

DAILY SPILLOVER IN CONFLICT FROM THE MARITAL RELATIONSHIP TO THE
PARENT-CHILD RELATIONSHIP: THE MODERATING ROLE OF ATTRIBUTES
ASSOCIATED WITH PARENT EMOTION-RELATED REGULATION

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A DISSERTATION

Submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy
in the Department of Psychology
in the Graduate School of
The University of Alabama

TUSCALOOSA, ALABAMA

2012

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ABSTRACT

Research has consistently documented that negativity generated in the marital relationship will “spill over” to negatively influence how parents interact with their children. The present study uses a daily reporting design to examine the spillover in naturally-occurring conflict from the marital relationship to the parent-child relationship over a week-long period. The present study also explores the direct and interaction effects of temperament and personality factors associated with emotion-related regulation on these spillover processes. This is the first known study to examine the spillover in specific conflict strategies and to link distal personality and temperament variables to micro-level processes such as day-to-day family conflict. Participants were 61 parents with a preadolescent child “at-risk” for aggressive behavior. Parents reported on their experience of marital and parent-child conflict and their use of constructive and destructive conflict strategies through daily telephone interviews. Personality and temperament ratings were collected through baseline interviews with participants in their homes or community settings. Primary analyses revealed a spillover in conflict and constructive conflict across one time period and across one full day. Parents’ emotion-related regulation had direct effects on parents’ use of constructive and destructive conflict strategies and interesting moderating effects on the spillover in conflict. Secondary analyses tested potential child effects. Findings have important clinical implications for adaptive intervention programs and family therapies targeting children at-risk for behavioral problems.

LIST OF ABBREVIATIONS AND SYMBOLS

α	Cronbach's index of internal consistency; probability of a Type I error
B	Unstandardized beta coefficient
$Exp(B)$	Odds Ratios
F	Fisher's F ratio
M	Mean
N	Total number in sample
η^2	Eta squared; measure of strength of relationship
p	Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value
r	Pearson product-moment correlation
SD	Standard deviation
SE	Standard error
t	Computed value of t -test
$<$	Less than
$=$	Equal to
Λ	Wilks' Lambda

ACKNOWLEDGMENTS

I am grateful for this opportunity to thank all of the individuals who generously offered their time, support, and guidance on this dissertation project. My mentor and dissertation chairman Dr. John Lochman has been a tremendous teacher. He mentors with his heart, as well as with his astute intellect and wealth of experience, and I will be forever grateful for his fatherly encouragement and his professional guidance. I am also grateful to my committee members, Dr. Mary Elizabeth Curtner-Smith, Dr. Ansley Gilpin, Dr. Laura Klinger, and Dr. Randall Salekin, who have consistently offered fresh perspectives on issues involving children and families and have devoted considerable time and interest to this project. I would also like to thank Dr. Jamie DeCoster, who has spent many a Saturday afternoon teleporting in to my computer screen in order to help me learn the proper care and feeding of time-series data analyses. I also owe special thanks to Sara Stromeyer, who spent many evenings making participant phone calls. Moreover, this project would not have been possible without the research assistance of Emily Hubert-Wallander and Colin McElvenny, two undergraduate students who braved the perils of dissertation data collection and the hazards of working with a harried doctoral student. As Colin so aptly put it, racing across Tuscaloosa County from one home visit to the next often felt “like a chase scene, but with no one chasing us.”

I would also like to acknowledge the tremendous influence of my mother – a clinical psychologist who carried on her own research activities in between reading stories to me at the kitchen table – and my father, who has always been my biggest cheerleader. I also want to thank

my fiancé Johnny Sherrill, who didn't seem to mind too much when I interrupted multiple dates to make participant phone calls and who somehow managed to squeeze a marriage proposal in between my dissertation deadlines. Finally, I want to thank my grandmother Mary Agnes Sullivan Davison, who pursued her doctoral degree in physical chemistry in the 1940s, at a time when few women were motivated to do so. Her love of learning and commitment to higher education have always been an inspiration to me, and her financial support of my graduate work has been a tremendous blessing.

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CHAPTER 1

INTRODUCTION

Research has consistently documented the ways in which stress, destructive behavior, and negative affect generated in marital conflict will “spill over” to negatively affect how parents interact with their children (Erel & Burman, 1995). Many factors are thought to influence the degree to which spillover occurs. Contextual factors, characteristics of the child, and characteristics of the parent may all play an important role. While many factors may help to explain spillover processes, parent temperament and personality factors associated with emotion-related regulation are the specific focus of this dissertation study. More specifically, this dissertation will explore the degree to which temperament and personality factors associated with emotion-related regulation moderate the spillover in conflict and conflict strategies from the marital relationship to the parent-child relationship over time.

SPILOVER: UNDERSTANDING THE RELATION BETWEEN MARITAL CONFLICT AND PARENTING

Research has consistently highlighted the link between marital conflict and parenting. While multiple explanations have been proposed to account for this link, the “spillover hypothesis” has garnered the most research support, to date. “Spillover” refers to the transmission of mood, affect, and behavior from one setting to another (Repetti, 1987). While this term first emerged in the sociological literature, it has since been applied to the marital and

parent-child domains within the psychological literature (Engfer, 1988). As applied to these domains, the spillover hypothesis proposes that negativity aroused in one family sub-system is likely to bleed over into other family sub-systems (Engfer, 1988). Consistent with this hypothesis, researchers have proposed that the stress, affect, and behaviors generated within marital conflict will spill over to affect the ways in which parents relate to their children (Erel & Burman, 1995).

The spillover hypothesis has its roots in family systems, social learning, and family stress and role strain theories. Family systems theory suggests that parents engaged in marital conflict may be motivated to turn their attention to perceived problems with a child in order to distract from the negativity in the marital relationship. In this way, parents are effectively able to submerge their antagonisms toward each other – at least temporarily – and unite over shared antagonisms towards a child. Family systems researchers have frequently called this phenomenon “detouring” (Minuchin, 1974) and “scapegoating” (Vogel & Bell, 1960). Family systems researchers have also noted that children may contribute to these maladaptive cycles by escalating their own negative behaviors in an attempt to distract their parents from marital conflicts that are upsetting to them (Christensen & Margolin, 1988).

Social learning theory offers another explanation for spillover. Social learning theory maintains that children learn, use, and elicit from their parents the same behaviors that they see modeled for them during instances of marital conflict (Erel & Burman, 1995). If children see their parents modeling hostile behaviors during marital conflict, then these children may be more likely to imitate these hostile behaviors during parent-child conflict and elicit reciprocal behaviors from their parents. Conversely, if children see their parents modeling warm, constructive behaviors during marital conflict, then these children may be more likely to imitate

these constructive behaviors during parent-child conflict and elicit reciprocal behaviors from their parents. Indeed, past research suggests that individuals can elicit markedly different responses from a conflict partner simply by altering the conflict strategies that they use (Lochman & Allen, 1979).

Family stress and role strain theories suggest that marital conflict is a stress factor that results in increased problems in the parent-child relationship (Margolin, 1981). Researchers from this perspective maintain that parents who are experiencing marital conflict have less emotional energy to appropriately manage conflicts and other issues with their children (Emde & Easterbrooks, 1985). Ultimately, these researchers suggest multiple directions of influence, noting that marital stress may impact the parent-child relationship, that parent-child stress may impact the marital relationship, and that multiple third variable stressors (e.g., job loss, illness) may impact both the marital and the parent-child relationships (Margolin, 1981). While the family systems, social learning, and family stress and role strain theories provide different theoretical explanations for spillover, each one provides general theoretical support for the spillover hypothesis.

The spillover hypothesis has garnered much research support, as well. Two major meta-analyses, for example, have documented moderate relations between aspects of the marital relationship and aspects of the parent-child relationship (Erel & Burman, 1995; Krishnakumar & Buehler, 2000). While one meta-analysis highlighted the positive relation between marital quality and parent-child quality broadly-defined (Erel & Burman, 1995), the other documented a negative relation between marital conflict and positive parenting and took a finer-grained look at the unique moderators of this relation (Krishnakumar & Buehler, 2000). More specifically, this meta-analysis demonstrated that the relation between marital conflict and parenting was

strongest when marital conflict was measured as overt conflict style alone or in combination with disagreement and when parenting was measured as harsh punishment and acceptance (Krishnakumar & Buehler, 2000). Other research documents the spillover in specific conflict strategies from one family subsystem to another. Findings by Rinaldi and Howe (2003), for example, suggest that individuals who engage in negative strategies like verbal aggression and avoidance during marital conflict will be more likely to use those same strategies during parent-child conflict. This research suggests that hostile marital conflict behaviors undercut parents' abilities to engage with their children in positive ways.

SPILOVER: IMPLICATIONS FOR CHILDREN

The spillover in negativity from the marital relationship to the parent-child relationship has significant implications for children's behavioral outcomes. Numerous studies have demonstrated, for example, that the spillover in hostility from the marital relationship to the parent-child relationship predicts children's externalizing problems. These studies suggest that harsh parenting mediates the relation between hostile marital conflict and children's problems. This mediated pathway has been documented in studies of young children (Erath, Bierman, & the Conduct Problems Prevention Research Group, 2006), preadolescents (Buehler, Benson, & Gerard, 2006), and adolescents (Buehler & Gerard, 2002). Moreover, these relations have been documented using high-risk (e.g., Erath et al.; Graham, Kim, & Fisher, 2012) and representative community samples (e.g., Gerard, Krishnakumar, & Buehler, 2006) in both cross-sectional and longitudinal work (Cui & Conger, 2008; Gerard et al., 2006). Most of these studies define marital conflict as overtly hostile conflict behaviors (e.g., shouting, criticizing, hitting or throwing things) (e.g., Cui & Conger, 2008; Gerard et al., 2006). Likewise, studies generally define harsh parenting in terms of harsh discipline (e.g., Erath et al., 2006), harshness broadly-

defined (e.g., yelling, calling the child “dumb” as in Buehler et al., 2006), or engagement in harsh conflict strategies with children (Baden, Lochman, & Wells, 2008).

SPILLOVER: THE MODERATING ROLE OF TEMPERAMENT AND PERSONALITY FACTORS ASSOCIATED WITH EMOTION-RELATED REGULATION

Given the negative impact of spillover on children’s behavioral outcomes, it is important to identify parent-level moderators of spillover that might serve as targets for intervention.

While many parent-level factors may help to explain spillover processes (e.g., parental efficacy, their experience of other daily stressors), this dissertation study is specifically focused on factors related to parent temperament and personality. Moreover, temperament and personality factors that might explain spillover due to their association with adult emotion-related regulation are of specific interest. These factors may serve to moderate the influence of emotion aroused in one family sub-system on the behavior and emotion expressed in another family sub-system.

Emotion-related regulation: Definition and conceptualizations

While many definitions of emotion regulation have been suggested, the definition of emotion regulation presented by Eisenberg and her colleagues has been used in relevant family systems research and will therefore be adopted in this dissertation study (Eisenberg, Hofer, & Vaughan, 2007; Eisenberg & Morris, 2002). Eisenberg and her colleagues use the term emotion-related self-regulation (frequently shortened to emotion-related regulation) to refer to “the process of initiating, avoiding, inhibiting, maintaining, or modulating the occurrence, form, intensity, or duration of internal feeling states, emotion-related physiological processes, emotion-related goals, and or behavioral concomitants of emotion, generally in the service of accomplishing one’s goals” (Eisenberg & Morris, 2002). This term is intended to capture

processes used to manage emotional reactivity and processes used to manage the behavioral expressions of emotion (Eisenberg et al., 2007). Thus, the term *emotion-related* regulation is particularly apt, because it captures the regulation of behavior linked with emotion, in addition to the regulation of emotional states (Eisenberg et al., 2007).

Adult emotion-related regulation has frequently been indexed using measures of adult temperament and personality. The adult temperament characteristic of effortful control and the adult personality characteristics of Agreeableness and Conscientiousness are of particular interest in this dissertation, given their theoretical and empirical links to adult emotion-related regulation. These links are outlined below. It should be noted that these temperament and personality factors are not, in and of themselves, emotion regulation. Rather, these three factors are thought to reflect processes involved in emotion-related regulation. These three factors, no doubt, tap processes that serve other functions, as well. Eisenberg et al., (2007) sum it up best when they assert that effortful control (and Conscientiousness and Agreeableness, for the purposes of this study), are simply “part of the array of processes or capabilities – part of the bag of tricks – that can be used to manage emotion and its expression in behavior” (p. 289).

Temperament and emotion-related regulation: The role of effortful control

Effortful control is considered a central dimension of temperament (Ahadi & Rothbart, 1994). Temperament has generally been conceptualized as innate individual differences in reactivity and self-regulation (Rothbart & Derryberry, 1981). Self-regulation refers to the modulation of arousal and emotional reactivity to stimuli and has been operationalized as effortful control (Derryberry & Rothbart, 1988). Effortful control has been defined as “the ability to inhibit a dominant response to perform a subdominant response” (Rothbart & Bates,

1998, p. 137). Effortful control has been thought to depend on neural networks in the prefrontal cortex that are also involved in executive function tasks such as planning, shifting attention, inhibiting dominant responses, and activating subdominant responses (Nigg, 2006; Rothbart, Ahadi, & Evans, 2000). While adult temperament scales include temperament factors in addition to effortful control (e.g., negative affect, extraversion/surgency, and orienting sensitivity in Evans & Rothbart, 2005 and Rothbart et al., 2000), these factors are not included in this study because they are not thought to play a primary role in emotion-related regulation.

Current leading temperament scales measure effortful control using three sub-scales that assess both behavioral and attentional components of self-regulation (Evans & Rothbart, 2007; Rothbart et al., 2000). The attentional component of effortful control (“attentional control”) refers to individuals’ capacities for shifting attention away from or towards stimuli. The two behavioral components of effortful control (“inhibitory control” and “activation control”) refer to individuals’ capacities for inhibiting or activating behavioral responses to stimuli.

Researchers have theorized that these effortful control processes are centrally involved in emotion-related regulation (Eisenberg, Smith, Sadovsky, & Spinrad, 2004). For example, in the context of an emotionally-charged marital dispute, individuals’ ability to shift their attention away from negative stimuli and away from their negative emotions and distract themselves with more positive thoughts or activities (“attentional control”) might contribute to better marital outcomes. Likewise, individuals’ ability to inhibit their tendencies to act out the emotions aroused in a marital dispute towards their children (“inhibitory control”) and activate alternative coping responses (“activation control”) might serve to prevent spillover from occurring. In sum, individuals with greater temperamental regulation (i.e., effortful control) may be better at

regulating their attention and behavior surrounding emotionally-valenced stimuli. They may therefore experience less spillover in their relationships.

Empirical evidence supports the link between effortful control and emotion-related regulation. Developmental research, for example, suggests that effortful control moderates the relation between negative affect and internalizing problems in children (Nigg, 2006). This research suggests that effortful control processes may be involved in the management of negative emotionality. Moreover, research linking low effortful control to high levels of externalizing behavior problems suggests that effortful control may play a role in regulating the negative emotionality and inhibiting the behavioral impulses that underlie these problematic behaviors (Eisenberg et al., 2009). While these relations have been studied most extensively in children, research in the adult domain highlights a negative relation between effortful control and indices of negative emotionality (Derryberry & Rothbart, 1988). This research suggests that effortful control may play a role in modulating negative affect.

Personality and emotion-related regulation: The roles of Agreeableness and Conscientiousness

Introduction to personality factors

Researchers have suggested that temperament may serve as the foundation for adult personality traits (Evans & Rothbart, 2005; McCrae et al., 2000). In recent decades, research has converged on five major dimensions of personality, often called the “Big Five” (John, Naumann, & Soto, 2008). While there has been some variation in the labels that have been used to describe these five factors over time, the most widely accepted labels are Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness (John et al., 2008). The Big Five have emerged

across cultures (John et al., 2008; Rolland, 2002), in various samples, and in dictionary-based, questionnaire-based, and observer-based research (John et al., 2008).

Some researchers have examined sub-facets of these five major dimensions (Costa, McCrae, & Dye, 1991). These researchers argue that these sub-facets provide a sharper conceptual framework for the broader personality dimensions and index significant individual differences in personality (Costa et al., 1991). While these sub-facets of personality have been validly used in some research, they have not been examined in studies of emotion-related regulation and family systems. These studies have typically examined the Big Five factors at their broadest, most abstract level. Therefore, this dissertation study will follow suit and focus on links between family processes and Big Five factors at their broadest level. While all of the Big Five factors have been linked to family functioning in various ways, this dissertation study will only examine those factors that might explain spillover due to their theoretical and empirical links to emotion-related regulation.

Agreeableness and Conscientiousness as related to regulatory processes

Researchers have theorized that Conscientiousness and Agreeableness are the two primary Big Five factors associated with self-regulatory processes, broadly speaking (Ahadi & Rothbart, 1994). Researchers have proposed that Conscientiousness and Agreeableness develop out of effortful control and tap the same self-regulatory processes involved in effortful control (Ahadi & Rothbart, 1994; Jensen-Campbell et al., 2002). In fact, some research with children has highlighted effect sizes as large as $r = .59$ to $r = .71$ for the relation between Agreeableness and subscales of effortful control including attention shifting, attention focusing, and inhibitory control (Cumberland-Li, Eisenberg, & Reiser, 2004). Research with adult populations has

revealed effect sizes ranging from low ($r = .11$) to moderate ($r = .30$) (Evans & Rothbart, 2005; Wiltink, J., Vogelsang, U., & Beutel, M. E., 2006). Effect sizes for the relation between Conscientiousness and effortful control have been more consistent. Research suggests, for example, that effect sizes for this relation are large and generally fall at or around $r = .60$ (Evans & Rothbart, 2005; Wiltink, J., Vogelsang, U., & Beutel, M. E., 2006).

While this research has explicitly examined the links between Agreeableness, Conscientiousness, and effortful control, other research has indirectly examined these links. For example, Jensen-Campbell et al. (2002) explored the interplay between these two personality factors and individuals' performance on three neuropsychological tests tapping self-regulatory/effortful control processes. Overall, they found that higher levels of Agreeableness and Conscientiousness predicted better performance on these self-regulatory tasks (Jensen-Campbell, 2002). In sum, this research suggests that Agreeableness and Conscientiousness may join effortful control as markers of self-regulation.

Agreeableness as a marker for emotion-related regulation

Theoretical support for Agreeableness as a marker for emotion-related self-regulation, more specifically, has been building in recent years. Relative to the other Big Five factors, the Agreeableness factor has generally been conceptualized as most related to interpersonal relationships (Graziano, Jensen-Campbell, & Hair, 1996). Traditionally, Agreeableness has been defined as reflecting a “pro-social and communal orientation toward others” as compared to antagonism (John et al., 2008). Given its interpersonal cast, researchers have proposed that Agreeableness reflects motives for maintaining good interpersonal relationships and avoiding conflict with others. These researchers have gone on to emphasize that effectively acting on

these motives requires efforts to control emotions (Tobin, Graziano, Vanman, & Tassinari, 2000; Jensen-Campbell & Graziano, 2001).

Empirical evidence is building for the link between Agreeableness and emotion-related regulation. Ode and Robinson (2007), for example, found that Agreeableness moderated the relation between neuroticism – often conceptualized in terms of negative emotionality – and somatic symptoms. This research suggests that Agreeableness may play a role in regulating negative affect to support more adaptive outcomes. Additional research suggests that individuals high in Agreeableness are more likely to evidence greater efforts to control their emotions in response to negatively charged stimuli than individuals low in Agreeableness (Tobin et al., 2000). This finding was documented using both self-report and observational methods (Tobin et al., 2000). Interestingly, fMRI research suggests that individuals high in Agreeableness evidence increased activation in the primary brain region associated with emotion regulation when they are exposed to negative stimuli (Haas, Omura, Constable, & Canli, 2007). Individuals who scored higher in Agreeableness experienced more activation in this brain region than individuals who scored lower in Agreeableness. This research supports the notion that individuals high in Agreeableness may demonstrate more efforts to control emotion than their low Agreeableness counterparts.

