CHILD AGENCY, MARITAL CONFLICT, AND CHILD MENTAL HEALTH

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Abstract

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Addressing a gap in study of reciprocal relations between marital conflict and children, this project is concerned with examining children’s agency, or intentional influence, in the marital relationship. The processes by which marital conflict leads to child agency, the impact of children’s agency on marital conflict, and how children’s agency relates to child adjustment or maladjustment over time are the focus of this project. Consistent with emotional security theory (EST, Davies & Cummings, 1994) and clinical theory and research, this research advances previous work by operationalizing and examining the independent contributions of agentic behavior, behavioral dysregulation, and perceptions of agency to subsequent marital conflict; examining links between behavioral responses, marital conflict, and mental health over time; and testing developmental change in children’s behavioral responses to conflict.

Participants were 236 families, tested in a three-wave, multi-method, multi-informant design. Results indicated that marital discord predicted high levels of children’s agentic behavior and behavioral dysregulation, and that children’s negative emotional reactivity fully mediated relations between marital discord and agentic behavior and behavioral dysregulation. Tests of effects on subsequent marital discord supported the notion that agentic behavior predicts low levels of subsequent marital
discord. In contrast, behavioral dysregulation predicted high levels of subsequent discord, and perceived agency did not predict later marital functioning when tested in a model that included agentic behavior and behavioral dysregulation.

Tests of correlations between children’s concurrent behavioral responses, perceived agency, and mental health suggested that agentic behavior is positively associated with prosocial behavior, whereas behavioral dysregulation appears to be positively linked with adjustment problems, and perceived agency is unrelated to mental health. Longitudinal analyses were consistent with these relations, and revealed that behavioral dysregulation predicts subsequent adjustment problems, but that adjustment problems do not predict subsequent behavioral dysregulation. Moreover, agentic behavior was not linked with prosocial behavior over time.

Finally, analyses of developmental change suggested that children’s behavioral and emotional responses to conflict decrease with increasing age, and predictors of interindividual differences in change were inconclusive. Results are discussed in terms of the emotional security hypothesis and the functionalist perspective on emotions, with implications for research on family relations.
DEDICATION

I dedicate my dissertation to my husband, Paul Schermerhorn, and to our children, Max and Will Schermerhorn, for all of the love the three of them have given me.
CONTENTS

ACKNOWLEDGMENTS...........................................................................................................v
INTRODUCTION......................................................................................................................1
METHOD...............................................................................................................................41
RESULTS.............................................................................................................................51
DISCUSSION........................................................................................................................65
REFERENCES......................................................................................................................76
APPENDIX A: MSSB STORY STEMS..................................................................................90
APPENDIX B: AGENTIC BEHAVIOR ITEMS RATING QUESTIONNAIRE......................92
APPENDIX C: TABLES.........................................................................................................94
APPENDIX D: FIGURES......................................................................................................101
FIGURES

Figure 1. Boxplots Representing the Distributions of the Agentic Behavior Scores at Each Time Point. 102

Figure 2. Direct Effects of Marital Discord on Agentic Behavior and Behavioral Dysregulation. 103

Figure 3. Negative Emotional Reactivity Mediating Effects of Marital Discord on Children’s Behavioral Responses. 104

Figure 4. Effects of Children’s Behavioral Responses on Marital Discord. 105

Figure 5. Correlations between Latent Variables Representing Children’s Behavioral Responses and Mental Health. 106

Figure 6: Longitudinal Relations between Agentic Behavior and Prosocial Behavior. 107

Figure 7: Longitudinal Relations between Behavioral Dysregulation and Internalizing and Externalizing Behavior. 108

Figure 8: Longitudinal Relations between Behavioral Dysregulation and Prosocial Behavior. 109

Figure 9: Developmental Change in Children’s Responses to Marital Discord: An Illustrative Set of Ten Cases. 110

Figure 10. Relation between Number of Waves and Power for Different Values of Rho and Delta. 111
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INTRODUCTION

Marital conflict is a significant predictor of children’s mental health. Previous research has documented the effects of marital conflict on numerous facets of children’s functioning. For example, researchers have documented the effects of marital conflict on children’s internalizing and externalizing behavior and social functioning (see Cummings, 1994 for a review). Although externalizing behaviors are the most common adjustment problem linked with destructive marital conflict, other forms of adjustment problems have also been noted (Emery, Fincham, & Joyce, 1987).

However, less is known about the processes by which marital conflict and child mental health are related. Recent research on the effects of parenting and marital conflict on children’s mental health has begun to focus on the processes underlying these relationships (Cummings & Davies, 2002; Davies, Harold, Goeke-Morey, & Cummings, 2002). A process-oriented perspective on family functioning, emphasizing the mechanisms whereby family members and processes affect each other, emphasizes the bi-directionality of parent-child relationships (Cummings, Davies, & Campbell, 2000; Kuczynski, Harach, & Bernardini, 1999; Kuczynski, Marshall, & Schell, 1997; Lytton, 2000). Consistent with transactional perspectives on human development (Sameroff, 1975), children are explicitly regarded in these models as active agents in their own development in the context of family influences (Cummings et al., 2000). Preliminary analyses indicate that children are agents of change in the marital relationship (Schumer, Schmer, Cummings, & Davies, in press).
A family systems perspective (Cox & Paley, 1997) emphasizes family members’ reciprocal influence on one another. It is increasingly recognized that the family should be viewed as an organized whole, consisting of multiple, interacting subsystems (Cox & Paley, 2003). Empirical research lends support to the notion that children are not passive recipients of parenting, but rather, active participants in parent-child relationships (Emery, Binkoff, Houts, & Carr, 1983; Maccoby, 1984; Stifter, 2003), and that children elicit parenting (Cole, 2003). For example, Kerr and Stattin (2003) found that in families with adolescents, parenting styles appear as reactions to, rather than predictors of, delinquency.

However, the notion of children’s agency in the family has been little articulated, including the ways in which children affect broader family functioning, including interparental relations (Maccoby, 1984). Little is known about whether children are effective agents in influencing marital conflict over time. Moreover, examination of children’s agency as a process in the family context is needed to elucidate relations between marital conflict and children’s mental health. Children’s effects on subsequent marital conflict likely represent an important, and often overlooked, area of family functioning, particularly as it pertains to ensuing child mental health. Dunn (1997) also highlighted the need for examination of bidirectionality over time, particularly in terms of stability of differences between dyads over time in the balance of control. Research in this area also holds promise for helping clinicians better understand family interaction patterns and functioning. Nonetheless, relatively little research has examined children as active participants in the interparental relationship. Recent work has advanced the notion that not only does the marital relationship affect children, but also that child behaviors in
the context of marital discord may influence later marital functioning (Schermerhorn et al., in press).

The current study contributes to a better understanding of family process, especially interrelations between marital conflict and child agency. As one of the first studies to explore both sides of this transactional process, the current study has several interrelated aims. The first aim is to examine links between interparental discord, negative emotional reactivity, and children’s behavioral responses to marital discord. These two mechanisms are part of a complex transactional process in the family. The second aim is to examine links between children’s behavioral responses and subsequent interparental discord. The present study advances current understanding of this process, that is, understanding of how child responses that partly stem from marital discord may feed back to influence marital processes. A third aim is to further examine effects of marital conflict on children’s mental health, and the final aim is to examine developmental change in patterns of interaction and influence. This work advances family process models beyond outmoded views of children as passive recipients of exposure to marital conflict.

Prior to Bell’s (1968; 1971; 1979) seminal work, research on family relations assumed a unidirectional (parent to child) model for examining influences on children’s development emerging from parent-child relations, with children viewed as the passive recipients of socialization efforts initiated and enacted by the parents. Patterson’s (1997) review of studies examining associations between parent and child behaviors suggested causal effects of child behavior on parents. Several studies have emphasized bidirectional models of influence on children’s socialization (Powers, Hauser, Schwartz, Noam, & Jacobson, 1983; Maccoby, 1984; Lytton, 2000), with current theory further emphasizing
the need to understand the role of children as agents in the family (Kuczynski et al., 1997; Kuczynski & Hildebrandt, 1997). Nonetheless, although the role of children’s emotional, cognitive and other processes in their own development is acknowledged, and it is generally accepted that children theoretically have significant effects on family functioning, limited research has specifically focused on the role of children as active agents in the functioning of families and in their own development. Moreover, relatively little is known about the ways in which these bidirectional relations involving children develop and change over time (Maccoby, 1984).

From a Unidirectional View to a Bidirectional View

A long-standing assumption in socialization research was that the child’s effects on the parent-child system could be attributed to biological characteristics of the child (Bell, 1971). Over the past several decades, views on socialization and moral training have increasingly recognized the bidirectionality of the parent-child relationship (Kuczynski & Hildebrandt, 1997). Thus, child effects are now seen as important in their own right, independent of the issue of biology (Bell, 1971; 1979). Beginning in infancy, children are viewed as contributing to the parent-child relationship, with effects varying as a function of their cognitive development, their temperament, and the experiences that they bring to the relationship (Kahn & Antonucci, 1980).

The relationship between parent and infant is a developing one, with each member of the relationship affecting the other member over time. Moreover, the effect of a particular child characteristic or behavior on the parent-child relationship may depend on the level of development of the child and the parent (Schaffer, 1999). For example, behaviors that are regarded as neutral or even positive in infancy may be viewed
negatively 10 years later (e.g., thumb sucking). Furthermore, children direct parent-child interactions as well as the other way around. For example, interactions between mothers and their infants can be controlled by the infant's mood as well as by such infant behaviors as smiling and crying.

Child effects on parent-child interactions may also be due to characteristics that are attributable to past experiences, including parent-child interaction histories. For example, two infants may be very similar in temperament initially, but may become quite different, depending on how well their parents adapt to their child's temperament (Schaffer, 1999). Thus, parental behaviors from previous interactions influence children's expectations of their parents' future behavior. These expectations, in turn, influence children's behavior in subsequent interactions with their parents; that is the pattern of effects is transactional (Bowlby, 1973). Lollis and Kuczynski (1997) have emphasized the range of contexts in which parent-child interactions take place (e.g., play, caregiving, teaching), noting that parent-child interactions occurring in one context may affect interactions occurring in another context.

**Defining Agency**

Agency is to be distinguished from bidirectionality. Agency is conceptualized in terms of what children think and do in bidirectional interactions with others (Kuczynski et al., 1999), and as self-initiated, intentional action (Cummings & Schermerhorn, 2003). Bidirectional effects, in contrast, may include any behavioral, psychological, or biological processes that alter relations between two people, but they are not necessarily self-initiated or intentional. Bidirectionality is necessary for the demonstration of agency and may suggest the possibility of children's exercise of agency, but is insufficient in
itself for demonstration of children's agentic behavior. That is, agency makes stronger assumptions about the child’s role in marital conflict, including the motivation, organization, and plans that underlie children’s responding to marital conflict.

Children as Agents of Change within Family Relationships

This section concerns evidence regarding children’s agency in various family relationships, and factors that affect children’s agency, including child development. Given the early stage of research in this area, inferences pertaining to agency may be drawn from studies that do not specifically operationalize agency, but whose findings or concepts are nonetheless related to notions of agency.

Parenting and Child Agency

Bidirectionality in parent-child interactions is affected by children’s developmental level (Maccoby, 1984), including physical growth, language development, decreasing impulsivity with increasing age, the development of conceptions of others, conceptions of self, cognitive executive processes, and autonomy. Interrelations between developmental level and parent-child relations have implications for changes in the extent and form of children’s exercise of agency and awareness of their own agency.

With increases in language proficiency, children's interactions with their parents change (Maccoby, 1984). Furthermore, children become better able to communicate with family members and increasingly aware of others' points of view. Children become capable of altering the manner in which they portray themselves to others (Newson & Newson, 1976).
These changes enable children to synchronize their own activities with those of their parents, and potentially to develop more sophisticated and successful agentic behavior. Moreover, school-age children are capable of evaluating themselves objectively, and are more likely to evaluate themselves in terms of psychological characteristics, such as their behavior and intelligence, as opposed to simply objective characteristics, like being attractive or being involved in particular activities (Maccoby, 1984). This capacity for objective evaluation likely fosters a greater self-awareness of one's agency vis-a-vis interactions with family members.

Concurrent with these changes in children's interactions with family members, children's cognitive development allows their parents to increasingly use verbal instructions and explanations in place of physical demonstrations, and to make more sophisticated verbal responses to their children's requests. With maturity, children are more likely to be influenced by their parents' petitions to their sense of fairness, with accompanying decreases in emphasis on reward and punishment. Furthermore, parents of older children can effectively discipline by revoking their children's privileges, given older children's greater understanding of mutual obligations. Older children can also be influenced by their parents' emphasis on what other people will think of their behavior. In summary, children's development of agency in the family must be considered in the context of bidirectional relationships with parents and other family members (Maccoby, 1984).

*Compliance, Parenting, and Children's Agentic Behavior*

Previous research has laid a foundation for studying child effects on parents (Holden, Thompson, Zambarano, & Marshall, 1997; Kuczynski & Hildebrandt, 1997;
Kuczynski et al., 1997; Maccoby, 1984; Patterson, DeBaryshe, & Ramsey, 1989; Powers et al., 1983; Shaw & Bell, 1993; Stice & Barrera, 1995; Stifter, 2003), documenting the importance of further exploring child effects models. Children engage in different forms of agentic, or efficacious, behavior at different developmental points. Between 1 ½ to 3 ½ years of age, passive noncompliance, in which children do not acknowledge the parent’s request, and direct defiance, that is, overtly refusing to cooperate with parents’ requests, undergo a decline (Kuczynski, Kochanska, Radke-Yarrow, & Girnius-Brown, 1987). Both passive noncompliance and direct defiance continue to decrease through age 5 (Kuczynski & Kochanska, 1990). Conversely, the incidence of negotiation as an exercise of agency, in which the child proposes a bargain with the parent, increases with age. With regard to noncompliance, children’s declining reliance on aversive noncompliance strategies, and greater use of more skillful noncompliance strategies, reflect children’s desires for autonomy within the context of increasing social skill (Kuczynski et al., 1987; Kuczynski & Kochanska, 1990). In a study of children’s effects on maternal mood, Covell and Abramovitch (1987) found that the majority of children perceived themselves as being capable of altering their mothers’ mood, endorsing behavioral, gift-giving, and verbal strategies for altering maternal mood.

With regard to corresponding developmental changes in parents’ strategies in response to changes in children’s exercise of agency, physical interventions decrease, and verbal interventions increase, from age 1 ½ to 3 ½ (Kuczynski et al., 1987). As children get older, their parents rely more on persuasive strategies. Kuczynski et al. hypothesized that this may result from parents’ desires to avoid direct confrontation, which also becomes less likely as children become more prone to negotiation as exercise of agency. Parents’ reduced reliance on overt control strategies may support their
children’s increasing independence. Parents also decrease their use of distraction and increase their use of verbal reprimands as children get older (Kuczynski et al., 1987), suggesting that as children get older their parents become increasingly focused on teaching them to behave well. Supporting a bidirectional model for individual differences in children’s agentic behavior, negotiation is more evident among children whose parents used indirect and persuasive strategies, whereas children whose parents used direct control strategies are more likely to engage in direct defiance (Kuczynski et al., 1987).

