

FAMILY AND CHILD-LEVEL MODERATORS OF THE RELATIONSHIP BETWEEN  
MARITAL CONFLICT AND EARLY ADOLESCENT PEER SOCIAL COMPETENCE

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## **ABSTRACT**

ABIGAIL SAYLOR PRESSEL: Family and Child-Level Moderators of the Relationship  
Between Marital Conflict and Early Adolescent Peer Social Competence  
(Under the direction of Martha Cox)

Family and child-level variables were examined as moderators of the impact of marital conflict on adolescent peer social competence in a sub-sample of 546 intact families (276 sons, 270 daughters) who participated in the 5th and 6th grade assessments of the NICHD SECCYD. Analyses were conducted using the Actor-Partner Interdependence Model to assess for actor, partner, and interaction effects. Consistent with the first hypothesis, a significant negative relationship was consistently found between actors' reported marital conflict and adolescent peer competence, such that higher marital conflict was associated with lower peer social competence while lower marital conflict was associated with higher peer social competence. This finding was not replicated for partners across models. It was hypothesized family emotional expressiveness would moderate the relationship between marital conflict and peer social competence. Although emotional expressiveness did not act as a moderator, both actor and partner effects were found for the positive association between emotional expressiveness and peer social competence. It was hypothesized that positive parenting behavior would moderate the relationship between marital conflict and peer social competence, such that a higher level of marital conflict would be less predictive of adolescent peer social competence in the presence of positive parenting behavior. No moderation was found, but both actor and partner parenting sensitivity were positively associated with peer social competence. It was anticipated that perceived parent-

child relationship security would provide a buffer for adolescents experiencing marital conflict in the home. No moderation was found, but actor and partner effects supported a positive association between perceived relationship security and peer social competence. Adolescents who viewed peers as supportive were rated by their parents as more socially competent with peers in comparison with adolescents who did not view peers as supportive. Relative to mothers, fathers appeared to be more negatively affected by their own reported marital conflict in the home when rating their adolescent's peer social competence. Fathers also reported lower peer social competence scores when mothers reported increased conflict in the home, while mothers were not as negatively affected by fathers' reported marital conflict. The strengths and limitations of the present study are discussed.

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## LIST OF ABBREVIATIONS

APIM = Actor-Partner Interdependence Model

$b$  = beta; standardized regression coefficient

Cronbach's  $\alpha$  = statistical estimate of internal reliability

Fisher  $Z$  = statistical transformation which makes it possible to compare across variables with different scales

MCMC = Markov Chain Monte Carlo

NICHD SECCYD = National Institute of Child Health and Human Development  
Study of Early Child Care and Youth Development

$p$  = value which determines statistical significance, reflects likelihood result was based on chance

Pearson  $r$  = bivariate correlation statistic

PROC MIANALYZE = SAS multiple imputation analysis procedure

PROC MIXED = SAS modeling program that allows for multilevel modeling

## **CHAPTER 1**

### **INTRODUCTION**

Marital conflict has been associated with a number of negative outcomes for children and adolescents. Yet marital conflict is a complex construct, and research has shown the effects of marital conflict manifest differently and to different degrees across children. Therefore it may be beneficial to better understand the vulnerability and protective processes which may affect the impact of marital conflict on the family. The literature suggests that risks may be potentiated by other risk factors and ameliorated by protective factors (Cummings, Davies, & Campbell, 2000; Garmezy, 1983). A number of key risk and protective factors may operate in concert with marital conflict, leading to a range of child outcomes. The goal of this paper is to consider what processes may moderate the effect of marital conflict on children's peer social competence. The present study provides a unique contribution to the research field in a number of key ways including: utilizing a large archival sample with data from intact families followed longitudinally; involving a multi-reporter, multi-method approach that makes use of information gained through self-report measures as well as observational means; and examining environmental factors, family factors, and child-specific factors to determine what processes exacerbate or ameliorate the effect of marital conflict on early adolescent peer social competence.