Conscientiousness as a marker for emotion-related regulation

Researchers have also suggested that Conscientiousness may tap processes involved in emotion-related regulation. Conscientiousness has historically been described as “socially prescribed impulse control that facilitates task- and goal-directed behavior, such as thinking before acting, delaying gratification, following norms and rules, and planning, organizing, and

prioritizing tasks” (John et al., 2008). As suggested by its definition, Conscientiousness has less of an interpersonal cast than Agreeableness. Whereas Agreeableness has been described as tapping the regulation of frustration coming from people, Conscientiousness has been described as tapping the regulation of frustration coming from tasks (Jensen-Campbell et al., 2002). Notably, some research has failed to find links between Conscientiousness and emotion control (Tobin et al., 2000). That notwithstanding, research that conceptualizes emotion regulation more broadly to include emotion-related behavior retains the Conscientiousness factor as a measure of regulation (Cumberland-Li, Eisenberg, Champion, Gershoff, & Fabes, 2003).

FACTORS ASSOCIATED WITH EMOTION-RELATED REGULATION AND IMPLICATIONS FOR RELATIONSHIPS

As reviewed thus far, research highlights links between temperament and personality factors – namely, effortful control, Agreeableness, and Conscientiousness – and self-regulatory processes, including emotion-related regulation. Given this research, it seems reasonable to speculate that individuals who fall higher on temperament and personality dimensions associated with emotion-related regulation might show more adaptive ways of managing conflict and might evidence better marital and parenting outcomes. Some research supports these predictions.

The management of interpersonal conflict

Individuals who fall higher on temperament and personality dimensions tapping emotion-related regulation may manage interpersonal conflicts differently than individuals who fall lower on these dimensions. While little research in the adult domain has investigated this question using measures of temperamental effortful control, some research sheds light on this

question by highlighting the links between the management of conflict and personality factors such as Agreeableness and Conscientiousness.

Given its interpersonal cast, Agreeableness has been the most frequent target of research investigating the links between personality and conflict. This research suggests that individuals high in Agreeableness may react to interpersonal conflicts more pro-socially than individuals low in Agreeableness. Interpersonal conflicts are often replete with negative or aggressive cues. Meier, Robinson, and Wilkowski (2006) found that individuals high in Agreeableness did not demonstrate the same spike in aggressive behavior following aggressive cues as their counterparts low in Agreeableness. In fact, aggressive cues actually predicted a spike in pro-social thoughts among individuals high in Agreeableness (Meier et al., 2006). The authors asserted that this may reflect self-regulatory processes at work. More specifically, they proposed that individuals high in Agreeableness may implicitly undercut the activation of hostile thoughts and behaviors by promoting the activation of pro-social thoughts and behaviors (Meier et al., 2006). This is likely to influence the conflict strategies that individuals endorse. In fact, Jensen-Campbell and Graziano (2001) demonstrated that adolescents high in self-reported Agreeableness endorsed constructive conflict strategies such as negotiation more than adolescents low in self-reported Agreeableness. Moreover, individuals high in Agreeableness rated power-assertive conflict strategies as less effective than individuals low in Agreeableness (Graziano et al., 1996). Individuals high in Agreeableness also perceived less conflict in the situation, liked their interaction partner more, and rated them more positively than their low Agreeableness counterparts (Graziano et al., 1996).

Less research investigates the link between Conscientiousness and interpersonal conflict, broadly-speaking. As Bono, Boles, Judge, and Lauver (2002) point out, the lack of research in

this area is not necessarily surprising, given that the major features of Conscientiousness – orderliness, efficiency, reliability, achievement orientation, etc. – do not stand out as obvious features at play during interpersonal conflict. That notwithstanding, some research does suggest that individuals high in Conscientiousness report more frequent use of constructive conflict strategies such as negotiation than individuals low in Conscientiousness (Jensen-Campbell & Graziano, 2001). These individuals also report more resolved conflicts (Jensen-Campbell & Graziano, 2001). Other research goes against these findings. Bono et al. (2002), for example, found that the average level of Conscientiousness in roommate pairs positively correlated with roommates' reports of relationship conflict. Bono et al. (2002) explained this finding, by speculating that high levels of Conscientiousness may also herald high levels of inflexibility and fault-finding that may be detrimental to relationships. While the research linking Conscientiousness and interpersonal conflict at its broadest level is rather sparse, more research exists on the relation between Conscientiousness and marital functioning/conflict, more specifically.

Marital functioning

Temperament and personality factors associated with emotion-related regulation may also predict marital functioning. While little research has examined effortful control as a predictor of marital functioning, much research has examined Agreeableness and Conscientiousness as predictors.

Agreeableness emerges as a consistent predictor of positive marital functioning and constructive marital behavior. Donnellan, Conger, and Bryant (2004) found that this personality factor was positively related to global evaluations of the marriage and negatively related to

observed marital interactions characterized by high hostile/low warmth behaviors. As individuals' Agreeableness increased, their engagement in high hostile marital behaviors such as threats, coercion, and criticism decreased (Donnellan et al., 2004). This relation held constant across observational and questionnaire methodologies (Donnellan et al., 2004). Other research has demonstrated that high levels of Agreeableness in cohabiting partners are associated with couples' reports of constructive conflict communication patterns (Heaven, Smith, Prabhakar, Abraham, & Mete, 2006). This research suggests that Agreeableness has an important influence on marital functioning, perhaps due to its link with emotion-related regulation.

The research linking Conscientiousness to functioning in romantic relationships is somewhat more mixed. The preponderance of research suggests that high levels of Conscientiousness are predictive of positive relationship quality. Donnellan et al. (2004), for example, found that husbands' self-reported Conscientiousness predicted wife-reported marital quality. Wives' self-reported Conscientiousness predicted wife-reported marital quality and the average marital quality reported for the couple (Donnellan et al., 2004). The positive relation between Conscientiousness and relationship quality has also been documented in samples of dating and engaged couples (Holland & Roisman, 2008). Research also demonstrates negative correlations between personality factors similar to Conscientiousness (i.e., Constraint) and destructive relationship behaviors such as conflict and abuse (Robins, Caspi, & Moffitt, 2002). While most research suggests that Conscientiousness predicts positive marital functioning, some research suggests that Conscientiousness may predict perceptions of an avoidant/withdrawn conflict communication style among marital or cohabiting partners (Heaven et al., 2006).

Parenting

Temperament and personality factors related to emotion regulation may also predict parenting behaviors. Temperamental effortful control and the personality factors of Agreeableness and Conscientiousness have all been the focus of parenting research.

Research suggests that adult effortful control may be an important factor to consider when examining how parents manage emotionally-charged situations, such as conflict, with their children. In these parent-child conflict situations, children are likely to experience and express a range of emotions. Some research suggests that parents high in effortful control tend to respond more positively to their children's emotions by problem-solving with their children, talking with them about their feelings, and encouraging them (Valiente, Lemery-Chalfant, & Reiser, 2007). In contrast, parents low in effortful control tend to respond more negatively to their children's emotions by minimizing their feelings, punishing them, or feeling personally distressed by them (Valiente et al., 2007). Notably, parents' responses predicted their children's effortful control, which, in turn, predicted children's behavioral problems.

Research also highlights the links between positive parenting behaviors and the adult personality factors of Agreeableness and Conscientiousness. One meta-analysis of 30 studies found that that high levels of Agreeableness and Conscientiousness predicted positive parenting behaviors such as warmth and provision of structure (Prinzle, Stams, Dekovic, Reijntjes, & Belsky, 2009). High levels of Agreeableness also predicted lower levels of parental over-reactivity (de Haan, Prinzle, & Dekovic, 2009) and greater parental support of children's autonomy, as compared to the use of coercion and power-assertion (Prinzle et al., 2009). High Agreeableness and Conscientiousness in mothers have also been linked to more expressivity of

positive emotions, less expressivity of negative emotions, and more maternal sensitivity (Smith et al., 2007). Notably, expressivity of positive emotions mediated the relation between the adult personality factors of Agreeableness and Conscientiousness and maternal sensitivity (Smith et al., 2007). In studies of toddlers, Conscientiousness has emerged as a significant predictor of maternal responsiveness above and beyond the influence of the other Big Five factors (Clark, Kochanska, & Ready, 2000), and in studies of slightly older children, Conscientiousness has emerged as a significant predictor of greater positive support and less negative control (Losoya, Callor, Rowe, & Goldsmith, 1997).

Cumberland-Li et al. (2003) investigated the degree to which temperamental and personality factors associated with emotion-related regulation predict parenting behaviors. On the basis of past theory and research, Cumberland-Li et al. used measures of effortful control, Agreeableness, and Conscientiousness to tap emotion-related regulatory processes. Ultimately, however, analysis of the data suggested that effortful control and Conscientiousness hung together as part of a regulation composite, while Agreeableness loaded more strongly on a factor related to emotionality. In their study, Cumberland-Li et al. found that mothers' regulation – defined as the composite of effortful control sub-scales and Conscientiousness – predicted higher levels of positive emotional expressivity and lower levels of negative emotional expressivity. The opposite pattern was found when mothers' negative emotion – defined as the composite of low Agreeableness along with other temperament and personality factors – was the predictor variable. These results suggest that regulation-related temperament and personality factors are important to consider when examining individual differences in parenting behavior.

Results from Cumberland-Li et al. (2003) also guide aspects of the data analytic plan for this dissertation. More specifically, while Agreeableness, Conscientiousness, and effortful

control are theoretically linked to the same processes and should theoretically ‘hang together’ in analyses as one construct, past research suggests that the actual data may not play out in that way. Consequently, this dissertation will explore how these three factors correlate together in order to determine whether they should be examined in aggregate or as three individual moderators.

Summary

Research reviewed thus far suggests that the temperament and personality characteristics of parents may influence their management of conflict, their marital functioning, and their parenting behaviors. While researchers have historically explored the direct effects of temperament and personality factors on marital and parenting behaviors in independent analyses, researchers have recently begun to acknowledge and explore the impact of personality on the association between marital and parenting behaviors. Past researchers, for example, have documented the influence of personality variables including antisocial personality traits (Stover et al., 2012), self-control, flexibility (Talbot & McHale, 2004), aggressive personality traits, anxious personality traits, and sociability (Ganiban et al., 2009) on the spillover from the marital relationship to parenting.

The present study complements these recent investigations by exploring the influence of additional temperament and personality characteristics on the spillover of marital conflict to the parent-child relationship. Effortful control, Agreeableness, and Conscientiousness are particularly relevant to these outcomes, given their association with emotion-related regulation. Adults who fall higher on these temperament and personality dimensions may be better able to regulate the influence of negative emotion on their thoughts, affect, and behavior in challenging

interpersonal situations. They may, therefore, enjoy better interpersonal outcomes. No known research, to date, has investigated how these personality and temperament factors associated with emotion-related regulation might moderate spillover. Therein lies the focus of the present dissertation study.

THE PRESENT STUDY

Prior research documents the link between marital and parenting behaviors. Prior research also highlights the direct effects of factors thought to tap emotion-related regulatory processes – namely, effortful control, Agreeableness, and Conscientiousness – on these adult-level variables. This prior research serves as the springboard for the present study. The present study has two major aims: (1) to dissect the spillover in naturally-occurring conflict from the marital relationship to the parent-child relationship on a day-to-day basis and (2) to examine the direct and interaction effects of factors associated with emotion-related regulation on marital and parent-child conflict.

Most past research supporting the first aim of this study has used cross-sectional or longitudinal designs with each time point separated by one or more years. These designs introduce significant problems of retrospective recall and mask the dynamic, moment-to-moment nature of real-life family interactions. This project aims to address these problems by using a daily reporting design. Daily reporting designs have been used before to successfully capture the day-to-day spillover in conflict from the marital relationship to the parent-child relationship (Almeida, Wethington, & Chandler, 1999; Chung, Flook, & Fuligni, 2009; Margolin, Christensen, & John, 1996). While these studies provide a procedural framework for daily reporting designs, they define conflict in fairly simplistic and imprecise ways (e.g., “tension,”

“argument”) and offer little information about the exact nature of spillover. The present study will address these weaknesses by providing a more nuanced, concrete definition of conflict and by examining the spillover in specific conflict strategies.

The present study will take a finer-grained look at the nature of spillover by examining the spillover in constructive and destructive conflict strategies. Understanding conflict behavior in terms of these two dimensions has received much empirical support (e.g., Cummings, Goeke-Morey, & Papp, 2003; Rinaldi & Howe, 2003). These two dimensions will serve as the umbrella for six more specific conflict strategies, including negative verbal interactions, physical aggression, non-verbal expressions of anger or distress, avoidance/withdrawal, calm reasoning, and warmth. The first four items will reflect destructive conflict strategies, and the latter two items will reflect constructive conflict strategies. These six items conceptually reflect all items included in past measures of daily marital conflict (Cummings et al., 2003) and map onto the marital and parent-child conflict behaviors reflected in leading family conflict measures, such as the Conflict Tactics Scales (Straus, 1979). Past research using the Conflict Tactics Scales suggests that individuals demonstrate enduring patterns of conflict behavior across family subsystems when measured concurrently (Rinaldi & Howe, 2003). This has yet to be explored using a daily reporting design, however.

In line with its second aim, the present study will examine the direct effects of factors associated with emotion-related regulation on conflict frequency and conflict strategies. Moreover, the present study will be the first to explore the degree to which regulation-related attributes moderate the spillover in conflict and conflict strategies from the marital to the parent-child relationship within and across days. Research reviewed herein highlights the link between marital and parenting behaviors. Aforementioned research also highlights the direct effects of

regulation-related factors on interpersonal conflict and marital and parenting behaviors. This research suggests that these constructs – interpersonal conflict, marital behavior, parenting behavior, and personality/temperament factors associated with emotion-related regulation – are in play. It is yet unclear, however, whether regulation-related attributes moderate the link between marital and parenting conflict behaviors. It is believed that regulation-related attributes will serve a protective role for individuals and result in (1) decreased instances of marital and parent-child conflict, (2) increased use of constructive conflict strategies and decreased use of destructive conflict strategies, and (3) less spillover of negative marital processes to the parent-child relationship.

The two aims of the present study guide five major hypotheses.

Aim one

Hypothesis one

It is hypothesized that families will show a spillover in conflict from the marital to the parent-child relationship across three distinct time lags, consistent with similar research in this area (Margolin et al., 1996). To investigate these spillover processes, each day will be divided into three equal time periods roughly corresponding to morning, afternoon, and evening. Past research using a clinical sample demonstrated that marital tension continued to predict parent-child tension across time, however, it is yet unclear whether these same patterns will emerge in an at-risk sample (Margolin et al., 1996).

Hypothesis two

It is hypothesized that individuals will demonstrate enduring patterns of conflict behavior (e.g., constructive vs. destructive strategies) across family sub-systems and across time. Prior research using questionnaire data (Rinaldi & Howe, 2003) provides some support for this hypothesis.

Aim two

Hypothesis three

It is hypothesized that adults' regulation-related attributes will predict the frequency of their marital and parent-child conflicts during the week-long reporting period. Individuals who fall higher on temperamental and personality dimensions associated with emotion-related regulation will have less marital and parent-child conflict than those who fall lower on these dimensions.

Hypothesis four

It is hypothesized that individuals who fall higher on regulation-related dimensions will use more constructive conflict strategies and less destructive conflict strategies than those who fall lower on these dimensions.

Hypothesis five

It is hypothesized that adults' regulation-related attributes will moderate (1) the spillover in conflict from the marital to the parent-child relationship across time and (2) the type of conflict (constructive or destructive) used in the marital relationship and then in the parent-child relationship across time. In other words, individuals who fall higher on regulation-related

dimensions will experience less spillover in conflict from the marital to the parent-child relationship. Moreover, it is hypothesized that individuals who fall higher on regulation-related factors will be more likely to show a spillover in constructive conflict and less likely to show a spillover in destructive conflict compared to individuals who fall lower on regulation-related factors.

Secondary Analyses

In examining the relation between marital conflict and parenting, it is important to acknowledge that characteristics of the child may shape these family processes. Consequently, secondary analyses will examine child race, child gender, and child effortful control as possible moderators of the spillover in conflict from the marital relationship to the parent-child relationship. Notably, these secondary analyses will likely be under-powered to detect significant effects. Therefore, findings will likely be used for heuristic purposes only, to highlight trends and to lay the groundwork for future research.

Child gender and race will be examined. Prior meta-analytic work suggests that the relation between marital conflict and parenting is stronger for girls than for boys and mixed gender samples (Krishnakumar & Buehler, 2000). This same research also suggests that the relation between marital conflict and parenting is stronger for samples of European-Americans than for mixed race samples (Krishnakumar & Buehler, 2000). Notably, however, markedly less research has been conducted with minority families than with European-American families (Krishnakumar & Buehler, 2000). Given existing research, it is hypothesized that secondary analyses will reveal patterns suggesting that spillover is stronger for girls than for boys and for European-Americans than for minorities.

Children's temperamental characteristics likely influence the patterns of conflict observed in families. Effortful control has been identified as one major dimension of temperament that has been linked to marital conflict, parenting, and children's long-term outcomes (Eisenberg et al., 2009; Gustafsson, Cox, & Blair, 2012). Consequently, children's effortful control will be examined as a possible moderator of the spillover in conflict from the marital relationship to the parent-child relationship in the present study. Past research suggests that children who are low in effortful control demonstrate more externalizing behavior problems at later time points than children who are higher in effortful control (Eisenberg et al., 2009). Children low in effortful control and thereby higher in externalizing behavior problems tend to elicit increased marital conflict (Cui, Donnellan, & Conger, 2007; Jenkins, Simpson, Dunn, Rasbash, & O'Connor, 2005) and increased aggressive discipline from their parents (Sheehan & Watson, 2008). It follows that families with children low in effortful control will likely demonstrate more spillover in conflict from the marital relationship to the parent-child relationship than children higher in effortful control. This hypothesis reflects an emphasis on testing possible child-driven effects on spillover processes.

Just as children's lack of effortful control likely fuels increased marital and parent-child conflict, marital and parent-child conflict likely contribute to children's poor effortful control. Indeed, some past research suggests that marital conflict impacts children's effortful control indirectly by disrupting parenting (Gustafsson, Cox, & Blair, 2012). It follows that families with children lower in effortful control will likely demonstrate stronger links between conflict expressed in the marital relationship and conflict expressed in the parent-child relationship than families with children higher in effortful control. It is possible that children higher in effortful control may be better able to modulate the tendency towards emotional reactivity and behavioral

dysregulation that frequently follows marital conflict (Schermerhorn, Cummings, DeCarlo, and Davies (2007). If children are able to remain emotionally and behaviorally regulated within the context of marital conflict, they may be less likely to elicit subsequent conflict with their parents.

CHAPTER 2

METHOD

Sample

Participants in the present study were parents with a child between the ages of 10 and 14, who participated in one of two prior research studies testing the efficacy of a preventive intervention for children at-risk for aggression. These two prior studies included 259 participants who were eligible to be contacted about the present study. These participants were eligible to be contacted on the basis of their completion of requirements in the two prior studies and their written consent to be contacted about additional studies. Of these 259 participants, 55 people were determined ineligible for the present study during the screening phone call because they had no partner living in the home, they were not the primary caretaker for the child, and/or they lived out-of-state. 18 people declined participation in the present study at the time of the screening phone call. 93 people were not reachable, even after multiple phone calls and phone messages. 18 people were scheduled for an appointment but either cancelled or no-showed; these individuals were never reached again. One person declined consent at the home visit, and two people were determined ineligible at the time of the home visit. Six people are unaccounted for in the data.

Based on a priori power analyses (see Appendix A), the sampling goal in the present study was to qualify 60 participants. A total sample size of 61 parent participants was obtained. The sampling strategy was to enroll the first 61 participants who were screened and consented out of the original sample of 259 people. Descriptive statistics about this sample are summarized in Table 1.

