fit that was not different from the full model. Finally, bootstrapping with bias-corrected confidence intervals was then used to examine the indirect effects in the model, as recommended by McCartney, Burchinal, and Bub, (2006).

To rule out alternative explanations, a series of alternative models were estimated. First, the extent to which sex of target participant or the targets' children moderated the structural paths were estimated. Second, since most studies typically measure parenting that is directed towards the child (i.e., direct parenting) and rarely, if ever, considers parenting that is observed by the child but directed towards a sibling (i.e., observed parenting), the models just described were re-estimated separately for direct and observed forms of G1 parenting. This step was essential to validate the use of observed forms of parenting as well as to evaluate the extent to which direct and observed forms of parenting function similarly.

### **Descriptive Statistics and Correlational Analyses**

Review of the distributional properties revealed that all constructs were normally distributed and had acceptable skewness and kurtosis. Means, standard deviations, and bivariate correlations among all study variables are summarized in Table 1. On average, G1 parents were observed to use moderately high levels of positive parenting during their interactions with the target participant (see Table 1, mean = 4.76; SD = 1.14). Interestingly, G1 parents evidenced



similar levels of positivity during interactions with targets' siblings (see Table 1, mean = 4.68;  $SD = 1.07$ ). G1 direct and observed positive parenting was very strongly correlated ( $r = .90$ ;  $p < .001$ ), indicating that the parenting targets' experienced was qualitatively similar to the parenting siblings' experienced.

Table 1.

*Summary of the means, standard deviations and bivariate correlations among all study indicators.*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. G1 Positive Parenting Direct	4.76	1.14					
2. G1 Positive Parenting Observed	4.68	1.07	.90***				
3. G1 Family Conflict Direct	3.99	1.48	-.39***	-.40***			
4. G1 Family Conflict Observed	3.36	1.36	-.39***	-.43***	.62***		
5. G2 Romantic Conflict	3.45	1.57	-.21**	-.24***	.26***	.19**	
6. G2 Positive Parenting	5.49	1.10	.24***	.25***	-.17**	-.26***	-.35***

*Notes.* \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$

With regard conflict, G1 families engaged in relatively low levels of conflict (see Table 1), but the family conflict directed towards the target participants was slightly higher than the conflict target participants observed (see Table 1). Like G1 positive parenting, both direct and observed G1 family conflict scores were statistically and significantly correlated ( $r = .62$ ;  $p < .001$ ). Interestingly, G1 family conflict, both direct and observed, was statistically and significantly correlated with G2 romantic partners (see Table 1, mean = 3.45;  $SD = 1.57$ ).

Finally, G2 target participants were observed to use more positive parenting with their own children than they experienced in their families of origin (see Table 1). G1 parenting was measured during targets' adolescence and during conversations while G2 parenting was

measured with their toddler aged child during activity based tasks. Quite possibly, an activity based task during early childhood evokes more positivity than a conversation with adolescents. Interestingly, G1 positive parenting that was directed towards G2 targets and observed by G2 targets was positively and statistically significantly correlated with G2 positive parenting towards G3, although the magnitude of these associations was generally modest.

With regard to correlations across constructs, G1 parenting, both observed and direct, was negatively correlated with direct and observed indicators of G1 family conflict, suggesting that more positive parenting was associated with less family conflict (see Table 1). Similarly, G2 romantic conflict was negatively correlated with G2 positive parenting (see Table 1). Finally, experiencing more positive parenting (i.e., G1 positive parenting direct and observed) and less family conflict (i.e., G1 family conflict direct and observed) during targets' adolescence was associated with less conflict in the romantic relationship in adulthood (see Table 1).

### **Primary Analyses**

First, the direct-effect model was estimated in which G2 positive parenting was regressed on G1 positive parenting and G1 family conflict (see Figure 2). The fit statistics indicated the model fit the data well ( $\chi^2(3) = 2.85$ ;  $p = .42$ ; CFI = 1.00; RMSEA = .00; see Table 2). Results from the direct-effect model show that G1 family conflict was statistically significantly associated with less G2 positive parenting ( $\beta = -.21$ ;  $p = .02$ ). However, the path from G1 positive parenting to G2 positive parenting was not statistically significant once the effect of G1 family conflict on G2 parenting was considered. Thus, contrary to hypotheses, mediation was only possible with family conflict and not G1 positive parenting.