Focusing on the child’s role in evoking parenting, Cole (2003) examined maternal emotional reactions to their children during a laboratory procedure involving a frustrating wait. Results indicated that maternal emotional reactions predicted children’s behavior problems two years later. In particular, maternal anger in response to child emotions predicted higher levels of subsequent behavior problems, even controlling for earlier levels of behavior problems.

Holden, Thompson, Zambarano, and Marshall (1997) found evidence that children are efficacious in bringing about change in their parents’ discipline styles. In a study of mothers of 3 year-olds, the majority of mothers experienced a change in attitude toward corporal punishment, becoming less inclined to spank their children. Mothers cited their children’s negative responses to spanking as the primary stimulus for the change. Furthermore, in a longitudinal study of associations between parent and child effects (Eisenberg et al., 1999), children’s externalizing negative emotion at ages 6 – 8 predicted greater parental distress and punitive reactions at ages 8 – 10. Moreover, children’s attention focusing and behavioral regulation at ages 6 – 8 predicted fewer maternal punitive reactions at ages 8 - 10. Focusing on child effects, in a study of
children’s effects on maternal mood, Covell and Abramovitch (1987) found that the majority of children perceived themselves as being capable of altering their mothers’ mood, endorsing behavioral, gift-giving, and verbal strategies for altering maternal mood. The majority of their mothers concurred that their children would be capable of altering their mood. Covell and Miles (1992) examined children’s beliefs about strategies to lessen parental anger. Hypothetical scenarios were presented involving parental anger over a child misdeed, a bad day at work, and interparental conflict. Children were asked whether they thought the child in the scenario could lessen the parent’s anger, and if so, what the child could do to lessen parental anger. Most of the strategies children endorsed involved intervening directly or comforting the parent. Children were more likely to endorse direct intervention strategies for hypothetical scenarios in which they caused parental anger, compared with scenarios in which parental anger was caused by difficulties at work or interparental conflict. Finally, Stice and Barrera (1995) found that perceived parental support and control predict subsequent adolescent substance use, and at the same time, adolescent substance use predicts subsequent lower levels of perceived parental support and control.

**Parent-child Conflicts and Children’s Autonomy and Agency**

Parent-child conflict is one domain in which children have opportunities for exercising more agency within the family. Topics of parent-child conflict change with age. For example, families of mid-adolescents (ninth- and tenth-graders) and late-adolescents (eleventh- and twelfth-graders) were more likely to experience parent-child conflict over chores, compared with families of preadolescents. In addition, families
with early-adolescents (seventh- and eighth-graders) experienced more conflict over academic issues, compared with families of children in other age groups. Whereas families with children across this age span agreed that their conflicts typically involved routine, commonplace activities, they disagreed about the meaning of those conflicts. Parents tended to interpret the conflicts in terms of transgressions of conventional expectations, whereas children tended to endorse personal choice interpretations. Interestingly, whereas boys’ understanding of their parents’ conventional interpretation was positively associated with boys’ age, girls evidenced less understanding of their parents’ conventional interpretations during early adolescence, compared with preadolescence and late adolescence. Thus, children’s moral development affects children’s motivations and dispositions regarding exercise of agency, which, in turn, affects parent-child relations (Smetana, 1988).

*Attachment and Children’s Agency*

*Emotional Security in Parent-child Relationships*

Attachment refers to the emotional bond that forms between parents and children. Securely attached children are more likely to be confident in exploring the environment, and are more likely to be confident that their signals to their parents will elicit desired reactions (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1973). Moreover, bidirectional relations are evident between children’s patterns of agency and parental behaviors in the context of parent-child attachment security. Insecurely attached children are more clingy, demanding, resistive, and whiny than securely attached children. At the same time, their parents are more irritable, which, in turn, causes the
negative behavior to worsen. Such phenomena illustrate the transactional nature of parent-child attachment relations (Ainsworth et al., 1978).

Moreover, children with disorganized/disoriented attachments to parents, which are associated with inconsistent, unpredictable or abusive parenting, or parental psychopathology, are more likely to make attempts to exercise agency over their parents’ behavior contexts that elicit stress, such as separation from, and reunion with, the parent. That is, insecurely attached children are more likely to engage in relatively extreme attempts to control the parents’ behavior, either by controlling the parent through punitive behaviors, or by controlling the parent through caregiving behaviors.

The emotional security that children derive from parent-child relationships may have implications for the extent to which children feel compelled to attempt to influence family members engaging in behaviors that threaten their sense of security. In other words, children’s emotional security may affect children’s motivation to engage in agentic behavior intended to influence family members to behave in ways that increase the child’s sense of security. In addition, children’s attachment security may influence children’s confidence in acting upon or exploring the environment, or their confidence in the emotional availability of family members when they need them (Waters & Cummings, 2000). In other words, their sense of agency, or the degree to which they feel confident that they are capable of engaging in behaviors that will elicit more supportive behavior from other family members may be affected by their attachment security.

Thus, a heightened need to engage in agentic behavior in the context of the attachment relationship is stimulated by relationships with parents that are relatively unpredictable or uncertain (Cummings & Schermerhorn, 2003). That is, when parents
do not provide a secure relationship for children (e.g., attachment), children may respond by becoming more proactive than would otherwise be expected in order to create such characteristics in their relationships with parents. This instance provides another example of how being an agent and feeling like an agent do not necessarily co-occur.

Sibling Relationships and Children's Agency

Everyday interactions with siblings provide a common opportunity for children to develop understanding and capacity to relate to others, especially in early childhood. This capacity may serve as a prelude to the exercise of agency in other social contexts.

Children’s Talk

Cognitive development produces changes in children’s talk and social understanding, facilitating more frequently successful, agentic interactions with others. Children’s talk between the ages of 2 and 6 suggests an increasing ability to understand others, which can serve as a foundation for the development of enhanced skills for the exercise of agency. Dunn, Creps, and Brown (1996) reported that mothers engaged in more reflective commentary (i.e., reflecting/commenting on events, behavior, or inner states of others, or asking for more information) than children when children were 2 - 3 years of age. However, between 4 and 6 years of age the proportion of both mothers’ and children’s talk including reflective commentary increased, so that at the end of that time the proportion of reflective commentary in both parties’ speech was similar. At the same time, the proportion of children’s self-interested talk with mothers decreased. Similarly, children’s talk with siblings showed increases in reflective commentary, and
decreases in self-interested talk. Consistent with a transactional model, the characteristics of the children mattered. Siblings engaged in more reflective commentary with children evidencing greater ability to understand the emotions and cognitions of others. These findings highlight the utility of studying the development of agency during this age range.

**Understanding of Others’ Feelings**

Observations of children’s behavior in naturalistic settings indicates that children understand the hopes and goals of others, and that expressions of intimacy and self-disclosure appear much earlier than previously thought (Dunn, 1996). Such social-cognitive development may be significant to children’s development of more successful agentic behavior in the family, since the ability to persuade others is fostered by a capacity to understand others’ thoughts and desires. Even toddlers demonstrate understanding of others’ feelings and motivations, teasing older siblings, making sophisticated requests for their mother’s intervention in sibling conflicts, and responding to others’ distress with comforting or intervention (Cummings, Hollenbeck, Iannotti, Radke-Yarrow, & Zahn-Waxler, 1986; Cummings, Zahn-Waxler, & Radke-Yarrow, 1981; Dunn & Munn, 1985; Zahn-Waxler, Radke-Yarrow, & King, 1979).

Children as young as two years of age are sensitive to the emotional experiences of their family members, and base their behavioral responses on their understandings of these experiences. During the second year of life, children show considerable emotional behavior, expressing anger and happiness with siblings, mothers, and other family members (Cummings et al., 1986; Cummings, Zahn-Waxler, & Radke-Yarrow, 1981; Zahn-Waxler et al, 1979). Notably, in family conflicts in which family members express
intense negative affect, children were most likely to watch or become distressed (Cummings et al., 1981), whereas in conflicts in which others laughed, children were most likely to laugh. Moreover, expressions of affection between family members were greeted by efforts to join in affection and expressions of pleasure (Cummings et al., 1981). If siblings and mothers both expressed neutral affect, children were likely to watch, imitate their siblings, or ignore the conflict (Dunn & Munn, 1985).

**Sibling Conflict**

Although it might be expected that children’s relationships would become more harmonious as a result of the development of these abilities, such as the abilities to take another’s perspective, negotiate, and compromise, relationships may actually become less harmonious (Cummings & Schermerhorn, 2003). Thus, the capacity for more forceful agentic behavior is not necessarily associated with greater interpersonal harmony. Assuming that agentic behavior reflects children’s intentions, children may not always wish to achieve peaceful or fair solutions in asserting their will. Children may use these abilities to “win” conflicts, rather than settling for compromises. Nonetheless, winning may well reflect successful agentic behavior, or, at the least, perfectly well reflect the intentions of children’s exercise of agency.

Children have been shown to select different strategies in conflict situations, depending on the person with whom they are in conflict (e.g., friend, sibling, or parent). For example, Dunn, Slomkowski, Donelan, and Herrera (1995) reported that at 4 years of age children made more other-oriented statements in conflicts with their friends, compared with conflicts with their mothers or siblings. They also made more self-
oriented statements in conflicts with friends than siblings, and reasoned argument was least likely with siblings.

Perlman and Ross (1997) examined sibling conflicts in which parents intervened and the eventual outcome was at odds with the parents’ initial position. In these situations, children intentionally attempt to influence their parents, altering their parents’ responses to the sibling conflicts; therefore, such situations evidence exercise of agency. In conflicts in which the parents did not prevail, the children were more engaged, justified themselves more, and ignored their siblings less than in conflicts in which the parents did prevail. Parents did not tend to change positions out of inconsistency, but instead as a result of their children’s influence, reasoning and involvement in conflict.

**Gender Differences**

The research on family relations has yielded inconsistent findings regarding gender, with many studies failing to find gender differences (Davies, Harold, et al., 2002; Cassidy & Shaver, 1999). Furthermore, Schermerhorn et al. (in press) found that gender did not moderate relations between marital conflict, negative emotional reactivity, and perceived agency. In a study of adults’ relationships, however, Suh, Moskowitz, Fournier, and Zuroff (2004) found that men exhibit more agentic behavior (defined there as efforts directed toward mastery and power) in male-male relationships, whereas women in female-female relationships exhibit more communal behavior. However, in male-female relationships, women were more agentic, and men were more communal. These findings suggest possible gender differences in agentic behavior. One possibility is that the form of children’s behavioral responses to marital discord (including those responses that are intended to reduce marital conflict) may vary as a function of child
gender. That is, females may be more favorably disposed toward communal behaviors (e.g., parent-comforting behaviors), and males more inclined toward agentic behaviors as defined by Suh et al. (e.g., direct requests for reductions in marital conflict, exhibition of dysregulated behaviors consistent with Emery, 1982).

Children’s Agency Beliefs

*Developmental Change over Time in Children’s Agency Beliefs*

Nicholls (1978) found that before age 11 or 12, children believe that children who work hard are smart; in other words, prior to age 11, ability is inferred from effort. Around age 11, children begin to differentiate between ability and effort, and attribute more intelligence to children who invest less effort, but achieve equal performance. Skinner (1990) also reported that a shift from effort-orientation toward ability-orientation begins to emerge around ages 11 and 12. Skinner found that around ages 9 and 10, children begin to attribute academic success or failure to a wider range of factors, including factors external to them, such as powerful other people. These findings suggest that younger children may have greater perceptions of agency than older children because younger children attribute performance to something they have control over (effort), whereas older children attribute performance to something over which they do not have control (ability). If younger children are more agentic, the implications for parent-child interactions in that age group should be explored further.

Chapman, Skinner, and Baltes (1990) hypothesized that agency, control, and means-ends beliefs should be correlated with cognitive performance in 8-, 10-, and 12-year-olds. They found that children who believed they could put forth enough effort to
perform well on cognitive tasks did perform well on those tasks, beginning at age 10. On the other hand, beginning around age 10, children who believed they possessed enough ability to perform well on cognitive tasks did perform well on those tasks, beginning at age 10.

Agency Beliefs and Performance

Agency beliefs are associated with interindividual differences in performance, particularly in academic arenas. Dweck and Leggett (1988) distinguished between children who view themselves as “helpless” and “mastery-oriented” children. Avoidance of challenge and decreased effort in response to challenge are typical of the helpless pattern. Perhaps not surprisingly, mastery-oriented children pursue challenges and endeavor to perform well even on challenging tasks. Mastery-oriented children generally achieve greater performance, compared with children who exhibit the helpless pattern. Children who are oriented toward ability and performance-evaluation, and who are high in ability tend to be mastery-oriented, and are consequently more likely to experience academic success. Conversely, children who are oriented toward ability and performance-judgment, and who are low in ability tend to feel helpless, and are consequently more likely to experience academic failure. However, children who are oriented toward effort and learning tend to be mastery-oriented, regardless of whether they are high or low in ability, and consequently are more likely to experience academic success (Dweck & Leggett, 1988).

Schmitz and Skinner (1993) found that children with greater perceived control exerted more effort on math and German assignments, but did not require as much time to complete the tasks, compared with children experiencing lower perceived control.
However, on tests, children with greater perceived control did not need to exert as much effort, compared with children having lower perceived control. In general, the most successful children were those who exerted themselves more, needed less time to complete tasks, rated tasks as easier, had higher intelligence test scores, and had greater perceived control. Moreover, Skinner, Zimmer-Gembeck, and Connell (1998) reported a cycle in which perceived control affected children’s performance, which in turn, affected later perceived control.

Although this research was not conducted in the context of families, it has implications for understanding children’s agency in the family. First, if children perceive themselves as capable of obtaining certain outcomes in their families, they should be more likely to generate those outcomes (Cummings & Schermerhorn, 2003). This could have either a positive or a negative effect on the family, depending on the child’s particular goals. More specifically, a child’s sense of agency could have a very positive effect on the family if the child’s goals include wanting family members to get along better, or spend more time together doing fun things. In contrast, if the child’s goals are targeted at obtaining special favors or outcomes that benefit only the child, then a child’s sense of agency may have a negative effect on the family.

Children’s perceptions of agency do not originate solely with their parents (Cummings & Schermerhorn, 2003). The combination of particular child and family characteristics may tend to make individual children more, or less, likely to perceive themselves as agents, and these likely characteristics interact with the family environment to produce varying degrees of agency in children. Because a sense of agency appears to have an overall positive effect on children’s performance, parents may want to encourage agency in their children.
To summarize, children’s development is associated with changes in children’s cognitive constructions of agency. Moreover, children’s beliefs about their own agency are likely linked to their agency in the family. However, little is known about the implications of children’s cognitive constructions of agency for relations between family and children’s agentic behavior and sense of agency in these contexts.