As can be seen in Table 1, the target children in the present study were predominantly male and non-white. These children were the target children for whom participants in the present study reported on parent-child conflict. These children were all considered at-risk for aggressive behavior on the basis of teacher-reports on a screening measure, placing them in the top 25% of students screened for aggression. This at-risk sample was selected for use in the present study, given the known links among marital conflict, parenting, and children's externalizing behavior problems including aggression (Buehler, Benson, & Gerard, 2006; Buehler & Gerard, 2002; Erath, Bierman, & the Conduct Problems Prevention Research Group, 2006). This research suggests that a sample of children at-risk for aggression is enriched for marital conflict and parent-child conflict. In this way, an at-risk sample provides a benefit over a random sample in terms of studying some of these rarer family processes. An at-risk sample is also of interest in the present study, because study findings have the potential to inform preventive interventions.

Participants in the present study were the parent in the household who spent the most time with the target child, consistent with the inclusion criteria for similar studies (e.g., Margolin et al., 1996). Participants also had to have lived with their spouse or partner for at least six months. As can be seen in Table 1, the average length of cohabitation for participants in the present study was approximately 10.5 years, with approximately three-fourths of the sample

married and living with their spouse rather than simply cohabitating. For the sake of simplicity, conflict between married or cohabiting partners is termed “marital conflict” in the present study. The sample was primarily comprised of biological mothers, with more nominal rates of participation by fathers, grandmothers, and other caretakers. The sample was predominantly non-white, and participants ranged in age from 29 to 71 years with a median age of approximately 35. The median family income fell between \$30,001 and \$40,000.

Table 1

Characteristics of the Sample (N = 61)

Variable	Mean ± Standard Deviation or Count (%)
<i>Parent Participants</i>	
Gender	
Female	55 (90.2%)
Male	6 (9.8%)
Race	
Non-white	45 (73.8%)
White	16 (26.2%)
Age	39.3 ± 9.92
Relationship to target child	
Biological mother	46 (75.4%)
Biological father	4 (6.6%)
Biological parent’s significant other	1 (1.6%)
Grandmother	7 (11.5%)
Aunt	1 (1.6%)
Foster parent/Adoptive	1 (1.6%)
Other	1 (1.6%)
Marital and Living Status	
Married and living with spouse	45 (73.8%)
Two biological caretakers	25
One biological caretaker, one non-biological caretaker	20
Single and living with partner	16 (26.2%)
Two biological caretakers	1
One biological caretaker, one non-biological caretaker	14
Two non-biological caretakers	1

Table 1 continued

Characteristics of the Sample (N = 61)

Variable	Mean \pm Standard Deviation or Count (%)
Length of cohabitating relationship (years)	10.45 \pm 9.88
Marital and living with spouse (years)	12.62 \pm 9.12
Single and living with partner (years)	4.32 \pm 4.16
Education (continued)	
Some high school (10 th or 11 th grade)	7 (11.5%)
High school graduate/GED	13 (21.3%)
Some college (at least 1 year or technical training)	23 (37.7%)
2-year college or associate's degree	10 (16.4%)
4-year college or bachelor's degree	5 (8.2%)
Graduate training or degree	3 (4.9%)
Income per year (in dollars)	30,001-40,000 ^a
Partner's relationship to target child	
Biological mother	4 (6.6%)
Biological father	19 (31.1%)
Biological parent's significant other	8 (13.1%)
Grandfather	2 (3.3%)
Uncle	1 (1.6%)
Stepmother	1 (1.6%)
Stepfather	19 (31.1%)
Foster parent/Adoptive	1 (1.6%)
Other	6 (9.8%)
<i>Target Children</i>	
Gender	
Female	18 (29.5%)
Male	43 (70.5%)
Race	
Non-white	48 (78.7%)
White	13 (21.3%)
Age	12.41 \pm 0.80
Grade	
5 th	10 (16.4%)
6 th	34 (55.7%)
7 th	17 (27.9%)

^a Median family income is listed. Income ranges were as follows: \$0-\$10,000, \$10,001-\$20,000, \$20,001-\$30,000, \$30,001-\$40,000, \$40,001-\$50,000, \$50,001-\$60,000, \$60,001-\$70,000, \$70,001-\$80,000, \$80,001-\$90,000, \$90,001-\$100,000, More than \$100,001.

Procedure

A pilot study was conducted prior to the present study to examine the feasibility of the proposed procedure. Based on information gathered as part of the pilot study, small modifications were made to the procedure. A detailed description of these modifications appears in Appendix B. These modifications were designed to enhance participant comprehension, reduce the degree to which the telephone interviews interfered with participants' daily lives, and improve the effectiveness of the interview in capturing relevant data.

The present study had two phases. In phase one, participants attended one visit lasting approximately 50 minutes at a university laboratory, in their home, or at another location of their choosing (e.g., the library). During this visit, participants reviewed the consent form and completed a contact information sheet (see Appendix C) and four brief, paper-pencil questionnaires on their demographics (see Appendix D), personality, temperament, and their child's temperament. Participants also received a packet of daily telephone interviews (see Appendix E) that began with a question-and-answer page highlighting general instructions and defining what types of marital and parent-child interactions to report. The Principal Investigator or a research assistant reviewed this question-and-answer page with participants, making certain to go slowly, pause frequently, and look for verbal and nonverbal cues for how participants were responding. After reviewing this question-and-answer page with participants, interviewers transitioned to the portion of the packet that included six copies of the daily telephone interview. Each of these copies outlined the six major conflict strategies, provided examples for each strategy, and identified the specific time frames for the three reporting periods (morning, afternoon, and evening). The interview was then administered, with participants following along using their copies of the interview. This introduced participants to the interview format, gave the

interviewer an opportunity to clarify aspects of the interview and answer participant questions, and yielded the first day of data in the week-long data collection period. At the end of the visit, participants were given the packet of six telephone interviews corresponding to each remaining day of data collection. They were encouraged to record conflicts as they occurred in the coming week, consistent with procedures described in Margolin et al. (1996). While these records did not comprise formal data collection, they were intended to assist families in remembering the relevant details of their conflicts at the time of the actual telephone interview. Moreover, these informal records were intended to be especially helpful to those participants who missed their daily telephone interviews and had to provide their data the next day, as described below.

In phase two, participants reported on their daily marital and parent-child conflicts through five-minute telephone interviews that occurred at approximately the same time each day for the six consecutive days following their baseline visit and interview. This resulted in seven days worth of data. The daily telephone interviews began with a reminder about the types of family interactions under study. Participants were then asked whether they had contact with their partner or child (i.e., saw him/her, talked on the phone, or slept in the same house) during the morning, afternoon, and evening of the prior 24-hour time period. Participants who endorsed marital and/or parent-child contact were then asked whether they experienced marital and/or parent-child conflict, respectively, during those time periods. Participants were also asked about the types of strategies they used during the conflict. Examples were provided for each type of strategy (e.g., “Did you use negative verbal interactions, like nagging, insulting, giving verbal threats, or expressing anger?”).

If participants were not available when they were called, they were re-contacted one additional time later that day. If they were still not available, they received a voice message

asking them to record their responses on their personal copy of the telephone interview. Participants were asked to provide these responses when the interviewer called them the next day. Notably, 89% of the data were collected on the targeted day. Only 11% of the data were collected one day late. If data were not collected within one day of the targeted day, the data were considered missing to follow-up.

A missing data analysis of telephone interview data revealed that there were only 14 of 61 cases with any missing interview data. One of these cases lacked interview data for six of seven days and was consequently excluded from the time-lagged analyses of interview data. The 60 participants included in the time-lagged analyses all had at least three full days of interview data (i.e., at least 9 time points). Across these 60 participants, there were 94.9% complete interview data and only 5.1% missing data for both marital and parent-child conflict.

Measures

Adult Temperament Questionnaire – Short Form (ATQ). The Adult Temperament Questionnaire – Short Form (ATQ) is a self-report form assessing adult temperament (see Appendix F; Evans & Rothbart, 2005; Rothbart et al., 2000). One factor scale (Orienting Sensitivity) and its relevant items were deleted from this instrument for use in the present study. This decision was made in order to speed the interview process and because this scale had little relevance for present or future analyses.

The shortened ATQ presents participants with 62 items that tap three major constructs of temperament: negative affect, extraversion, and effortful control. The effortful control factor is most relevant for the present study. This factor is comprised of three scales assessing attentional control, inhibitory control, and activation control. The activation and inhibitory control scales

each have seven items, while the attentional control scale has five items, yielding 19 total items for the effortful control factor. Respondents rate the degree to which statements describe themselves on a scale ranging from 1 = *extremely untrue of you* to 7 = *extremely true of you*. Past research highlights high internal consistency for the effortful control factor scale ($\alpha = 0.78$) (Evans & Rothbart, 2005; Rothbart et al., 2000). In the present study, the Cronbach alpha coefficient for the effortful control factor scale was 0.71.

The Big Five Inventory (BFI). The Big Five Inventory (BFI) presents respondents with 44 short phrases reflecting the Big Five personality dimensions (see Appendix G; John, Donahue, & Kentle, 1991). The Agreeableness and Conscientiousness scales each consist of nine items. Respondents rate the degree to which each phrase describes themselves using a scale ranging from 1 = *disagree strongly* to 5 = *agree strongly*. Past research (John et al., 2008) documents high internal consistency for the Agreeableness and Conscientiousness scales ($\alpha = 0.79$ and 0.82 , respectively), high test-retest reliability ($\alpha = 0.70$ for both), and high convergent validity with other Big Five instruments such as the NEO-FFI (0.99 and 0.97 , respectively) (Costa & McCrae, 1989, 1992). In the present study, the Cronbach alpha coefficient was 0.66 for the Agreeableness scale and 0.78 for the Conscientiousness scale.

Daily Telephone Interview. The daily telephone interview was developed for use in the present study to capture the presence/absence of marital and parent-child conflict and the presence/absence of six general conflict strategies during three distinct time periods of the prior 24-hour period (refer back to Appendix E). These three time periods spanned Midnight to 8AM, 8AM to 4PM, and 4PM to Midnight. For the sake of simplicity, these three time periods are referred to as morning, afternoon, and evening in the present study.

The interview begins with a description of the types of marital and parent-child conflicts that participants should report. This description is derived essentially verbatim from Cummings, Goeke-Morey, Papp, and Dukewich (2002) and is designed to capture a wide range of marital and parent-child conflicts. Participants are instructed to report any marital and parent-child interactions in which (1) give and take is required to reach an agreement/solution (even if an agreement is not reached), or (2) they have different points of view, or (3) someone feels emotional tension, frustration, or anger, or (4) any mix of the above. Consistent with Cummings et al. (2002), participants are told that these interactions could be positive or negative, involve simple misunderstandings or small differences of opinion, seem major or minor, and occur at home, while driving, out, or on the telephone together. While this entire description was stated several times throughout the baseline visit, this description was shortened slightly for the actual telephone interviews.

The first question in the interview is whether participants had contact with their partner or child (i.e., saw him/her, talked on the phone, or slept in the same house) during the morning, afternoon, and evening of the prior 24-hour time period. For time periods in which participants report contact, they are asked whether they experienced conflict. The presence or absence of marital and/or parent-child conflict during these time periods is recorded. If conflict did occur, the interview asks whether six specific conflict strategies were used – negative verbal interactions, physical aggression, warmth, calm reasoning, withdrawal/avoidance, and expressions of anger and distress without words. Examples of each of these strategies are named. Participants report all of the conflict strategies they used during the blocks of time for which they had contact with their spouse and/or child. The presence or absence of specific

conflict strategies is recorded. All questions in the daily telephone interview can be answered with *yes* or *no*.

Early Adolescent Temperament Questionnaire – Revised, Parent Report. The Early Adolescent Temperament Questionnaire – Revised, Parent Report (EATQ) is a rating scale that parents complete about their adolescents (see Appendix H; Ellis & Rothbart, 2001). Four scales (Affiliation, High-Intensity Pleasure/Surgency, Shyness, and Depressive Mood) and their relevant items were deleted from this instrument for use in the present study. This decision was made in order to speed the interview process and because this scale had little relevance for present or future analyses.

The shortened EATQ presents parents with 37 phrases that describe 6 dimensions of temperament in adolescents, including three scales assessing activation control, attention, and inhibitory control. These three scales are most relevant for the present study. The activation control scale includes 7 items, while the attention scale includes 6 items and the inhibitory control scale includes 5 items. Parents rate the degree to which each phrase describes their adolescents using a scale ranging from 1 = *almost always untrue* to 5 = *almost always true*. Past research highlights high internal consistency for the activation control and attention scales ($\alpha = 0.83$) and the inhibitory control scale ($\alpha = 0.69$). (Ellis & Rothbart, 2001). In the present study, the Cronbach alpha coefficients were 0.77 for the activation control scale, 0.69 for the attention scale, and 0.47 for the inhibitory control scale. Given the inadequate reliability of the inhibitory control scale, exploratory analyses were conducted to determine whether a child regulation composite might be constructed by aggregating the activation control scale, the attention scale, and the inhibitory control scale (see below).

Composite Scores

Exploratory analyses were conducted to determine whether composite scores might be created to reflect the constructs of parent regulation and child regulation. Descriptive statistics regarding sample means and standard deviations for the variables comprising these composites appear in Table 2. The means and standard deviations for measures of agreeableness and

Table 2

Descriptive Statistics for Personality and Temperament Ratings

Variable	Mean \pm Standard Deviation	Range
<i>Parent Regulation</i>		
Agreeableness	4.26 \pm 0.49	3 – 5
Conscientiousness	3.96 \pm 0.67	1.78 – 5
Effortful control	4.83 \pm 0.68	3.42 - 6.26
<i>Child Regulation</i>		
Activation Control	2.92 \pm 0.81	1 - 4.43
Inhibitory Control	3.14 \pm 0.63	1 - 4.60
Attention	2.98 \pm 0.69	1 - 4.50

conscientiousness reported by parents in the present sample are generally consistent with the values reported by a similar sample – albeit one that included parents of both at-risk and control children – using the same personality inventory (e.g., Cumberland-Li et al., 2003). Moreover, the mean and standard deviation for effortful control reported by parents in the present sample is generally consistent with the values reported by a community sample of parents (Valiente et al., 2007) and a sample of undergraduate students (Evans & Rothbart, 2005). It should be noted that Valiente et al. (2007) and Evans and Rothbart (2005) used minor variations of the Adult Temperament Questionnaire used in the present study (e.g., a different number of items) but used the same sub-scales for effortful control and based responses on the same 7-point Likert scale. Notably, the racial and ethnic breakdown of prior samples used in studies of these constructs has ranged widely, from 76% Euro-American (Cumberland-Li et al., 2003) to 75% non-white

(Valiente et al., 2007). Finally, the means and standard deviations for measures of child activation control, inhibitory control, and attention reported by parents in the present sample were generally consistent with the values reported by parents of a community sample of children (Ellis & Rothbart, 2001).

To explore whether a parent regulation composite might be created, each participant's raw scores for agreeableness, conscientiousness, and effortful control were standardized. The standardized scores for these three variables were then correlated to determine whether these variables should indeed be examined in aggregate. Analyses revealed medium to large effect sizes for the relations between effortful control and agreeableness ($r = .45$), effortful control and conscientiousness ($r = .64$), and agreeableness and conscientiousness ($r = .49$). Consequently, the standardized scores for the agreeableness, conscientiousness, and effortful control variables were averaged to create a parent regulation composite. This parent regulation composite was then standardized.

To explore whether a child regulation composite might be created, each child's raw scores for activation control, inhibitory control, and attention on the EATQ were correlated to determine whether these variables should indeed be examined in aggregate. These dimensions of child temperament are all thought to tap regulatory processes. Moreover, past factor analytic work suggests that these dimensions of temperament all group together as part of an "effortful control" factor (Ellis & Rothbart, 2001). Correlation analyses in the present study revealed large effect sizes ($r = 0.52$ to 0.66 , $p < .001$) for the relations among these three variables. Moreover, when all of the items loading on these three variables were included in one reliability analysis, the resulting scale had a Cronbach alpha of 0.85. Consequently, a child regulation composite

was created by averaging the raw scores for the activation control, inhibitory control, and attention variables. This child regulation composite was then standardized.

Dummy Coded Variables

Two distinct pairs of dummy codes were created to reflect the constructive versus destructive qualities of marital and parent-child conflict. Two distinct coding systems were used in order to meet data analytic demands. These demands are noted briefly below.

Strategy dummy codes. The first pair of dummy codes was created to reflect the presence or absence of constructive and destructive *strategies* in marital and parent-child conflict. These codes are called “strategy dummy codes.” In the system used to create these codes, only those individuals who endorsed conflict for a given time point received a strategy dummy code reflecting type of conflict strategy used during a given time point. If a participant engaged in warmth and/or calm reasoning during a given time point, these behaviors were collapsed into one strategy dummy code reflecting the presence of constructive conflict strategies during that specific time point. Participants who did not use either warmth or calm reasoning received a strategy dummy code reflecting the absence of constructive conflict strategies during that specific time point. If a participant engaged in negative verbal interactions, physical aggression, withdrawal/avoidance, and/or expressions of anger or distress without words, these behaviors were collapsed into one strategy dummy code reflecting the presence of destructive conflict strategies during that specific time point. Participants who did not use any of these specific strategies received a strategy dummy code reflecting the absence of destructive conflict strategies during that specific time point.

As noted previously, individuals who denied conflict for a given time point received no strategy dummy code for the type of conflict strategy used during that time point. Because these individuals had no conflict, they, by definition, used no conflict strategies. This variable was therefore left blank for these individuals. List-wise deletion, the default strategy used in the time-series analyses employed in the present study, resulted in these participants being excluded from the time-series analyses involving conflict strategy use. Ultimately, these analyses were impossible to conduct due to the reduced sample. Consequently, a second dummy coding system was employed.

Conflict dummy codes. The second pair of dummy codes was created to reflect the presence or absence of constructive and destructive *conflict* in the marital and parent-child relationship. These codes are called “conflict dummy codes.” The conflict dummy codes were designed to capture a larger-order variable reflecting the presence or absence of constructive and destructive *conflict*. The main way in which the conflict dummy codes differed from the strategy dummy codes was that individuals received a conflict dummy code signifying the absence of destructive and constructive conflict if they experienced no conflict at all during the given time period. So, for example, participants received a conflict dummy code for the absence of destructive conflict if they (1) experienced no conflict at all or (2) used no destructive conflict strategies during a given time point. Likewise, participants received a conflict dummy code for the absence of constructive conflict if they (1) experienced no conflict at all or (2) used no constructive conflict strategies during a given time point. Consistent with the coding system used to create the strategy dummy codes, participants received a conflict dummy code for the presence of destructive conflict if they engaged in negative verbal interactions, physical aggression, withdrawal/avoidance, and/or expressions of anger or distress without words during a given time

point. Likewise, participants received a conflict dummy code for the presence of constructive conflict if they used warmth and/or calm reasoning during a given time point. This strategy resulted in every participant receiving a conflict dummy code for every time point in which they had contact with their partner or child. This dummy coding strategy made it possible to analyze the time-series, conflict strategy data on the full sample.

Summary. Two distinct pairs of dummy codes were created to reflect type of marital and parent-child conflict: constructive or destructive. A strategy dummy code was created to reflect the presence or absence of constructive and destructive conflict strategies. Only individuals who experienced conflict during a given time period received a strategy dummy code for that time period. A conflict dummy code was created to reflect the presence or absence of constructive and destructive conflict. Individuals received a conflict dummy code for every time period in which they had contact with their partner or child. These conflict dummy codes were used in all time-series analyses.

In both dummy coding systems, codes for constructive and destructive conflict were not mutually exclusive. In other words, participants could have engaged in both types of conflict during a given time point, with independent analyses for each. Separate dummy codes were created for conflict that occurred in the context of the marital relationship and for conflict that occurred in the context of the parent-child relationship.

CHAPTER 3

RESULTS

Descriptive analyses

Data were examined to determine the frequency of marital and parent-child conflict, the frequency of constructive and destructive conflict strategies, and variations in the frequency of conflict by day and time.