## Background

### *The Importance of Peer Competence*

The ability to interact actively and appropriately with peers across time represents successful engagement in stage-salient developmental tasks. Relationships with peers can be beneficial in part because they may help teach children and adolescents certain skills that then translate into competence in other interpersonal areas, such as coping with stress and managing emotions when interacting with authority figures (Asher & Parker, 1989). Peer relationships also teach children and adolescents social rules and provide them with positive social mastery experiences within the context of close, affiliative bonds (Asher & Parker, 1989). The skills and abilities associated with peer social competence during the adolescent years are likely to prove beneficial to individuals when faced with challenges in later developmental stages (Collins & van Dulmen, 2006).

Difficulties with peers in childhood have been associated with difficulties later in life (Hartup & Moore, 1990; Parker & Asher, 1987). Kupersmidt, Burchinal and Patterson (1995) found problems with peer relationships both on dyadic and group levels in middle childhood were risk factors for aggression and delinquency in early adolescence. Early peer rejection has been shown to be predictive of later antisocial behavior in middle childhood, above and beyond later measures of social rejection and early aggression (Cowan & Cowan, 2004). Peer rejection has also been associated with truancy, elevated externalizing and internalizing symptoms, and increased risk for adolescent pregnancy (DeRosier, Kupersmidt, & Patterson, 1994; Kupersmidt & Patterson, 1991; Underwood, Kupersmidt & Coie, 1996). The range of potentially negative effects of poor peer relationships highlights the importance of understanding social competence in relation to other developmental and family processes.

The function of peer relationships in children's development changes over time. Across the years of early childhood, children begin to shift from interacting primarily with their caregivers and siblings to engaging in social exchanges with other children outside the family unit (Ellis, Rogoff & Cromer, 1981). Initially peer interactions involve coordinated play with other children, and friendships are defined largely by physical proximity and common activities (Merrell & Gimpel, 1998). During middle childhood, children are exposed to more clearly defined peer groups, cliques, and coalitions (Parker & Gottman, 1989). At this age, children begin to better understand social forces that guide behavior and use social situations to determine how to act and react to their environment (Parker & Gottman, 1989). Friendships in childhood and adolescence are often marked by fluidity (Cairns & Cairns, 1995). Rather than indicating problematic relationships, Cairns and Cairns (1995) suggest that changes in friendships over time often may represent developmentally appropriate adaptations to individuals' changing desired goals and social needs. In adolescence, individuals' social experiences become increasingly complex with regard to a range of domains including friendship patterns, social rules and expectations, and social perspective taking (Merrell & Gimpel, 1998). These years have also been identified as the time at which individuals demonstrate the highest levels of conformity to social groups (Huston & Ripke, 2006).

Peer functioning may be a particularly important area to evaluate in the transition years as individuals move from elementary school to middle school. Early adolescents must deal with a range of physiological, social, and educational transitions (Jackson & Rodriguez-Tome, 1993; Rutter, 1980). Biologically, individuals during the years of early adolescence are beginning puberty, with accompanying physical and hormonal changes. Socially, there is

increased interest in the opposite sex and in establishing same-sex cliques or groupings (Parker & Gottman, 1989). The transition from elementary to middle school often necessitates a change in classroom organization; children typically move from a home-base classroom set-up with 1-2 main teachers to a rotating class schedule with a range of instructors. Students are given increased responsibility to manage their academic requirements, and students must learn to juggle academics with the larger number of extracurricular activities available in the middle school years. Given the potential difficulty of the transition, the ability to engage successfully with peers may be a boon to individuals as they adjust to the new academic and social expectations of middle school life.

#### *The Measurement of Peer Social Competence*

The field of research on social functioning and peer relationships is rich and varied with regard to the study and assessment of peer-related variables. Peer research includes positive aspects such as the presence of prosocial abilities and positive peer social experiences, as well as more negative interpersonal interactions such as peer aggression and peer victimization. When reviewing the peer literature, there can also be confusion over the use of similar terms to describe different processes. For instance, McFall (1982) highlights the importance of distinguishing the terms *social competence* and *social skills*. Although these terms are often used interchangeably, McFall argues social skills are specific behaviors individuals engage in when approaching an activity or situation, while social competence reflects a critical assessment or conclusion as to whether the individual demonstrates the ability to handle activities or situations adequately.