Agency and Marital Conflict

As illustrated by these studies, child effects models are crucial for understanding the dynamics of parenting. Results of a recent study by Jenkins, Dunn, O’Connor, Rasbash, and Simpson (2005) lend support to the notion of bidirectional effects in the context of the marital relationship. Jenkins et al. found that, not only did marital conflict predict increases in children’s externalizing problems, but also children’s externalizing problems predicted increases in marital conflict. Moreover, when examining both directions of effect within the same model (marital-to-child, child-to-marital), both remained significant predictors of change, supporting the importance of examining both directions of influence. Using multilevel modeling, Jenkins et al. compared families in which the children’s average level of externalizing problems was high, medium, or low. They found that in families whose average level of externalizing was high, the higher the level of externalizing problems for any individual child within the family, the more marital conflict about that individual child increased during the period under observation. This study highlights the influence of child effects on the marital relationship. However, relatively little is known about the role of children as agents in contexts of interparental conflict, with only a few studies emphasizing the functional significance of child involvement in shaping the course of interparental conflict.
While there are many unanswered questions regarding child effects in general, even less is known about the role of children as agents in contexts of interparental conflict. However, previous research has laid the foundation for examining children’s agentic behavior in the context of interparental conflict. J. S. Cummings, Pellegrini, Notarius, and Cummings (1989) recorded children’s responses to friendly, angry, and reconciliatory interactions between their mother and an experimenter. They found that children were more likely to appear preoccupied with the interaction, express concern or seek support from their mother, or offer their mother support during angry interactions, compared with friendly or reconciliatory interactions. Moreover, children from homes with physically aggressive interparental conflict were more likely to offer support. Similarly, marital distress predicted concern and support seeking. Davies, Forman, Rasi, and Stevens (2002) also reported that child- and parent-reported marital conflict was associated with higher levels of child regulation of marital conflict. Results of an experiment by El-Sheikh and Cummings (1992) suggested that children who believed they had control over their exposure to interparental conflict experienced increased arousal and motivation to intervene in the conflict, compared with children who did not believe they had control over their exposure to conflict.

**Conceptualization of Agentic Behavior and Perceived Agency**

Agentic behavior is to be distinguished from perceived agency, consistent with Cummings and Schermerhorn (2003). Agentic behavior reflects children’s actions or behaviors intended to influence outcomes in the marital relationship, whereas perceived agency represents children’s feelings, plans, or motivations to influence outcomes in the family. The distinction between agentic behavior and perceived agency is analogous to
the distinction between performance and beliefs, or between behavior and impulses or cognitions about behaviors (Schermerhorn et al., in press).

Consistent with Davies and Cummings’ (1994) emotional security hypothesis, Schermerhorn et al. (in press) hypothesized that destructive marital conflict serves to increase children’s negative emotional reactivity, thereby motivating perceived agency, or agency impulses. Perceived agency may result in any of several responses that may influence marital conflict directly or indirectly, including (a) suppression of agency impulses, with no behavioral response, (b) expression of distress or concern that does not reflect a clearly evident plan to affect marital interactions (e.g., crying), (c) behavioral responses that do not display clear evidence of intentions to affect marital interactions (i.e., dysregulated behavior, such as aggressive behavior toward siblings), and (d) behavioral responses that are clearly agentic in their intentions (e.g., mediation).

Situational factors, such as safety concerns and the opportunity to act, may diminish children’s willingness to exercise agentic behavior. Consequently, Schermerhorn et al. (in press) suggested that perceived agency may provide a more revealing picture of children’s tendencies toward affecting marital conflict over time, which may or may not be reflected in what children actually do when faced with interparental conflicts. Accordingly, Schermerhorn et al. focused on perceived agency as a critical first step in advancing these theoretical issues. Extending Schermerhorn et al.’s initial work on perceived agency, the focus of the current research includes testing children’s actual behavioral responses to marital conflict as independent predictors of marital conflict. The current study also provides tests of the direct effect of perceived agency on marital conflict when controlling for behavioral responses. The
operationalization of these constructs in the Method section further clarifies distinctions between these constructs.

**Theory-driven Models for Agency**

Several theoretical models make predictions that children’s involvement in marital conflict increases as a function of exposure to marital conflict. Emery (1989) theorized that marital conflict increases children’s distress, particularly with repeated exposure to conflict, with distress motivating children to mediate in conflict, or to disrupt marital conflict in other ways (e.g., by acting out). Similarly, EST (Davies & Cummings, 1994) posits that marital conflict increases children’s negative emotionality, or emotional insecurity. Negative emotionality is conceptualized as reflecting emotional insecurity, with emotional insecurity, in turn, serving to motivate children’s impulses to mediate or in other ways reduce exposure (e.g., avoid) to marital conflict (Cummings & Davies, 1996). Impulses to regulate exposure to marital conflict are posited as a component process of emotional security as an organizational construct. For example, impulses to mediate or avoid conflict (e.g., leaving room, covering ears), are indicators that the goal of preserving emotional security is activated, and is also a means by which children respond towards maintaining or regaining that goal (Davies, Harold, et al., 2002).

Consistent with the emotional security hypothesis, it is proposed that negative emotional reactivity motivates children to respond agentically, as one mechanism for preserving emotional security (Schermerhorn et al., in press). Thus, the concept of agency is a logical extension of the predictions of the emotional security hypothesis.

Notably, many child behaviors in the context of marital conflict are not agentic, as they do not reflect an intention to influence the marital relationship (e.g., leaving the
Moreover, child responses to marital conflict that reflect low levels of threat to the security system (and low levels of agency) are theorized to predict positive child adjustment (Davies, Harold, et al., 2002). These responses include continuing initial activities and asking parents briefly about the topic of the conflict. However, these behaviors are not the focus of the current proposal.

Agency is conceptually related to, and distinguishable from, several other constructs that have been examined in the literature. Children’s responses to marital conflict have been conceptualized as coping responses (O’Brien, Margolin, John, & Krueger, 1991; Kerig, 2001), and indeed, agency and coping are not inconsistent. However, the agency conceptualization makes stronger statements about the direction of effects (i.e., child-to-parent), which is critical to recognizing children as active participants in the marital relationship (Cummings & Schermerhorn, 2003).

Several studies connect children’s perceived control with marital conflict. El-Sheikh and Cummings (1992) reported that children who believed they had control over exposure to conflict had higher levels of arousal and motivation to become involved in interparental conflict, compared with children who did not believe they had control over their exposure. Children who believed they could effectively manage their feelings of distress resulting from marital conflict exhibited fewer behavior problems, controlling for family stress level (Rossman & Rosenberg, 1992). Moreover, children’s appraisals of (Kerig, 1998a; Kerig, 1998b), and perceived control over (Kerig, 1998a), interparental conflict may ameliorate the effects of interparental conflict on children’s adjustment. However, there are fundamental distinctions between (perceived) control and (perceived) agency. The concept of control centers around managing, being in command of, and having power over. In contrast, the concept of agency centers around viewing the
individual as a catalyst, a stimulus for change. Viewing the child as having control over the marital relationship signifies that the child manages the parents; the marital relationship is within the child’s control. In contrast, viewing the child as an agent is consistent with the perspective that the child is one among several influences on the marital relationship, and may or may not ultimately have control over the parents (Schermerhorn et al., in press).

Thus, although involving relatively subtle differences, these constructs have important and different implications for models of children’s dynamic motivation and plans in response to marital conflict. Moreover, Cummings and Schermerhorn (2003) contended that perceived agency more effectively and clearly captures the spirit of the dynamic response processes outlined in current theory (e.g., the emotional security hypothesis), as well as better reflecting the fundamental nature of current notions about children’s reciprocity in family relationships.

Emery (1989) outlined a model for children’s agentic behavior in response to interparental conflict. First, interparental conflict creates distress for children. The distress motivates children to respond in some way to attempt to relieve the distress. Finally, Emery suggested that child responses that reduce interparental conflict are repeated.

According to the emotional security hypothesis, marital conflict impacts children by decreasing their emotional security (Cummings & Davies, 1996; Davies & Cummings, 1994), which motivates them to attempt to regulate exposure to marital conflict. In response to intense marital conflict, children may exercise agency with the goal of increasing their emotional security by attempting to alter, decrease, or end their
parents’ conflicts (e.g., mediation, comforting, taking sides, hostile responding) or by avoiding or minimizing exposure to marital conflict (Davies & Cummings, 1994; 1998).

The emotional security hypothesis is consistent with a functionalist perspective on emotion, in which emotion is viewed as an effort to influence the environment (Bretherton, Fritz, Zahn-Waxler, and Ridgeway, 1986; Campos, Mumme, Kermoian, & Campos, 1994), and emotion is used “to support adaptive, organized behavioral strategies” (Thompson, 1994, p. 25). Similarly, Emery (1989) theorized that marital conflict is distressing for children, particularly for those with substantial histories of exposure to destructive marital conflict. That distress then prompts children to attempt to reduce conflict in a variety of ways or, alternatively, results in elevated behavioral dysregulation. Relatedly, Adamson and Thompson (1998) found that children’s negative emotional responding was greater for parents’ conflictual interactions than for their friendly interactions, and that child-related conflicts elicited more negative emotionality than did money-related- or politics-related conflicts. Problem solving strategies (e.g., direct involvement) were the most commonly endorsed responses, regardless of the conflict topic. Notably, El-Sheikh and Cummings (1992) reported that children who believed they had control over exposure to conflict increased arousal and motivation to become involved in interparental conflict, compared with children who did not believe they had control over their exposure.

Consequently, children’s negative emotionality in the context of marital conflict is regarded as playing an important role in predicting children’s behavioral reactions, either agentic behaviors or dysregulated behaviors. Negative emotionality is expected to serve as a mediator of relations between marital discord and any behavioral reaction, either agentic behavior or behavioral dysregulation. Consistent with the assumption of a
functionalist perspective on emotions implicit in the emotional security hypothesis, Schermerhorn et al. (in press) reported empirical support for the notion that negative emotionality predicted children’s impulses to respond behaviorally and intervene (i.e. perceived agency) in the context of marital conflict.

Regarding children’s coping with marital conflict, Rossman and Rosenberg (1992) found that children who believed they could effectively manage their distress resulting from marital conflict exhibited fewer behavior problems, controlling for family stress level. Interestingly, in high-stress families, children who believed they could control their parents’ conflicts were more likely to have lower self-perceived competence, compared to children who did not believe they could control their parents’ conflicts.

Notably, exercise of agency and feeling like an agent may not always co-occur (Cummings & Schermerhorn, 2003). Children from high conflict homes have been reported to be more likely to intervene in their parents’ conflicts (J.S. Cummings et al., 1989), reflecting exercise of agency, or agentic behavior. However, high levels of marital conflict have been linked with decreases in children’s emotional security (Davies & Cummings, 1998). One explanation may be that children’s agentic behavior is not successful. Interparental conflicts that are unaffected by children’s interventions may lead children to perceive themselves as less agentic, reflecting diminished perceived agency (Cummings & Davies, 1994; Davies & Cummings, 1994), and fostering emotional insecurity.

When asked to rate the effectiveness of a variety of strategies to reduce parental anger in a hypothetical interparental conflict scenario, 4 – 9 year-olds were more likely than 10 – 12 year-olds to rate direct intervention in interparental conflict as effective (Covell & Miles, 1992). Covell and Miles found that parents of 4 – 6 year-olds were
more likely to indicate that direct intervention would be effective in reducing interparental anger, compared with parents of 7–12 year-olds. Thus, younger children’s use of direct intervention strategies might signal their negative emotional arousal, bringing about a reduction in parental anger, whereas parents of older children might perceive their children as better able to cope with interparental conflict.

Connecting children’s agency beliefs regarding the marital relationship with children’s mental health, Patenaude (2000) found that girls’ beliefs about their role vis-à-vis the marital relationship moderated the effect of exposure to marital conflict on their adjustment. Specifically, for girls who believed they should engage in a parentified role in the marital relationship, and for girls who believed they could control interparental conflict by engaging in parent-protecting behaviors, higher levels of marital conflict were associated with lower adjustment problems. In contrast, for boys with strong role responsibility beliefs, higher levels of marital conflict tended to be associated with more internalizing symptoms, although this effect was not significant. Patenaude (2000) suggested that for girls, perceptions of responsibility for, and control over, interparental conflict may have resulted in increased self-perceived competence, which may have protected them from adjustment problems. For boys, on the other hand, role responsibility beliefs tended to be detrimental, particularly in the context of high levels of destructive conflict.

Previous analyses investigated links between marital conflict, negative emotional reactivity, and perceived agency (Schermerhorn et al., in press). Results indicated that initial levels of destructive marital conflict predicted concurrent negative emotional reactivity, negative emotional reactivity predicted concurrent perceived agency, and initial levels of marital discord predicted subsequent destructive marital conflict. Notably,
the path from perceived agency to subsequent marital discord was also significant, but negative. That is, perceived agency predicted low levels of subsequent destructive marital conflict, controlling for initial levels of marital conflict.

There are multiple possible interpretations for these intriguing results regarding children’s influence on marital conflict. Given that planning is the first step towards behavioral responding, marital conflict may be reduced over time because children followed-up with active efforts at intervention. Another possible explanation is that parents are affected by being made aware of children’s concerns about the parents’ conflicts, which may be due to intervention behaviors, but may also be a function of children’s obvious difficulty with conflict. Beyond children’s intentional efforts to influence the marital relationship, parents are likely to be sensitive to their children’s indications that their conflict is too intense, and it may be this combination of responses that accounts for decreases in subsequent levels of marital conflict. Notably, children’s perceived agency may be linked with a wide range of responses, including a variety of responses other than simply mediation (e.g., anxious cleaning up of the home; doing chores for the parents; giving parents concerned or anxious looks; expressions of threat or self-blame). Lending support to this notion, in a sample of clinic-referred children and their families, Mahoney, Boggio, and Jouriles (1996) found that mother-to-child empathic statements were greater following a conflictual marital discussion not witnessed by the child, compared with statements following a nonconflictual marital discussion. Mahoney et al. suggested that mothers’ increased empathy might reflect their desire to protect their children from marital conflict, whereas when children witness marital conflict, a more immediate need to help children manage their responses to marital conflict replaces this increased empathy.
Questions not addressed by Schermerhorn et al. (in press) include relations of these constructs with children’s actual behavioral responses. A logical next step for this program of research is to examine unique contributions of children’s behavioral responses (agentic behavior, dysregulated behavior) in reducing destructive marital conflict, and to examine relations between behavioral responses and child mental health. Furthermore, previous research (perceived agency) included only 115 children and their families, assessments were made at only two time points, and measurement of marital conflict did not include observational coding of marital interactions.

The emotional security hypothesis has highlighted constructive agentic behavior in the service of “controlling exposure to marital conflict” (i.e., mediation, Davies & Cummings, 1994). Thus, children’s intervention and other behavioral responses to control exposure to marital discord are emphasized as reflecting the goal of maintaining a sense of security. Consistent with that view, children’s mediation in interparental disputes is seen primarily to be an indicator of their feelings of distress, reflecting the extent to which negative emotionality has motivated children to become involved in regaining or maintaining family security. Although the common wisdom has been that children’s agentic behaviors reflect misplaced efforts and are inevitably ineffectual at best, and at worst, contribute to the intensity of marital disputes, this view is inconsistent with the emotional security hypothesis. That is, the emotional security hypothesis suggests that children engage in these behaviors because it does serve, at least temporarily, to reduce conflict between the parents and as a result reduce their exposure to family threats. Similarly, from a family systems perspective, one might expect interventive behaviors by any member of the family, including children, to have beneficial effects on marital
discord over time, reflecting reciprocal relations between child and marital systems in the family (Cummings & Schermerhorn, 2003).