Frequency of marital and parent-child conflict. On average, participants reported that they experienced marital conflict during 16.74% of the time periods during which conflict was possible ($SD = 17.42\%$). This is consistent with the base rate of marital conflict (i.e., 17%) reported by a similar sample in other research using a daily reporting design (Margolin et al., 1996). Participants reported a range of marital conflict, with some reporting no conflict and others reporting that conflict characterized up to 69% of the time periods assessed. An independent samples t-test was conducted to compare the frequency of marital conflict for participants who were married and living with a spouse and for participants who were single and living with a partner. There was a significant difference in the frequency of marital conflict for married ($M = 19.46\%$, $SD = 19.16\%$) versus cohabiting ($M = 9.09\%$; $SD = 7.2\%$) individuals ($t(58.67) = 3.07$, $p = .003$). The size of this difference was large ($\eta^2 = .15$) (Cohen, 1988).

On average, participants reported that they experienced parent-child conflict during 23.21% of the time periods during which conflict was possible ($SD = 16.66\%$). This is slightly

lower but generally consistent with the base rate of parent-child conflict (i.e., 32%) reported by a similar sample using a daily reporting design (Margolin et al., 1996). Participants reported a range of parent-child conflict, with some reporting no conflict and others reporting that conflict characterized up to 74% of the time periods assessed. An independent samples t-test was conducted to compare the frequency of parent-child conflict for participants who were married and living with a spouse and for participants who were single and living with a partner. There was a significant difference in the frequency of parent-child conflict for married ($M = 25.83\%$; $SD = 18\%$) versus cohabiting ($M = 15.85\%$; $SD = 9.04\%$) individuals ($t(51.94) = 2.84$, $p = .006$). The size of this difference was large ($\eta^2 = .13$) (Cohen, 1988).

Frequency of constructive and destructive conflict strategies. When conflict occurred, the presence or absence of constructive and/or destructive strategy use was analyzed. In the context of marital conflict, the average participant used constructive strategies 81.19% of the time ($SD = 30.06\%$) and destructive strategies 57.21% of the time ($SD = 38.14\%$). In the context of parent-child conflict, the average participant used constructive strategies 92.11% ($SD = 20.61\%$) of the time and destructive strategies 41.8% ($SD = 37.99\%$) of the time. The range for constructive and destructive strategy use was 0% to 100% in both the marital and parent-child relationships. There were no significant differences in the frequencies with which marital versus cohabiting individuals used constructive and destructive strategies in marital or parent-child conflict.

Variations in the frequency of conflict by day. Data were examined to test whether the frequency of marital and parent-child conflict differed across the seven days of the reporting period. Multivariate tests revealed a significant relation between the day marital conflict data were reported and the frequency of marital conflict reported, $\Lambda = 0.70$, $F(6, 42) = 3.03$, $p = .015$,

using Wilks' Lambda. Post-hoc Bonferroni comparisons revealed that the frequency of reported marital conflict was significantly greater on day one than all other days ($p < .05$), except day five ($p = .101$). There were no other significant differences among any other days during the reporting period.

Multivariate tests also revealed a significant relation between the day parent-child conflict data were reported and the frequency of parent-child conflict, $\Lambda = 0.57$, $F(6, 43) = 5.33$, $p < .001$, using Wilks' Lambda. Post-hoc Bonferroni comparisons revealed that the frequency of reported parent-child conflict was significantly greater on day one and day two than on day five ($p < .001$). There were no other significant differences among any other days during the reporting period.

Variations in the frequency of conflict by time. Data were also examined to test whether the frequency of marital and parent-child conflict differed by time (e.g., 8AM to 4PM, 4PM to Midnight, Midnight to 8AM). There was no significant relation between the time point at which marital conflict data were reported and the frequency of reported marital conflict $\Lambda = 0.94$, $F(2, 58) = 1.76$, $p = .18$, using Wilks' Lambda. There was also no significant relation between the time point at which parent-child conflict data were reported and the frequency of reported parent-child conflict, $\Lambda = 0.91$, $F(2, 57) = 2.79$, $p = .07$, using Wilks' Lambda.

Hypotheses Tests

Hypotheses one, two, and five were tested using generalized estimating equations. Generalized estimating equations reflect an extension of generalized linear modeling (Norusis, 2008). Generalized estimating equations allow for within-subjects dependency in observations, and they allow for the analysis of categorical dependent variables that are, by definition, not

normally distributed (Norusis, 2008). Notably, because list-wise deletion was the default strategy used across all GEE analyses, marital and parent-child conflict data for Day 1, Times 1 and 2 were excluded from all GEE analyses. This was a necessary byproduct of the time-lagged nature of the data and the tightly controlled analyses that were conducted. Hypotheses three and four were tested using correlational analyses. Significant results of primary analyses appear in tables within the text. Non-significant results of primary analyses can be found in Appendix I.

Hypothesis 1. Generalized estimating equations (GEE) were used to test the hypothesis that parents would show a spillover in conflict from the marital to the parent-child relationship across three time lags. In order to test this hypothesis, the presence or absence of marital conflict at earlier time periods was the independent variable and the presence or absence of parent-child conflict at later time periods was the dependent variable. Lag one reflected the prediction of morning to afternoon, afternoon to evening, and evening to the next morning. Lag two reflected the prediction of morning to evening, afternoon to the next morning, and evening to the next afternoon. Lag three reflected the prediction morning to the next morning, afternoon to the next afternoon, and evening to the next evening. In other words, lag three represented the prediction of outcomes one full day later.

Results revealed that the presence of marital conflict significantly predicted the presence of parent-child conflict one time period later and one full day later, but not two time periods later (See Table 3). Odds ratios [Exp(B)] indicate that the odds that a family would experience parent-child conflict during a time period were 2.26 times larger when there had been marital conflict during the prior time period. In addition, the odds that a family would experience parent-child conflict during a time period were 1.998 times larger when there had been marital conflict one full day earlier. The presence of marital conflict two time periods prior did not appear to

significantly influence the odds of having parent-child conflict during the current time period. All of these findings control for prior parent-child conflict and other covariates.

Hypothesis 2. GEE was also used to test the hypothesis that parents would show a spillover in constructive and destructive conflict from the marital to the parent-child relationship across three time lags. In order to test this hypothesis, the presence or absence of destructive marital conflict at earlier time periods was the independent variable and the presence or absence of destructive parent-child conflict at later time periods was the dependent variable. This model was also tested with constructive marital conflict as the independent variable and constructive parent-child conflict as the dependent variable. This model was tested across the three time lags outlined under Hypothesis 1 above.

Results revealed that the presence of constructive marital conflict significantly predicted the presence of constructive parent-child conflict one time period later and one full day later, but not two time periods later (See Table 4). Odds ratios [Exp(B)] indicate that the odds that a family would experience constructive parent-child conflict during a time period were 2.63 times larger when there had been marital constructive conflict during the prior time period. In addition, the odds that a family would experience constructive parent-child conflict during a time period were 2.15 times larger when there had been constructive marital conflict one full day earlier. The presence of constructive marital conflict two time periods prior did not appear to significantly influence the odds of having parent-child conflict during the current time period. Moreover, the presence of destructive marital conflict did not appear to significantly influence the odds of having destructive parent-child conflict at any of the three time lags assessed.

Table 3

The Effect of Prior Marital Conflict on Subsequent Parent-Child Conflict

Variable	Parameter Estimates			
	B	SE	Wald Chi-Square[1]	<i>p</i>
Model 1: The Effect of Marital Conflict on Parent-Child Conflict One Time Period Later				
Intercept	-2.33	1.49	2.44	.12
Independent Variable				
Presence of Marital Conflict	0.82	0.25	10.66	.001
Covariates				
Respondent Gender ^a	-0.20	0.32	0.40	.53
Respondent Race ^b	0.44	0.23	3.65	.06
Respondent Age	-0.004	0.01	0.10	.75
Marital Status ^c	-0.28	0.30	0.88	.35
Length of Cohabiting Relationship	-0.02	0.01	2.44	.12
Income	0.07	0.04	2.74	.10
Child Gender ^d	-0.30	0.25	1.34	.25
Child Age	0.06	0.12	0.26	.61
Presence of Prior Parent-Child Conflict				
One time point prior	0.03	0.18	0.03	.87
Two time points prior	0.03	0.25	0.01	.91
Three time points prior	1.19	0.20	37.33	<.001
Model 3: The Effect of Marital Conflict on Parent-Child Conflict One Full Day Later				
Intercept	-2.01	1.56	1.64	.20
Independent Variable				
Presence of Marital Conflict	0.69	0.19	12.92	<.001
Covariates				
Respondent Gender ^a	-0.26	0.33	0.63	.77
Respondent Race ^b	0.38	0.24	2.49	.12
Respondent Age	-0.003	0.01	0.05	.82
Marital Status ^c	-0.38	0.30	1.58	.21
Length of Cohabiting Relationship	-0.02	0.01	2.39	.12
Income	0.07	0.04	3.09	.08
Child Gender ^d	-0.26	0.25	1.11	.29
Child Age	0.04	0.12	0.09	.77
Presence of Prior Parent-Child Conflict				
One time point prior	-0.02	0.20	0.01	.94
Two time points prior	-0.01	0.25	0.003	.96
Three time points prior	1.04	0.20	26.33	<.001

Note: When education level was included as a covariate in these models, the presence of marital conflict continued to predict the presence of parent-child conflict one time period later ($p = 0.004$) and one full day later ($p = 0.001$).

Procedure is modeling ^a males (respondent), ^b whites, ^c single and living with a partner, and ^d males (child).

Table 4

The Effect of Prior Constructive Marital Conflict on Subsequent Constructive Parent-Child

Conflict

Variable	Parameter Estimates			
	B	SE	Wald Chi-Square[1]	<i>p</i>
Model 1: The Effect of Constructive Marital Conflict on Constructive Parent-Child Conflict One Time Period Later				
Intercept	-2.06	1.56	1.74	.19
Independent Variable				
Presence of Constructive Marital Conflict	0.97	0.30	10.46	.001
Covariates				
Respondent Gender ^a	-0.09	0.32	0.07	.79
Respondent Race ^b	0.33	0.22	2.13	.14
Respondent Age	-0.002	0.01	0.04	.85
Marital Status ^c	-0.23	0.33	0.52	.47
Length of Cohabiting Relationship	-0.03	0.01	4.23	.04
Income	0.09	0.04	5.53	.02
Child Gender ^d	-0.34	0.27	1.53	.22
Child Age	0.03	0.12	0.05	.82
Presence of Prior Parent-Child Constructive Conflict				
One time point prior	-0.16	0.20	0.60	.44
Two time points prior	0.27	0.24	1.27	.26
Three time points prior	0.93	0.19	23.53	<.001
Model 3: The Effect of Constructive Marital Conflict on Constructive Parent-Child Conflict One Full Day Later				
Intercept	-1.44	1.65	0.76	.38
Independent Variable				
Presence of Constructive Marital Conflict	0.76	0.25	9.19	.002
Covariates				
Respondent Gender ^a	-0.12	0.34	0.12	.73
Respondent Race ^b	0.29	0.24	1.52	.22
Respondent Age	-0.003	0.01	0.05	.83
Marital Status ^c	-0.36	0.33	1.16	.28
Length of Cohabiting Relationship	-0.03	0.01	4.53	.03
Income	0.10	0.04	5.53	.02
Child Gender ^d	-0.30	0.28	1.15	.28
Child Age	-0.01	0.13	0.01	.92
Presence of Prior Parent-Child Constructive Conflict				
One time point prior	-0.27	0.23	1.35	.25
Two time points prior	0.16	0.26	0.35	.55
Three time points prior	0.79	0.21	14.66	<.001

Procedure is modeling ^a males (respondent), ^b whites, ^c single and living with a partner, and ^d males (child).

Hypothesis 3. In order to test the hypothesis that conflict frequency is negatively related to regulation-related characteristics, the frequency of conflict was correlated with each participant's regulation composite. Analyses revealed no significant correlation between parents' regulation composite and the average frequency of their marital conflict ($r = -0.03$, $p = .79$) or their parent-child conflict ($r = 0.01$, $p = .92$).

Hypothesis 4. In order to test the hypothesis that adults' regulation-related characteristics will predict the conflict strategies they use, the frequency of constructive and destructive strategy use was separately correlated with each participant's regulation composite. Analyses revealed that participants' regulation was related to the frequency with which they used constructive strategies in handling marital conflict ($r = 0.42$, $p = .003$). Participants higher in regulation used constructive marital conflict strategies more frequently. Participants' regulation was not significantly related to the frequency with which they used constructive strategies in managing parent-child conflict ($r = 0.11$, $p = .41$).

The relation between parents' destructive conflict strategy use and their regulation-related characteristics was also explored. Analyses revealed that participants' regulation was significantly related to the frequency with which they used destructive strategies in handling marital conflict ($r = -0.44$, $p = .002$) and parent-child conflict ($r = -0.42$, $p = .001$). Participants higher in regulation used destructive marital and parent-child conflict strategies less frequently.

Hypothesis 5. In order to test the hypothesis that adults' regulation-related attributes moderate the spillover in conflict, GEE was used to determine whether there was a significant interaction between the regulation composite and the nature of prior marital interactions when predicting subsequent parent-child interactions. More specifically, the regulation composite was

examined as a moderator of the relation between prior marital conflict and subsequent parent-child conflict (See Table 5), as well as the relation between prior destructive and constructive marital conflict and subsequent destructive and constructive parent-child conflict.

Table 5

The Moderating Effect of Regulation on the Spillover in Conflict from the Marital Relationship to the Parent-Child Relationship

Variable	Parameter Estimates			
	B	SE	Wald Chi-Square[1]	<i>p</i>
Model 1: The Moderating Effect of Regulation on Spillover across One Time Period				
Intercept	-2.46	1.58	2.41	.12
Interaction Effect and Main Effects				
Presence of Marital Conflict X Regulation	0.65	0.25	6.59	.01
Presence of Marital Conflict	0.75	0.24	9.41	.002
Regulation	-0.06	0.10	0.29	.59
Covariates				
Respondent Gender ^a	-0.22	0.32	0.46	.50
Respondent Race ^b	0.50	0.23	4.51	.03
Respondent Age	-0.004	0.01	0.10	.75
Marital Status ^c	-0.29	0.29	0.98	.32
Length of Cohabiting Relationship	-0.02	0.01	2.46	.12
Income	0.06	0.04	2.35	.13
Child Gender ^d	-0.35	0.27	1.72	.19
Child Age	0.07	0.12	0.37	.54
Presence of Prior Parent-Child Conflict				
One time point prior	0.02	0.18	0.01	.92
Two time points prior	<0.001	0.25	<0.001	.999
Three time points prior	1.18	0.20	36.53	<.001
Model 3: The Moderating Effect of Regulation on Spillover Across One Full Day				
Intercept	-2.12	1.60	1.76	.19
Interaction Effect and Main Effects				
Presence of Marital Conflict X Regulation	0.41	0.19	4.58	.03
Presence of Marital Conflict	0.72	0.20	13.38	<.001
Regulation	-0.04	0.11	0.14	.71
Covariates				
Respondent Gender ^a	-0.32	0.33	0.91	.34
Respondent Race ^b	0.42	0.24	3.07	.08
Respondent Age	-0.003	0.01	0.06	.80

Table 5 continued

Model 3: The Moderating Effect of Regulation on Spillover Across One Full Day	B	SE	Wald Chi-Square[1]	<i>p</i>
Marital Status ^c	-0.39	0.29	1.85	.17
Length of Cohabiting Relationship	-0.02	0.01	2.16	.14
Income	0.07	0.04	2.58	.11
Child Gender ^d	-0.33	0.25	1.65	.20
Child Age	0.05	0.12	0.16	.69
Presence of Prior Parent-Child Conflict				
One time point prior	<0.001	0.20	<0.001	.998
Two time points prior	-0.05	0.24	0.04	.85
Three time points prior	1.05	0.20	26.82	<.001

Procedure is modeling ^a males (respondent), ^b whites, ^c single and living with a partner, and ^d males (child).

The results of these analyses revealed that parents' regulation significantly moderated the spillover in conflict from the marital relationship to the parent-child relationship. In the presence of marital conflict either one time period or one day earlier, individuals high in regulation were more likely to experience parent-child conflict than individuals low in regulation. These moderating effects are illustrated in Figure 1 and Figure 2, respectively. Parents' regulation did not moderate the spillover in conflict from the marital relationship to the parent-child relationship across two time lags. In other words, the presence of marital conflict two time periods prior did not appear to significantly influence the odds of having parent-child conflict during the current time period, and this effect was not moderated by regulation. Moreover, parents' regulation did not moderate the spillover in constructive or destructive conflict across any of the three time lags assessed.

Figure 1. Interaction Between Parent Regulation and Marital Conflict During the Prior Time Period on Parent-Child Conflict.

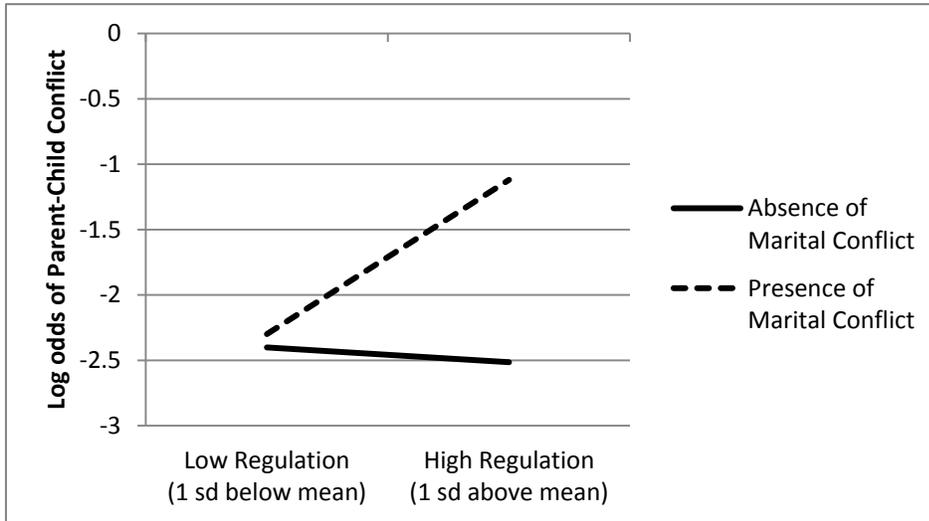
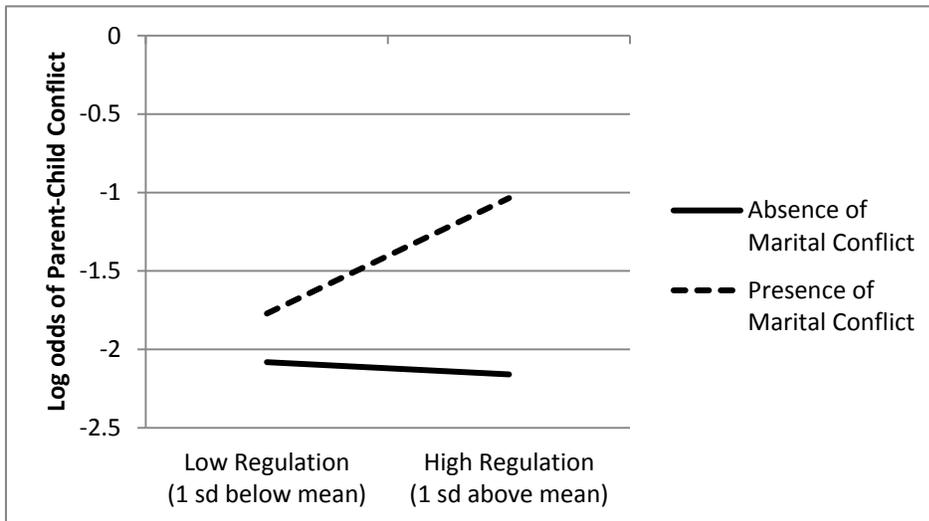


Figure 2. Interaction Between Parent Regulation and Marital Conflict One Day Prior on Parent-Child Conflict.



Secondary Analyses

In order to test the hypothesis that child characteristics moderate the spillover in conflict, GEE was used to determine whether there was a significant interaction between child variables

and marital conflict when predicting subsequent parent-child conflict. More specifically, child race, gender, and regulation were examined as independent moderators of the relation between prior marital conflict and subsequent parent-child conflict. Each of these three moderators were examined across each of the three time lags. In total, nine analyses were run. Only one analysis was significant. Detailed results of this analysis are indicated in the text and table below.