An integrative model proposed by Reschley and Gresham (1981) provides a framework for understanding the assessment of various elements of social functioning (see



Figure 1). In Reschley and Gresham’s model, social competence is an umbrella term for an individual’s abilities to navigate the larger social environment. Subsumed within the construct of social competence are the domains of adaptive behavior, social skills, and peer acceptance (Gresham, 1986; Gresham & Reschley, 1987). The adaptive behavior domain is further divided into areas of an individual’s independent functional

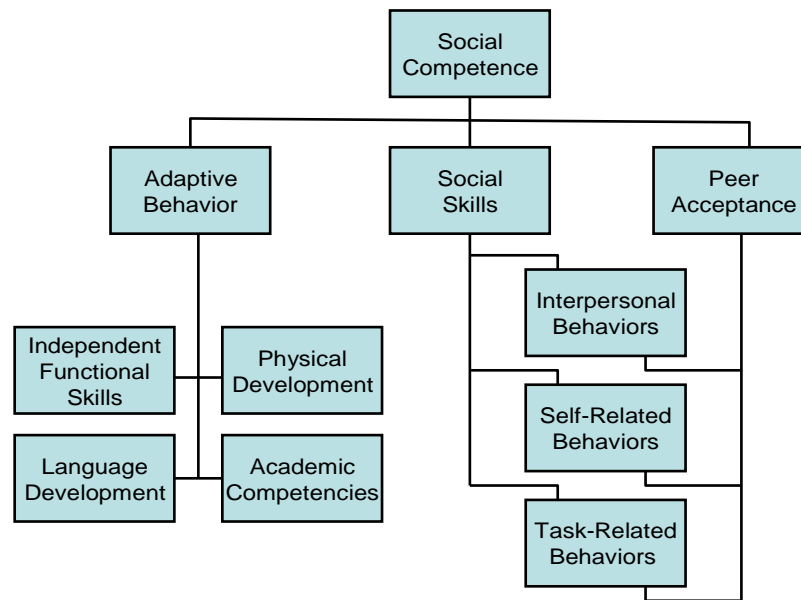


Figure 1: Reschley and Gresham’s Model of Social Competence (Merrell & Gimpel, 1998; Reschley & Gresham, 1981; Gresham & Reschley, 1987).

skills, physical development, language development and academic competencies. The social skills domain includes interpersonal behaviors, self-related behaviors, and task-related behaviors. Specific social skills include the ability to cooperate, assert oneself appropriately, and interact with peers and other adults in a range of situations. The peer acceptance domain is both a domain within social competence as well as an anticipated outcome of an

individual's performance in the adaptive behavior and social skills domains (Gresham & Reschley, 1987).

Researchers have utilized various methods to measure social and peer-related variables (for review, see Merrell & Gimpel, 1998). Children's social skills and peer acceptance have been directly measured using observational procedures, either through naturalistic classroom observations (Walker & Severson, 1991) or through an analog observation of children with same-age peers in a lab setting (Coie & Kupersmidt, 1983; Dodge, 1983). Children and adolescents also have been asked to report their own perceptions of their social skills and peer acceptance using measures such as the Assessment of Interpersonal Relations (AIR; Bracken, 1993) and the self-report version of the Social Skills Rating System (SSRS; Gresham & Elliott, 1990). Students may be asked to identify and list their number of friends, describe qualities of their friendships, and describe perceived levels of social support, loneliness, and/or peer conflict. Parents and teachers also have reported on children's and adolescents' social competence based on their perspectives at home and in the classroom using measures such as the School Social Behavior Scales (SSBS; Merrell, 1993), the Walker-McConnell Scales of Social Competence and School Adjustment, or the Social Skills Rating System (SSRS; Gresham & Elliott, 1990). Sociometric data provide another way of measuring peer acceptance by asking children and adolescents to rate each other using strategies such as peer nominations, picture sociometric tasks, and class play scenarios (Bower, 1969; Landau & Milich, 1990; Worthen, Borg, & White, 1993). The related field of social information processing examines how children and adolescents perceive peer situations and use such information in making social decisions (Crick & Dodge, 1994). Aspects of social information processing such as intent attributions, social goals and outcome

expectations have been associated with differences in interpersonal behaviors among subtypes of reactively and proactively aggressive children (Crick & Dodge, 1996).

Whereas there are a variety of ways to evaluate the range of variables associated with particular aspects of social competence, the present study focused on children's peer social competence. The study utilizes parent reports from a subset of questions from the Social Skills Rating System which incorporate information about adolescents' social competence in a range of situations with peers.