A related goal is to explore the effects of dysregulated behavior in response to marital conflict on subsequent marital conflict. The clinical literature has long indicated that marital discord relates to children’s behavior problems (Emery & O’Leary, 1982; Emery, Weintraub, & Neale, 1982). Notably, an extensive series of empirical studies has demonstrated the link between marital discord and children’s aggressive behavioral dysregulation, most recently Cummings, Goeke-Morey, and Papp (2004). Using both home diary reports and analog stimuli in the laboratory, Cummings et al. found substantial evidence that destructive marital discord predicted more behavioral dysregulation than did constructive conflict. Some have contended that behavioral dysregulation may also reflect a form of agentic behavior (i.e., “taking on a symptom,” Emery, 1982), intended to distract parents from marital difficulties. Thus, there is some argument to be made for children’s behavioral dysregulation in response to marital discord (i.e., “taking on a symptom”) possibly serving to reduce marital discord over time. On the other hand, children’s hostility in the context of interparental hostility may escalate coercive family processes (Patterson, 1982), thereby promoting increased marital discord over time. Emery suggested the operation of possible gender differences in this regard, with boys’ “symptoms” exhibited in the form of aggression and noncompliance, and girls’ “symptoms” taking the form of withdrawal, anxiety, and especially good behavior. Emery theorized that both parent effects and child effects are important, and ultimately interact with one another over time, as suggested by research on child effects on marital satisfaction (declining satisfaction concurrent with birth of child, marital
difficulties associated with caring for a handicapped child, and parental reports that children increase marital stress).

The Current Study

Based on previous research, it is well established that marital conflict predicts behavioral responses and adjustment problems in children. Based on the findings of Schermerhorn et al. (in press), children’s perceived agency predicts less subsequent marital conflict. However, important questions remain regarding child effects on marital conflict. The notion that marital conflict predicts higher levels of behavioral responses (agentic behavior, behavioral dysregulation) through effects on negative emotional reactivity has not been investigated. Moreover, the degree to which children’s actual behavioral responses to marital conflict predict reduced conflict is not yet known, and it may be that these relations are more complex than suggested by previous study of perceived agency. More importantly, relations between agency and child mental health have not been examined. Even if children are effective agents of change in reducing marital conflict, agentic behavior may incur substantial cost to the child’s mental health if the child comes to view the marital relationship as permeable, and the parents as requiring child intervention to resolve marital conflict. On the other hand, if agency results in improved marital functioning, that improvement should serve to increase children’s emotional security, predicting improved mental health. Marital conflict may contribute to prediction of change in agency, but it is not yet known whether agency predicts change in child mental health. The proposed research addresses these timely questions, towards broadening current understanding of family processes.
Another currently unanswered question concerns developmental change in agency beginning at age 5. Change in children’s behavioral responses to marital conflict may reflect intraindividual change that is independent of the level of the effects of marital conflict. The dataset in the current proposal allows examination of normative intraindividual change in agentic behavior. This is a timely question, as little is known about changes in agency for this age group, that is, changes between 5 and 8 years. In a study of 2- to 5-year-olds, J.S. Cummings et al. (1989) found that 5-year-olds were more likely than 2-year-olds to engage in agentic behavior in the context of marital conflict. For children ages 1 – 2 ½, the most frequent response to interadult anger expressions was crying, followed by concerned facial expressions (Cummings, Zahn-Waxler, & Radke-Yarrow, 1981). Cummings, Zahn-Waxler, and Radke-Yarrow (1984) found that agentic behavior in the context of interadult anger increased from toddlerhood (10, 15, and 20 months of age) to school age (6 – 7 years of age). Specifically, increasing age was associated with increases in comforting and intervention in anger incidents and decreases in aggression, anger, smiling, and excitement. Furthermore, school-age children were significantly less likely to cry when exposed to interadult anger, compared with toddlers. However, previous research has not examined change in agentic behavior beginning around 6 years of age and continuing into middle childhood; thus, there is little basis from past research for making predictions regarding change in agency from kindergarten to middle childhood ages. Nonetheless, agentic behavior and perceived agency are expected to increase with age, reflecting children’s increasing social competencies and sense of mastery and control over social situations between kindergarten and middle-childhood ages.
Moreover, the current study provides an examination of developmental changes in multiple constructs (e.g., marital discord, negative emotionality, behavioral responses to conflict, and mental health) during this period from more than one perspective. That is, both change in interindividual differences and interindividual differences in change (Nesselroade, 1991) are examined. SEM analyses are used to test hypotheses about change in the rank ordering of individuals on the constructs of interest (e.g., change in rank ordering of marital discord scores from Time 1 to Time 3). In contrast, HLM analyses are used to test hypotheses about change within a person in the constructs of interest (e.g., change in agentic behavior as a function of age). In addition, exploratory HLM analyses are employed to test predictors of interindividual differences in change. Potentially, there may be a divergence between patterns of intraindividual change and change in interindividual differences. For example, a child may show an increase over time in agentic behavior (intraindividual change; change relative to that child’s previous agentic behavior), but this may be consistent with an absence of change in differences between children (stable interindividual differences; lack of change relative to other children), if the pattern of increase mirrors a general developmental increase in agency.

Hypotheses

It is hypothesized that parents and children influence each other in the context of the marital relationship and family functioning, consistent with assumptions of transactional and reciprocal models of family influence. Previous research has examined links between marital conflict and children’s perceived agency regarding marital conflict. Extending that research, the current study examines relations between marital discord and children’s actual behavioral responses to marital discord—both agentic behavior and
behaviorally *dysregulated* responses—and, furthermore, the relations between those constructs and children’s mental health.

Destructive marital conflict is expected to predict higher levels of agentic behavior and behavioral dysregulation, with those responses in turn affecting subsequent marital conflict, and with both related to children’s mental health. Consistent with emotional security theory, and building on previous research on perceived agency, negative emotional reactivity is expected to mediate relations between marital discord and children’s behavioral responses. In addition, agentic behavior is expected to increase over this age period (from age 6 to age 8), and predictors of differences between children in change over time are explored. Based on the three wave design and appropriate multivariate statistics, the relations between these psychological constructs over time can be examined.

**Hypothesis 1: Relations between Marital Discord, Child Negative Emotional Reactivity, and Child Behavioral Responses**

Destructive marital conflict is expected to predict higher levels of both agentic behavior (i.e., involvement in marital discord) and behavioral dysregulation. Consistent with a functionalist perspective on emotions and the emotional security hypothesis, children’s negative emotionality in the context of marital discord is hypothesized to play an important role in predicting children’s behavioral reactions, both agentic behavior and behavioral dysregulation. Based on EST, destructive marital conflict is hypothesized to lead to negative emotional reactivity in children, which is also expected to lead to greater levels of agentic behavior and behavioral dysregulation. Based on the original formulation of EST (Davies & Cummings, 1994), and more recent refinements (Davies,
Harold, et al., 2002), negative emotional reactivity provides a reliable indicator of the extent to which marital conflict is threatening to children. At the same time, appraisals of the threat posed by marital conflict are expected to organize and direct children’s proactive behavioral responses to marital conflict (agentic behavior), on the one hand, or dispositions towards behavioral dysregulation, on the other. Schermerhorn et al. (in press) found empirical support for the notion that negative emotionality predicted children’s impulses to respond behaviorally and intervene (i.e. perceived agency) in the context of marital discord. The current study explores the role of negative emotionality further by examining for the first time links between marital discord, negative emotional reactivity, and children’s behavioral reactions, including agentic behavior and behavioral dysregulation. Building upon the findings of Schermerhorn et al. (in press), it is hypothesized that marital discord will predict negative emotional reactivity in the context of marital discord, which, in turn, will predict children’s behavioral responses, either agentic behaviors or behavioral dysregulation. Negative emotionality is expected to serve as a mediator of relations between marital discord and any behavioral reaction, either agentic behavior or behavioral dysregulation. Moreover, hypothesized relations between marital discord, negative emotional reactivity, and both agentic and dysregulated behavior are examined longitudinally, allowing testing of relations over time, providing a more rigorous test of our hypotheses than would be possible with cross-sectional analysis.

Hypothesis 2: Children’s Influence on Marital Conflict

A major aim is to test the hypothesized effects of behavioral responses to marital discord (behavioral dysregulation, agentic behavior) on subsequent marital discord. Some
have suggested that children’s involvement or other reactions to marital discord may cause marital discord to escalate. A case can be made that this may be true for dysregulated child behaviors in the context of marital discord. However, there are also reasons to expect behavioral dysregulation to decrease marital discord (e.g., “taking on a symptom,” Emery, 1982). The current study serves to test these two competing hypotheses regarding the role of dysregulated behavior in subsequent marital functioning. Moreover, based on previous research (e.g., Schermerhorn et al., in press) and theory (Davies & Cummings, 1994), children’s agentic responding is unlikely to cause marital discord to escalate. On the contrary, agentic behavior may well be effective in reducing marital discord, although there have been no direct tests of this hypothesis for agentic behavior as opposed to perceived agency.

Based on previous research (Schermerhorn et al., in press), high levels of perceived agency at Time 1 are hypothesized to predict low levels of destructive marital conflict at Time 3. Our expectations regarding the unique contributions of perceived agency merit further discussion. Perceived agency is expected to predict less destructive marital conflict, independent of the effects of agentic behavior and behavioral dysregulation, through indirect means such as expressions of distress or behavioral responses not necessarily intended to influence marital relations (see Schermerhorn et al., in press). Previous research has not tested both perceived agency and behavioral responses to conflict in the same model, and utilized only two time points, with a much smaller sample. Testing perceived agency and behavioral responses within the same model represents a new development in this area of work, as does the more informative model testing based on three waves.
In summary, relations between children’s behavioral responding and marital conflict over time may well depend upon the form of children’s behavioral reactions, not simply whether behavioral responses are evidenced. Thus, behavioral dysregulation may either increase or decrease marital conflict; the literature provides support for both possibilities. On the other hand, agentic behavior is unlikely to increase marital conflict and recent work supports that children’s proactive agentic responses may contribute to reduced marital conflict over time. Previous research has not tested children’s actual responses to marital conflict (agentic behavior and behavioral dysregulation), as predictors of marital conflict over time, but instead served to establish links between children’s perceptions of agency and changes in marital conflict over time. Moreover, previous research utilized only two time points, with a much smaller sample. Testing effects of agentic behavior and behavioral dysregulation on marital discord represents a new development in this area of work, as does the more informative model testing based on three waves.

**Hypothesis 3: Relations between Child Behavioral Responses and Child Mental Health**

Analyses include examination of relations between child behavioral responses and mental health problems. Agentic behavior (particularly in the form of care-taking the parents, anxious mediation in marital conflict) may be consistent with internalizing problems. Based on the Diagnostic and Statistical Manual of Mental Disorders-IV (1994), anxious agentic behavior is similar in form to internalizing problems, such as Major Depressive Disorder (inappropriate guilt, competence-related worries). Children with internalizing problems may experience substantial guilt and worry about their abilities to perform competently with respect to the marital relationship. On the other
hand, it may be the case that many agentic children do not feel anxious about the marital relationship, and do not internalize their parents’ relationship difficulties.

On the other hand, agentic children may possess unusual aptitude for influencing others, and may be especially skilled in social interactions, engaging in particularly prosocial behavior. During Piaget’s preoperational period (ages 2 to 6), children acquire the ability to understand other points of view, with implications for a Theory of Mind Mechanism (ToMM; Leslie, 1994) in the development of abilities to understand others’ behavior and intentions. These abilities are critical to the success of children’s agentic behavior, as children must correctly perceive and understand others in order to select suitable means of attempting to influence them. Thus, agentic children may be particularly skilled socially, with a particularly proclivity for prosocial behavior. One aim of the current study is to test possible associations between agentic behavior and mental health, including internalizing problems and prosocial behavior.

Relatedly, consistent with clinical research (Emery, 1989), dysregulated behavior (e.g., yelling at the parents to stop arguing) is similar in form to externalizing disorders, such as Conduct Disorder and Oppositional Defiant Disorder (losing temper, aggression) (DSM-IV). Notably, Oppositional Defiant Disorder is associated with serious marital conflict, and predictors of both Conduct and Oppositional Defiant Disorders include such family factors as parental rejection and neglect, harsh and inconsistent discipline, and lack of supervision. Highlighting the bidirectional nature of these effects, the DSM indicates “there may be a vicious cycle in which the parent and child bring out the worst in each other” (DSM-IV, 1994, p. 92), suggesting a lack of goodness-of-fit between parent and child. The current study includes tests of relations between behavioral dysregulation and externalizing problems. Moreover, perceived agency is expected to
predict mental health problems, independent of effects of agentic behavior on mental health, because elevated levels of perceived agency indicate that the security system has been threatened. In sum, new contributions relevant to Hypothesis 3 include examining relations between children’s behavioral responses to marital discord and children’s mental health.

Hypothesis 4: Developmental Change in Children’s Behavioral Responses to Marital Conflict

Agentic behavior and perceived agency are both hypothesized to increase as a function of children’s development between 5 and 8 years of age. Previous research (J. Cummings et al., 1989) suggests that agentic behavior emerges by the Time 1 age of the children in this study (i.e., 5-6 years of age). Agentic behavior and perceived agency are expected to increase, reflecting children’s increasing social competencies and sense of mastery and control over social situations between kindergarten and middle-school ages. Age-related change in behavioral dysregulation and negative emotional reactivity are also examined. By contrast, it is expected that both behavioral dysregulation and negative emotional reactivity will both decrease as children develop, because of their increasing abilities to regulate their emotions and behavior (Kopp, 1982). Tests of developmental change in agency, behavioral dysregulation, and negative emotional reactivity represent a new direction in this area of research.

Hypothesis 5: Predictors of Interindividual Differences in Change

Exploratory analyses include tests of destructive marital conflict as a predictor of intraindividual change (increases) in perceived agency, agentic behavior, and behavioral
dysregulation, as a function of threat to the child’s security system. In addition, analyses explore agency and behavioral dysregulation as predictors of change in destructive marital conflict, consistent with preliminary analyses (Schermhorn et al., in press). Exploratory analyses also include tests of destructive marital conflict and children’s behavioral responses as predictors of intraindividual change in child adjustment problems. These speculative analyses cover new ground in providing a first look at predictors of interindivdual differences in change in the multiple constructs that are the focus of this study.

These hypotheses were tested with a longitudinal (3-wave) design, using multiple methods and informants, and a tightly constrained age-group that consisted of children who were 5 – 6 years of age at Time 1. Previous research found increasing child involvement in marital discord between toddler and preschool ages, with an upsurge in agentic behavior at about 5 years of age (J.S. Cummings et al., 1989), supporting the focus on this age group as a first period to examine children’s agency as a possible influence on marital discord. Similarly, children’s behavioral dysregulation in response to marital discord is a salient response in this age period (Cummings, 1987). Despite theory regarding possible gender differences in the form of children’s behavioral responses to marital discord (Emery, 1982), specific hypotheses are not formulated for gender, particularly because of the lack of gender differences in past work on this topic (Schermhorn et al., in press).
METHOD

Sample and Procedures

The sample is a representative community sample of 232 primarily middle-class, cohabiting couples with a kindergarten-age child. Children (105 boys, 127 girls) had an average age of 5.99 years at Time 1 ($SD = .45$, range $= 4.99 – 7.11$). Seventy-one percent of children were European-American, 14% were African American, 13% were biracial, and 2% were Hispanic. Parents reported cohabiting for an average of 11.1 years ($SD = 4.84$). Two hundred and nine of the couples (90.1%) were married. The mean age for mothers was 35 years ($SD = 5.57$) and was 37 years for fathers ($SD = 6.09$). Approximately 98% of mothers had completed at least a high school education, and 39% had completed college or beyond. For fathers, approximately 93% had completed at least high school and 43% had a college education or beyond.