Race. Results of these analyses revealed that children's race did not significantly moderate the spillover in conflict from the marital relationship to the parent-child relationship across any of the three time lags assessed.

Gender. Results of these analyses revealed that children's gender did not significantly moderate the spillover in conflict from the marital relationship to the parent-child relationship across any of the three time lags assessed.

Regulation. Results of these analyses revealed that children's regulation significantly moderated the spillover in conflict from the marital relationship to the parent-child relationship across one full day (See Figure 3 and Table 6). In the presence of marital conflict one day earlier, parents with children high in regulation were slightly more likely to experience parent-child conflict than parents with children low in regulation. In the absence of marital conflict one day earlier, parents with children high in regulation were less likely to experience parent-child conflict than parents with children low in regulation. Children's regulation did not significantly moderate the spillover in conflict across time lags one and two.

Figure 3. Interaction Between Child Regulation and Marital Conflict One Day Prior on Parent-Child Conflict.

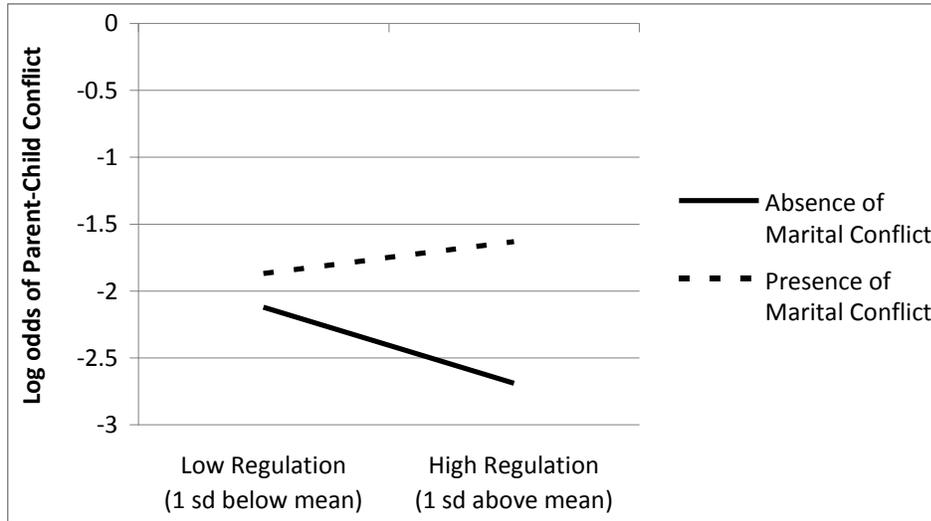


Table 6

The Moderating Effect of Child Regulation on the Spillover in Conflict from the Marital Relationship to the Parent-Child Relationship One Full Day Later

Variable	Parameter Estimates			
	B	SE	Wald Chi-Square[1]	<i>p</i>
Intercept	-2.41	1.64	2.16	.14
Interaction Effect and Main Effects				
Presence of Marital Conflict X Regulation	0.40	0.16	6.05	.01
Presence of Marital Conflict	0.66	0.19	12.53	<.001
Regulation	-0.28	0.14	4.07	.04
Covariates				
Respondent Gender ^a	-0.56	0.42	1.75	.19
Respondent Race ^b	0.40	0.25	2.46	.12
Respondent Age	-0.01	0.01	0.35	.55
Marital Status ^c	-0.38	0.27	1.90	.17
Length of Cohabiting Relationship	-0.02	0.01	1.83	.18
Income	0.06	0.04	1.56	.21
Child Gender ^d	-0.34	0.25	1.89	.17
Child Age	0.09	0.13	0.52	.47
Presence of Prior Parent-Child Conflict				
One time point prior	0.13	0.20	0.41	.52
Two time points prior	-0.02	0.23	0.01	.93
Three time points prior	1.00	0.20	25.36	<.001

Procedure is modeling ^a males (respondent), ^b whites, ^c single and living with a partner, and ^d males (child).

CHAPTER 4

DISCUSSION

The present study explored the spillover in naturally-occurring conflict from the marital relationship to the parent-child relationship in an at-risk sample over time. The present study builds on past theory and research by documenting the spillover in conflict across one time period and across one full day and is the first known study to document this identical pattern of spillover in constructive conflict strategies. This is also the first known study to highlight the direct and interaction effects of factors associated with emotion-related regulation on patterns of marital and parent-child conflict. Present findings have important clinical implications. Moreover, the method by which study findings were obtained constitutes a notable contribution to the existing literature by providing a longitudinal way to study fine-grained processes that have not been examined in this way before.

Spillover in conflict: Conceptual issues

The most important finding was that parents showed a spillover in conflict from the marital relationship to the parent-child relationship across one time period and across one full day. This finding converges with past research documenting strong associations between marital functioning and parent-child functioning and provides further support for the spillover hypothesis (Engfer, 1988). This finding suggests that parents who experience marital conflict during a given time point will be more likely to experience conflict with their children at the next

time point and one full day later. This finding converges with evidence from two major meta-analyses documenting moderate relations between aspects of the marital relationship and aspects of the parent-child relationship (Erel & Burman, 1995; Krishnakumar & Buehler, 2000). Past research has explored more general associations between marital and parent-child functioning (e.g., relationship quality) (Erel & Burman, 1995) and more specific associations between marital and parent-child functioning (e.g., conflict strategy use) (Rinaldi & Howe, 2003).

The present finding that marital conflict increased the likelihood of parent-child conflict across one time period and across one full day also converges with past studies using daily reporting methods to highlight the dynamic ways in which marital functioning influences parent-child functioning in a moment-to-moment, day-by-day way (Almeida et al., 1999; Margolin et al., 1996). The present study builds upon this past research, however, in its more finely-tuned definition of conflict and its finer-grained analysis of the spillover in specific conflict strategies. Understanding whether, how, why, and to what degree marital functioning causally influences parent-child functioning is essential, given the documented impact of these processes on child adjustment (e.g., Buehler et al., 2006; Cui & Conger, 2008; Gerard et al., 2006).

Diverse theoretical perspectives, including family systems theories, social learning theories, and family stress and role strain theories, provide a conceptual framework for understanding these findings. From a family systems perspective, present findings suggest that parents may have elicited more conflict with their children following instances of marital conflict as a way to distract attention from marital antagonisms and instead focus on perceived faults and misbehaviors of the child (Minuchin, 1974; Vogel & Bell, 1960). The finding that marital conflict predicted parent-child conflict, even after controlling for earlier levels of parent-child

conflict, is consistent with the notion that conflict expressed in the marriage was subsequently expressed in terms of conflict with the child.

From a social learning theory perspective, present findings suggest that children in the present study may have learned, used, and elicited from their parents the same behaviors that they saw modeled for them during instances of marital conflict (Erel & Burman, 1995). If children saw their parents experiencing conflict, then they may have been more likely to perceive conflict as normative and to have consequently engaged with their parents in conflictual interactions. Not only might social learning theory be used to explain *whether* individuals experienced conflict in the present study, but this theory might also be used to explain *how* individuals managed conflict across relationships in the present study. Past longitudinal research demonstrates, for example, that parents' use of positive problem solving and negative conflict engagement with a spouse was predictive of their adolescents' use of the same strategies in parent-child conflict two years later (Van Doorn, Branje, & Meeus, 2007). The reverse paths from parent-child conflict styles to marital conflict styles were not significant (Van Doorn et al., 2007). These findings suggest that parents may socialize children to handle parent-child conflict in certain ways, simply by modeling these conflict behaviors in their marital relationships. Children may reciprocate the same conflict patterns they see modeled for them and thereby elicit the same behaviors from their parents that were previously expressed in instances of marital conflict.

The family stress and role strain perspective suggests that parents in the present study may have been so emotionally taxed by instances of marital conflict that they were less able to successfully circumvent subsequent instances of conflict with their children (Margolin, 1981). It is worth noting that the inverse is also likely true. Research suggests, for example, that marital

satisfaction declines during the child- and adolescent-rearing years (Cui & Donnellan, 2009) and that difficult children present additional strains on the marital relationship (e.g., Cui, Donnellan, & Conger, 2007; Jenkins, Simpson, Dunn, Rasbash, & O'Connor, 2005). Given the at-risk sample of children included in the present study, it is reasonable to speculate that these children may have stressed the parent-child relationship and thereby may have contributed to increased conflict in the marital relationship. Indeed, this hypothesis was the driving force behind secondary analyses exploring child temperament as a moderator of spillover.

In sum, the family systems, social learning, and family stress and role strain theories all help to explain the spillover in conflict from the marital relationship to the parent-child relationship documented in the present study. These theories are not mutually exclusive. Rather, elements of each of these theories are likely at play during the dynamic interaction between marital and parent-child conflict. That notwithstanding, the family stress and role strain theory emerges as particularly apt at accounting for some of the time-lagged effects observed in the present study, as described below.

Spillover in conflict: Time-lagged effects

It is notable that the presence of marital conflict predicted the presence of parent-child conflict one time period later and one full day later, but not two time periods later. This finding suggests that parents are especially vulnerable to conflict with their children during the period of time immediately following marital conflict. Perhaps after parents engage in marital conflict, they are primed to notice subsequent points of conflict with their children, have less patience for minor disagreements with children, have less tolerance for child non-compliance and minor misbehavior, and feel more emotionally and mentally taxed. While these data do not reveal the

reason for the link between marital conflict and subsequent parent-child conflict, they do suggest that this link is particularly strong at consecutive time periods but dissipates over two time periods.

In fact, past researchers have suggested that one model of family conflict involves a gradual decay of conflict over time (Margolin et al., 1996). This pattern seems to be at work in the present study. Present results suggest that marital conflict does not significantly predict parent-child conflict over two time periods. This finding highlights a decay effect whereby the initial carryover of conflict dissipates over time. As Margolin et al. point out, perhaps this decay effect suggests that over time, parents resign themselves to conflict or simply lose interest in the conflict. While conflict appears to decay over time, present findings indicate that conflict is re-activated at the same time period one full day later.

The finding that marital conflict significantly predicts parent-child conflict one full day later suggests that conflict may follow ritualized patterns. It is possible that some environmental cue or stressor characterizes a certain time of day and routinely stimulates conflict (Margolin et al., 1996). This finding is certainly consistent with family stress and role strain theories, which emphasize the impact of third variable, contextual stressors on marital and parent-child functioning (Margolin, 1981). This finding also converges with anecdotal reports from parents, who bemoan dreaded morning routines characterized by consistent battles with children over getting out of bed and hectic evening hours characterized by marital negotiations about who cleans the dishes and how the credit card bill gets paid. As articulated by Margolin et al., time-bound effects may also be attributable to scheduling issues. For example, perhaps certain family members are only together at certain times of the day. Notably, the frequency of marital and

parent-child conflict did not vary by time of day in the present study, so it appears that parents vary in the times of day that are routinely problematic for them.

It is noteworthy that the frequency of reported marital conflict was significantly greater on day one than all other days and that the frequency of reported parent-child conflict was significantly greater on day one and day two than on day five. It is likely that these findings reflect methodological influences. Conflict data were collected in-person on day one and over the phone on all other days in the reporting period. The in-person data collection on day one allowed for maximum opportunities to clarify definitions of conflict, answer participants' questions, and probe for all relevant conflict interactions. This may explain the higher rates of marital and parent-child conflict on day one and the carryover effects for parent-child conflict on day two. While it is possible that findings reflect unintended intervention and monitoring effects, Laurenceau and Bolger (2005) cite preliminary research indicating that pre- to post-ratings of relationship functioning did not significantly change for three independent samples participating in a daily reporting study. Future research might investigate these issues further.

Spillover in type of conflict

Findings also provide support for the spillover in constructive conflict from the marital relationship to the parent-child relationship over time. This is the first known study to take a finer-grained look at the nature of spillover by examining the spillover in specific conflict strategies using a daily reporting, time series design. Findings indicate that parents' who engage in constructive patterns of marital conflict during a given time period will be more likely to engage in constructive patterns of parent-child conflict one time period later and one full day later, but not two time periods later. These time-ordered links parallel the time-ordered findings

presented above. Notably, parents' engagement in destructive patterns of marital conflict did not predict their engagement in destructive patterns of parent-child conflict across any of the three time periods assessed.

There are several possible reasons for these conflicting findings regarding spillover in constructive versus destructive conflict. It is possible that parents who use constructive strategies for handling marital conflict are positively reinforced for the use of these behaviors – either through the resolution of conflict or positive feedback from their partners. This theory fits with prior research suggesting that altering the conflict strategies that one uses in a dating relationship elicits strong, reciprocal counter-effects in the partner (Lochman & Allen, 1979). Indeed, many of the gold-standard marital therapies (e.g., Behavioral Couple Therapy, Integrated Behavioral Couple Therapy) are rooted in behavioral traditions that emphasize the importance of increasing the amount of positive reinforcement in the marital relationship – usually by teaching couples problem solving skills and communication techniques to promote constructive conflict resolution (Jacobson & Margolin, 1979) and by enhancing warmth, intimacy, and closeness in the marital relationship. It is believed that enhancing these variables helps to maintain positive feedback loops in a marriage. In fact, multiple clinical trials have shown that these therapies result in decreased marital distress and increased marital satisfaction (for review, Sexton, Alexander, & Meuse, 2004). To the extent that constructive conflict patterns, including the use of warmth, calm reasoning, and problem-solving, result in positive marital outcomes, perhaps parents are more motivated to use these same strategies in managing conflicts with their children. This hypothesis is certainly consistent with behavioral theory. In order to fully investigate this question, future research might ask parents to report on the degree to which constructive conflict strategies resulted in positive outcomes in their marital relationship. This type of research would

help to clarify whether observed results are partially attributable to principles of positive reinforcement at play.

The conflicting findings regarding the spillover in constructive versus destructive conflict might also have to do with the types of strategies comprising each of these higher-order categories. Past meta-analytic work suggests that spillover effects are strongest for overt conflict rather than covert conflict (Krishnakumar & Buehler, 2000). In the present study, constructive conflict was comprised of many overt constructive behaviors that occurred frequently in this sample (e.g., calm reasoning, problem solving, showing physical affection). In contrast, destructive conflict was comprised of relatively infrequent overt destructive behaviors (e.g., physical aggression). This category was comprised of many more covert destructive behaviors (e.g., rolling eyes, using cold stares, withdrawal, avoidance) that occurred quite frequently in this sample. Consequently, perhaps the differential findings are a function of the overt versus covert quality of conflict strategy use.

Direct effects of parent regulation on conflict frequency and conflict strategy use

The second set of predictions focused on the direct and interaction effects of factors associated with emotion-related regulation on marital and parent-child conflict. It was hypothesized that individuals who fall higher on regulation-related factors would have less marital and parent-child conflict than individuals who fall lower on those dimensions. This hypothesis was not supported, perhaps because this hypothesis was based on some relatively mixed findings in the existing literature. The existing literature reveals mixed findings on the degree to which agreeableness, conscientiousness, and effortful control – all components of the regulation composite in the present study – contribute to conflict frequency. The hypothesis that

regulation would be associated with less frequent conflict largely stemmed from the literature linking the agreeableness personality factor to individuals' pro-social responses to conflict cues (Meier et al., 2006), their pro-social perceptions of conflict and conflict partner (Graziano et al., 1996), and their positive marital and parent-child functioning, more generally (de Haan et al., 2009; Donnellan et al., 2004; Prinzie et al., 2009; Smith et al., 2007). While this literature provides overwhelming support for the hypothesis that agreeableness might be related to conflict frequency, evidence for the links between the conscientiousness personality factor and conflict frequency is more mixed. For example, while some research suggests that conscientiousness is related to many aspects of positive marital and parent-child functioning that would seem to serve as protective factors against conflict (e.g., Donnellan et al., 2004; Prinzie et al., 2009), other research suggests that conscientiousness may actually be associated with increased interpersonal conflict (Bono et al., 2002). Moreover, while some research links effortful control to positive parenting behaviors (Cumberland-Li et al., 2003), no known research, to date, has examined the links between effortful control and marital and parent-child conflict frequency. In summary, the lack of support for the direct effect of the regulation composite on conflict frequency may reflect the variability with which each factor comprising the composite has been related to conflict frequency in the extant literature. Alternatively, study findings may simply suggest that marital and parent-child conflict is a natural and inevitable part of daily life for families, regardless of parents' regulation-related attributes.

While regulation did not significantly predict how frequently individuals engaged in marital and parent-child conflict, it did influence how they managed marital and parent-child conflict when it did occur. Regulation was a more consistent predictor of destructive strategy use than constructive strategy use. More specifically, regulation predicted destructive strategy

use in both marital and parent-child conflict and constructive strategy use in marital conflict only. Parents high in regulation tended to use destructive strategies less frequently in managing both marital and parent-child conflict and constructive strategies more frequently in managing marital conflict alone.

Possible explanations for this finding stem from past research on the personality variable of agreeableness, one of the three factors included in the regulation composite in this study. First, past research suggests that agreeableness as a personality factor may be better at differentiating individuals' evaluations of destructive conflict strategies than constructive conflict strategies. For example, Graziano et al., (1996) found that individuals low and high in agreeableness equally endorsed constructive strategies like negotiation in handling interpersonal conflict. In contrast, individuals low in agreeableness rated power-assertive strategies such as physical action, criticism, threat, and manipulation as better conflict management choices than did their high agreeableness counterparts. Perhaps this is why we see that regulation is a more consistent predictor of destructive conflict strategy use in the present study. Second, recent meta-analytic work suggests that child age moderates the relation between parental agreeableness and parental warmth, one of the constructive strategies measured in the present study (Prinz et al., 2009). As children approach mid-adolescence and adolescence, the association between parental agreeableness and parental warmth seems to weaken (Prinz et al., 2009). Given our sample of preadolescent target children, it is possible that this weakening association is one reason why parent regulation (including agreeableness) does not seem to predict constructive strategy use (including warmth) in managing parent-child conflict in the present study.

Interaction effects between parent regulation and marital conflict on subsequent parent-child conflict

The results of interaction effects were unexpected. Results revealed that in the presence of marital conflict, individuals high in regulation were more likely to experience parent-child conflict one time period later and one full day later than individuals low in regulation. These findings suggest that individuals high in regulation are reacting to marital conflict with subsequent parent-child conflict.

Past theory and research on conscientiousness and agreeableness – the two personality variables comprising the regulation composite – may provide some helpful clues to interpreting these findings. Past theory suggests that agreeableness reflects motives for maintaining positive relations with others and that conscientiousness reflects a drive towards orderliness, maintenance of high standards, and achievement of goals (Prinzle et al., 2009; Tobin et al., 2000). For individuals who value smooth relationships, orderliness, and structure, among other related factors, perhaps interpersonal conflict is particularly distressing. While both conscientiousness and agreeableness have been linked to elements of regulation in past research, perhaps they are also linked to personality vulnerabilities that result in the experience of conflict in one family sub-system reverberating throughout other family sub-systems.

Conscientiousness, for example, may herald high levels of inflexibility and fault finding that may negatively influence the marital and parent-child relationships. In fact, past research suggests that individuals' with a roommate high in conscientiousness reported more relationship conflict (Bono et al., 2002). Moreover, the average level of conscientiousness in roommate pairs was positively associated with relationship conflict (Bono et al., 2002). Other research

highlights the link between one sub-facet of conscientiousness – achievement – and the tendency towards argumentativeness in men (Blickle, 1997). Men high in achievement orientation were less likely to take steps to avoid an argument (Blickle, 1997). In sum, while conscientiousness has been linked to elements of regulation that would presumably serve a protective role against spillover, conscientiousness has also been linked to a number of qualities that might exacerbate spillover. Perhaps individuals who are highly conscientious are also highly inflexible, critical, and argumentative. These individuals may naturally elicit more conflict in both the marital and parent-child relationships. Alternatively, they may be more likely to react to instances of marital conflict with parent-child conflict. Either interpretation might help to explain why individuals in the present study who were high in regulation – and therefore high in conscientiousness – were more likely to react to marital conflict with subsequent parent-child conflict.