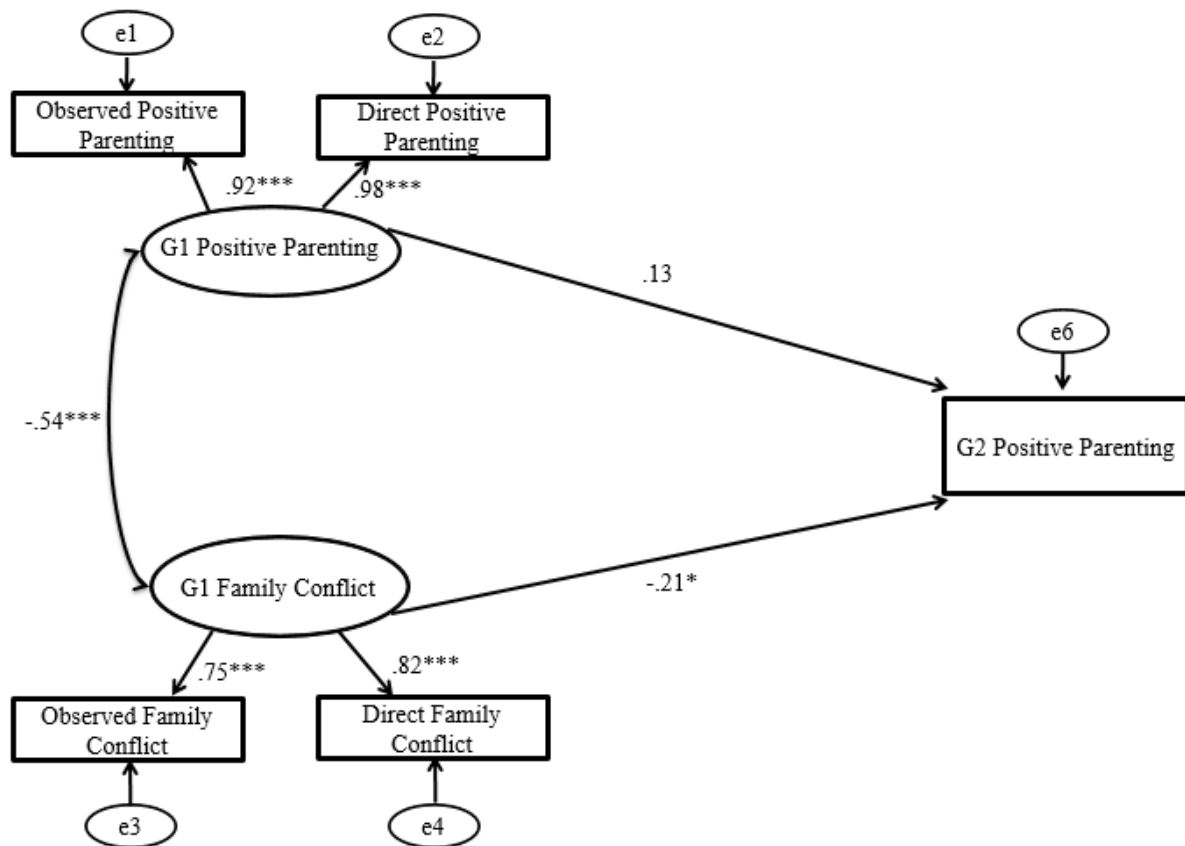


Figure 2. The structural equation model testing direct effects of G1 positive parenting and G1 family conflict on G2 positive parenting. Standardized regression coefficients.  $\chi^2(3) = 2.85$ ,  $p = .42$ ; CFI = 1.00; RMSEA = 0; \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Table 2.

*Summary of Fit Indices for All Models.*

Model	CFI	$\chi^2$	df	p	RMSEA
1. Direct effects model	1.00	2.85	3	.42	0 (0-.10)
2. Full effects model	.99	8.50	5	.13	.05 (0-.11)
3. No direct effects model	.98	19.86	7	.01	.08 (.04-.13)
3. Moderation by target gender	.98	22.86	13	.04	.05 (.01-.09)
4. Moderation by G3 gender	.99	19.07	10	.04	.06 (.01-.10)
5. Direct Parenting and Conflict	.00	.00	.00	.00	.00
6. Observed Parenting and Conflict	.00	.00	.00	.00	.00

---

*Notes.* CFI = comparative fit index; RMSEA=root mean square error of approximation.

Next, the full structural model was estimated (see Figure 3). Examination of model fit statistics indicated that the model fit the data well (see Table 2). As expected, three of the hypothesized paths were significant. Specifically, G1 family conflict was marginally associated with more G2 romantic conflict. G1 family conflict also was linked to less G2 positive parenting. G2 romantic conflict was associated with significantly less G2 positive parenting. Contrary to expectations, the beta coefficients for the paths from G1 positive parenting to G2 romantic conflict and G2 positive parenting were not statistically significant.

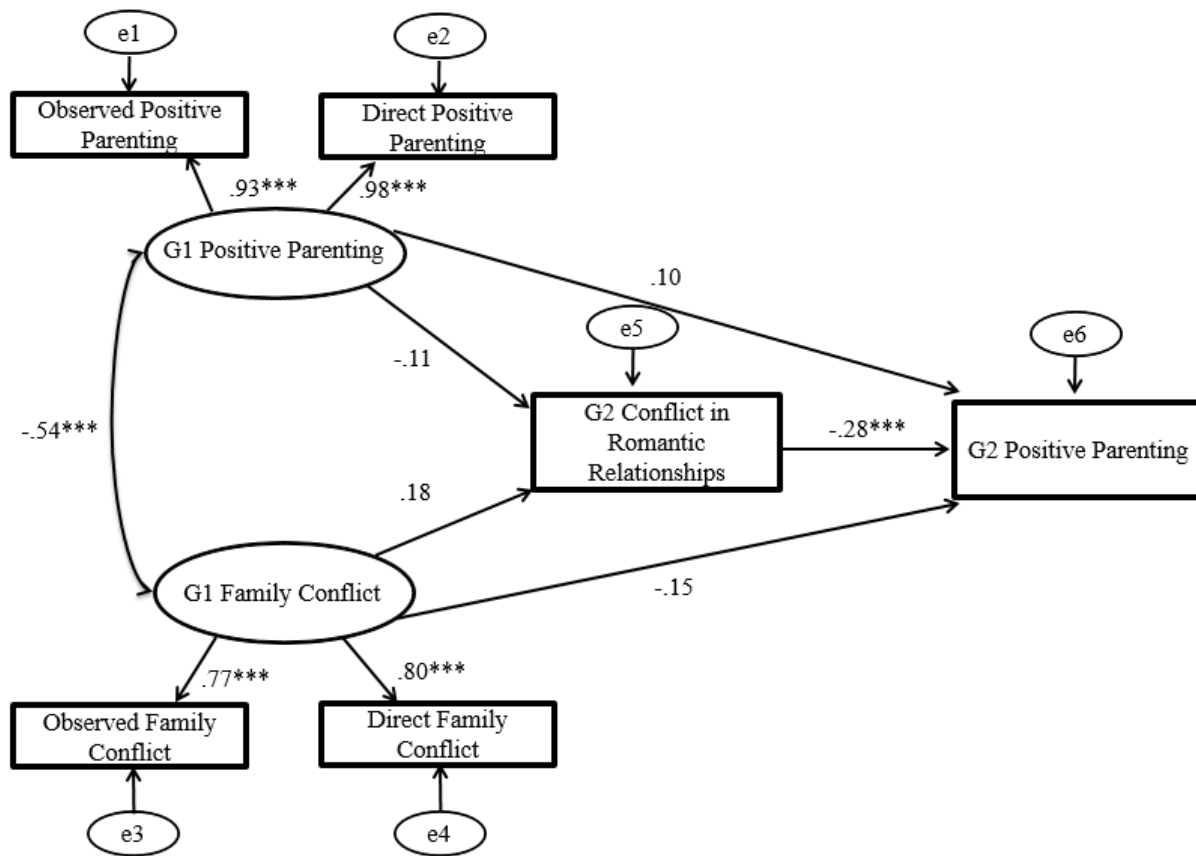


Figure 3. The structural equation model evaluating direct and indirect effects of G1 positive parenting and G1 family conflict on G2 positive parenting through G2 conflict in romantic relationships. Standardized regression coefficients.  $\chi^2(5) = 8.50, p = .13$ ; CFI = .99; RMSEA = .05; \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Lastly, a restricted model was estimated in which direct effects were removed from the model (see Figure 4). If G2 romantic conflict fully mediated the associations from G1 positive parenting and G1 family conflict with G2 positive parenting, then restricted model would fit the data equally well as the full structural model. Since G1 positive parenting was not statistically and significantly associated with G2 positive parenting, G2 romantic conflict could only mediate the association from G1 family conflict to G2 positive parenting. Although the restricted model provided a relatively good fit with the data (see Table 2), the chi-square difference test was statistically significant ( $\chi^2_{\text{diff}}(2) = 11.36; p < .01$ ), indicating the restricted model fit the data

significantly worse than the full structural model.