Families were recruited from the Midwest and Northeast via postcard mailings, sign-ups at community events, letters sent to parents whose children were attending local schools, and referrals from other participating families. In order to obtain a sociodemographically diverse sample representative of the geographic area, efforts were made to actively recruit participants through school districts, community agencies, and events tailored to families of low socioeconomic status and of racial and ethnic diversity. The sample size decreased slightly at later time points due to attrition, with 222 families retained at Time 2 and 212 families retained at Time 3.
Because of the attrition in our sample, tests were conducted to examine possible differences in each of the variables in our study as a function of whether families participated in all three waves of data collection (coded 0) or did not participate in all three waves (coded 1). There were no significant differences as a function of attrition in the central variables of the study (i.e., marital discord, negative emotional reactivity, agentic behavior, perceived agency, behavioral dysregulation, and mental health variables). Two differences were found for the demographic variables: a) families who participated in all three waves had higher income levels ($29,000 - $39,999) compared to families who did not participate in all three waves ($23,000 - $28,999), \( t(226) = 4.25, p < .001 \); and b) families who participated in all three waves had completed more years of education (\( M = 14.67, SD = 2.23 \)) compared to families who did not participate in all three waves (\( M = 12.83, SD = 2.60 \)), \( t(228) = 3.77, p < .001 \).

Mothers and fathers reported their global marital satisfaction on the Marital Adjustment Test (MAT; Locke & Wallace, 1959), providing a basis for comparing the marital functioning of this sample with that of other community samples. The mean marital satisfaction score for mothers was 109.38 (\( SD = 27.05, \text{range} = 5 – 155 \)) and for fathers the mean was 102.24 (\( SD = 29.42, \text{range} = 17 – 157 \)). Sixty-six mothers (28.4%) and 86 fathers (38.4%) had MAT scores below 100, suggesting marital distress. One hundred and ten of the 232 couples (47.4%) included at least one partner with a score below 100. Whereas the percentages of participants scoring in the distressed range are somewhat higher than those reported in other studies based on community samples (e.g., McHale, Kuersten-Hogan, Lauretti, & Rasmussen, 2000), the average level of distress is comparable to those of other community samples.
Procedures

As part of a larger longitudinal project, participating parents completed questionnaires and tasks in the laboratory every year, with laboratory sessions lasting approximately three hours. Parents completed questionnaires about demographic information, marital functioning, and other measures in separate rooms for each partner, and completed a marital conflict resolution task.

Measures

A summary of the measures, including notation regarding reporters and type of methodology, is provided in Table 1.

Marital Conflict

Observational Assessment

Mothers and fathers also engaged in a marital conflict resolution task (“marital interaction”) in the lab during Time 1, Time 2, and Time 3. The task involved selecting two topics that the couple identified as particularly difficult for them to handle. Parents were then asked to discuss each issue as they would at home for 10 minutes, working toward a solution. Interactions were videotaped with parental consent, and later coded. On the basis of previous research, marital interactions were coded for such conflict tactics as nonverbal anger, personal insult, and verbal affection, which were coded for every 30-second time interval. Interactions were also coded for emotions (anger, sadness, fear, and positive emotions) during each interaction.
After extensive training, coding was completed by a post-doctoral fellow, after establishing her reliability with this coding system. For the reliability training, the coder first learned detailed descriptions of the behaviors and emotions. The coder was then required to correctly identify each behavior and emotion from prototypical interactions. Discussion and feedback was provided by an experienced and highly reliable graduate student coder. The post-doctoral coder then coded 30 interactions that had previously been coded by the graduate student coder in order to calculate reliability. Where reliability did not meet standards, the coder was provided with additional training until she demonstrated that she could code reliably. Intra-class correlation coefficients were computed, comparing the post-doctoral coder with the experienced graduate student coder. Only codes with interrater reliabilities greater than .60 were included in analyses. The destructive codes that were included were nonverbal anger, defensiveness, verbal anger, angry feelings, and sad feelings; the constructive variables that were included were physical affection, problem solving, compromise, and positive feelings. Intra-class correlation coefficients for these variables ranged from .67 to .98. The post-doctoral fellow coded each interaction once (aside from the reliability interactions, which were also coded by the graduate student).

The marital interaction codes were averaged across the twenty 30-second intervals of each interaction, and then averaged across mothers and fathers in order to reduce the number of variables in the analyses. Those averages were converted to z-scores, and the sum of the constructive codes was subtracted from the sum of the destructive codes to yield a single marital interaction score for each couple. The composite scores demonstrated acceptable levels of internal consistency, as intra-class correlation
coefficients computed on the maternal and paternal codes were .87 for Time 1, .89 for Time 2, and .91 for Time 3.

Questionnaire Assessment

Mothers and fathers completed the 2-item Frequency/Severity subscale of the Conflicts and Problem-Solving Scales (CPS; Kerig, 1996) during Time 1, Time 2, and Time 3, rating the frequency and severity of conflict. Parents completed the Frequency/Severity subscale, indicating their responses on a 6-point scale, from 1 (once a year or less) to 6 (just about every day). Kerig reported moderate test-retest reliability and good convergent and discriminant validity. Mothers’ and fathers’ respective Cronbach’s $\alpha$s in this sample were .76 and .75 for Time 1, .74 and .73 for Time 2, and .73 and .76 for Time 3.

Negative Emotional Reactivity

Questionnaire Assessment

Mothers and fathers completed the Security in the Marital Subsystem – Parent Report Inventory (SIMS-PR, Davies, Forman, et al., 2002), which is a measure of child emotional security based on Davies and Cummings’ (1994) emotional security hypothesis, and includes the Negative Emotional Reactivity subscale. Mothers and fathers completed this 7-item subscale reporting their child’s reactions to witnessing conflicts between parents in the past year. Items are completed on a 5-point ordinal scale from 1 (not at all like him/her) to 5 (a whole lot like him/her). Sample items include Appears sad and Takes a while after the argument to act like him or herself again.
Davies, Forman, et al. reported good reliability and validity for the SIMS. Cronbach’s $\alpha$s for mothers and fathers in our sample were .82 and .80 at Time 1, .82 and .80 at Time 2, and .80 and .80 at Time 3, respectively.

Agency

Perceived Agency

Children completed a revised version of the MacArthur Story Stem Battery (MSSB; Bretherton, Oppenheim, Buschsbaum, Emde, & The MacArthur Narrative Group, 1990) to provide a measure of perceived agency. In the MSSB, which is a narrative story-telling task, each story is begun by the examiner and completed by the child. To facilitate story-telling, stories were introduced using family action figure dolls: a mother, father, and son or daughter matching the child’s sex and ethnicity. Narrative story-telling tasks are typically highly effective with children in this age group because they draw on children’s natural interest in play activities to elicit children’s representations of family relationships.

The children were told they would be making up stories using the action figures. The examiner began each of the stories and instructed the children to use the figures to tell the rest of the story. The action figures were positioned to depict the story being told, and the examiner used different dramatic, animated voices to involve the children as much as possible in the telling and development of the stories. Verbal prompts such as “Does anything else happen or is that the end of the story?” “What is Dad doing there?” “What’s going to happen about your Mom and Dad’s argument?” and “Who cleaned up the dishes?” were used to encourage the children to elaborate on, and clarify, their stories.
The children’s story telling was encouraged to continue until the main issue in the story stem was addressed. The narratives were videotaped for later coding.

The revised MSSB (Cummings, Davies, Goeke-Morey, & Shamir, 2001) was adapted to include stories depicting marital conflicts of varying intensities (see Appendix A), aspects of parenting, and parent-child attachment. The parenting stories were not used for this report. The marital conflict stories include a mild conflict regarding a lost set of keys, an intense conflict regarding a messy kitchen, and a productive marital conflict with a calm discussion of one of the parents’ returning home late. The attachment stories depict separation from the parents, followed by reunion with one of the parents (the mother in one story, and the father in the other story).

The MSSB stories were coded by 4 coders; 20% of the videos were coded by all 4 coders in order to check reliability throughout the coding process. All coders followed the same procedure, beginning by watching a story once and assigning tentative codes for that story. Coders then watched the same story a second time to make sure the codes assigned were accurate. If coders were not completely comfortable with the codes, they watched a third time before moving on the next story. Anything judged to be particularly difficult to code was discussed with the rest of the coders during a weekly coding meeting. Each code is scored on a 4-point scale, with 0 representing none and 3 representing a lot.

Children’s responses to the MSSB marital conflict stories were coded for child Mediation in marital conflict and Parentification in the context of marital conflict. Children receive high scores on the Mediation scale for stories that depict the child figure mediating, and becoming involved in, the parents’ conflict. Stories with high scores on the Mediation scale portray children attempting to directly alter marital conflict (e.g.,
telling the parents what to do, or to stop arguing), reflecting perceptions of agency designed to diminish, or resolve, the conflict. Children receive high scores on the Parentification scale for marital conflict stories in which the child figure is depicted as doing something typically done by a parent. In these stories, children’s representations reflect a propensity to act intentionally in an adult-like role (e.g., taking care of the parents and caring for themselves extensively), reflecting perceptions of agency. These codes are used as measures of perceived agency, because they reflect impulses, motivations, and representations of agency, but do not reflect the child’s actual behavior. This measurement provides advanced assessment of perceptions and general motivation that do not always relate to actual behavior. As there are three marital conflict stories, codes were summed across the three stories to create a score for each child’s Mediation and Parentification. Intra-class correlation coefficients for inter-rater reliability computed on 20% of videos for Time 1 was .95 for Mediation and .92 for Parentification, for Time 2, inter-rater reliability was .95 for Mediation and .90 for Parentification, and for Time 3, inter-rater reliability was .89 for Mediation and .90 for Parentification. Weekly coding meetings were also used to address reliability issues. Each coder coded tapes individually for the purpose of calculating reliability. Following that, discrepancies were discussed until consensus was reached for every code. Thus, the actual reliability is at least as high as, if not higher than, these numbers indicate.

**Agentic Behavior**

Mothers and fathers also completed 7 items from the SIMS (Davies, Forman, et al. 2002) that were used as a measure of agentic behavior. As with the negative emotional reactivity subscale, these items were completed by parents using a 5-point ordinal scale
from 1 (not at all like him/her) to 5 (a whole lot like him/her). Items were selected for inclusion in a measure of agentic behavior on the basis of multiple criteria. A panel of 9 psychologists rated each item from the SIMS for the degree to which it matched a definition of agentic behavior developed for the purpose of this study (see Appendix B). Items were rated on a 5-point scale from 1 (Not at all important to include in a measure of agentic behavior) to 5 (Very important to include in a measure of agentic behavior). Each of the agentic behavior items had mean ratings larger than 3.8, thus, all were well above the mid-point (3.0) on the rating scale. In addition, principal components analysis was conducted on all 37 of the items from the SIMS Time 2 responses, in order to identify agentic items, with separate analyses for mothers and fathers. A 3-factor solution was tested, using Promax rotation, allowing factors to correlate with one another. The factor loadings are shown in Table 2, with bold-faced font for the 7 agentic behavior items. The content of the items is provided in Appendix B, but is not repeated in this table due to space considerations. Item numbers in this table correspond to item numbers in Appendix B. For fathers, Item 32 did not load as highly on the agentic behavior factor as anticipated, but this item was included in the agentic behavior scale, based on theory and on experts’ ratings of the items.

In sum, items were selected for inclusion on the basis of 1) experts’ ratings of the SIMS items for agentic behavior, 2) principal components analysis, and 3) these 7 items mapped onto our pre-existing conceptualization of agentic behavior. Sample items from this subscale include *Tries to help us solve the problem* and *Tells us to stop arguing.* These items reflect agentic behavior, as the child is viewed as engaging in behaviors designed to influence the outcome of the marital conflict. Cronbach’s αs in our sample were .84 and .84 at Time 1, .83 and .83 at Time 2, and .84 and .83 at Time 3, for mothers.
and fathers, respectively. Although the scores for agentic behavior are positively skewed, they approximate a normal distribution, as shown in Figure 1.

**Behavioral Dysregulation**

This construct was based on the 5-item Behavioral Dysregulation subscale of the SIMS (mother and father). As with the other subscales from the SIMS, the Direct Involvement subscale is completed on a 5-point ordinal scale from 1 (*not at all like him/her*) to 5 (*a whole lot like him/her*). Sample items include *Yells at family members* and *Starts hitting, kicking, slapping, or throwing things at family members*. Cronbach’s $\alpha$s in our sample were .74 and .71 at Time 1, .68 and .69 at Time 2, and .68 and .64 at Time 3.

**Child Mental Health**

To assess child externalizing and internalizing symptoms, both parents completed the Child Behavior Checklist for ages 4 to 18 (CBCL; Achenbach, 1991). Parents rated how often their child had exhibited internalizing problems (e.g., “too fearful or anxious”) and externalizing problems (e.g., “lying or cheating”), on a 3-point scale ranging from 0 (*not true*) to 2 (*very true or often true*). The internalizing scale consists of the withdrawn (9 items), somatic complaints (9 items), and anxious/depressed (14 items) subscales; the externalizing scale consists of the delinquent behavior (13 items) and aggressive behavior (20 items) scales. Cronbach’s alphas for mothers’ and fathers’ reports of internalizing were .85 and .88 at Time 1, .87 and .87 at Time 2, and .87 and .88 at Time 3. Cronbach’s alphas for mothers’ and fathers’ reports of externalizing were .87 and .90 at Time 1, .90 and .90 at Time 2, and .87 and .88 at Time 3.
The Teacher Report Form (TRF; Achenbach, 1991b) is a teacher-report version of the CBCL. The measure is composed of 62 items that describe students. Items are answered on a 3-point ordinal scale ranging from 0 (Not true) to 2 (Very true). Teachers’ responses on the Externalizing scale were used, and sample items include *Gets in many fights*, and *Lying or cheating*. For our sample, Cronbach’s αs were .92 for Time 1, .93 for Time 2, and .95 for Time 3.

The Child Behavior Scale (CBS; Ladd & Profilet, 1996) was included to provide a measure of children’s social functioning. Mothers and fathers completed the 6-item Asocial scale and the 7-item Prosocial scale, and teachers completed the 7-item Prosocial scale and the 4-item Hyperactive-Distractible scale. Items are answered on a 3-point scale from 1 (Doesn’t apply) to 3 (Certainly applies). Sample items from the Asocial scale include *Avoids peers* and *Solitary child*, items from the Prosocial scale include *Kind toward peers* and *Shows concern for moral issues*, and items from the Hyperactive-Distractible scale include *Squirmy, fidgety child* and *Inattentive*. This measure has demonstrated good internal consistency, stability, and validity (Ladd & Profilet, 1996). For our sample, Cronbach’s αs for mothers’ and fathers’ respective reports for the Asocial subscale were .74 and .72 for Time 1, .76 and .74 for Time 2, and .79 and .80 for Time 3. Cronbach’s αs for mothers’, fathers’, and teachers’ respective reports for the Prosocial subscale were .79, .82, and .92 for Time 1, .79, .82, and .91 for Time 2, and .80, .81, and .87 for Time 3. For the Hyperactive-Distractible scale, Cronbach’s αs were .84 for Time 1, .86 for Time 2, and .86 for Time 3.
RESULTS

Descriptive statistics and intercorrelations of key variables are presented in Tables 3 and 4. The primary analyses of the current study utilized structural equation modeling (SEM) to test Hypotheses 1, 2, and 3 regarding relations between marital discord, children’s behavioral responses to discord, and children’s mental health. Multilevel modeling (HLM) was used to test hypotheses about within-subjects change in marital discord, children’s behavioral responses to conflict, and children’s mental health (Hypothesis 4), as well as an exploratory analysis of Hypothesis 5 regarding predictors of change in these constructs over time.