Past research on the associations among agreeableness, emotional experience, and emotion regulation may also help to explain the present interaction effects. Past research suggests that individuals high in agreeableness perceive less conflict in interpersonal situations (Graziano et al., 1996). Past research also suggests, however, that individuals high in agreeableness experience more intense negative emotions in response to negative stimuli compared to individuals low in agreeableness (Tobin et al., 2000). This finding converges with other evidence suggesting that self-reported agreeableness in women is positively correlated with self-reported anger and self-reported feelings of being hurt in actual conflict situations (Jensen-Campbell & Graziano, 2001). Taken together, this research suggests that individuals high in agreeableness may be less likely to perceive conflict but that they are more likely to experience strong, negative emotional reactions to conflict when they do perceive it. Notably, one goal of the procedure used in the present study was to heighten parents' attention to even minor

instances of conflict. It is possible that for individuals high in agreeableness, many of these instances would have been overlooked or unrecognized if it were not for the daily telephone interviews. These daily interviews might have sensitized highly agreeable participants to the experience of conflict and consequently elicited strong, negative emotions that might normally have lay dormant. While past research suggests that these participants would have responded with greater efforts to control their emotion, past research also suggests these highly agreeable participants would have had more negative emotion to try to control (Tobin et al., 2000). Moreover, it is possible that greater efforts to control emotion may bespeak less actual skill (Tobin et al., 2000). In sum, this research may help to explain why individuals in the present study who were high in regulation – and therefore high in agreeableness – were more likely to react to marital conflict with subsequent parent-child conflict.

Future research might examine whether regulation is associated with a history of marital and parent-child conflict for participants. It is possible that variability in regulation may distinguish individuals who have experienced chronic family conflict over the years and those who have experienced relatively little family conflict over the years. To the extent that participants low in regulation have experienced chronic family conflict, one might explain present results by concluding that low regulation individuals are relatively desensitized to conflict due to their family histories and therefore less likely to show spillover in conflict from the marital relationship to the parent-child relationship. Conversely, to the extent that participants high in regulation have a family history relatively free from conflict, one might explain present results by concluding that high regulation individuals were uniquely sensitized to the experience of conflict in the present study, that they reacted negatively to this (rather

uncommon) experience, and that this ultimately resulted in the spillover effects observed in the present study.

Interaction effects between child regulation and marital conflict on subsequent parent-child conflict

Despite prior meta-analytic work suggesting that spillover is stronger for girls than boys and for European-Americans than minorities (Krishnakumar & Buehler, 2000), present findings revealed no significant moderating effects by child gender or race. Child regulation did emerge as a significant moderator, however. Findings revealed that in the presence of marital conflict, parents with children higher in regulation were slightly more likely to experience parent-child conflict one full day later. In the absence of marital conflict, parents with children higher in regulation were less likely to experience parent-child conflict one full day later. This finding suggests that the presence or absence of marital conflict is a stronger predictor of subsequent parent-child conflict than child regulation.

Limitations and directions for future research

Several limitations should be noted in interpreting present findings. First, findings may reflect some degree of single source bias. Participants in the present study reported on all study variables, including their own personality and temperament, their child's temperament, their experience of marital and parent-child conflict, and their conflict strategy use. Past research demonstrates high overall convergence between individuals' self-reported ratings of their personality and their partners' ratings of their personality (Holland & Roisman, 2008). This suggests that the self-reported ratings of personality collected in the present study were sufficient. It is possible, however, that the partners and children of participants would have

provided discrepant reports regarding the frequency of conflict and the types of strategies that were used during family conflict. For example, past research suggests that parents and children often disagree about the frequency with which parents use conflict strategies such as reasoning in parent-to-child conflict (Rinaldi & Howe, 2003). Rinaldi and Howe (2003) suggest that parents may tend to endorse higher levels of constructive strategies in order to present themselves in a more socially desirable manner. Future research should incorporate partner- and child-reports of conflict or augment self-reports with laboratory-based measures, in order to minimize the potential impact of single source bias and social desirability issues on study findings.

Second, the present study focused only on *participant* regulation when examining the direct effect of regulation on marital conflict frequency and conflict strategy use and the interaction effect of participant regulation on spillover. It is likely, however, that *partner* regulation also contributes to conflict frequency and conflict management in the dyad; these ratings were not collected. In truth, past research highlights the degree to which marital conflict frequently varies as a function of the personality “climate” created by the dyad (Graziano et al., 1996). In fact, past research investigating the relation between agreeableness and marital conflict demonstrates that individuals low in agreeableness elicit more conflict from their partners than individuals high in agreeableness (Graziano et al., 1996). Marital conflict increased as the number of high-agreeable people in the pair decreased (Graziano et al., 1996). To the extent that participants in the present study differed from their partners in personality and temperament, some of the unexpected interaction effects may be attributable to differences in the regulation “climate” created by each dyad in the present study.

Third, the present study specifically focused on the link between prior marital conflict and subsequent parent-child conflict. Future research should examine the opposite direction of

effects. Moreover, while secondary analyses were intended to explore the degree to which characteristics of the child influence spillover processes, future research should investigate these child-driven effects more closely. Ideally, children might provide daily reports of their experience of parent-child conflict and of the conflict strategies they used. Parents might provide corroborative ratings of these variables and also report on their experience of marital conflict and marital conflict strategy use. While some past theory suggests that children may elicit increased conflict with their parents as a way to distract from and reduce the occurrence of marital conflict (Christensen & Margolin, 1988), the preponderance of past theory and research suggest that children – especially difficult ones, as in the present sample – stress the parent-child relationship and thereby contribute to increased conflict in the marital relationship (Cui et al., 2007; Jenkins et al., 2005). Future research might explore these bidirectional effects.

Future research might also explore other dimensions of spillover such as the content of marital and parent-child conflict. The preponderance of past research suggests that marital conflict that is child-related is perceived by children as particularly threatening and is most predictive of negative child outcomes (Zimet & Jacob, 2001). It is possible that children respond to child-related marital conflict by getting involved in the conflict, perhaps because they perceive themselves as responsible for the tension (Zimet & Jacob, 2001). This may then provoke increased parent-child conflict and thereby help to explain observed spillover effects. Future research might also explore external, contextual factors (e.g., job strain) that might set the stage for marital conflict and ultimately contribute to conflict spillover. Indeed, present findings highlight many interesting avenues for continued research.

Clinical Implications

Present findings have important clinical implications. The finding that marital conflict and parent-child conflict are causally linked in a sample of children at-risk for aggression might be used to inform adaptive interventions for these children. Adaptive interventions are an emerging class of treatments that tailor treatment components and dosages to match the specific needs of an individual child or family (Collins, Murphy, & Bierman, 2004). Adaptive interventions targeting children at-risk for behavior problems typically include core intervention components offered to all children and additional intervention components, frequently targeting parents (e.g., in-home counseling, parent groups, family therapy), depending on their level of risk on specific “tailoring” variables (Collins et al., 2004; Conduct Problems Prevention Research Group, 1999; Dishion & Kavanagh, 2000). Parent functioning is one such tailoring variable that has consistently been measured and targeted in adaptive interventions for children at-risk for behavior problems (Conduct Problems Prevention Research Group, 1999).

While parent functioning is certainly an important variable to consider, present findings documenting the causal link between marital conflict and parent-child conflict in a sample of children at-risk for aggression suggest that marital conflict is a critically important point of emphasis when developing adaptive interventions for children at-risk for behavior problems. Present findings suggest that parent-child conflict is highly likely within the context of marital conflict in at-risk families. Consequently, if interventionists engage parents in parent coaching and behavior management programs but are completely oblivious to the presence of marital conflict, they will be seriously limited in their ability to create meaningful change in families. Given the causal links between marital conflict and parent-child conflict identified in the present study and the extensive body of literature documenting the impact of this marital to parent-child

spillover on children's behavioral outcomes (e.g., Buehler et al., 2006; Cui & Conger, 2008; Gerard et al., 2006), it is essential that interventions designed to enhance the parent-child relationship and target child behavior also focus on assessing and, if applicable, treating marital conflict.

Adaptive interventions should begin with a careful assessment of marital conflict, including the types of strategies typically used to manage conflict, in the initial screening phase for these interventions. A daily reporting method for collecting these data might provide the most accurate estimates of conflict in the home (Gottman, 1979) and might highlight the typical patterns of conflict for individual families. Families characterized by high levels of marital conflict might receive a more intense level of intervention for this factor than families characterized by lower levels of marital conflict. The frequency and intensity of intervention (i.e., dosage) might vary depending on the initial level of conflict reported and the degree to which the level of conflict responds to treatment (Collins et al., 2004).

Specific adaptive components for marital conflict might be gleaned from existing, short-term, stand-alone treatments for marital conflict. For example, Cummings, Faircloth, Mitchell, Cummings, and Schermerhorn (2008) developed and tested a four-session, psycho-educational program targeting marital conflict in community families. This program focused on educating parents about the effects of marital conflict on parenting and children, helping parents identify constructive and destructive conflict strategies in the marital relationship, and emphasizing the importance of maintaining close emotional bonds with spouses and children even within the context of conflict (Cummings et al., 2008). This program included lectures, discussions, and active communication training with coaches. Following treatment, parents in the treatment group showed greater mean levels of marital support behavior, positive emotion, conflict

resolution, and overall constructiveness during a marital problem-solving task relative to parents in a control group (Cummings et al., 2008). While parents also demonstrated improvements in their destructive strategy use, treatment gains were most consistent and prolonged for constructive conflict strategy use, which were maintained at one- and two-year follow-ups (Cummings et al., 2008; Faircloth, Schermerhorn, Mitchell, Cummings, & Cummings, 2011). Changes in knowledge about the impact of marital conflict emerged as the active mechanism by which couples experienced these improvements (Cummings et al., 2008). Moreover, these improvements were directly linked with family systems improvements, including increased marital satisfaction, improved parenting, and better child adjustment (Cummings et al., 2008; Faircloth et al., 2011).

These findings provide hopeful evidence for the effect of brief interventions on marital conflict and broader family outcomes, including parenting and child adjustment. This suggests that brief interventions such as the one described above might be included as an adaptive component in interventions targeting children's behavior problems. The finding that *knowledge* was the active mechanism by which parents experienced improvements in family functioning suggests that interventionists working with couples in conflict (and children with behavior problems) should first assess parents' baseline understanding about the effects of marital conflict on children. Interventionists might also use the screening/assessment data on parents' conflict strategies to tailor their interventions. In keeping with the work of Cummings et al. (2008), the ultimate goals would be to educate parents about the impact of marital conflict on parenting and children, to teach parents about the differences between constructive and destructive conflict strategies, and to provide active coaching in the use of constructive strategies during problem-solving tasks. Results from past research suggest that this type of psycho-education is likely to

increase parents' use of constructive strategies and that these improvements will be maintained over time (Cummings et al., 2008; Faircloth et al., 2011).

Given present findings suggesting that spillover occurs with constructive strategy use but not with destructive strategy use, the long-term impact of psycho-education on parents' constructive strategy use and broader family functioning is especially encouraging (Cummings et al., 2008; Faircloth et al., 2011). Results of the present study suggest that parents who use constructive strategies during marital conflict will be more likely to use constructive strategies during subsequent parent-child conflict. The aforementioned intervention effects indicate that psycho-education is most effective for introducing long-term change in constructive conflict strategies (Cummings et al., 2008; Faircloth et al., 2011). Taken together, this research suggests that intervention components targeting marital conflict should focus more on enhancing parents' use of constructive strategies in marital conflict than on decreasing their use of destructive strategies. Interventions should specifically focus on nurturing parents' use of humor, affection, calm reasoning, discussion, and problem-solving during instances of marital conflict. Parents would likely benefit from some education in basic problem-solving techniques and in-vivo coaching in the use of those techniques within a marriage or partnership. In-vivo coaching would also allow therapists to help parents coordinate the use of warmth (humor, support, affection) with active problem-solving to achieve positive outcomes.

While present findings highlight the critical importance of targeting marital conflict in adaptive interventions, interventions that also address the second component of spillover – namely, parent-child conflict – may best impact family outcomes. Adaptive treatment strategies for parent-child conflict might be gleaned from existing interventions and parent training programs focused on nurturing positive interactions between parents and children with behavior

problems (e.g., Eyberg, 1988; McMahon & Forehand, 2003). Indeed, parent training has emerged as an effective augment to behavioral couples therapy in some pilot research with high-risk families (Lam, Fals-Stewart, & Kelley, 2009). This research investigates the effects of parent training plus couples behavioral therapy versus couples behavioral therapy alone in treating relationship conflict, poor parenting, and involvement with Child Protection Services (CPS) in a sample of fathers with alcohol use disorders (Lam et al., 2009). With this sample, parent training plus behavioral couples therapy yielded similar effects on relationship satisfaction and partner violence relative to behavioral couples therapy alone (Lam et al., 2009). The combined treatment, however, resulted in greater improvements in parenting and greater reductions in fathers' involvement with CPS (Lam et al., 2009). This provides initial support for the importance of targeting multiple components of spillover – namely, aspects relating to both the marital and the parent-child relationship – in interventions seeking to nurture children's positive outcomes.

In addition to highlighting points of emphasis in adaptive interventions, present findings are also helpful for clarifying targets for intervention related to the timing of family conflict. The finding that marital conflict significantly predicts parent-child conflict one time period later suggests that interventionists should educate parents about the ways in which marital stress and conflict can heighten parents' sensitivity to and/or experience of conflict with their children in the subsequent time period. Perhaps if parents are more aware of their vulnerability to parent-child conflict immediately following marital conflict, they will be more likely to take steps to de-escalate situations with their children before conflict occurs. The finding that marital conflict significantly predicts parent-child conflict one full day later suggests that conflict may follow daily, ritualized patterns. Parents should be sensitized to these ritualized patterns of their marital

and parent-child conflict. Therapists might encourage parents to systematically observe their daily patterns of conflict, with an eye towards identifying times of day during which they are particularly vulnerable. Therapists might also work with parents to identify environmental stressors or cues that might trigger conflict (e.g., after-work and bed-time routines) and strategize with them about how to mitigate these factors (Margolin et al., 1996).

Contributions and summary

In addition to the clinical contributions of the present study, the method by which study findings were obtained constitutes a meaningful and substantial contribution to the literature for several reasons. First, the daily reporting, time series design used in the present study allows us to draw conclusions about the temporal ordering of variables. This type of design allows us to conclude that marital conflict temporally precedes parent-child conflict even after controlling for earlier instances of parent-child conflict. This reflects an obvious strength over past cross-sectional designs that document concurrent – but not temporal – links (Buehler et al., 2006; Buehler & Gerard, 2002; Erath et al., 2006).

Not only does the present daily reporting design highlight time-ordered effects that are lost in cross-sectional studies, but this design also addresses issues of retrospective recall that frequently cause problems in longitudinal studies. While longitudinal studies have been helpful in highlighting time-ordered effects (e.g., Cui & Conger, 2008; Gerard et al., 2006), these studies have typically used time points separated by one or more years and have therefore tended to mask the dynamic, moment-to-moment nature of real-life family interactions. These studies have also been limited by their reliance on participants' retrospective recall of marital and parent-child interactions over a span of months and years. Daily reporting designs such as the

one used in the present study minimize the time between participants' experience of a target event and their reporting of that event. This, presumably, enhances the quality and validity of the data.

Moreover, the present daily reporting design captures the natural, spontaneous, day-by-day nature of family conflict that is often lost when using standard questionnaire or laboratory-based methods. In fact, past research suggests that marital conflict measured in the laboratory setting is an under-estimate of actual behavior relative to when marital conflict is measured in the home (Gottman, 1979). Not only does collecting data based on individuals' daily experiences in their home and community settings provide more accurate estimates of actual behavior, but this type of design also allows us to generalize study findings to real-world settings. This certainly reflects a valuable contribution to the literature.

Finally, the present method improves upon past research in its finer-grained analysis of family conflict and the variables that might influence it. More specifically, this is the first known study to examine the spillover in conflict strategies used by parents first in the marital relationship and then in the parent-child relationship using a daily reporting design. This is also the first known study to take such a fine-grained approach in the analysis of temperament, personality, and day-to-day family conflict. As noted by Laurenceau and Bolger (2005), much past research has focused on the influence of distal factors such as temperament/personality on macro-level family outcomes such as relationship satisfaction, rather than on the micro-level behaviors that ultimately help to explain these macro-level outcomes. For example, distal personality factors have consistently been linked to macro-level family outcomes such as marital quality (e.g., Donnellan et al., 2004) and positive parenting (e.g., Prinzie et al., 2009). These personality variables have not typically been linked to micro-level family processes, however,

such as day-to-day family conflict. The present daily reporting method provides a novel way to examine the degree to which distal personality and temperament factors are implicated in more proximal and dynamic interpersonal outcomes such as the daily experience of conflict. This is the first known study to take such an approach with these variables.

In summary, the present study's use of a daily reporting design offers significant contributions to the existing literature in terms of highlighting time-ordered links, addressing past problems of retrospective recall, yielding data that are accurate and generalizable to real-world settings, and providing a way to study fine-grained processes that have not been explored before. Given the known links between the spillover phenomenon documented in the present study and children's negative behavioral outcomes, findings have important clinical implications for adaptive intervention programs and family therapies targeting children at-risk for behavioral problems.

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Appendix A: A priori power analyses

Power analyses conducted prior to the start of the study revealed that a sample size of 60 would provide adequate power to test study hypotheses. Because there are no easily accessible ways to analyze power for analyses using generalized estimating equations, power was analyzed for conceptually-related analyses, instead. Past research has demonstrated, for example, that the overall effect sizes for the relation between *global* measures of marital conflict and parenting are moderate, as suggested by Krishnakumar and Buehler’s (2000) meta-analysis of 39 studies. When the relation between marital conflict and parenting has been examined using more discrete, finely-tuned categories, however, the effect sizes have been larger. For example, when Rinaldi and Howe (2003) examined the link between marital conflict strategies and concurrent parent-child conflict strategies, they found large effects: $r = 0.49$ for verbally aggressive strategies, 0.52 for avoidant strategies, and 0.66 for constructive strategies, with an average effect size of 0.56. Because the present study more closely aligns with Rinaldi and Howe’s (2003) work in its finer-grained analysis of conflict strategies, effect sizes (r) of 0.40 or higher were expected. As Table A1 below suggests, a sample size of 60 yields sufficient power to detect effects of this size. Therefore, the required sample size for the present study was 60.

Table A1. Expected Statistical Power given a Range of Sample Sizes and Effect Sizes

Effect Sizes				
Sample Sizes	0.40	0.50	0.60	0.70
50	0.835	0.967	0.997	0.999
60	0.897	0.987	0.999	0.999
70	0.937	0.994	0.999	1.000
80	0.962	0.997	0.999	1.000

Note: Numbers within the body of this table reflect the statistical power for detecting effects with a range of sample sizes.

Appendix B: Modifications to procedure

<i>Issue</i>	<i>How this issue was addressed and/or explored</i>
Readability of the daily telephone interview	
Formatting	In an effort to simplify the interview packets that families received, a question and answer page was added to the booklet of interviews. It was hoped that this question and answer format would convey information in a more accessible, simplified way. Second, basic changes were made to the format of the interview (e.g., font) in order to make the interview clearer.
Reading level	The reading level of the telephone interview was checked. Two readability statistics were obtained: the Flesch Reading Ease score and the Flesch-Kincaid Grade Level score. The Flesch Reading Ease score falls on a 100-point scale, with higher scores indicating that the document is easier to understand. It is recommended that documents obtain a score ranging from 60 to 70. The daily telephone interview obtained a score of 67.4. The Flesch-Kincaid Grade Level score is based on the U.S. schools. The daily telephone interview is written at the 6.4 grade level.
Vocabulary used	The complexity of the vocabulary used in the daily telephone interview was explored by testing the readability statistics (see above) and by conducting the pilot study. This investigator observed whether participants appeared to understand interview questions during the face-to-face baseline visit, and this investigator specifically asked questions probing this issue during the debriefing interviews. Results from a pilot study suggested that the vocabulary used was appropriate and understandable.
Content validity of the interview questions tapping strategy use	The “verbal aggression” strategy was changed to “negative verbal interactions” to better capture the types of behaviors in question.
Streamlining the interview	In the original interview, parents were asked whether their parent-child conflict was in response to child misbehavior. After consultation with faculty, this question was deemed unnecessary and dropped from the interview.