### *Family-Peer Linkages*

Both theoretical and empirical work suggests the importance of family experiences in predicting the development of social competence in children. Family systems and developmental psychopathology approaches each emphasize the importance of context for understanding behavior (Davies & Cicchetti, 2004). Family systems theory suggests looking beyond the parent-child dyad to understand how other subsystems within the family, such as the marital subsystem, can have profound effects on child social and emotional development (Cox & Paley, 1997; Minuchin, 1974; Minuchin, 2002). Consideration of the family as a system also necessitates an appreciation for how that system engages with larger systems beyond the family (Cox & Paley, 1997). Developmental psychopathology also suggests that the context in which events occur can dramatically change their impact (Cummings, Davies, & Campbell, 2000). The context of the family may be a key component to understanding individual differences in adolescents' peer social competence.

Much of the past empirical work on family-peer linkages has focused on the mediators of family experiences on children's peer relationships, particularly with regard to how parent-child relationships may impact peer relationships. Parents provide the earliest

environment for a developing child to begin to understand the social world. From a social learning perspective, parents act as models of social behavior. Through watching their parents interact with other adults and with members of the family, children begin to learn how to engage with others. From a young age, parent-child interactions may serve as a training ground for learning a broad range of social skills (Parke et al., 1992). Interacting with a parent provides a child with an opportunity to learn basic rules of social reciprocity, emotional expression, and problem-solving. Feedback from the parent may help the child learn to modify his or her social behaviors in different situations. Parents also act as direct teachers or coaches, instructing their children on how to make friends and be a friend to others (Parke & O'Neil, 1997). Parents may also serve as their children's social managers, facilitating opportunities for peer interaction (Ladd, Profilet, & Hart, 1992).

Warm, sensitive parenting has been associated with children's peer acceptance and positive involvement with peers (Dekovic & Meeus, 1997; Parke & O'Neil, 2000; Putallaz, 1987). The reverse also appears to be true, wherein parental behaviors exhibiting control and hostility are associated with higher prevalence of child peer rejection and higher levels of reported child aggression (Boyum & Parke, 1995; Parke & O'Neil, 2000). A range of potential mediators of the effect of family functioning on peer relationships and social competence have been explored (for review, see Parke et al., 1992; Parke et al., in press). Parke and colleagues suggest parent-child interactions provide children with opportunities to learn to understand and regulate affective expressions. The authors believe these same skills learned through parent-child interactions can be translated and applied by children in their relationships with peers. They hypothesize that the ability to encode and decode emotional signals may be a key component of peer functioning learned first through parent-child

interactions. The effect of family functioning on social functioning may also be mediated through the child's cognitive representational models of relationships (Cassidy, Kirsch, Scolton & Parke, 1996; McDowell, Parke & Spitzer, 2002; Waters & Cummings, 2000).

The focus on dyadic parent-child relationships is consistent with much of the research on families, and it has been suggested that such a focus misses important qualities of family experience by not including the child's experience of the parental relationship and the whole family environment (Cox & Paley, 1997). More research is needed to examine the linkages between the broader family system and children's social functioning. Marital relationships may be particularly important in terms of direct effects on children's adjustment as well as indirect effects through their impact on other relationships in the family (Cox & Harter, 2001).

#### *Marital Conflict and Child and Adolescent Adjustment*

Research has repeatedly demonstrated an association between marital conflict and various negative child and adolescent outcomes (for reviews, see Emery, 1999; Grych & Fincham, 1993, 2001). In recent years, there has been a shift in the field, moving beyond studies that predict a linear relationship between the level of marital conflict and negative child outcomes to those which examine the complex range of factors which may impact the degree to which negative conflict is associated with detrimental effects for children and the family. Just as all arguments are not created equal, all families do not respond to arguments in the same fashion.

There are a number of reasons why marital conflict may be associated specifically with decreased peer social competence among early adolescents. Parents who report high levels of conflict and tension may be modeling poor communication skills and socially

aggressive behavior to their children. Adolescents coping with high levels of stress as a result of ongoing marital conflict may have difficulty interacting appropriately with their peers. Given the potentially destabilizing influence of conflict in the home environment, some adolescents may isolate themselves socially. Adolescents who witness their parents engaging in high levels of conflict may incorporate lessons learned from these observations into their own working models of relationships and view relationships with others as potentially hostile or rejecting.