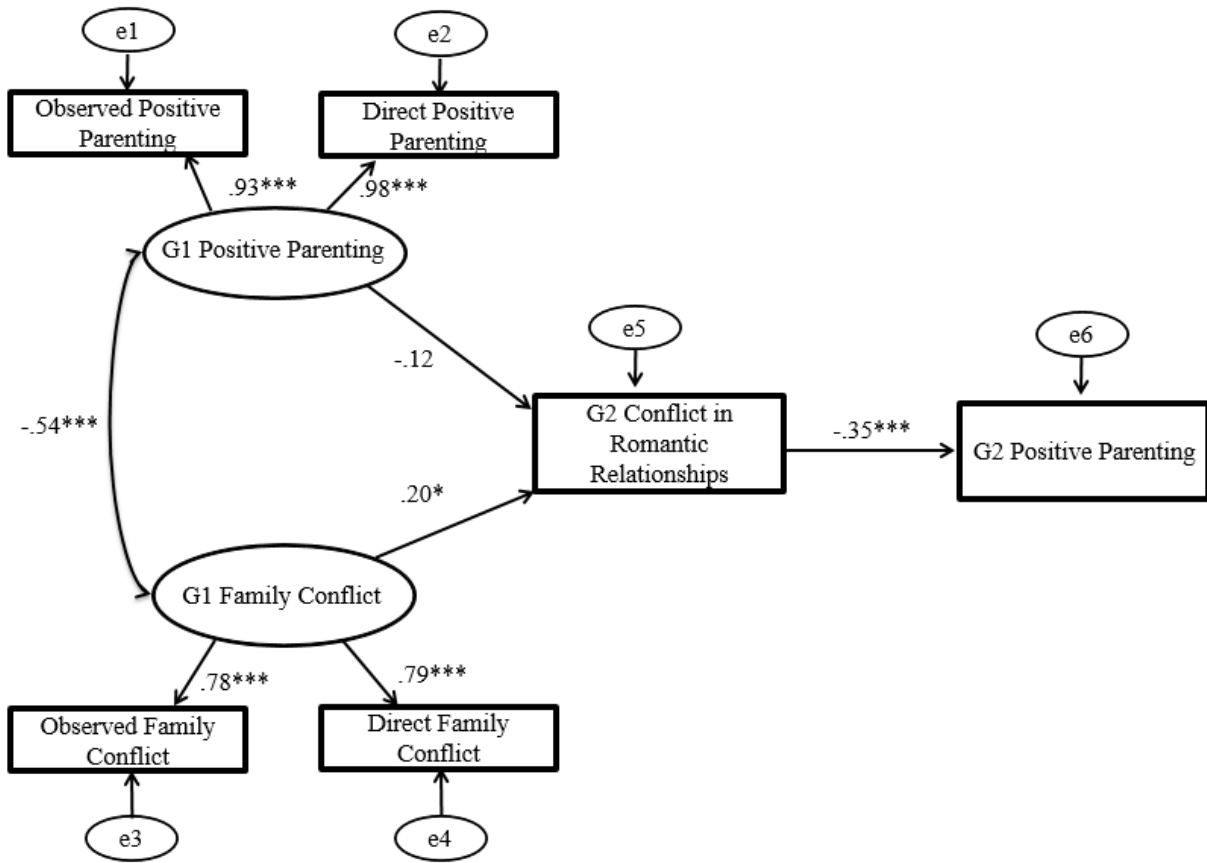


Figure 4. The structural equation model testing indirect effects of G1 positive parenting and G1 family conflict on G2 positive parenting through G2 conflict in romantic relationships. Standardized regression coefficients.  $\chi^2(7) = 19.86, p = .01$ ; CFI = .98; RMSEA = .08; \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Bootstrapping with bias-corrected confidence intervals was used to estimate the magnitude of the indirect effect of G1 family conflict on G2 positive parenting, as recommended by McCartney, Bub, and Burchinal (2006). Without a statistically significant path from G1 parenting to G2 positive parenting and without a statistically significant path from G1 positive parenting to G2 romantic conflict, no evidence for a positive parenting pathway existed. Not surprisingly, the indirect effect from G1 positive parenting to G2 positive parenting was not statistically significant (path estimate = .03,  $p = .28$ ). Contrary to expectations, the indirect effect

from G1 family conflict to G2 positive parenting was not significant (path estimate = -.05,  $p = .14$ ), suggesting that G2 romantic conflict did not mediate or even partially mediate the link between G1 positive parenting and G1 family conflict and G2 positive parenting.

*Alternative explanations: Target and Child Sex as moderating the pattern of Intergenerational transmission of positive parenting and family conflict*

To rule out the possibility that the process by which experiences within the family of origin differentially influence levels of positive parenting observed within the family of procreation vary by parent or child sex a series of stacked models were computed. These models separately examined whether sex of the target participant or their children moderated the pattern of associations found in the full structural model. Results of the models comparing the path coefficients for male and female target participants will be described first, followed by a review of the findings comparing G2 boys and girls. To estimate the stacked models, a model in which all paths were unconstrained was compared to a model in which all paths were constrained to be equal. If the model fit of the constrained and unconstrained model were statistically and significantly different from one another, then at least one of the path coefficients varied by sex. Should the two models differ significantly, then all paths will be constrained to be equal and paths will be freed one at a time to determine which paths vary significantly across sex.

First, considering target sex, the unconstrained model ( $\chi^2 (13) = 22.86; p = .04$ ); CFI = .98; RMSEA = .05) model was compared to the fully constrained model ( $\chi^2 (19) = 29.09; p = .07$ ); CFI = .98; RMSEA = .05). The chi-square difference test between the unconstrained and fully constrained model was not statistically significant ( $\chi^2_{\text{diff}} (6) = 6.23; p = .40$ ), indicating that the fit of the fully constrained model was comparable to the unconstrained model. In other words, the models for male and female target participants did not differ from each other.

Next, sex differences across the children of the targets were evaluated. Both the unconstrained ( $\chi^2 (10) = 19.07; p = .04$ ); CFI = .99; RMSEA = .06) and constrained model ( $\chi^2 (17) = 27.61; p = .09$ ; CFI = .99; RMSEA = .04) fit the data poorly. The chi-square difference test between the unconstrained and fully constrained model was not significant ( $\chi^2_{\text{diff}} (7) = 8.54; p = .29$ ), indicating that the fit of the fully constrained model was comparable to the unconstrained model. In other words, the magnitude of the path coefficients did not vary by the sex of the third generation children.