Confidentiality of the
interview booklets that
participants received

A cover page was added to the booklet with “Confidential” marked prominently. Also, the following statement was added to the bottom of the question and answer page: “Please do not talk with your partner or your child about your responses. We are simply interested in the way you see the situation. Please keep these forms in a private place.”

Account for whether
participants have contact
with partner/child during
time period assessed

Questions were added to the telephone interview to tap this issue.

Appendix C: Contact Information Sheet

Your Name _____ Your child's name _____

Address: _____

Home Phone Number: _____

Cell Phone Number: _____

Work Phone Number: _____

Email Address: _____

Can we leave a message for you (circle all that are OK):

- a. At your home phone number?
- b. At your cell phone number?
- c. At your work phone number?

When we leave a message, can we (circle all that are OK):

- a. Say our name and say that we are calling from the University of Alabama?
- b. Say that we are calling from "The Family Interactions Study?"
- c. Ask you to record your responses to questions on your personal copy of the interview?

When is the most convenient time for us to call you? Please list a two-hour time block that works the best for you. We will do our very best to call during that time!

Additional instructions you would like to add: _____

Who could we contact if we have trouble reaching you?

Name: _____

Phone Numbers: _____

Email Address: _____

Name: _____

Phone Numbers: _____

Email Address: _____

Appendix D: Demographics Questionnaire

Questions about you:

1. Your birth date: _____

2. Your gender:
 - a. Male
 - b. Female

3. Your ethnic and racial background:
 - a. African-American, Black
 - b. White Caucasian – Non Hispanic
 - c. Hispanic or Latino
 - d. Another race _____
 - e. More than one race (please specify _____)
 - f. Decline to answer

4. How are you related to the target child in this study?
 - a. Biological mother
 - b. Biological father
 - c. I am not related to this child. I am the significant other of this child's parent.
 - d. Grandmother
 - e. Grandfather
 - f. Aunt
 - g. Uncle
 - h. Stepmother
 - i. Stepfather
 - j. Foster parent/adoptive
 - k. Other _____

5. Your marital and living status:
 - a. Married and living with my spouse
 - b. Single and living with my partner

6. How long have you been living with your spouse or partner? _____

7. How is your spouse/partner related to the target child in this study?
- a. Biological mother
 - b. Biological father
 - c. He/she is not related to the child. He/she is just my significant other.
 - d. Grandmother
 - e. Grandfather
 - f. Aunt
 - g. Uncle
 - h. Stepmother
 - i. Stepfather
 - j. Foster parent/adoptive
 - k. Other _____
8. What is the highest level you finished in school?
- a. Less than 7th grade
 - b. Junior High School/9th grade
 - c. Some High School (10th or 11th grade)
 - d. High School Graduate or GED
 - e. Some college (at least 1 year or technical training)
 - f. 2-year college or associate's degree
 - g. 4-year college or bachelor's degree
 - h. Graduate training or degree
9. Do you work outside the home?
- a. Yes
 - b. No
10. If you work outside the home, what hours do you work? _____
11. If you work outside the home, what days do you work? _____
12. What is your family's current yearly income level?
- a. \$0 - \$10,000
 - b. \$10,001 - \$20,000
 - c. \$20,001 - \$30,000
 - d. \$30,001 - \$40,000
 - e. \$40,001 - \$50,000
 - f. \$50,001 - \$60,000
 - g. \$60,001 - \$70,000
 - h. \$70,001 - \$80,000

- i. \$80,001 - \$90,000
- j. \$90,001 - \$100,000
- k. More than \$100,001

Questions about your child:

1. Your child's birth date: _____

2. Your child's gender:
 - a. Male
 - b. Female

3. Your child's current grade in school:
 - a. 4th
 - b. 5th
 - c. 6th
 - d. 7th
 - e. 8th

4. Your child's ethnic and racial background:
 - a. African-American, Black
 - b. White Caucasian – Non Hispanic
 - c. Hispanic or Latino
 - d. Another race _____
 - e. More than one race (please specify _____)
 - f. Decline to answer

FAMILY INTERACTIONS STUDY

Confidential

If you have any questions, please feel free to call 205-210-9694.

QUESTIONS AND ANSWERS: THE DAILY TELEPHONE INTERVIEW

Q: What is the daily telephone interview?

A: A 5-minute interview that asks you about interactions with your spouse/partner and your child over the last 24 hours.

Q: Which child should I think about when I'm answering these questions?

A: You should answer these questions with _____ in mind.

Q: What types of family interactions do you want to know about?

A: This is very **important**.

We would like to know about any interactions that occurred in the last 24 hours with your spouse/partner or child where:

- (a) give and take is required to reach an agreement/solution (even if you don't reach an agreement) OR**
- (b) you and your spouse/partner or child have different points of view on something OR**
- (c) someone feels emotional tension, frustration, or anger OR**
- (d) any mix of the above.**

--These interactions can be quite positive or even quite negative.

--These interactions may be a simple misunderstanding.

--We are interested in any differences in opinion.

--These interactions can be major interactions or very minor with no noticeable distress experienced.

--These interactions may occur when you are at home, driving, out, or on the telephone together.

Q: How many days will I be doing this interview?

A: Once with a research assistant in-person and six days over the phone.

Q: What is included in this packet?

A: Six copies of the daily telephone interview.

Q: What should I do with these interview forms?

A: Use these forms to follow-along with us when we call you for the daily telephone interview. You might also write down your responses to interview questions throughout the day. This may help you remember the details of your family interactions when we call.

Q: What happens if I miss the phone call for the daily telephone interview?

A: We will try calling you back a second time. If we miss you the second time, please write down your interview responses on one of the forms in this packet. We will ask for your responses when we call you the next day.

Please do not talk with your spouse/partner or your child about your responses. We are simply interested in the way you see the situation. Please keep these forms in a private place. If you have any questions, please call 205-210-9694. Thank you so much for your help with this study!

DAILY TELEPHONE INTERVIEW

DATE _____ TIME _____

Please review the types of family interactions we are interested in. This is described in **bold** on the first page of this packet.

I. MARITAL INTERACTIONS

First think about your interactions with your spouse/partner over the last 24 hours.

Did you see each other, talk on the phone, or sleep in the same house
YESTERDAY from 5:00PM to 1:00AM? YES NO

[If yes] did any of the interactions we're interested in occur? YES NO

[If yes] did you use: (Mark all that apply.)

- Y N Negative verbal interactions (e.g., nagging, insulting, giving verbal threats, expressing anger)
 - Y N Physical Aggression (e.g., being physically aggressive towards a person or object, being physically threatening)
 - Y N Warmth (e.g., using humor, giving support, being physically or verbally affectionate)
 - Y N Calm Reasoning (e.g., discussing, problem solving)
 - Y N Withdrawal/Avoidance (e.g., leaving the room/home, giving silent treatment, pretending not to care, avoiding eye contact)
 - Y N Expressions of anger or distress without words (e.g., crying, speaking in an unsteady voice, rolling your eyes, using cold stares, using facial expressions or hand gestures to show anger)
-

Did you see each other, talk on the phone, or sleep in the same house
TODAY from 1:00AM to 9:00AM? YES NO

[If yes] did any of the interactions we're interested in occur? YES NO

[If yes] did you use: (Mark all that apply.)

- Y N Negative verbal interactions
 - Y N Physical Aggression
 - Y N Warmth
 - Y N Calm Reasoning
 - Y N Withdrawal/Avoidance
 - Y N Expressions of anger or distress without words
-

Did you see each other, talk on the phone, or sleep in the same house
TODAY from 9:00AM to 5:00PM? YES NO

[If yes] did any of the interactions we're interested in occur? YES NO

[If yes] did you use: (Mark all that apply.)

- Y N Negative verbal interactions
- Y N Physical Aggression
- Y N Warmth
- Y N Calm Reasoning
- Y N Withdrawal/Avoidance
- Y N Expressions of anger or distress without words

II. PARENT-CHILD INTERACTIONS

Now think about interactions with your child over the last 24 hours.

Did you see each other, talk on the phone, or sleep in the same house
YESTERDAY from 5:00PM to 1:00AM? **YES** **NO**

[If yes] did any of the interactions we're interested in occur? **YES** **NO**

[If yes] did you use: (Mark all that apply.)

- Y N Negative verbal interactions (e.g., nagging, insulting, giving verbal threats, expressing anger)
 - Y N Physical Aggression (e.g., being physically aggressive towards a person or object, being physically threatening)
 - Y N Warmth (e.g., using humor, giving support, being physically or verbally affectionate)
 - Y N Calm Reasoning (e.g., discussing, problem solving)
 - Y N Withdrawal/Avoidance (e.g., leaving the room/home, giving silent treatment, pretending not to care, avoiding eye contact)
 - Y N Expressions of anger or distress without words (e.g., crying, speaking in an unsteady voice, rolling your eyes, using cold stares, using facial expressions or hand gestures to show anger)
-

Did you see each other, talk on the phone, or sleep in the same house
TODAY from 1:00AM to 9:00AM? **YES** **NO**

[If yes] did any of the interactions we're interested in occur? **YES** **NO**

[If yes] did you use: (Mark all that apply.)

- Y N Negative verbal interactions
 - Y N Physical Aggression
 - Y N Warmth
 - Y N Calm Reasoning
 - Y N Withdrawal/Avoidance
 - Y N Expressions of anger or distress without words
-

Did you see each other, talk on the phone, or sleep in the same house
TODAY from 9:00AM to 5:00PM? **YES** **NO**

[If yes] did any of the interactions we're interested in occur? **YES** **NO**

[If yes] did you use: (Mark all that apply.)

- Y N Negative verbal interactions
 - Y N Physical Aggression
 - Y N Warmth
 - Y N Calm Reasoning
 - Y N Withdrawal/Avoidance
 - Y N Expressions of anger or distress without words
-

Appendix F: Adult Temperament Questionnaire

Please provide the following information by checking the appropriate response or filling in the blank.

Sex: Male _____ Female _____

Is English your first language? Yes _____ No _____

Age: _____

Country of Origin: _____

ADULT TEMPERAMENT QUESTIONNAIRE (VERSION 1.3)

Directions

On the following pages you will find a series of statements that individuals can use to describe themselves. There are no correct or incorrect responses. All people are unique and different, and it is these differences which we are trying to learn about. Please read each statement carefully and give your best estimate of how well it describes you. Circle the appropriate number below to indicate how well a given statement describes you.

<u>circle #:</u>	<u>if the statement is:</u>
1	extremely untrue of you
2	quite untrue of you
3	slightly untrue of you
4	neither true nor false of you
5	slightly true of you
6	quite true of you
7	extremely true of you

If one of the statements does not apply to you (for example, if it involves driving a car and you don't drive), then circle "X" (not applicable). Check to make sure that you have answered every item.

	1 extremely untrue	2 quite untrue	3 slightly untrue	4 neither true nor false	5 slightly true	6 quite true	7 extremely true	X not applicable
1.	I become easily frightened.							
	1	2	3	4	5	6	7	X
2.	I am often late for appointments.							
	1	2	3	4	5	6	7	X
3.	Sometimes minor events cause me to feel intense happiness.							
	1	2	3	4	5	6	7	X
4.	I find loud noises to be very irritating.							
	1	2	3	4	5	6	7	X
5.	It's often hard for me to alternate between two different tasks.							
	1	2	3	4	5	6	7	X
6.	I rarely become annoyed when I have to wait in a slow moving line.							
	1	2	3	4	5	6	7	X
7.	I would not enjoy the sensation of listening to loud music with a laser light show.							
	1	2	3	4	5	6	7	X
8.	I often make plans that I do not follow through with.							
	1	2	3	4	5	6	7	X
9.	I rarely feel sad after saying goodbye to friends or relatives.							
	1	2	3	4	5	6	7	X
10.	Even when I feel energized, I can usually sit still without much trouble if it's necessary.							
	1	2	3	4	5	6	7	X
11.	Looking down at the ground from an extremely high place would make me feel uneasy.							
	1	2	3	4	5	6	7	X

	1	2	3	4	5	6	7	X
	extremely untrue	quite untrue	slightly untrue	neither true nor false	slightly true	quite true	extremely true	not applicable
12.	I would not enjoy a job that involves socializing with the public.							
	1	2	3	4	5	6	7	X
13.	I can keep performing a task even when I would rather not do it.							
	1	2	3	4	5	6	7	X
14.	I sometimes seem to be unable to feel pleasure from events and activities that I should enjoy.							
	1	2	3	4	5	6	7	X
15.	I find it very annoying when a store does not stock an item that I wish to buy.							
	1	2	3	4	5	6	7	X
16.	I usually like to talk a lot.							
	1	2	3	4	5	6	7	X
17.	I seldom become sad when I watch a sad movie.							
	1	2	3	4	5	6	7	X
18.	When I am enclosed in small places such as an elevator, I feel uneasy.							
	1	2	3	4	5	6	7	X
19.	When listening to music, I usually like to turn up the volume more than other people.							
	1	2	3	4	5	6	7	X
20.	Sometimes minor events cause me to feel intense sadness.							
	1	2	3	4	5	6	7	X
21.	It is easy for me to hold back my laughter in a situation when laughter wouldn't be appropriate.							
	1	2	3	4	5	6	7	X

1	2	3	4	5	6	7	X
extremely untrue	quite untrue	slightly untrue	neither true nor false	slightly true	quite true	extremely true	not applicable

22. I can make myself work on a difficult task even when I don't feel like trying.
- 1 2 3 4 5 6 7 X
23. I rarely ever have days where I don't at least experience brief moments of intense happiness.
- 1 2 3 4 5 6 7 X
24. When I am trying to focus my attention, I am easily distracted.
- 1 2 3 4 5 6 7 X
25. I would probably enjoy playing a challenging and fast paced video-game that makes lots of noise and has lots of flashing, bright lights.
- 1 2 3 4 5 6 7 X
26. Whenever I have to sit and wait for something (e.g., a waiting room), I become agitated.
- 1 2 3 4 5 6 7 X
27. I'm often bothered by light that is too bright.
- 1 2 3 4 5 6 7 X
28. I seldom become sad when I hear of an unhappy event.
- 1 2 3 4 5 6 7 X
29. When interrupted or distracted, I usually can easily shift my attention back to whatever I was doing before.
- 1 2 3 4 5 6 7 X
30. I find certain scratchy sounds very irritating.
- 1 2 3 4 5 6 7 X
31. I like conversations that include several people.
- 1 2 3 4 5 6 7 X
32. I am usually a patient person.
- 1 2 3 4 5 6 7 X

	1	2	3	4	5	6	7	X
	extremely untrue	quite untrue	slightly untrue	neither true nor false	slightly true	quite true	extremely true	not applicable
33. It is very hard for me to focus my attention when I am distressed.	1	2	3	4	5	6	7	X
34. Very bright colors sometimes bother me.	1	2	3	4	5	6	7	X
35. I can easily resist talking out of turn, even when I'm excited and want to express an idea.	1	2	3	4	5	6	7	X
36. I would probably not enjoy a fast, wild carnival ride.	1	2	3	4	5	6	7	X
37. I sometimes feel sad for longer than an hour.	1	2	3	4	5	6	7	X
38. I rarely enjoy socializing with large groups of people.	1	2	3	4	5	6	7	X
39. If I think of something that needs to be done, I usually get right to work on it.	1	2	3	4	5	6	7	X
40. It doesn't take very much to make me feel frustrated or irritated.	1	2	3	4	5	6	7	X
41. It doesn't take much to evoke a happy response in me.	1	2	3	4	5	6	7	X
42. When I am happy and excited about an upcoming event, I have a hard time focusing my attention on tasks that require concentration.	1	2	3	4	5	6	7	X

	1 extremely untrue	2 quite untrue	3 slightly untrue	4 neither true nor false	5 slightly true	6 quite true	7 extremely true	X not applicable
43.	Sometimes, I feel a sense of panic or terror for no apparent reason.							
	1	2	3	4	5	6	7	X
44.	I often have trouble resisting my cravings for food, drink, etc.							
	1	2	3	4	5	6	7	X
45.	Colorful flashing lights bother me.							
	1	2	3	4	5	6	7	X
46.	I usually finish doing things before they are actually due (for example, paying bills, finishing homework, etc.).							
	1	2	3	4	5	6	7	X
47.	I often feel sad.							
	1	2	3	4	5	6	7	X
48.	I usually remain calm without getting frustrated when things are not going smoothly for me.							
	1	2	3	4	5	6	7	X
49.	Loud music is unpleasant to me.							
	1	2	3	4	5	6	7	X
50.	When I'm excited about something, it's usually hard for me to resist jumping right into it before I've considered the possible consequences.							
	1	2	3	4	5	6	7	X
51.	Loud noises sometimes scare me.							
	1	2	3	4	5	6	7	X
52.	When I see an attractive item in a store, it's usually very hard for me to resist buying it.							
	1	2	3	4	5	6	7	X
53.	I would enjoy watching a laser show with lots of bright, colorful flashing lights.							
	1	2	3	4	5	6	7	X
54.	When I hear of an unhappy event, I immediately feel sad.							
	1	2	3	4	5	6	7	X
55.	I usually like to spend my free time with people.							
	1	2	3	4	5	6	7	X

	1	2	3	4	5	6	7	X
	extremely untrue	quite untrue	slightly untrue	neither true nor false	slightly true	quite true	extremely true	not applicable
56.	It does not frighten me if I think that I am alone and suddenly discover someone close by.							
	1	2	3	4	5	6	7	X
57.	It takes a lot to make me feel truly happy.							
	1	2	3	4	5	6	7	X
58.	When I am afraid of how a situation might turn out, I usually avoid dealing with it.							
	1	2	3	4	5	6	7	X
59.	I especially enjoy conversations where I am able to say things without thinking first.							
	1	2	3	4	5	6	7	X
60.	When I try something new, I am rarely concerned about the possibility of failing.							
	1	2	3	4	5	6	7	X
61.	It is easy for me to inhibit fun behavior that would be inappropriate.							
	1	2	3	4	5	6	7	X
62.	I would not enjoy the feeling that comes from yelling as loud as I can.							
	1	2	3	4	5	6	7	X

Appendix G: Big Five Inventory

BFI: Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others*? Please write a number next to each statement to indicate the extent to which **you agree or disagree with that statement.**

1	2	3	4	5
Disagree Strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly

I am someone who...

- | | |
|--|--|
| <p>1. _____ Is talkative</p> <p>2. _____ Tends to find fault with others</p> <p>3. _____ Does a thorough job</p> <p>4. _____ Is depressed, blue</p> <p>5. _____ Is original, comes up with new ideas</p> <p>6. _____ Is reserved</p> <p>7. _____ Is helpful and unselfish with others</p> <p>8. _____ Can be somewhat careless</p> <p>9. _____ Is relaxed, handles stress well.</p> <p>10. _____ Is curious about many different things</p> <p>11. _____ Is full of energy</p> <p>12. _____ Starts quarrels with others</p> <p>13. _____ Is a reliable worker</p> <p>14. _____ Can be tense</p> <p>15. _____ Is ingenious, a deep thinker</p> <p>16. _____ Generates a lot of enthusiasm</p> <p>17. _____ Has a forgiving nature</p> <p>18. _____ Tends to be disorganized</p> <p>19. _____ Worries a lot</p> <p>20. _____ Has an active imagination</p> <p>21. _____ Tends to be quiet</p> <p>22. _____ Is generally trusting</p> | <p>23. _____ Tends to be lazy</p> <p>24. _____ Is emotionally stable, not easily upset</p> <p>25. _____ Is inventive</p> <p>26. _____ Has an assertive personality</p> <p>27. _____ Can be cold and aloof</p> <p>28. _____ Perseveres until the task is finished</p> <p>29. _____ Can be moody</p> <p>30. _____ Values artistic, aesthetic experiences</p> <p>31. _____ Is sometimes shy, inhibited</p> <p>32. _____ Is considerate and kind to almost everyone</p> <p>33. _____ Does things efficiently</p> <p>34. _____ Remains calm in tense situations</p> <p>35. _____ Prefers work that is routine</p> <p>36. _____ Is outgoing, sociable</p> <p>37. _____ Is sometimes rude to others</p> <p>38. _____ Makes plans and follows through with them</p> <p>39. _____ Gets nervous easily</p> <p>40. _____ Likes to reflect, play with ideas</p> <p>41. _____ Has few artistic interests</p> <p>42. _____ Likes to cooperate with others</p> <p>43. _____ Is easily distracted</p> <p>44. _____ Is sophisticated in art, music, or literature</p> |
|--|--|

Appendix H: Early Adolescent Temperament Questionnaire (EATQ), Revised, Parent Report

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**Early Adolescent Temperament Questionnaire - Revised
Parent Report**

Directions

On the following pages you will find a series of statements that people might use to describe their child. The statements refer to a wide number of activities and attitudes.