Only a small handful of studies have evaluated the impact of marital conflict on children and adolescents' peer outcomes. Katz and Gottman (1995) found evidence for two distinct behavioral trajectories with peers among children from homes with hostile marital conflict across early to middle childhood. Over a three year observation period, one group of children was found to engage in relatively high levels of both positive and negative peer interactions, although these behaviors rarely came to the attention of adults as problematic. A second group of children was found to engage in negative peer interactions without the same degree of corresponding positive interactions; these children were more likely to come to the attention of adults and be labeled as difficult. Parke et al. (2001) found initial support for the roles of children's perceptions of marital conflict and children's emotion regulation as mediators of the relationship between marital conflict and social skills. In a second study, Katz and Gottman (1996) found an indirect pathway between marital conflict and child social skills through disrupted parenting.

#### *Moderation of Marital Conflict: Vulnerability and Protective Factors Considered*

Vulnerability and protective factors were first examined in studies of the offspring of parents with severe mental illness and have since been applied to study a range of situations

where children are considered at-risk for negative outcomes or adjustment problems (Rutter, 1987; Watt, Anthony, Wynne, & Rolf, 1984). Effects are indirect and are seen through the interaction of vulnerability and protective factors with other variables (Rutter, 1990).

Experiencing marital conflict in the family may place adolescents at risk for interpersonal difficulties with peers, yet the risk may be ameliorated or intensified by other contextual factors. Therefore, it is important to understand the contexts in which adolescents experience marital conflict in order to predict peer functioning.

The present study represents a first step in examining the associations among a range of potential moderators of the effect of marital conflict on early adolescents' peer social competence. While it is beyond the scope of the present study to examine the specific mediators driving these moderating relationships, the present study will highlight areas which may merit further research into underlying mechanisms at work.

#### Processes Within the Family

To better understand the impact of marital conflict on early adolescents' peer social competence and psychological functioning, it is important to consider additional factors within the family that may work in concert with marital conflict to impact early adolescents' peer relationships. It is hypothesized that mothers' and fathers' emotional expressiveness may operate as protective factors in conjunction with reported marital conflict to contribute to a child's broader sense of emotional well-being within the family. The experience of marital conflict may not be as negative or aversive for early adolescents who experience a sense of appropriate emotional expression within the family. Early adolescents who experience marital conflict coming from homes with low emotional expressiveness and/or

poor parent-child relationships may have a more difficult time successfully negotiating peer situations.

### *Family Emotional Expressiveness*

Family emotional expressiveness reflects the degree to which family members share positive and negative emotions with each other. In addition to the demonstration of affect states, emotional expressiveness in the family may also include aspects of emotional understanding such as the motivation and ability to control emotional expressions as well as understanding display rules for emotion states (Halberstadt, 1991). Halberstadt and Eaton (2002) highlight that individuals experience emotions in the social context of the family. Families may vary a great deal in their overall level of emotional expressiveness. Due to the social nature of the family, an individual may be encouraged to express or suppress certain emotional responses by other members of the family. Emotions are important for successful peer relations and the family may serve an important function for learning about and responding to others' emotions (Cassidy, Parke, Butkovsky, & Braungart, 1992).

There is evidence that children learn emotional expression in the context of the family. Across 115 studies, Halberstadt and Eaton (2002) found a moderate positive relationship between global family emotional expressiveness and children's self-expressiveness. Looking across 428 studies, Halberstadt and Eaton found a similar moderate positive relationship between positive family emotional expressiveness and child self-expressiveness of positive emotions. Only a slight relationship was found across 17 studies which examined the relationship between negative family emotional expressiveness and children's self-expressiveness of negative emotions. These final results should be viewed with caution due to the low number of studies which comprised the analysis. As Boyum and



Parke (1995) suggest, family emotional expressiveness may provide children with guidelines for the appropriate use of emotion during ongoing social relationships. Such skill-building may translate into greater competence when engaging and interacting with peers. In the presence of marital conflict, adolescents who have developed the abilities that are linked to family emotional expressiveness may be better prepared to handle peer social interactions competently.