*Alternative Models: Considering observed vs. direct positive parenting and family conflict on later parenting.*

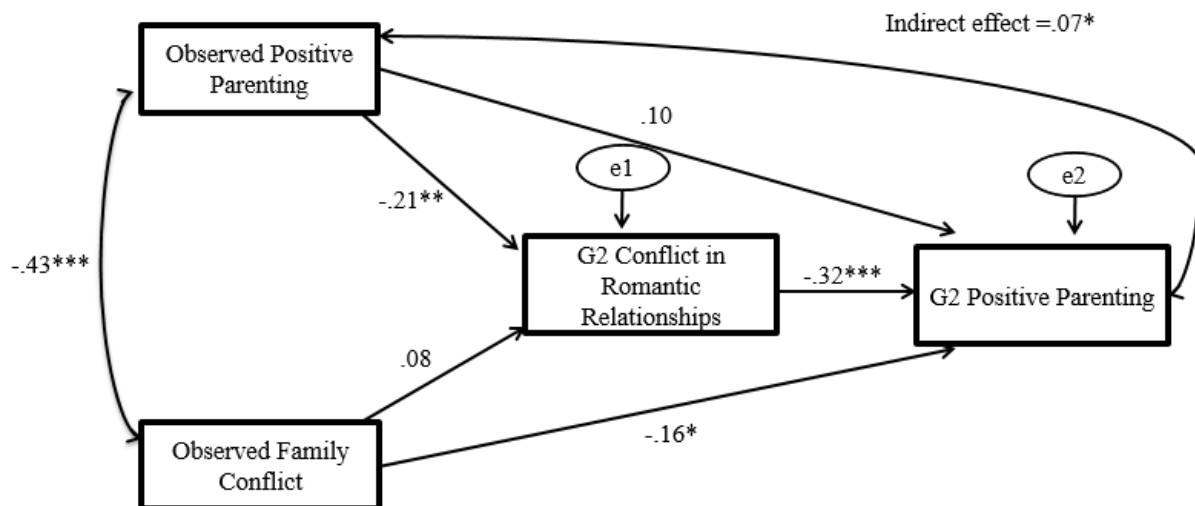
G1 positive parenting was operationalized to include both positive parenting directed towards the target participant as well as positive parenting observed by the target participant and directed towards their siblings (i.e., observed by target). Similarly, G1 family conflict also included conflict which included the G2 target participant and conflict in which the target participant witnessed. Quite possibly the impact of observing parenting or conflict is different than experiencing it through direct interaction. To rule out this explanation, two additional structural models were estimated. That is, the structural model depicted in Figure 1 was re-estimated first to estimate the impact of G1 direct positive parenting and G1 direct family conflict on G2 positive parenting by way of G2 romantic conflict. Next, this model was estimated using the G1 observed positive parenting and G1 observed family conflict on G2 positive parenting by way of G2 romantic conflict.

Both the direct and observed effects were estimated using the same procedures as the full structural model (see Figure 1). That is, two models were estimated, one with the full structural model and one without the direct paths from G1 parenting and conflict to G2 parenting. The full



structural model was fully saturated, no fit indices were provided. If the chi-square statistic for the more restricted model, or the model without the main effects from G1 parenting and conflict to G2 parenting, is not statistically, this model would be the preferred model because it would be the more parsimonious model. Bootstrapping with bias-corrected confidence intervals also was used to estimate the statistical significance of any indirect effects. The following sections first discuss the results of the direct model and then describe the results of the observed model.

Considering the direct experiences model, direct engagement with G1 positive parenting predicted less G2 romantic conflict while more G1 family conflict was associated with more G2 romantic conflict (see Figure 5). Interestingly, G1 direct positive parenting predicted more G2 positive parenting, but G1 direct family conflict was unrelated to levels of G2 positive parenting.

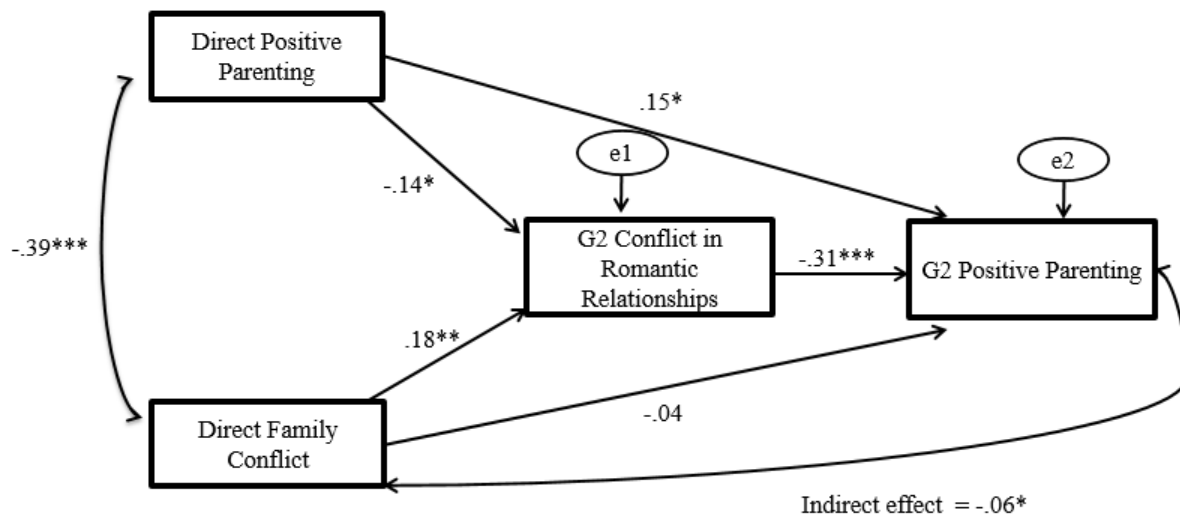


*Figure 5.* The structural equation model testing indirect effects of direct positive parenting and direct family conflict on G2 positive parenting through G2 conflict in romantic relationships. Standardized regression coefficients.  $*p < .05$ .  $**p < .01$ .  $***p < .001$ .

Removing the main effects of G1 direct positive parenting and G1 direct family conflict on G2 positive parenting resulted in a statistically significant change in chi-square. The chi-

square difference test indicated that the model without the direct links from G1 parenting or conflict to G2 parenting fit the data significantly worse than the full structural model ( $\chi^2_{\text{diff}}(2) = 7.92; p = .02$ ). Using bootstrapping, the indirect effect from G1 direct family conflict to G2 positive parenting was statistically significant (path estimate =  $-.06, p = .04$ ), but the indirect effect from G1 direct positive parenting to G2 positive parenting was not (path estimate =  $.04; p = .11$ ).