For each statement, please circle the answer which best describes how true each statement is for your child. There are no best answers. People are very different in how they feel about these statements. Please circle the first answer that comes to you.

You will use the following scale to describe how true or false a statement is about your child:

<u>Circle number:</u>	<u>If the statement is:</u>
1	Almost always untrue of your child
2	Usually untrue of your child
3	Sometimes true, sometimes untrue of your child
4	Usually true of your child
5	Almost always true of your child

Your son or daughter:

Almost always untrue Usually untrue Sometimes true, sometimes untrue Usually true Almost always true

1) Worries about getting into trouble.	1	2	3	4	5
2) When angry at someone, says thing s/he knows will hurt that person's feelings.	1	2	3	4	5
3) Has a hard time finishing things on time.	1	2	3	4	5
5) If having a problem with someone, usually tries to deal with it right away.	1	2	3	4	5
6) Has a hard time waiting his/her turn to speak when excited.	1	2	3	4	5
8) Opens presents before s/he is supposed to.	1	2	3	4	5
11) If very angry, might hit someone.	1	2	3	4	5
14) Usually does something fun for awhile before starting her/his homework, even though s/he is not supposed to.	1	2	3	4	5
15) Finds it easy to really concentrate on a problem.	1	2	3	4	5
17) When asked to do something, does it right away, even if s/he doesn't want to.	1	2	3	4	5
19) Tends to be rude to people s/he doesn't like.	1	2	3	4	5
20) Is annoyed by little things other kids do.	1	2	3	4	5
21) Gets very irritated when someone criticizes her/him.	1	2	3	4	5
22) When interrupted or distracted, forgets what s/he was about to say.	1	2	3	4	5
23) Is more likely to do something s/he shouldn't do the more s/he tries to stop her/himself.	1	2	3	4	5
25) Tends to try to blame mistakes on someone else.	1	2	3	4	5
30) Worries about our family when s/he is not with us.	1	2	3	4	5
31) Gets irritated when I will not take her/him someplace s/he wants to go.	1	2	3	4	5
32) Slams doors when angry.	1	2	3	4	5
35) Has a difficult time tuning out background noise and concentrating when trying to study.	1	2	3	4	5
36) Usually finishes her/his homework before it's due.	1	2	3	4	5
38) Usually gets started right away on difficult assignments.	1	2	3	4	5
39) Is good at keeping track of several different things that are happening around her/him.	1	2	3	4	5
41) Makes fun of how other people look.	1	2	3	4	5
42) Doesn't criticize others.	1	2	3	4	5

Your son or daughter:	Almost always <u>untrue</u>	Usually <u>untrue</u>	Sometimes <u>true</u> , sometimes <u>untrue</u>	Usually <u>true</u>	Almost always <u>true</u>
45) Gets irritated when s/he has to stop doing something s/he is enjoying.	1	2	3	4	5
46) Usually puts off working on a project until it is due.	1	2	3	4	5
47) Is able to stop him/herself from laughing at inappropriate times.	1	2	3	4	5
48) Is afraid of the idea of me dying or leaving her/him.	1	2	3	4	5
49) Is often in the middle of doing one thing and then goes off to do something else without finishing it.	1	2	3	4	5
53) Doesn't enjoy playing softball or baseball because s/he is afraid of the ball.	1	2	3	4	5
55) Feels scared when entering a darkened room at night.	1	2	3	4	5
57) Hates it when people don't agree with him/her.	1	2	3	4	5
58) Gets very frustrated when s/he makes a mistake in her/his school work.	1	2	3	4	5
59) Is usually able to stick with his/her plans and goals.	1	2	3	4	5
60) Pays close attention when someone tells her/him how to do something.	1	2	3	4	5
61) Is nervous being home alone.	1	2	3	4	5

Appendix I: Tables of non-significant results

Table 11

The Effect of Prior Marital Conflict on Parent-Child Conflict Two Time Periods Later

Variable	Parameter Estimates			
	B	SE	Wald Chi-Square[1]	<i>p</i>
Intercept	-1.66	1.64	1.03	.31
Independent Variable				
Presence of Marital Conflict	0.26	0.23	1.31	.25
Covariates				
Respondent Gender ^a	0.14	0.37	0.14	.71
Respondent Race ^b	0.44	0.24	3.24	.07
Respondent Age	-0.003	0.01	0.05	.82
Marital Status ^c	-0.37	0.32	1.40	.24
Length of Cohabiting Relationship	-0.02	0.01	3.04	.08
Income	0.06	0.04	1.73	.19
Child Gender ^d	-0.19	0.28	1.73	.19
Child Age	0.008	0.13	0.004	.95
Presence of Prior Parent-Child Conflict				
One time point prior	0.12	0.19	0.40	.53
Two time points prior	0.10	0.25	0.18	.67
Three time points prior	1.11	0.20	30.69	<0.001

Procedure is modeling ^a males (respondent), ^b whites, ^c single and living with a partner, and ^d males (child).

Table I2

The Effect of Prior Constructive Marital Conflict on Parent-Child Constructive Conflict Two

Time Periods Later

Variable	Parameter Estimates			
	B	SE	Wald Chi-Square[1]	<i>p</i>
Intercept	-1.03	1.72	0.36	.55
Independent Variable				
Presence of Constructive Marital Conflict	0.20	0.26	0.62	.43
Covariates				
Respondent Gender ^a	0.28	0.38	0.54	.46
Respondent Race ^b	0.35	0.24	2.09	.15
Respondent Age	-0.002	0.01	0.03	.87
Marital Status ^c	-0.34	0.35	0.96	.33
Length of Cohabiting Relationship	-0.03	0.02	4.55	.03
Income	0.09	0.04	3.76	.05
Child Gender ^d	-0.21	0.30	0.49	.48
Child Age	-0.05	0.14	0.14	.71
Presence of Prior Constructive Parent-Child Conflict				
One time point prior	-0.04	0.20	0.05	.83
Two time points prior	0.34	0.23	2.16	.14
Three time points prior	0.87	0.20	19.63	<0.001

Procedure is modeling ^a males (respondent), ^b whites, ^c single and living with a partner, and ^d males (child).

Table 13

The Effect of Prior Destructive Marital Conflict on Subsequent Destructive Parent-Child

Conflict

Variable	Parameter Estimates			
	B	SE	Wald Chi-Square[1]	p
Model 1: The Effect of Destructive Marital Conflict on Destructive Parent-Child Conflict One Time Period Later				
Intercept	-1.93	2.14	0.81	.37
Independent Variable				
Presence of Destructive Marital Conflict	-0.20	0.54	0.14	.71
Covariates				
Respondent Gender ^a	-0.23	0.64	0.13	.72
Respondent Race ^b	0.96	0.40	5.68	.02
Respondent Age	-0.02	0.02	1.40	.24
Marital Status ^c	-0.66	0.42	2.43	.12
Length of Cohabiting Relationship	-0.04	0.02	2.79	.10
Income	-0.01	0.08	0.02	.89
Child Gender ^d	0.07	0.42	0.03	.87
Child Age	0.03	0.18	0.03	.86
Presence of Prior Parent-Child Destructive Conflict				
One time point prior	-0.18	0.53	0.12	.74
Two time points prior	0.11	0.51	0.05	.83
Three time points prior	1.35	0.29	22.42	<.001
Model 2: The Effect of Destructive Marital Conflict on Destructive Parent-Child Conflict Two Time Periods Later				
Intercept	-2.61	2.09	1.57	.21
Independent Variable				
Presence of Destructive Marital Conflict	0.01	0.47	<0.001	.99
Covariates				
Respondent Gender ^a	0.36	0.48	0.55	.46
Respondent Race ^b	0.93	0.36	6.53	.01
Respondent Age	-0.01	0.02	0.80	.37
Marital Status ^c	-0.68	0.41	2.73	.10
Length of Cohabiting Relationship	-0.04	0.02	3.13	.08
Income	-0.03	0.07	0.16	.69
Child Gender ^d	-0.05	0.37	0.02	.89
Child Age	0.08	0.18	0.21	.65
Presence of Prior Parent-Child Destructive Conflict				
One time point prior	0.08	0.45	0.03	.86
Two time points prior	0.13	0.46	0.08	.78
Three time points prior	1.40	0.30	22.45	<.001

Table I3 continued

Model 3: The Effect of Destructive Marital Conflict on Destructive Parent-Child Conflict One Full Day Later	B	SE	Wald Chi-Square[1]	<i>p</i>
Intercept	-2.05	2.21	0.86	.35
Independent Variable				
Presence of Destructive Marital Conflict	-0.39	0.47	0.70	.40
Covariates				
Respondent Gender ^a	-0.05	0.61	0.01	.94
Respondent Race ^b	0.96	0.42	5.39	.02
Respondent Age	-0.02	0.02	1.90	.17
Marital Status ^c	-0.88	0.48	3.32	.07
Length of Cohabiting Relationship	-0.03	0.02	2.08	.93
Income	-0.03	0.08	0.13	.72
Child Gender ^d	0.02	0.42	0.003	.96
Child Age	0.08	0.19	0.17	.68
Presence of Prior Parent-Child Destructive Conflict				
One time point prior	-0.74	0.68	1.18	.28
Two time points prior	-0.03	0.46	0.003	.96
Three time points prior	1.35	0.33	17.23	< 0.001

Procedure is modeling ^a males (respondent), ^b whites, ^c single and living with a partner, and ^d males (child).

Table I4. The Moderating Effect of Regulation on the Spillover in Conflict from the Marital Relationship to the Parent-Child Relationship Two Time Periods Later

Variable	Parameter Estimates			
	B	SE	Wald Chi-Square[1]	<i>p</i>
Intercept	-1.63	1.71	0.92	.34
Interaction Effect and Main Effects				
Presence of Marital Conflict X Regulation	0.01	0.24	0.001	.98
Presence of Marital Conflict	0.26	0.23	1.31	.25
Parent Regulation	0.01	0.11	0.01	.92
Covariates				
Respondent Gender ^a	0.14	0.37	0.14	.71
Respondent Race ^b	0.44	0.24	3.21	.07
Respondent Age	-0.003	0.01	0.05	.83
Marital Status ^c	-0.37	0.31	1.42	.23
Length of Cohabiting Relationship	-0.03	0.01	2.98	.08
Income	0.06	0.04	1.73	.19
Child Gender ^d	-0.20	0.28	0.49	.48
Child Age	0.01	0.13	0.002	.97
Presence of Prior Parent-Child Conflict				
One time point prior	0.12	0.19	0.41	.52
Two time points prior	0.10	0.25	0.17	.68
Three time points prior	1.11	0.20	30.69	<0.001

Procedure is modeling ^a males (respondent), ^b whites, ^c single and living with a partner, and ^d males (child).

Table 15. The Moderating Effect of Regulation on the Spillover in Destructive Conflict from the Marital Relationship to the Parent-Child Relationship

Variable	Parameter Estimates			
	B	SE	Wald Chi-Square[1]	<i>p</i>
Model 1: The Moderating Effect of Regulation on Spillover across One Time Period				
Intercept	-2.24	2.09	0.08	.28
Interaction Effect and Main Effects				
Presence of Destructive Marital Conflict X Regulation	0.63	0.44	2.10	.15
Presence of Destructive Marital Conflict	-1.60	0.55	0.08	.77
Regulation	-0.23	0.15	2.35	.13
Covariates				
Respondent Gender ^a	-0.02	0.01	1.96	.16
Respondent Race ^b	0.96	0.41	5.53	.02
Respondent Age	-0.02	0.01	1.96	.16
Marital Status ^c	-0.78	0.44	3.12	.08
Length of Cohabiting Relationship	-0.04	0.02	2.52	.11
Income	-0.01	0.07	0.01	.92
Child Gender ^d	0.11	0.42	0.07	.80
Child Age	0.07	0.17	0.15	.70
Presence of Prior Parent-Child Destructive Conflict				
One time point prior	-0.37	0.59	0.39	.53
Two time points prior	0.09	0.52	0.03	.86
Three time points prior	1.33	0.27	23.58	<.001
Model 2: The Moderating Effect of Regulation on Spillover Across Two Time Periods				
Intercept	-2.67	2.10	1.62	.20
Interaction Effect and Main Effects				
Presence of Destructive Marital Conflict X Regulation	-0.45	0.44	1.06	.30
Presence of Destructive Marital Conflict	-0.17	0.44	0.16	.69
Regulation	-0.13	0.15	0.74	.39
Covariates				
Respondent Gender ^a	0.46	0.52	0.78	.38
Respondent Race ^b	0.91	0.37	6.09	.01
Respondent Age	-0.02	0.02	0.96	.33
Marital Status ^c	-0.75	0.42	3.22	.07
Length of Cohabiting Relationship	-0.04	0.02	2.93	.09
Income	-0.02	0.07	0.09	.76
Child Gender ^d	0.02	0.37	0.002	.96
Child Age	0.09	0.17	0.26	.61
Presence of Prior Destructive Parent-Child Conflict				
One time point prior	-0.21	0.52	0.17	.68
Two time points prior	0.15	0.48	0.10	.75
Three time points prior	1.40	0.29	23.833	<.001

Table 15 continued

Model 3: The Moderating Effect of Regulation on Spillover Across One Full Day	B	SE	Wald Chi-Square[1]	p
Intercept	-1.90	2.24	1.07	.30
Interaction Effect and Main Effects				
Presence of Destructive Marital Conflict X Regulation	-0.08	0.27	0.07	.79
Presence of Destructive Marital Conflict	-0.50	0.49	1.07	.30
Regulation	-0.23	0.15	2.23	.14
Covariates				
Respondent Gender ^a	0.12	0.67	0.03	.86
Respondent Race ^b	0.95	0.43	4.87	.03
Respondent Age	-0.03	0.02	3.21	.07
Marital Status ^c	-1.01	0.51	3.88	.05
Length of Cohabiting Relationship	-0.04	0.02	1.99	.16
Income	-0.02	0.07	0.05	.82
Child Gender ^d	0.16	0.42	0.03	.86
Child Age	0.09	0.18	0.26	.61
Presence of Prior Destructive Parent-Child Conflict				
One time point prior	-1.32	0.98	1.81	.18
Two time points prior	-0.22	0.49	0.20	.66
Three time points prior	1.23	0.31	15.74	<.001

Procedure is modeling ^a males (respondent), ^b whites, ^c single and living with a partner, and ^d males (child).

Table 16

The Moderating Effect of Regulation on the Spillover in Constructive Conflict from the

Marital Relationship to the Parent-Child Relationship

Variable	Parameter Estimates			
	B	SE	Wald Chi-Square[1]	<i>p</i>
Model 1: The Moderating Effect of Regulation on Spillover across One Time Period				
Intercept	-2.11	1.66	1.62	.20
Interaction Effect and Main Effects				
Presence of Constructive Marital Conflict X Regulation	0.11	0.37	0.09	.77
Presence of Constructive Marital Conflict Regulation	0.95	0.31	9.24	.002
Regulation	-0.03	0.11	0.07	.80
Covariates				
Respondent Gender ^a	-0.08	0.32	0.07	.80
Respondent Race ^b	0.33	0.22	2.15	.14
Respondent Age	-0.003	0.01	0.04	.97
Marital Status ^c	-0.25	0.32	0.61	.43
Length of Cohabiting Relationship	-0.03	0.01	3.78	.05
Income	0.09	0.04	5.41	.02
Child Gender ^d	-0.34	0.28	1.52	.22
Child Age	0.03	0.13	0.07	.80
Presence of Prior Parent-Child Constructive Conflict				
One time point prior	-0.15	0.21	0.53	.47
Two time points prior	0.27	0.24	1.21	.27
Three time points prior	0.93	0.19	23.16	<0.001
Model 2: The Moderating Effect of Regulation on Spillover Across Two Time Periods				
Intercept	-1.08	1.83	0.35	.56
Interaction Effect and Main Effects				
Presence of Constructive Marital Conflict X Regulation	0.14	0.25	0.31	.58
Presence of Constructive Marital Conflict Regulation	0.17	0.25	0.50	.48
Regulation	-0.02	0.12	0.04	.85
Covariates				
Respondent Gender ^a	0.28	0.38	0.55	.46
Respondent Race ^b	0.35	0.24	2.09	.15
Respondent Age	-0.002	0.01	0.03	.87
Marital Status ^c	-0.35	0.34	1.05	.31
Length of Cohabiting Relationship	-0.03	0.02	4.37	.04
Income	0.09	0.04	3.82	.05
Child Gender ^d	-0.21	0.30	0.50	.48
Child Age	-0.05	0.14	0.11	.75

Table 16 continued

Model 2: The Moderating Effect of Regulation on Spillover Across Two Time Periods	B	SE	Wald Chi-Square[1]	p
Presence of Prior Constructive Parent-Child Conflict				
One time point prior	-0.04	0.20	0.04	.85
Two time points prior	0.35	0.23	2.26	.13
Three time points prior	0.86	0.20	19.63	<0.001
Model 3: The Moderating Effect of Regulation on Spillover Across One Full Day				
Intercept	-1.44	1.72	0.70	.40
Interaction Effect and Main Effects				
Presence of Constructive Marital Conflict X Regulation	0.005	0.28	0.00	.99
Presence of Constructive Marital Conflict Regulation	0.76	0.25	9.36	.002
Regulation	0.001	0.11	0.00	.99
Covariates				
Respondent Gender ^a	-0.12	0.34	0.12	.73
Respondent Race ^b	0.29	0.24	1.53	.22
Respondent Age	-0.003	0.01	0.05	.83
Marital Status ^c	-0.36	0.32	1.21	.27
Length of Cohabiting Relationship	-0.03	0.01	4.35	.04
Income	0.10	0.04	5.47	.02
Child Gender ^d	-0.30	0.27	1.16	.28
Child Age	-0.01	0.13	0.01	.92
Presence of Prior Constructive Parent-Child Conflict				
One time point prior	-0.27	0.23	1.36	.24
Two time points prior	0.16	0.26	0.35	.56
Three time points prior	0.79	0.21	14.69	<0.001

Procedure is modeling ^a males (respondent), ^b whites, ^c single and living with a partner, and ^d males (child).

Appendix J: IRB Approval

Office for Research
Institutional Review Board for the
Protection of Human Subjects

THE UNIVERSITY OF
ALABAMA
R E S E A R C H

January 23, 2012

Rachel Baden
Department of Psychology
College of Arts and Sciences
Box 870348

Re: IRB Protocol # 10-003-R2: "Family Interactions Study"

Dear Ms. Baden:

The University of Alabama Institutional Review Board has granted approval for your renewal application for one year. Your application has been given expedited approval according to 45 CFR part 46. Approval has been given under expedited review category 8 as outlined below:

(8) Continuing review of research previously approved by the convened IRB as follows:

- a. where (i) the research is permanently closed to the enrollment of new subjects; (ii) all subjects have completed all research-related interventions; and (iii) the research remains active only for long-term follow-up of subjects; or*
- b. where no subjects have been enrolled and no additional risks have been identified; or*
- c. where the remaining research activities are limited to data analysis.*

Your application will expire on January 22, 2013. If the study continues beyond that date, you must complete the IRB Renewal Application. If you modify the application, please complete the Modification of an Approved Protocol form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, please complete the Request for Study Closure form.

Should you need to submit any further correspondence regarding this application, please include the assigned IRB protocol number.

Good luck with your research.

Sincerely,



Director & Research Compliance Officer
Office for Research Compliance
The University of Alabama

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