Studies have demonstrated an association between family emotional expressiveness and aspects of children's social competence. Cassidy et al. (1992) found mothers' and fathers' reported level of emotional expressiveness within the home each predicted kindergarten aged children's peer acceptance. In a meta-analysis, Halberstadt, Crisp and Eaton (1999) found family emotional expressiveness was related to measures of children's and adolescents' social competence.

Family emotional expressiveness may moderate the effects of marital conflict on adolescents' peer social competence. If children and adolescents learn emotional expression from observing their parents expressing and reacting to a range of emotions within the home, they may be better able to maintain these skills when interacting with peers in the context of marital conflict. In families where emotional expression is suppressed, the experience of marital conflict may be more stressful and confusing. For these adolescents, there may be a greater spillover into peer relationships. Adolescents may not feel comfortable expressing themselves with peers and may resort to aggression or isolation to handle strong emotions.

#### *Positive Parenting Behavior*

In the past, research has primarily focused on disrupted parenting as a mediator of the relationship between marital conflict and children's adjustment. There are a number of

pathways through which marital conflict may negatively affect the parent-child relationship (for review, see Cox, Paley & Harter, 2001). The “spillover hypothesis” suggests negative affect from the marital relationship may be displaced onto the parent-child relationship (Coiro & Emery, 1998; Erel & Burman, 1995; Katz & Gottman, 1996). Parents, distracted by adult concerns, may spend less time engaging in positive parenting behaviors and may utilize inconsistent parenting techniques (Cox & Paley, 1997). There may also be an increase in parent-child conflict (Easterbrooks & Emde, 1988). Children may also become scapegoats, with parents displacing their anger toward each other on the child (Minuchin, 1974; Vogel & Bell, 1960). The effects of marital conflict appear to be particularly detrimental to children in families with poor parent-child relationships and high levels of parent-child conflict (Amato, 1986; El-Sheikh & Elmore-Station, 2004; Gelles & Straus, 1988).

Parenting may function as a key moderator for understanding the strength of the relationships between family and ecological variables and developmental outcomes for children (Cummings, Davies, & Campbell, 2000). Although much of the research thus far has looked at disrupted parenting functioning as a mediator to predict negative child outcomes, it is also possible for families to retain positive parent-child relationships in the face of marital conflict (Amato, 1986; Belsky, Youngblade, Rovine, & Volling, 1991). There is some evidence positive individual parenting behavior may protect children from marital hostility (Katz & Gottman, 1994, as referenced by Katz & Gottman, 1995). Cox, Paley and Harter (2001) highlight the need to study the processes which allow for positive parent-child relationships to develop and continue in the context of ongoing marital conflict. A key element of a positive parent-child relationship is the individual parent’s ability to

remain engaged and supportive when interacting with the child in spite of concerns related to marital distress.

Positive parenting may be an important moderator of the effect of marital conflict on adolescent peer social competence. Parents who are sensitive, accepting, and provide their children with positive social interactions are modeling appropriate reciprocal social behaviors, which in turn their children may learn to replicate in other settings (Cummings, Davies, & Campbell, 2000). Positive parent-child interactions provide children with the opportunity to enhance their ability to process social situations (Cummings et al., 2000). In spite of ongoing marital conflict, adolescents who experience positive parenting from one or both parents may be able to utilize the strengths from this relationship when interacting with peers at school. Lower levels of positive parenting in the context of marital conflict may deprive adolescents of the benefits of socialization which occur through positive parent-child relationships and leave adolescents with few guidelines for interacting with peers.

#### *Parent Gender*

Research findings are mixed on the role, if any, parent gender plays in understanding the effects of marital conflict on children's adjustment. Here again, little is known about the potential moderating role of parent gender for understanding the relationship between marital conflict and the specific outcome of peer social competence and psychological functioning.

Some studies suggest there are differential effects of mothers' versus fathers' parenting behavior in the context of marital conflict for children's developmental outcomes. A study by Katz and Gottman (1994 as cited by Katz & Gottman, 1995) utilizing parent-child observational data indicates father's positive parenting may serve more of a protective function than mother's positive parenting. Owen and Cox (1997) found fathers' ability to

engage in sensitive parenting and foster secure parent-child attachments was more disrupted by marital conflict than was mothers' ability. Fauchier and Margolin (2004) found marital conflict moderated the relationship between marital affection and parent-child affection for fathers but not for mothers, such that fathers' affection was more disrupted by the presence of marital conflict relative to mothers' affection toward their children while experiencing marital conflict. It may also be important to consider the matching of parent and child gender to determine whether effects vary between parents and their same or opposite sex child.