Finally the models with the observed parenting and conflict indicators was estimated (see Figure 6). Results from the full structural model showed that G1 observed family conflict predicted significantly less G2 positive parenting, but G1 observed positive parenting was unrelated G2 positive parenting. The full-effects model was then compared to the fully mediated model in which the G1 direct effects on G2 positive parenting were removed from the model. The chi-square difference test was statistically significant ( $\chi^2_{\text{diff}}(2) = 13.15; p < .01$ ), indicating the model without the direct links fit the data significantly worse than the full structural model. Bootstrapping revealed that the indirect effect from G1 observed positive parenting to G2 positive parenting was significant (path estimate =  $.07, p = .01$ ). In contrast, the indirect effect from G1 observed family conflict to G2 positive parenting was not significant (path estimate =  $-.02; p = .41$ ).



*Figure 6.* The structural equation model testing indirect effects of observed positive parenting and observed family conflict on G2 positive parenting through G2 conflict in romantic relationships. Standardized regression coefficients.  $*p < .05$ .  $**p < .01$ .  $***p < .001$ .

In sum, results from the direct-effects model indicated that G1 family conflict was significantly associated with less G2 positive parenting. However, the path from G1 positive parenting to G2 positive parenting was not statistically significant after the effect of G1 family conflict on G2 positive parenting was considered. The only possible mediational effect was family conflict, not G1 positive parenting. Results from the full effects model showed that three hypothesized paths were statistically significant. Namely, G1 family conflict was marginally associated with more G2 romantic conflict and less G2 positive parenting. Furthermore, G2 romantic conflict was associated with significantly less G2 positive parenting. The restricted model fit the data worse than the full structural model, providing no evidence of full mediation. Bootstrapping with bias-corrected confidence intervals indicated that neither of the indirect effects was significant, providing no evidence of partial mediation.

## Discussion

According to Family Systems Theory, families represent a dynamic set of inter-relationships in which individual family members and dyadic or triadic constellations influence and are influenced by one another (Cox & Paley, 1999). Consequently, adolescents may be influenced by their interactions with parents as well as from observing parents interact with each other or with their siblings. Surprisingly, empirical research rarely goes beyond studying the dyad when examining the impact of family relationships on adjustment. That is, most studies examining parenting continuities focus on how parent-child interactions are replicated across generations. Similarly, studies may consider how marital conflict observed in one generation is associated with marital conflict in the next generation. This study is one of the few studies to go beyond simple dyadic relationships to consider both social interactions directly experienced and social interactions observed within families of origin on emerging relationships within families of procreation.

The purpose of this study was to replicate and extend existing research by considering the mechanisms by which positive parenting and family conflict within the family of origin influences the use of positive parenting with the next generation. Level of conflict observed within the context of romantic relationships was hypothesized to mediate the direct impact of parenting or family conflict on later parenting. Results provided mixed support for study hypotheses and suggest that learning occurs through both direct interactions and observations. The following sections will consider two distinct patterns by which parents come to use positive parenting. First, positive parenting in the first generation was expected to predict positive parenting in the second generation because such parenting would lead to less conflictual romantic relationships. Second, family conflict experienced within the family of origin was expected to predict more conflict in the G2 romantic relationship, conflict which was expected to

undermine G2 participants' use of positive parenting. The following sections will first discuss each of these pathways and then discuss the strengths and limitations of findings as well as the limitations and directions for future research.

### **Considering mechanisms by which positive parenting in one generation predicts positive parenting in the next generation**

Children of parents who used positive parenting during interactions with them were expected to engage in more positivity as parents, in part because these children would form less conflictual romantic relationships (see Figure 1). While results were somewhat consistent with expectations, evidence to support study hypotheses depended on how G1 parenting was operationalized. When G1 positive parenting included both positivity directed towards target adolescents and positive parenting observed between parents and siblings, no evidence that positive parenting experienced within the family of origin predicted later parenting either directly or indirectly by way of G2 romantic relationship quality emerged. However, when G1 positive parenting was decomposed, a different pattern of findings emerged. Adolescents who observed parents interacting with their siblings using positive parenting engaged in less conflictual romantic relationships in adulthood and used more positive parenting with their own children. Moreover, conflictual romantic relationships partially mediated the link between observed G1 positive parenting and G2 positive parenting. While adolescents' direct exposure to positive G1 parenting also was associated with less conflict in romantic relationships, the indirect path was not statistically significant, providing no evidence of mediation.

Positive parenting, or parenting characterized by high levels of responsiveness, support, acceptance, and engagement (Schofield, Conger & Neppl, 2014), repeatedly has been linked to more adaptive adjustment during childhood, adolescence, and into adulthood (e.g., Betts, et al.,

2013; Galambos, Barker, & Almeida, 2003). However, experiencing positive parenting may not translate into using positive parenting. Instead, observing family interactions in which parents are respectful of their siblings and communicate clearly and warmly with their siblings may model appropriate interactional behaviors within the confines of close, intimate relationships. In other words, the experience of positive parenting may promote social competence, but witnessing positive parenting may encourage more positivity in close relationships. Considering only the effects of direct parenting and not observed parenting may exclude important socializing mechanisms.

### **Conflict begets conflict: Understanding ways in which family conflict experienced in the family of origin affects later parenting**

Like parenting, conflict within the romantic relationship was expected to mediate any association between family conflict within the family of origin and later positive parenting. In contrast to the positive parenting pathway, operationalizing family conflict to include both conflict which involved the adolescent and in which the target adolescent observed supported expectations. That is, experiencing more pervasive family conflict was associated with more conflict within the romantic relationship and less positive parenting. Previous studies have reported that experiencing harsh parenting during adolescence predicts poorer parenting in the family of procreation (e.g., Conger, Schofield, Neppl, & Merrick, 2013; Neppl, Conger, Scaramella, & Ontai, 2009; Scaramella & Conger, 2003), but rarely have studies considered how family conflict may impact later parenting.

To ensure that both direct and observed aspects of family conflict similarly influenced positive parenting, each indicator of the latent family conflict factor was considered separately. In contrast to positive parenting, the indirect path from direct involvement in family conflict to

positive parenting by way of conflict in romantic relationships was statistically significant, but the indirect path from observed family conflict to positive parenting was not.