Structural Equation Modeling

SEM was used to test Hypotheses 1, 2, and 3, regarding causal relations between marital discord, children’s behavioral responses, and children’s mental health. In SEM, observed variables are used to operationalize a latent construct, forming a measurement model. Models of relations between the latent constructs (i.e., the structural model) are then tested to examine the extent to which the model explains the covariance structure of the data. In this way, relationships among a smaller set of latent constructs can be examined without losing information obtained from the larger set of observed variables. The use of multiple observed variables has the further advantage of minimizing measurement error, which otherwise would lead to biased estimates of path coefficients. For the following analyses, latent variables are derived from the various observed
indicators measured with questionnaires, observational measures, and narrative assessments, as summarized in Table 1. To increase the probability of generating valid, reproducible models, all model tests were conducted with limited numbers of model modifications, which were based on theory (Tomarken & Waller, 2003). Model fit was assessed on the basis of multiple fit indices, including $\chi^2$, the root mean square error of approximation (RMSEA), and the Bentler-Bonett Normed Fit Index (NFI), rather than on the basis of a single fit index. The traditional $\chi^2$ discrepancy test is presented, although this statistic is heavily influenced by sample size, with samples of even moderately large size resulting in a poor fit when using the $\chi^2$ discrepancy test (Bentler & Bonett, 1980). For this reason, several additional fit measures are presented. The relative $\chi^2$ index ($\chi^2/df$) should be close to 1, with values below 3 considered indicative of an acceptable fit between the hypothetical model and the sample data (Arbuckle & Wothke, 1999). Values of the root mean square error of approximation (RMSEA; Browne & Cudeck, 1993) less than, or equal to, .08 indicate a reasonable fit. Finally, values of the comparative fit index (CFI; Bentler, 1990) and the normed fit index (NFI; Bentler & Bonett, 1980) should be at least .90.

Analysis of Moment Structures (AMOS, v. 4.01; Arbuckle & Wothke, 1999) was used to test the models. In AMOS, missing data are accommodated via the full information maximum likelihood procedure (FIML). Missing data are regarded as missing at random (MAR), and the likelihood of the parameter values is computed on the observed portion of the data for each case.
Testing Gender as a Moderator Using SEM

To explore whether child gender moderates relations between constructs, stacked models tests were used. Rather than performing separate analyses for each group (which would effectively split the sample in half, reducing power to detect effects) stacked models tests were conducted to estimate parameters and test hypotheses about both boys and girls simultaneously. Using the stacked models approach, the $\chi^2$ fit indices are compared for two competing models, one that constrains the paths to be equal across genders and one that allows paths for both genders to freely vary. The difference in the $\chi^2$ values for the constrained vs. unconstrained models is distributed as a $\chi^2$ with degrees of freedom equal to the difference in degrees of freedom for the two models.

Model Tests

Descriptive statistics and intercorrelations of the variables for Hypotheses 1 and 2 are presented in Table 3.

Hypothesis 1: Relations between Marital Discord, Negative Emotional Reactivity, and Child Behavioral Responses

SEM was used to test the effects of destructive marital conflict on children’s behavioral responding. The first set of analyses involved a test of the direct effects of marital discord on agentic behavior and behavioral dysregulation. As expected, this first set of analyses indicated that Time 1 marital discord predicted high levels of Time 2 agentic behavior ($\beta = .32, p < .05$; see Figure 2) and Time 2 behavioral dysregulation ($\beta = .33, p < .01$). These results support the hypothesis that marital discord may prompt children to engage in behavioral responses intended to bring about greater emotional
security. Demonstrating this significant direct effect represents the first step in Baron and Kenny’s (1986) guidelines for testing mediation.

Next, a mediational model was examined, testing for mediation of the effect of Time 1 interparental discord on Time 2 agentic behavior and behavioral dysregulation through children’s negative emotional reactivity at Time 2 (see Figure 3). The path from interparental discord to negative emotional reactivity was significant ($\beta = .44, p < .001$), as were the paths from negative emotional reactivity to agentic behavior ($\beta = .78, p < .001$), and from negative emotional reactivity to behavioral dysregulation ($\beta = .69, p < .001$). Results supported full mediation of the relationships between marital discord and agentic behavior and between marital discord and behavioral dysregulation. With negative emotional reactivity in the model, the magnitude of the coefficient for the path from marital discord to agentic behavior dropped substantially ($\beta = -.09, p = .46$), as did the path from marital discord to behavioral dysregulation ($\beta = -.01, p = .95$). These results suggest that the effect of marital conflict on children’s behavioral responding occurs through negative emotional reactivity.

A final step in establishing mediation is to compare model fit when the direct pathway is included versus when it is not (Holmbeck, 1997), in order to determine whether including the direct path provides a better fit to the data. Results of this test indicated that adding the direct path between marital conflict and children’s behavioral responses did not significantly improve model fit ($\chi^2_{\text{diff}} = .56, df_{\text{diff}} = 2, p = .76$), indicating that this path was not significantly different from zero when estimated in the model that included negative emotional reactivity as a mediator. That is, consistent with hypotheses, negative emotional reactivity served as a mediator of the link between marital distress and children’s behavioral responses. Consequently, the direct paths from
marital discord to agentic behavior and from marital discord to behavioral dysregulation, were not included in subsequent models, for reasons of parsimony.

Hypothesis 2: Children’s Influence on Marital Conflict

For the central analyses of the study, a model was tested with (a) Time 1 marital discord predicting children’s negative emotionality at Time 2, (b) Time 2 negative emotionality predicting Time 2 agentic behavior and behavioral dysregulation, and (c) these responses, in turn, predicting Time 3 marital discord, while controlling for the effect of Time 1 marital discord on Time 3 marital discord. The model demonstrated a good fit to the data (see Figure 4). As expected, model testing indicated that marital discord is highly stable over time ($\beta = .63, p < .001$). Analyses supported our expectation that marital discord would predict children’s negative emotional reactivity, consistent with the emotional security hypothesis, as Time 1 marital discord predicted high levels of Time 2 negative emotional reactivity ($\beta = .40, p < .001$). Also as expected, negative emotional reactivity predicted high levels of agentic behavior ($\beta = .79, p < .001$) and behavioral dysregulation at Time 2 ($\beta = .67, p < .001$). Moreover, as hypothesized, even controlling for the effect of Time 1 marital discord on Time 3 marital discord, agentic behavior predicted low levels of marital discord at Time 3 ($\beta = -.31, p < .05$), and behavioral dysregulation predicted high levels of marital discord at Time 3 ($\beta = .35, p < .01$). Results indicated that relations between Time 2 perceived agency and Time 3 marital conflict were nonsignificant, so perceived agency was not included in further model testing for Hypothesis 2, for reasons of parsimony. The results for Hypothesis 2 suggest that children’s behavioral responses to marital conflict do predict subsequent
marital functioning, and that the form of the behavioral response (agentic vs. dysregulated) is important in predicting the direction of the effect on marital discord.

The final step in this investigation was to test gender as a moderator of the relations observed in Figure 4. Using the stacked models approach to testing gender as a moderator (Sturge-Apple, Davies, Boker, & Cummings, in press), no significant gender differences emerged ($\chi^2_{\text{diff}} = 6.03, df_{\text{diff}} = 6, p = .42$), suggesting that gender does not moderate these transactional pathways.

**Hypothesis 3: Relations between Child Behavioral Responses and Child Mental Health**

The final phase of SEM analyses involved testing relations between children’s mental health (internalizing and externalizing problems, prosocial behavior) and their behavioral responses to marital conflict (agentic behavior and behavioral dysregulation) and perceived agency. Descriptive statistics and intercorrelations of the indicator variables for Hypothesis 3 are presented in Table 4. Correlations were examined between concurrent (Time 1) latent variables representing agentic behavior, behavioral dysregulation, perceived agency, internalizing problems, externalizing problems, and prosocial behavior. SEM was used to calculate the correlations between these latent constructs (see Figure 5). Results of the SEM test of these correlational paths indicated a positive relationship between agentic behavior and prosocial behavior and positive relationships between behavioral dysregulation, internalizing problems, and externalizing problems. These analyses also indicated nonsignificant relations between agentic behavior and both internalizing and externalizing problems. Results indicated no significant relations between perceived agency and any of the mental health constructs, so for simplicity of presentation Figure 5 does not include relations with perceived
agency. Results for perceived agency were not further examined because the lack of findings regarding effects of perceived agency on subsequent marital conflict (Hypothesis 2) suggest that agentic behavior (not surprisingly) plays a more substantial role in the functioning of marriages and families than does perceived agency.

The next step in this investigation was to test gender as a moderator of the relations observed in Figure 5. Using the stacked models approach to testing gender as a moderator (Sturge-Apple et al., in press), no significant gender differences emerged ($\chi^2_{\text{diff}} = 9.31$, $df_{\text{diff}} = 10$, $p = .50$), suggesting that gender does not moderate these correlational pathways. Accordingly, subsequent analyses of relations between children’s behavioral responses to conflict and children’s mental health were run on the entire sample, to provide more parsimonious model tests.

In order to further examine the apparent lack of association between agentic behavior and internalizing and externalizing problems, the nonsignificant correlational paths between agentic behavior and internalizing and externalizing problems (path a and path b) were constrained to zero, and the fit of the unconstrained model was compared with that of the constrained model. This test indicated that including the correlational paths between agentic behavior and internalizing and externalizing problems did not significantly improve model fit ($\chi^2_{\text{diff}} = 0.72$, $df_{\text{diff}} = 2$, $p = .70$). Thus, the correlational paths between agentic behavior and internalizing problems, and between agentic behavior and externalizing problems, were not significantly different from zero, indicating a lack of association between agentic behavior and internalizing and externalizing problems.

For the significant correlational paths, tests of longitudinal relations were conducted to investigate prediction over time. The first of these models tested relations between agentic behavior and prosocial behavior at Time 1 and Time 2. Results indicated
that both prosocial behavior and agentic behavior are highly stable over time ($\beta = .93, p < .001$, $\beta = .89, p < .001$, respectively). Agentic behavior did not significantly predict subsequent prosocial behavior, nor did prosocial behavior predict subsequent agentic behavior. Model testing compared the fit of a model in which all paths were free to vary with the fit of a model in which the nonsignificant paths were constrained to zero (see Figure 6, paths a and b). This comparison indicated that including these paths in the model did not significantly improve model fit ($\chi^2_{\text{diff}} = 0.47, df_{\text{diff}} = 2, p = .79$). These results suggest that the magnitudes of these longitudinal paths were not significantly different from zero, a finding that is consistent with an absence of causal effects of either behavior (agentic or prosocial) on the other.

The next model tested relations between behavioral dysregulation, internalizing problems, and externalizing problems at Time 1 and Time 2. Results indicated that all three constructs are highly stable over time ($\beta = .97, p < .01$ for behavioral dysregulation, $\beta = .81, p < .001$ for internalizing problems, $\beta = .73, p < .001$ for externalizing problems). Behavioral dysregulation was a significant predictor of both subsequent internalizing and externalizing problems ($\beta = .19, p < .05$, $\beta = .26, p < .05$, respectively), even controlling for initial levels of those adjustment problems. In contrast, neither externalizing problems nor internalizing problems predicted subsequent behavioral dysregulation. Model testing compared the fit of a model in which all paths were free to vary with the fit of a model in which the nonsignificant paths were constrained to zero (see Figure 7, paths a and b). This comparison indicated no significant improvement in fit by including paths from externalizing and internalizing problems to behavioral dysregulation ($\chi^2_{\text{diff}} < 1.24, df_{\text{diff}} = 2, p = .54$), suggesting that the magnitudes of the paths from mental health problems to subsequent behavioral dysregulation were not significantly different from zero. This
finding is consistent with the notion that mental health problems do not predict behavioral dysregulation (contrasting with the findings suggesting that behavioral dysregulation predicts subsequent mental health problems).

Relations between Time 1 and Time 2 behavioral dysregulation and prosocial behavior were tested separately from the previous test in order to avoid generating an overly complex model. Results indicated that behavioral dysregulation and prosocial behavior are highly stable over time ($\beta = .88, p < .001$ for behavioral dysregulation, $\beta = .85, p < .001$ for prosocial behavior). High levels of behavioral dysregulation at Time 1 predicted low levels of prosocial behavior at Time 2, controlling for Time 1 levels of prosocial behavior ($\beta = -.28, p < .05$). In contrast, Time 1 prosocial behavior did not significantly predict Time 2 behavioral dysregulation. Model testing compared the fit of a model in which all paths were free to vary with the fit of a model in which the path from prosocial behavior to subsequent behavioral dysregulation was constrained to zero (see Figure 8, path a). This comparison indicated that including path a in the model did not significantly improve model fit ($\chi^2_{\text{diff}} < .52, df_{\text{diff}} = 1, p = .47$). This finding indicates that the path from prosocial behavior to subsequent behavioral dysregulation was not significantly different from zero, suggesting that, whereas behavioral dysregulation appears to predict prosocial behavior, prosocial behavior does not appear to predict behavioral dysregulation.

In sum, the analyses for Hypothesis 3 indicate that agentic behavior and prosocial behavior are positively correlated, and behavioral dysregulation, internalizing problems, and externalizing problems are also highly positively correlated. However, agentic behavior is not related to internalizing or externalizing problems, and behavioral dysregulation is negatively related to prosocial behavior. Moreover, it appears that
agentic behavior and prosocial behavior are not related over time. In contrast, analyses suggest that behavioral dysregulation predicts high levels of internalizing and externalizing problems and low levels of subsequent prosocial behavior. Notably, the reverse direction of effects (from mental health problems to behavioral dysregulation) was not supported, suggesting a possible role of children’s responses to marital conflict in the development of later mental health problems.

**Multilevel Modeling**

Hierarchical linear modeling (HLM; Raudenbush & Bryk, 2002) was used to test Hypotheses 4 and 5 regarding within-subjects change in marital discord, children’s behavioral responses, and children’s mental health, and predictors of between-subjects differences in change. Multilevel modeling allows investigation of change at the level of the individual parent (to assess change in marital conflict) and at the level of the individual child (to address change in agency and mental health), and permits testing predictors of interindividual differences in change trajectories. For example, HLM analyses allow testing of the hypothesis that agency increases over the age period examined in the present study. Notably, multilevel modeling accommodates data in which some participants were not observed at each time point (Willett & Sayer, 1994).

**Hypothesis 4: Developmental Change in Children’s Behavioral Responses to Marital Conflict**

HLM was used to test Hypothesis 1, regarding change in children’s behavioral responses to marital conflict. The equations below exemplify an unconditional HLM model for testing change. Using agentic behavior as an example, Level 1 represents
within-child change in agentic behavior; Level 2 allows the modeling of predictors of interindividual differences in change, but such predictors are not included in this initial model. The child’s age at each time point was used as the Time variable. First, the unconditional model (with no Level 2 predictors) was tested, allowing examination of within-child change in agentic behavior, independent of any predictors of that change.