In contrast, other researchers have found no systematic differences in parenting behavior in the context of marital conflict based on parent gender. In their meta-analysis, Erel and Burman (1995) found no evidence that gender of either the parents or the child moderated the relationship between marital quality and parenting. A review by Coiro and Emery (1998) also found little evidence for differential effects of marital conflict for fathers' versus mothers' parenting behavior. Given the conflicting research findings in the field, it remains to be seen whether parent gender may interact with positive parenting to differentially affect adolescents' peer social competence.

#### Individual Child Processes

Just as family and parental factors may influence the magnitude and direction of the relationship between marital conflict and peer social competence, it is also important to consider what individual child factors may serve as moderators. The developmental psychopathology approach highlights the role of children in actively constructing their environments. Therefore, it is necessary to consider how variables associated with the child may impact the manifestation of marital conflict as a risk factor for lower peer social

competence. While ideally it would be beneficial to have an assessment of early adolescents' perceptions of marital conflict, this is not possible with the present study. The present study focuses on other important aspects of adolescents' perceptions of their family and social networks.

#### *Adolescents' Perceived Parent-Child Relationship Quality*

Following the constructivist tenet of developmental psychopathology, the child's perceived relationship with each parent may be an important potential moderator of the relationship between marital conflict and peer social competence. The emotional security hypothesis highlights the value of assessing children's constructions of relationships within the family (Davies & Cummings, 1994). In a family where a child experiences emotional security, the family "serves as a source of stability, cohesiveness and predictability" for the child (Forman & Davies, 2003, p. 94). Although initially the emotional security hypothesis focused on the child's perceptions of the marital relationship, Davies et al. (2002) argue that emotional security can reflect emotional connections from multiple relationships within the family system.

As noted above, the present study is evaluating positive parenting behavior as a moderator of the effect of marital conflict for early adolescents' peer social competence and psychological functioning. While individual parent behavior could be protective or make a child more vulnerable to the potential negative effects of marital conflict, the child's perception of parent-child relationship quality may be even more salient than the parent's actual behavior for understanding child outcomes. Harold, Shelton, Goeke-Moray and Cummings (2004) suggest children who witness marital conflict may see parent-child relationship difficulties as more hostile and threatening. Therefore, an adolescent feeling

confident in an emotionally close, secure relationship with one or both parents could buffer that individual from the potentially negative effects of marital conflict. It is hypothesized that in the face of conflictual marital relations, an emotionally secure parent-child relationship experience could help an adolescent utilize the social reinforcement from that relationship to interact successfully with peers, while an adolescent who does not feel secure in his or her parent-child relationships likely experiences fewer opportunities to engage in positive family interactions and may demonstrate less competence when interacting with peers in the school environment.

#### *Adolescents' Perceived Peer Social Support*

While it is important to ascertain the degree to which early adolescents' perceived parent-child relationships act as a moderator of the effect of marital conflict on peer social competence and psychological functioning, it is also worthwhile to examine whether adolescents' perceptions of their social environment may also act as a moderator. Here again, the emphasis is on understanding adolescents' cognitive constructions of their interpersonal world. An adolescent's level of perceived peer social support may buffer him or her from the negative effects of marital conflict (for review, see Cummings & Davies, 2002). In a sample of 4<sup>th</sup>-6<sup>th</sup> graders, Wasserstein and LaGreca (1996) found self-report descriptions of close friendships were a moderator of the negative effect of marital discord for children's behavior problems in school. Rogers and Holmbeck (1997) also found adolescents' reports of perceived peer availability and perceived social support moderated the relationship between marital conflict and externalizing behavior in a sample of 6<sup>th</sup>-8<sup>th</sup> graders. One additional study by Jenkins and Smith (1990) did not find perceived peer social support to be a

moderator, although their study used maternal reports which may differ significantly from children's perceptions of their own peer support.