Quite possibly, adolescents who participate in more family conflict become more likely to engage in conflict with others over time. That is, participating in conflict may be more arousing than observing conflict. For instance, the amygdala has been found to be particularly important for generating, expressing and experiencing negative emotions (Phan et al., 2002; Murphy et al., 2003; Wager et al., 2003; Zald, 2003). Whittle and colleagues (2009) examined the link between harsh parenting and amygdala volume. When mothers reacted to adolescent boys' positive affect with punishing responses, boys showed increased volume in the right amygdala. Moreover, increased amygdala volume significantly predicted adolescents' aggressive behavior (Whittle et al., 2008). Although harsh parenting is different than family conflict in that harsh parenting may involve less reciprocity than conflict, it is plausible that repeated engagement in family conflict may change the amygdala volume and begin to characterize how individuals interact with others outside the family. Direct engagement in family conflict may interfere with prefrontal-subcortical connectivity, or sustained activation of the amygdala, resulting in more aggression. Furthermore, more negative arousal likely interferes with adolescents' development of adaptive skills. In turn, adolescents transfer this negativity to romantic partners and later children.

### **Strengths, Limitations, Implications, and Future Directions**

The current study had many important strengths. First, these data rely on a rather large sample of families followed prospectively over a 10 to 15 year period. Second, multiple family members were included as well as romantic partners. Third, each study construct was measured using separate observations that were rated by independent teams of observers. While such a

strategy reduces shared method variance as a possible explanation for the findings, this approach also may provide more conservative estimates of the actual patterns of associations. Fourth, the approach adopted was grounded in a family systems approach in that both the parenting and family conflict that targets directly experienced as well as the parenting and family conflict that they witnessed among family members was evaluated. Finally, two distinct pathways leading to positive parenting were considered; while studies often evaluate continuities within parenting, rarely are other characteristics of family relationships considered (i.e., family conflict).

Despite these strengths, there are limitations to this study. First, data are correlational and cannot be used to make causal inferences. Second, parenting was measured during two distinct developmental periods, adolescence and toddlerhood. According to van IJzendoorn (1992), studies observing intergenerational parenting should measure parenting at the same point in time. Parenting adolescents likely involves more conversation than parenting toddlers. However, even if children are the same age at both time points, it may be difficult to ensure that parents are the same age at both time points. Third, the lack of ethnic diversity in the sample means that the results from this study may not generalize to other populations. Finally, observations were not considered independent because participants were in the same family.

While both the experience and observation of positive parenting and family conflict influenced later romantic relationship quality, alternative explanations should be considered. G1 parents and G2 children share genes and similarities across the two generations could be explained by passive gene-environment correlation. That is, parents parent in ways that are not only consistent with their own genetic propensities, but also which complement the genetic proclivities of their children. Any commonality in observed parenting, or even conflict, may reflect genetic similarity.



The results also suggest that the theoretical model may be mis-specified. Consistent with the Family Stress Model, G1 positive parenting may mediate the association between G1 family conflict and G2 romantic conflict. That is, in the direct model, both G1 positive parenting and G1 family conflict were associated with less G2 conflict in romantic relationships. However, in the indirect model (or observed parenting), only G1 observed parenting was associated with less G2 romantic conflict. Moreover, the bivariate association between G1 observed family conflict and observed parenting was statistically significant. Additionally, at the bivariate level G1 observed conflict was significantly correlated with G2 romantic relationship conflict. It is possible that G1 observed parenting explained the association between G1 observed conflict and G2 romantic conflict.

The current study has several implications for future research. Directly experiencing and observing positive and negative family interactions affects the quality of emerging family relations. Current studies often or fail to measure multiple systems and subsystems of family interaction other than parent-child interaction. Family Systems Theory suggests that families function as an interdependent whole and these results clearly support this notion

## References

- Ainsfeld M. Language Development from Birth to Three. Hillsdale, NJ: Erlbaum; 1984.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin*, 103(3), 411.
- Arnett, J. J. (1999). Adolescent storm and stress, reconsidered. *American psychologist*, 54(5), 317.
- Bandura, A. Self-efficacy: toward a unifying theory of behavioral change. *Psychological Review*, 1977, 84, 191-215.
- Bank, L., Burraston, B., & Snyder, J. (2004). Sibling conflict and ineffective parenting as predictors of adolescent boys' antisocial behavior and peer difficulties: Additive and interactional effects. *Journal of research on adolescence*, 14(1), 99-125.
- Baril, H., Julien, D., Chartrand, É., Dubé, M., Pelland, M. È., & D'Amico, É. (2007). Lien entre la qualité des relations familiales et sociales à l'adolescence et à l'âge adulte. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, 39(1), 32.
- Baumrind, D. (1989). Rearing competent children. In W.Damon (Ed.), *Child development today and tomorrow* (pp. 349-378). San Francisco: Jossey-Bass.
- Belsky, J., Hancox, R. J., Sligo, J., & Poulton, R. (2012). Does being an older parent attenuate the intergenerational transmission of parenting?. *Developmental psychology*, 48(6), 1570.
- Belsky, J., Jaffee, S. R., Sligo, J., Woodward, L., & Silva, P. A. (2005). Intergenerational transmission of warm-sensitive-stimulating parenting: A prospective study of mothers and fathers of 3-year-olds. *Child development*, 76(2), 384-396.

- Belsky, J., Hancox, R. J., Sligo, J., & Poulton, R. (2012). Does being an older parent attenuate the intergenerational transmission of parenting?. *Developmental psychology*, 48(6), 1570.
- Betts, L. R., Trueman, M., Chiverton, L., Stanbridge, A., & Stephens, J. (2013). Parental rearing style as a predictor of attachment and psychosocial adjustment during young adulthood. *Journal of Social and Personal Relationships*, 30(6), 675-693.
- Brook, J. S., Lee, J. Y., Finch, S. J., & Brown, E. N. (2012). The association of externalizing behavior and parent–child relationships: An intergenerational study. *Journal of child and family studies*, 21(3), 418-427.
- Bryant, C. M., & Conger, R. D. (2002). An intergenerational model of romantic relationship development. *Stability and change in relationships*, 57-82.
- Carlo, G., McGinley, M., Hayes, R., Batenhorst, C., & Wilkinson, J. (2007). Parenting styles or practices? Parenting, sympathy, and prosocial behaviors among adolescents. *The Journal of genetic psychology*, 168(2), 147-176.
- Carlo, G., Mestre, M. V., Samper, P., Tur, A., & Armenta, B. E. (2011). The longitudinal relations among dimensions of parenting styles, sympathy, prosocial moral reasoning, and prosocial behaviors. *International Journal of Behavioral Development*, 35(2), 116-124.
- Castro, M., Expósito-Casas, E., López-Martín, E., Lizasoain, L., Navarro-Asencio, E., & Gaviria, J. L. (2015). Parental involvement on student academic achievement: A meta-analysis. *Educational Research Review*, 14, 33-46.
- Chen, Z. Y., & Kaplan, H. B. (2001). Intergenerational transmission of constructive parenting. *Journal of Marriage and Family*, 63(1), 17-31.