Level 1:

\[ \text{Agentic Behavior} = \beta_0 + \beta_1(Age) + r \]

Level 2:

\[ \beta_0 = \gamma_{00} + u_0 \]

\[ \beta_1 = \gamma_{10} + u_1 \]

Analysis of change in children’s responses to marital conflict indicated that children’s agentic, dysregulated, and emotionally reactive responses decrease with development over the period from age 6 to age 8. As an illustrative sample, the trajectories of a subset of the sample (the first 10 cases) are graphically depicted in Figure 9, representing maternal and paternal reports of agentic behavior, behavioral dysregulation, and negative emotional reactivity as a function of age. Lines connect the three time points of measurement for each person, with the overall pattern of change for each variable reflecting a downward trend. For example, in the figure depicting agentic behavior reported by mothers, one child received a score of approximately 27.15 at about age 6.33, a score of 33 around age 7.5, and a score of 30 around age 8.5. With increasing age, mothers’ and fathers’ reports of agentic behavior decreased (\( \gamma = -1.10, p < 0.001 \) and \( \gamma = -0.89, p < 0.001 \), respectively). Similarly, mothers’ and fathers’ reports of behavioral dysregulation decreased with increasing age (\( \gamma = -0.55, p < 0.001 \) and \( \gamma = -0.63, p < 0.001 \), respectively). Moreover, increased age was related to decreasing maternal and
paternal reports of negative emotional reactivity ($\gamma = -0.79$, $p < 0.001$ and $\gamma = -0.53$, $p < 0.001$, respectively). Unconditional models were also tested for the marital discord and child mental health variables of this study (see Table 5). A trend for fathers’ reports of the frequency and severity of marital conflict to decrease over this age period was indicated. Consistent with agentic behavior, perceived agency scores decreased during the observed period, suggesting an overall pattern for perceived agency to function in a manner similar to the functioning of agentic behavior. Whereas maternal reports of internalizing problems and teacher reports of externalizing problems both increased during this time, both maternal and paternal reports of externalizing problems decreased. Scores on the other variables did not change significantly over time.

**Hypothesis 5: Predictors of Interindividual Differences in Change**

The unconditional tests (i.e., tests of age-related change) reported for Hypothesis 4 indicated substantial remaining variance to be explained (all $p$s < 0.05 for the unexplained variance in the models), except for maternal reports of behavioral dysregulation ($p = 0.25$), so further tests were conducted to explain the unexplained variance. That is, unique variance between individuals’ trajectories remained, after examining intraindividual change. Subsequent analyses (conditional models) were tested to examine this unique variance, testing predictors of interindividual differences in change (see equations below). The equations below depict testing marital conflict at Level 2 as a predictor of interindividual differences in change in agentic behavior.
Level 1:

\[ \text{Agentic behavior} = \beta_0 + \beta_1(\text{Age}) + r \]

Level 2:

\[ \beta_0 = \gamma_{00} + \gamma_{01}(\text{Marital Conflict Composite}) + u_0 \]
\[ \beta_1 = \gamma_{10} + \gamma_{11}(\text{Marital Conflict Composite}) + u_1 \]

These analyses were repeated to examine hypotheses about predictors of interindividual change in marital conflict and child mental health. However, results of these tests of predictors of interindividual differences in change were inconclusive, with all of the (planned) tests yielding nonsignificant results. Potential explanations for the lack of findings for Hypothesis 5 include low reliability of measurement of change. Reliability estimates ranged from .10 - .30, which is quite low for the detection of significant effects. In addition, power analyses suggest a lack of power to detect a small effect on the outcome variables. Power estimates for multilevel modeling analyses were computed using Optimal Design (SSI BETAWARE; Raudenbush, Spybrook, Liu, & Congdon, 2004). Optimal Design is intended for multilevel modeling analyses that examine differences between dichotomous groups, and allows the user to specify values for the parameters that influence power. For dichotomous predictor variables, power is influenced by \( n \), the number of time points observed; \( J \), the number of children (or families) participating in the study; \( \rho \), the intra-class correlation; and \( \delta \), the standardized effect size, or difference between groups.

To determine whether sufficient power was present to detect a significant effect, power analyses were conducted for the set of HLM equations presented above, treating marital conflict as a dichotomous variable (high conflict, low conflict). \( \alpha \) was specified as 0.05, and based on past studies, values of 0.05 and 0.10 were specified for \( \rho \), indicating
that 5 or 10% of the total variation in the outcome lies between children, or within marital conflict groups. With the current sample of 232 children (J = 232) power estimates were computed for an effect size of 0.20. The effect size parameter used by Optimal Design is the population analog of Cohen’s \( d \), so 0.20 is a small effect. Results indicated that for 3 time points with an effect size of 0.20, and \( \rho \) of 0.05, power = 0.75; with \( \rho \) of 0.10, power = 0.70 (see Figure 10). Researchers differ with respect to cut-offs for acceptable levels of power, but 0.80 is a frequently used criterion, with some researchers requiring power = 0.90 (Raudenbush et al., 2004). A small effect (0.20) seems plausible, given that agentic behavior likely explains only a small percent of the variation in marital conflict, and marital conflict likely explains only a small percent of the variation in agentic behavior.

Therefore, it appears that the analyses are inconclusive. Notably, 1 additional time point would be sufficient to increase the power to 0.80 even with a small effect. On the other hand, independent of the issue of power, it may be the case that these variables simply do not predict interindividual differences in change. In that case, increased power would be irrelevant, because power is of little consequence when the alternative hypothesis is incorrect. The analyses for Hypotheses 4 and 5 extend previous research by examining developmental change in agentic behavior, a previously unexplored topic.
DISCUSSION

This research represents a critical step in tackling fundamental issues regarding interrelations between child agency, marital conflict, and child mental health. By extending preliminary analyses to include prediction of behavioral responses to marital conflict and testing direct and indirect pathways of effects (Hypothesis 1), examining the unique effects of agentic behavior, behavioral dysregulation, and perceived agency on marital conflict (Hypothesis 2) and their associations with child mental health (Hypothesis 3), and examining intraindividual change and interindividual differences in change in agency, marital conflict, and mental health (Hypotheses 4 and 5), this research moves the field forward, laying the foundation for additional research to address new questions arising from this research.

Following up on Schermerhorn et al.’s study of children’s perceived agency in the marital relationship, this study provides support for hypotheses about longitudinal relations between marital discord, negative emotional reactivity, and both agentic behavior and behavioral dysregulation. The results are consistent with the view that exposure to destructive marital conflict serves to increase children’s negative emotional reactivity. In turn, negative emotional reactivity predicted high levels of both agentic behavior and behavioral dysregulation. Agentic behavior and behavioral dysregulation had opposing effects on later marital discord, with children’s agentic behavior predicting low levels of subsequent marital discord, and behavioral dysregulation predicting high levels of subsequent marital discord. These analyses highlight the importance of

67
assessing both pathways of influence (i.e., parent-to-child and child-to-parent) in research on marital and family processes. The current study supports the notion that both pathways play a significant role in family relations.

Notably, it is not suggested here that children should get involved in marital conflict. Rather, the current approach is simply to investigate the results of children’s behavior when they do get involved. Furthermore, although this study supports our hypothesis that children’s agentic behavior predicts lower subsequent discord in families with young children, the extent to which these findings are generalizable to other age groups is not yet known. Highlighting the need for further investigation of this issue, Covell and Miles (1992) found that parents of 4 – 6 year-olds were more likely to indicate that direct intervention would be effective in reducing interparental anger, compared with parents of 7 – 12 year-olds. This finding suggests that older children’s involvement may have less impact on the alleviation of marital discord than for children of the age group in the current investigation. Cole’s (2003) work suggests viewing child effects in the context of clinical work, focusing on means of moving from child effects to child effectiveness, that is, moving from simply influencing others to influencing them in the intended, desirable direction. Children influence their parents, but “adults have the greater burden” (Cole, 2003, p. 117), needing to, not only control their own behavior, but also manage the behavior of their children. Moreover, Cole posits that parents must deal appropriately with influences that threaten to compromise their parenting, and must be sensitive to their children’s cues. Thus, it is parents, not children, who bear the responsibility to manage the child’s environment. Nonetheless, children’s influence on the marital relationship merits attention, highlighting the transactional nature of family relationships.
Consistent with a functionalist perspective on emotions, children’s negative emotional reactions in the context of marital discord were more proximal than marital discord per se in predicting children’s reactions (Davies & Cummings, 1994). Analyses indicated that interparental discord affected subsequent agentic behavior through the effect of discord on negative emotional reactivity. Similarly, interparental discord was related to later dysregulated behavior through its relationship with negative emotional reactivity. Thus, interparental discord was associated with higher levels of both agentic and dysregulated responding. These findings are consistent with previous research indicating that interparental discord is associated with increased attempts to intervene or mediate in conflict (Davies, Harold, et al., 2002) and with increased aggressive behavior (Cummings et al., 2004). Moreover, these findings support notions that children’s negative emotional reactivity is related both to children’s (a) agentic behavior, as predicted by the emotional security hypothesis (Davies & Cummings, 1994), and (b) behavioral dysregulation, as emphasized in the clinical literature (Emery, 1989). A caveat is that the present results only provide evidence for pathways of responding consistent with these views supported by statistical model testing, rather than experimental laboratory testing.

The current study lends support to the notion that children’s agentic behavior predicts subsequent decreases in interparental discord. The relations between agency and later discord replicate the findings of Schermerhorn et al. (in press) for perceived agency, and extend that work to children’s actual agentic behavior. In other words, in contrast to the commonly held belief that children are unable to effect change in the marital relationship, these analyses suggest that when children respond to interparental discord by attempting to mediate the conflict, the situation improves. Although agentic behavior
is a sign of insecurity about the marital relationship, the current study also suggests that children’s use of agentic behavior as a constructive coping strategy can affect the marital relationship in a positive way, and ultimately contribute at least to some extent towards restoring children’s sense of emotional security.

In contrast to the findings for agentic behavior, the findings for dysregulated behavior suggest that interparental discord may increase over time as a function of children’s dysregulated behavior, in addition to increases in children’s dysregulated behavior as a function of interparental discord, potentially resulting in a negative spiral of worsening relations within the family. Although this process of child effects on parents has long been the subject of speculation in the literature, this is the first longitudinal demonstration of this pathway. That is, this study is consistent with previous work in supporting the notion of negative effects of marital discord on children. In turn, children’s dysregulated behaviors appear to have negative effects on marital conflict over time, reflecting little support for the effectiveness of children’s strategy of “taking on a symptom.” That is, children’s problem behaviors do not appear to distract parents from their conflicts, thereby improving the parents’ relationship by reducing discord. On the contrary, children’s dysregulated behavior is linked with more destructive interparental relations over time.

These findings support the notion of bidirectional relations between all family systems, including relations between child and adult systems. Notably, this sample was a representative community sample, so it is not yet known how these findings generalize to clinical samples or to physically violent couples. However, a strength of the current investigation is that the results generalize more broadly to community samples and are not limited to just one group (e.g., children with clinical levels of psychopathology).
The implications of behavioral responses to conflict for children’s mental health are intriguing. The findings suggest that children’s agentic behavior is not related to children’s adjustment problems, although it is related at least cross-sectionally to prosocial behavior. That is, tests of the correlational paths from agentic behavior to internalizing and externalizing problems suggested that agentic behavior is unrelated to adjustment problems. This may appear to run counter to previous research, in which several years after their parents’ divorce, adolescents’ feeling caught between their parents (conceptually similar to agentic behavior) was associated with adolescents’ adjustment problems (Buchanan, Maccoby, & Dornbusch, 1991). However, there are important distinctions to be made between feeling caught in the middle and engaging in agentic behavior. That is, feeling caught between parents does not necessarily correspond directly to the particular behavioral response (agentic vs. dysregulated) the child responds with, in acting on the environment. Feeling caught in the middle does not necessarily map onto responding with agentic behavior (although it is not inconsistent with that type of response). Conceivably, children who feel caught in the middle may engage in a wide variety of behavioral responses, including agentic behavior, behavioral dysregulation, overt emotional negativity, and avoidance of conflict. Additional research would be needed in order to address this question.

In addition, the positive correlation between agentic behavior and prosocial behavior merits discussion. It appears that children who more frequently engage in agentic behavior tend to also more frequently engage in prosocial behavior concurrently (but not longitudinally). These findings paint a picture of the agentic child as one who, regardless of the presence or absence of internalizing or externalizing problems, is socially skilled, or at least motivated by prosocial tendencies. Those social skills or
prosocial tendencies likely enhance the child’s disposition to help and ability to be effectively agentic, perhaps acting proactively on the environment in a more skillful and prosocial way than many of the child’s peers. Thus, the agentic child may use more socially sophisticated methods of attempting to reduce marital conflict, and such methods may be more likely to effect change in the marital relationship, compared with the methods of less prosocial children. The findings regarding the absence of longitudinal links between agentic behavior and prosocial behavior are explainable. Although it makes sense that the two behaviors would be correlated since agentic behavior may well be related to being prosocial, there is no reason to expect that either behavior would causally predict the other.

In contrast, regarding behavioral dysregulation, correlational analyses (cross-sectional) suggest that children with high scores for behavioral dysregulation also tend to have high scores for adjustment problems—both internalizing and externalizing—and low scores for prosocial behavior. These findings fit with the hypothesis that behavioral dysregulation reflects processes in common with externalizing problems, as described in DSM-IV, possibly mechanisms underlying the exhibition or development of externalizing problems, such as sensitization to stress fostering behavioral disorganization or dysregulation. For example, yelling at the parents is consistent with an overall pattern of aggressive behavior, as in externalizing problems. Certainly prosocial behavior and many externalizing/dysregulated behaviors are mutually exclusive, providing a likely explanation for the negative correlation between dysregulated behavior and prosocial behavior. Regarding the positive association between dysregulated behavior and internalizing problems, it may be the case that, consistent with EST, dysregulated behavior reflects activation of the security system. Hence, it may be that a compromised
sense of security, rather than behavioral dysregulation per se, is associated with various adjustment problems, including internalizing problems. Longitudinal analyses indicated that behavioral dysregulation predicts high levels of internalizing and externalizing problems and low levels of prosocial behavior, even controlling for those variables at Time 1. However, child adjustment problems do not predict subsequent behavioral dysregulation. These results support the interpretation that behavioral dysregulation induced by marital discord is a mechanism contributing to the development of behavior problems, and not simply a correlate of behavioral problems. The fact that behavioral dysregulation in the context of interparental discord predicted both types of problem behaviors indicates a common process model may hold (e.g., EST), rather than distinct explanations accounting for internalizing and externalizing problems, respectively. For example, emotional insecurity about interparental discord is posited to activate emotional, cognitive, and behavioral responses, which, in turn, may underlie the development of internalizing and externalizing problems over time (Davies, Harold, et al., 2002). Thus, these results are consistent with the notion that early experiences of family relationships (including children’s perceptions of the marital relationship), play an important role in the development of adjustment problems.

In general, the pattern of findings regarding perceived agency (Hypotheses 2 and 3) suggests that perceived agency may play a less substantial role in influencing marital conflict than does agentic behavior, and may be less closely related to positive mental health outcomes, compared with agentic behavior. Agentic behavior might be expected to be more closely related to marital functioning and mental health compared with perceived agency, since agentic behavior reflects children’s actual behavior. In contrast, since perceived agency, reflecting children’s motivations and cognitions, is one step removed
from actual behavior, it is therefore probably less likely, or less certain, to influence marital functioning. That is, agentic behavior can be viewed as more proximal to marital functioning and mental health, so one might expect it to be more closely related.