- Chen, Z. Y., Liu, R. X., & Kaplan, H. B. (2008). Mediating mechanisms for the intergenerational transmission of constructive parenting: A prospective longitudinal study. *Journal of Family Issues*.
- Collins, W. A., Madsen, S. D., & Susman-Stillman, A. (2001). Parenting in middle childhood. In M. Bornstein (Ed.), *Handbook of parenting* (2nd ed., (pp. 73-101) Mahwah, NJ: Lawrence Erlbaum.
- Conger, R. D., Cui, M., Bryant, C. M., & Elder Jr, G. H. (2000). Competence in early adult romantic relationships: a developmental perspective on family influences. *Journal of personality and social psychology*, 79(2), 224.
- Conger, R. D., & Donnellan, M. B. (2007). An interactionist perspective on the socioeconomic context of human development. *Annu. Rev. Psychol.*, 58, 175-199.
- Conger, R. D., Neppl, T., Kim, K. J., & Scaramella, L. (2003). Angry and aggressive behavior across three generations: A prospective, longitudinal study of parents and children. *Journal of abnormal child psychology*, 31(2), 143-160.
- Conger, R. D., Schofield, T. J., Neppl, T. K., & Merrick, M. T. (2013). Disrupting intergenerational continuity in harsh and abusive parenting: The importance of a nurturing relationship with a romantic partner. *Journal of Adolescent Health*, 53(4), S11-S17.
- Cox, M. J., & Paley, B. (2003). Understanding families as systems. *Current Directions in Psychological Science*, 12(5), 193-196.
- Crittenden, P. M. (1984). Sibling interaction: Evidence of a generational effect in maltreating infants. *Child abuse & neglect*, 8(4), 433-438.

- Criss, M. M., & Shaw, D. S. (2005). Sibling relationships as contexts for delinquency training in low-income families. *Journal of Family Psychology, 19*(4), 592.
- Cui, M., Durtzchi, J. A., Donnellan, M. B., Lorenz, F. O., & Conger, R. D. (2010). Intergenerational transmission of relationship aggression: a prospective longitudinal study. *Journal of Family Psychology, 24*(6), 688.
- Davidov M, Grusec JE. Untangling the links of parental responsiveness to distress and warmth to child outcomes. *Child Development. 2006*;77:45–48.
- De Wolff, M. S., & Ijzendoorn, M. H. (1997). Sensitivity and attachment: A meta-analysis on parental antecedents of infant attachment. *Child development, 68*(4), 571-591.
- Eisenberg, N., Fabes, R. A., & Spinrad, T. L. (2006). Handbook of child psychology.
- Eisenberg, N., & Murphy, B. (1995). Parenting and children's moral development. *Handbook of parenting, 4*, 227-257.
- Friesen, M. D., Woodward, L. J., Horwood, L. J., & Fergusson, D. M. (2013). Quality of parent-child relations in adolescence and later adult parenting outcomes. *Social Development, 22*(3), 539-554.
- Galambos, N. L., Barker, E. T., & Almeida, D. M. (2003). Parents do matter: Trajectories of change in externalizing and internalizing problems in early adolescence. *Child development, 74*(2), 578-594.
- Gardner, F. E., Sonuga-Barke, E. J., & Sayal, K. (1999). Parents anticipating misbehaviour: An observational study of strategies parents use to prevent conflict with behaviour problem children. *Journal of Child Psychology and Psychiatry, 40*(08), 1185-1196.

- Gerard, J. M., Krishnakumar, A., & Buehler, C. (2006). Marital conflict, parent-child relations, and youth maladjustment a longitudinal investigation of spillover effects. *Journal of Family Issues*, 27(7), 951-975.
- Harold, G. T., Shelton, K. H., Goeke-Morey, M. C., & Cummings, E. M. (2004). Marital conflict, child emotional security about family relationships and child adjustment. *Social Development*, 13(3), 350-376.
- Holmbeck, G. N. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: examples from the child-clinical and pediatric psychology literatures. *Journal of consulting and clinical psychology*, 65(4), 599.
- Kline, T. J. (2005). *Psychological testing: A practical approach to design and evaluation*. Sage Publications.
- Kochanska, G. (1995). Children's temperament, mothers' discipline, and security of attachment: Multiple pathways to emerging internalization. *Child development*, 66(3), 597-615.
- Kopp, C. B. (1989). Regulation of distress and negative emotions: A developmental view. *Developmental psychology*, 25(3), 343.
- Ladd, G. W., & Profilet, S. M. (1996). The Child Behavior Scale: A teacher-report measure of young children's aggressive, withdrawn, and prosocial behaviors. *Developmental psychology*, 32(6), 1008.
- Lindsey, E. W., Colwell, M. J., Frabutt, J. M., & MacKinnon-Lewis, C. (2006). Family conflict in divorced and non-divorced families: Potential consequences for boys' friendship status and friendship quality. *Journal of Social and Personal Relationships*, 23(1), 45-63.

- Low, S. M., & Stocker, C. (2005). Family functioning and children's adjustment: associations among parents' depressed mood, marital hostility, parent-child hostility, and children's adjustment. *Journal of family psychology, 19*(3), 394.
- Maccoby, E. E. (1992). The role of parents in the socialization of children: An historical overview. *Developmental psychology, 28*(6), 1006.
- Maccoby, E. E., & Martin, J. A. (1983). Socialization in the context of the family: Parent-child interaction. *Handbook of child psychology: formerly Carmichael's Manual of child psychology/Paul H. Mussen, editor.*
- MacKinnon-Lewis, C., & Lofquist, A. (1996). Antecedents and consequences of boys' depression and aggression: Family and school linkages. *Journal of Family Psychology, 10*(4), 490.
- Masarik, A. S., Conger, R. D., Donnellan, M. B., Stallings, M. C., Martin, M. J., Schofield, T. J., Neppl, T. K., Scaramella, L. V., Smolen, A., & Widaman, K. F. (2014). For better and for worse: Genes and parenting interact to predict future behavior in romantic relationships. *Journal of Family Psychology, 28*(3), 357.
- McCartney, K., Bub, K. L., & Burchinal, M. R. (2006). VI. Selection, detection, and reflection. *Monographs of the Society for Research in Child Development, 71*(3), 105-126.
- Melby, J. N., & Conger, R. D. (2001). The Iowa Family Interaction Rating Scales: Instrument summary.
- Murphy, F. C., Nimmo-Smith, I. A. N., & Lawrence, A. D. (2003). Functional neuroanatomy of emotions: a meta-analysis. *Cognitive, Affective, & Behavioral Neuroscience, 3*(3), 207-233.

- Muthén, L. K., & Muthén, B. O. (1998). Mplus user's guide: The comprehensive modeling program for applied researchers. *Los Angeles: Muthen & Muthen*.
- Neppl, T. K., Conger, R. D., Scaramella, L. V., & Ontai, L. L. (2009). Intergenerational continuity in parenting behavior: mediating pathways and child effects. *Developmental psychology*, 45(5), 1241.
- Noack, P., & Kracke, B. (1998). Continuity and change in family interactions across adolescence. *Verbal interaction and development in families with adolescents*, 15, 65-81.
- Paley, B., Conger, R. D., & Harold, G. T. (2000). Parents' affect, adolescent cognitive representations, and adolescent social development. *Journal of Marriage and Family*, 62(3), 761-776.
- Parke, R. D., Kim, M., Flyr, M., McDowell, D. J., Simpkins, S. D., Killian, C. M., & Wild, M. (2001). *Managing marital conflict: Links with children's peer relationships*.
- Patterson, G. R. (1986). The contribution of siblings to training for fighting: A microsocial analysis. *Development of antisocial and prosocial behavior*, 235-261.
- Perlman, M., Garfinkel, D. A., & Turrell, S. L. (2007). Parent and sibling influences on the quality of children's conflict behaviours across the preschool period. *Social Development*, 16(4), 619-641.
- Phan, K. L., Wager, T., Taylor, S. F., & Liberzon, I. (2002). Functional neuroanatomy of emotion: a meta-analysis of emotion activation studies in PET and fMRI. *Neuroimage*, 16(2), 331-348.
- Raikes, H. A., & Thompson, R. A. (2005). Efficacy and social support as predictors of parenting stress among families in poverty. *Infant mental health journal*, 26(3), 177-190.



- Rhoades, K. A., Leve, L. D., Harold, G. T., Neiderhiser, J. M., Shaw, D. S., & Reiss, D. (2011). Longitudinal pathways from marital hostility to child anger during toddlerhood: genetic susceptibility and indirect effects via harsh parenting. *Journal of Family Psychology*, 25(2), 282.
- Rohner, R. P. (1986). *The warmth dimension: Foundations of parental acceptance-rejection theory*. Sage Publications, Inc.
- Rubin, K.H., Bukowski, W.M., & Parker, J.G. (2006). Peer interactions, relationships and groups. In N. Eisenberg (Vol. Ed.), *The handbook of child psychology* (6th ed., pp. 571-645). New York: Wiley.
- Scaramella, L. V., & Conger, R. D. (2003). Intergenerational continuity of hostile parenting and its consequences: The moderating influence of children's negative emotional reactivity. *Social Development*, 12(3), 420-439.
- Shaffer, A., Burt, K. B., Obradović, J., Herbers, J. E., & Masten, A. S. (2009). Intergenerational continuity in parenting quality: the mediating role of social competence. *Developmental psychology*, 45(5), 1227.
- Strassberg, Z., Dodge, K. A., Bates, J. E., & Pettit, G. S. (1992). The longitudinal relation between parental conflict strategies and children's sociometric standing in kindergarten. *Merrill-Palmer Quarterly* (1982-), 477-493.
- Scaramella, L. V., & Conger, R. D. (2003). Intergenerational continuity of hostile parenting and its consequences: The moderating influence of children's negative emotional reactivity. *Social Development*, 12(3), 420-439.

- Spillman, S. K., Neppl, T. K., Donnellan, M. B., Schofield, T. J., & Conger, R. D. (2013). Incorporating religiosity into a developmental model of positive family functioning across generations. *Developmental psychology*, 49(4), 762.
- Spinrad TL, Eisenberg N, Gaertner B, Popp T, Smith CL, Kupfer A, Greving K, Liew J, Hofer C. Relations of maternal socialization and toddlers' effortful control to children's adjustment and social competence. *Developmental Psychology*. 2007;43:1170–1186.
- Schofield, T. J., Conger, R. D., & Neppl, T. K. (2014). Positive parenting, beliefs about parental efficacy, and active coping: Three sources of intergenerational resilience. *Journal of Family Psychology*, 28(6), 973.
- Steinberg, L., & Morris, A. S. (2001). Adolescent development. *Journal of Cognitive Education and Psychology*, 2(1), 55-87.
- Stocker, C. M., & Youngblade, L. (1999). Marital conflict and parental hostility: Links with children's sibling and peer relationships. *Journal of Family Psychology*, 13(4), 598.
- Underwood, M. K., Beron, K. J., Gentsch, J. K., Galperin, M. B., & Risser, S. D. (2008). Family correlates of children's social and physical aggression with peers: Negative interparental conflict strategies and parenting styles. *International Journal of Behavioral Development*, 32(6), 549-562.
- Vairami, M., & Vorria, P. (2007). Interparental conflict and (pre) adolescents' peer relationships. *Hellenic Journal of Psychology*, 4(3), 257-280.
- Van Ijzendoorn, M. H. (1992). Intergenerational transmission of parenting: A review of studies in nonclinical populations. *Developmental review*, 12(1), 76-99.

- Wager, T. D., Phan, K. L., Liberzon, I., & Taylor, S. F. (2003). Valence, gender, and lateralization of functional brain anatomy in emotion: a meta-analysis of findings from neuroimaging. *Neuroimage*, *19*(3), 513-531.
- Whittle, S., Yap, M. B., Yücel, M., Fornito, A., Simmons, J. G., Barrett, A., Sheeber, L., & Allen, N. B. (2008). Prefrontal and amygdala volumes are related to adolescents' affective behaviors during parent–adolescent interactions. *Proceedings of the National Academy of Sciences*, *105*(9), 3652-3657.
- Whitton, S. W., Waldinger, R. J., Schulz, M. S., Allen, J. P., Crowell, J. A., & Hauser, S. T. (2008). Prospective associations from family-of-origin interactions to adult marital interactions and relationship adjustment. *Journal of Family Psychology*, *22*(2), 274.
- Zald, D. H. (2003). The human amygdala and the emotional evaluation of sensory stimuli. *Brain Research Reviews*, *41*(1), 88-123.

## Vita

The author was born in Lake Charles, Louisiana. She obtained her Bachelor's degree in Biological Sciences from Louisiana State University in 2010. She joined the University of New Orleans psychology graduate program to pursue a Master's degree and Ph.D. in applied developmental psychology and joined Professor Robert Laird's research lab in 2012. She obtained her Master's degree in from the University of New Orleans in 2013 and joined Professor Laura Scaramella's research lab in 2015.