Finally, developmental changes in children’s behavioral responses to conflict merit further discussion. Analyses suggested that, rather than the hypothesized increase in agentic behavior over the age span of 6 – 8 years of age, agentic behavior decreased during this time. This finding is consistent with the notion of this age period as a latency period. During the latency period (beginning around age 5 or 6) theorists have long speculated (e.g., beginning with Freud) that emotional drives are quieter, children are relatively preoccupied with (same-sex) peer relationships, and that relatively little happens during this time (Berger, 1994). It may be the case that agentic behavior diminishes during this age period because of a decrease in emotional drives or preoccupation with peer relationships, with agentic behavior possibly experiencing a resurgence as the child emerges from the latency period around age 12. Moreover, the gains in autonomy that characterize the adolescent period are consistent with possible increases in agentic behavior at the end of the latency period, with adolescents who have relatively greater autonomy-related needs being even more likely to attempt to influence their parents (Baranowski, 1977). Providing further support for the notion that agentic behavior may increase during adolescence, previous research suggests that children’s involvement in interadult conflict increases over the period from age 5 to age 19, with a more rapid increase observed in adolescence (i.e., between 11-15 years of age, Cummings, Ballard, El-Shiekh, & Lake, 1991). Notably, adolescents’ struggles to develop autonomy from the parents while maintaining relatedness with them may be impaired by hostile family conflict (Allen, Hauser, O’Connor, Bell & Eickholt, 1996).
The exploratory HLM tests of predictors of change in marital discord, behavioral responding, and mental health were inconclusive. Power analyses suggest that 3 time points of data collection may have yielded insufficient power to detect what is probably a small effect. On the other hand, the lack of findings may reflect a real lack of associations between the predictors and change in the variables of interest.

Future Directions

Very little is known about factors that relate to differences in children’s behavioral responding to marital discord. For example, an important question is to account for why a child’s negative emotional reactivity is more likely to result in agentic behavior or behavioral dysregulation, respectively. Temperamental differences, such as extraversion/surgency, might underlie children’s choices of responding. That is, the higher activity levels and impulsivity of extraverted children (Rothbart, Ahadi, Hershey, & Fisher, 2001) may be consistent with higher levels of behavioral dysregulation. Furthermore, consistent with theory linking agency and communion with dimensions of temperament (Wiggins, 1991; Wiggins & Trapnell, 1996), there may be temperamental differences in agency that underlie children’s behavioral responses to conflict.

In addition, Cummings et al. (2004) reported that conflict involving child- and marriage-related topics was related to children’s behavioral dysregulation, whereas social- and work-related topics were not. Future research should investigate the role of conflict topics, particularly child-related vs. nonchild-related topics, in predicting agentic behavior. It may be the case that topics that are more threatening to the security of the family (e.g., marriage-related topics) and topics that are more personally relevant (e.g., child-related topics) elicit more behavioral responding—both behavioral dysregulation
and agentic behavior. Children may be more motivated to involve themselves in conflicts that directly involve them or that are relevant to subsystems within the family.

In addition, family characteristics such as parental sensitivity may relate to effects of agentic behavior on marital discord (and effects of behavioral dysregulation on marital discord). That is, it may be the case that the effect of agentic behavior on marital conflict depends on the sensitivity of the parents. Parents who recognize that their conflicts are distressing to their children may be more likely to reduce subsequent conflict. If that is the case, it seems likely that, in terms of effects on marital functioning, the form of the behavioral response (agentic behavior vs. behavioral dysregulation) may be less important than parental sensitivity.

In conclusion, there are certainly many influences on family relations, and children’s behavioral responses to marital conflict do not occur in isolation from parents’ prior effects on children (Shanahan & Sobolewski, 2003). That is, child effects on marital functioning are themselves affected by parents’ earlier influence on their children. Nonetheless, the current study suggests that children are not helpless or ineffectual in the face of threats to their emotional security. Rather, they actively (and successfully) engage in efforts to decrease marital discord, thereby restoring their sense of emotional security. In addition, it may well be the case that children’s interventions are to a modest degree effective, rather than entirely futile. These findings thus suggest the need to rethink the common view of children in the face of marital conflict. At the same time, another implication is that when children’s involvement in marital conflict is not constructive, the outcome may well be a result that is in opposition to their goal of attaining or regaining emotional security. That is, children’s dysregulated behavior, which can be regarded as a
destructive response, served to predict increased marital discord over time, rather than reduced marital discord.

Notably, the multi-method, multi-informant, longitudinal design strengthens the conclusions that can be drawn regarding the direction of effects and children’s influence on the interparental relationship. Although previous research has made strides in examining the processes by which marital discord affects children, and in identifying predictors of children’s emotional, behavioral, and cognitive responses to conflict, the current study represents a significant advance over previous research that has largely neglected the reverse direction of effects, namely that of children’s influence on the marital relationship, with the further implication that children may affect marital conflict for good or ill, depending on exactly how they respond behaviorally.
REFERENCES


84


Shanahan, L., & Sobolewski, J.M. (2003). Child effects as family process. In A.C. Crouter & A. Booth (Eds.), *Children’s influence on family dynamics: The


Wiggins, J.S. (1991). Agency and communion as conceptual coordinates for the understanding and measurement of interpersonal behavior. In W.M. Grove, & D. Cicchetti (Eds.), *Thinking clearly about psychology: Essays in honor of Paul E.*


APPENDIX A

REVISED MACARTHUR STORY STEM BATTERY:

MARITAL CONFLICT STORIES

1. Lost Keys

Setting: This is a mild argument, and parents speak with an agitated, moderate level of anger. Underlined words are emphasized slightly.

Father: I can’t find my keys. Where did you put them?

Mother: I didn’t touch your keys. It’s not my responsibility to keep track of them.

Father: You’re always borrowing them and not putting them back!

Mother: No, I’m not. If you put them where they were supposed to go in the first place they wouldn’t get lost.

2. Messy Kitchen

Setting: This is an intense conflict. Both parents raise their voices and use angry tones of voice. The dolls stomp their feet when they say their lines. Underlined words are emphasized strongly.

Interviewer: Mom and Dad are really mad. Look at my face. {Experimenter makes an angry, scrunched up face, and maintains it throughout the story. Experimenter speaks in a very serious, annoyed, irritated, and defensive voice.}

Mother: Look at this mess! There are dirty dishes in the sink and melted ice cream all over the table! Why can’t you clean up after yourself?!!

Father: Me clean up! It’s your turn! I cleaned the kitchen last week!”
Mother: No, this is your mess! You’re the one who left the ice cream out. Because of you it melted all over the table!

Father: You said you were going to put the ice cream away…it’s your fault it melted!

3. Home Late

Setting: This is a productive marital conflict, with calm discussion. The parents do not raise their voices; they use a calm, neutral tone of voice.

Father to child: I wonder when Mom is going to be home for dinner? I’m getting really hungry. {Experimenter brings mother in.}

Father to mother: Hi, I thought you’d be home earlier.

Mother: I told you I might be back late.

Father: Yes, but you said 6:30, and it’s almost 7:00.

Mother: Well, things took longer than I expected.
APPENDIX B
AGENTIC BEHAVIOR ITEMS RATING QUESTIONNAIRE

For each item below, please rate the degree to which you think the item should be included in a scale of agency by circling the appropriate number on the rating scale. Thanks for your help!

The working definition of agentic behavior is as follows:

Agentic behavior is conceptualized as self-initiated, intentional action. In terms of family, children’s exercise of agency reflects their self-initiated efforts to affect interactions and relationships within the family. By comparison, bidirectional effects may include any behavioral, psychological, or biological processes that alter relations between two people, but are not necessarily self-initiated or intentional.

1 = not important
2 = mildly important
3 = neutral
4 = somewhat important
5 = very important

Parents are asked to report how well each item below describes their child’s reactions to witnessing arguments between them.

1. Tries to distract us by bringing up other things. 1 2 3 4 5
2. Tries to help us solve the problem. 1 2 3 4 5
3. Tries to comfort one or both of us. 1 2 3 4 5
4. Ends up taking sides with one of us. 1 2 3 4 5
5. Tries to get away from us (for example, by leaving the room). 1 2 3 4 5
6. Yells at family members. 1 2 3 4 5
7. Says unkind things to family members. 1 2 3 4 5
8. Starts hitting, kicking, slapping, or throwing things at family members. 1 2 3 4 5
9. Acts as if or says s/he feels sick. 1 2 3 4 5
10. Appears angry. 1 2 3 4 5
11. Appears frightened. 1 2 3 4 5
12. Appears sad. 1 2 3 4 5
13. Watches and listens very closely. 1 2 3 4 5
14. Becomes unusually well-behaved. 1 2 3 4 5
15. Smiles or laughs. 1 2 3 4 5
16. Becomes very quiet and withdrawn. 1 2 3 4 5
<p>| | | | | |</p>
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<tbody>
<tr>
<td>17. Acts as if or says his/her head hurts.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18. Keeps very still (almost as if he or she is frozen).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19. Still seems upset after we argue.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20. Can’t seem to calm down after we argue.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>21. Shows concern and sympathy for one or both of us.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>22. Causes trouble.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>23. Appears to keep feelings inside.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>24. Doesn’t tell anyone how he or she is feeling.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>25. Appears upset.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>26. Acts as if or says his/her stomach hurts.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>27. Acts as if s/he doesn’t care.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>28. Takes a while after the argument to act like him or herself again.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>29. Tries to hide feelings.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>30. Repeatedly brings up questions and concerns about argument after it’s over.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>31. Acts like it’s no big deal.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>32. Goes off by him/herself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>33. Tries to stay away from us.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>34. Tell us to stop arguing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>35. Gets involved in the argument.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>36. Tries to cheer us up after the argument.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>37. Acts as if or says s/he feels nauseous.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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</tbody>
</table>
APPENDIX C

TABLES

TABLE 1. OVERVIEW OF MEASUREMENT OF CONSTRUCTS

TABLE 2. PRINCIPAL COMPONENTS ANALYSES SUPPORTING AGENTIC BEHAVIOR SCALE

TABLE 3. DESCRIPTIVE STATISTICS AND INTERRELATIONS FOR INDICATOR VARIABLES OF HYPOTHESES 1 AND 2

TABLE 4. DESCRIPTIVE STATISTICS AND INTERRELATIONS FOR INDICATOR VARIABLES OF HYPOTHESIS 3

TABLE 5. CHANGE IN MARITAL DISCORD, PERCEIVED AGENCY, AND MENTAL HEALTH AS A FUNCTION OF CHILD AGE
### TABLE 1

OVERVIEW OF MEASUREMENT OF CONSTRUCTS

<table>
<thead>
<tr>
<th>Construct</th>
<th>Reporter</th>
<th>Method</th>
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<tbody>
<tr>
<td><em>Child Agentic Behavior:</em> SIMS</td>
<td>MF</td>
<td>Q</td>
</tr>
<tr>
<td><em>Child Dysregulated Behavior:</em> SIMS</td>
<td>MF</td>
<td>Q</td>
</tr>
<tr>
<td><em>Child Perceived Agency:</em> MSSB</td>
<td>C</td>
<td>N</td>
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*Note.* (M) mother, (F) father, (C) child, (T) teacher, (Q) questionnaire, (N) narrative task (coded by independent observers), (O) observation (coded by independent observers)
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PRINCIPAL COMPONENTS ANALYSES SUPPORTING AGENTIC BEHAVIOR SCALE

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### Negative Emotional Reactivity

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### Agentic Behavior

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### Behavioral Dysregulation

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*Note.* †p < .10. *p < .05. **p < .01. ***p < .001. CPS = Frequency/Severity subscale of the Conflicts and Problem Solving Scales (Kerig, 1996). Ns range from 175 to 231 due to missing data.
### TABLE 4

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*Note: * indicates significance at the .05 level, † indicates significance at the .10 level, ** indicates significance at the .01 level, *** indicates significance at the .001 level.*
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Ns range from 207 to 232 due to missing data.

†p < .10. *p < .05. **p < .01. ***p < .001.
### TABLE 5

CHANGE IN MARITAL DISCORD, PERCEIVED AGENCY, AND MENTAL HEALTH AS A FUNCTION OF CHILD AGE

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† *p* < 0.10, ** *p* < 0.01, *** *p* < 0.001.
APPENDIX D

FIGURES

Figure 1. Boxplots Representing the Distributions of the Agentic Behavior Scores at Each Time Point

Figure 2. Direct Effects of Marital Discord on Agentic Behavior and Behavioral Dysregulation

Figure 3. Negative Emotional Reactivity Mediating Effects of Marital Discord on Children’s Behavioral Responses

Figure 4. Effects of Children’s Behavioral Responses on Marital Discord

Figure 5. Correlations between Latent Variables Representing Children’s Behavioral Responses and Mental Health

Figure 6. Longitudinal Relations between Agentic Behavior and Prosocial Behavior

Figure 7. Longitudinal Relations between Behavioral Dysregulation and Internalizing and Externalizing Behavior

Figure 8. Longitudinal Relations between Behavioral Dysregulation and Prosocial Behavior

Figure 9: Developmental Change in Children’s Responses to Marital Discord: An Illustrative Set of Ten Cases

Figure 10. Relation between Number of Waves and Power for Different Values of Rho and Delta
Figure 1. Boxplots Representing the Distributions of the Agentic Behavior Scores at Each Time Point
Figure 2. Direct Effects of Marital Discord on Agentic Behavior and Behavioral Dysregulation

Standardized path coefficients are presented, and superscripts indicate fixed loadings for model estimation purposes. *$p < .05$. **$p < .01$. ***$p < .001$. 

$\chi^2 = 56.94 \quad$ NFI = .98 
$df = 12 \quad$ CFI = .99 
$p < .001 \quad$ RMSEA = .13 
$\chi^2/df = 4.75$
Figure 3. Negative Emotional Reactivity Mediating Effects of Marital Discord on Children’s Behavioral Responses

Standardized path coefficients are presented, and *f* superscripts indicate fixed loadings for model estimation purposes.

***p < .001.
Figure 4. Effects of Children’s Behavioral Responses on Marital Discord
Standardized path coefficients are presented, and * superscripts indicate fixed loadings for model estimation purposes.
*p < .05. ***p < .001.
Figure 5. Correlations between Latent Variables Representing Children’s Behavioral Responses and Mental Health

Standardized path coefficients are presented, and superscripts indicate fixed loadings for model estimation purposes.

*p < .05. **p < .01. ***p < .001.
Figure 6: Longitudinal Relations between Agentic Behavior and Prosocial Behavior

Standardized path coefficients are presented, and superscripts indicate fixed loadings for model estimation purposes.

*p < .05. **p < .01. ***p < .001.
Figure 7: Longitudinal Relations between Behavioral Dysregulation and Internalizing and Externalizing Behavior

Standardized path coefficients are presented, and * superscripts indicate fixed loadings for model estimation purposes.

\( \chi^2 = 734.74 \)  
NFI = .95  
df = 150  
CFI = .96  
p < .001  
RMSEA = .13  
\( \chi^2 / df = 4.90 \)
Figure 8: Longitudinal Relations between Behavioral Dysregulation and Prosocial Behavior

Standardized path coefficients are presented, and superscripts indicate fixed loadings for model estimation purposes.

*p < .05. **p < .01. ***p < .001.
Figure 9: Developmental Change in Children’s Responses to Marital Discord: An Illustrative Set of Ten Cases
Figure 10. Relation between Number of Waves and Power for Different Values of Rho and Delta