Perceived social support may perform a protective function for adolescents' peer social competence. If early adolescents recognize other peers as supportive, they may demonstrate confidence and be more likely to engage prosocially with their peers. They may be more likely to approach others to initiate activity and may be more likely to engage in cooperative interactions. In the context of marital conflict at home, adolescents who view other peers as supportive may find encouragement and relief in the school social context. When early adolescents experiencing marital conflict at home do not perceive their peers as supportive, they may be more likely to respond negatively to peers' aggression and teasing and may isolate themselves rather than engaging in group activity.

#### *Adolescent Gender*

Although a number of studies have examined child gender in relation to marital conflict processes, little is known about gender differences in peer social competence in the context of marital conflict. As reviewed by Davies and Lindsay (2001), there are two competing theories as to the role of gender in understanding marital conflict and child outcomes. The male vulnerability model posits boys are at higher risk for experiencing negative outcomes following marital conflict. The differential reactivity model posits boys and girls experience responses to marital conflict that differ in their expression but not in their level of felt distress.

Research indicates that there may be gender differences in children's exposure to marital conflict. Parents may be more likely to fight in front of their sons than in front of daughters (Jenkins, Simpson, Dunn, Rasbash, & O'Connor, 2005). One study has also

reported gender differences in children's behavioral responses to marital conflict, with girls more likely to engage in caregiving behaviors with parents after an argument while boys were more likely to engage in direct intervening to stop or redirect conflicts (Kerig, 1999). Studies of the differential effects for child gender over time have been inconclusive. Some studies indicate boys are more likely to become actively involved in their parents' arguments relative to girls as they mature and are more likely to exhibit maladjustment as a result (Kerig, 1999) while others suggest girls become more involved and affected relative to boys (Davies & Windle, 1997). Adolescent gender was considered in the present study as a control variable. If significant main effects were found for adolescent gender, further exploratory analyses would determine whether there were additional interactions between adolescent gender and other predictors in the models.

### The Present Study

In the current study, an archived data set from the NICHD Study of Early Child Care and Youth Development was used to address the study hypotheses. This was an excellent dataset because it provided a large sample of families from around the United States that were followed longitudinally, including a large number of intact families with both parents participating in data collection. Another key strength of the NICHD Study of Early Child Care and Youth Development was the comprehensive scope of the data collected, with information available on a broad range of areas of family functioning, marital functioning, and child development and adjustment. This data was used to address the following hypotheses:

Hypothesis 1: It was hypothesized that there would be a significant relationship between marital conflict and adolescent peer social competence, such that higher marital



conflict would be associated with lower peer social competence while lower conflict would be associated with higher peer social competence.

Hypothesis 2: It was hypothesized that the relationship between marital conflict and adolescent peer social competence would be moderated by family emotional expressiveness such that marital conflict would have less of an impact on adolescent peer social competence in the presence of higher levels of family emotional expressiveness.

Hypothesis 3: It was hypothesized that positive parenting behavior would moderate the relationship between marital conflict and adolescent peer social competence, such that a higher level of marital conflict would be less predictive of adolescent peer social competence in the presence of positive parenting behavior.

Hypothesis 4: It was hypothesized that children's perceived relationship security with each parent would moderate the relationship between marital conflict and adolescent peer social competence. It was anticipated that perceived parent-child relationship security would provide a buffer for adolescents experiencing marital conflict in the home.

Hypothesis 5: It was hypothesized that children's perceived peer support would moderate the relationship between marital conflict and adolescent peer social competence. It was anticipated that perceived peer support would provide a buffer for adolescents experiencing significant marital conflict in the home.

## **CHAPTER 2**

### **METHOD**

#### **Participants**

The NICHD Study of Early Child Care and Youth Development was designed to examine how children's early child care experiences and other contexts of development are associated with various developmental outcomes over time. Families were recruited from the following 10 sites: Arkansas; California; Kansas; Massachusetts; Pittsburgh, PA; Philadelphia, PA; Virginia; Washington; North Carolina; and Wisconsin. In 24 hospitals, 8,986 families were screened. At two weeks post-childbirth, 5416 families were considered eligible for the study. At one month of age, 1364 children were enrolled in the study. By age 7, 1103 children remained in the study. By age 12, 1077 early adolescents remained in the study. Of these 1077 early adolescents, 639 were living in intact families. Data were collected in four main phases, with data collection techniques ranging from home visits, lab visits, phone contacts, mailed questionnaires, and contact with child care and school personnel. Table 1 summarizes the data collection techniques and locations for the present study.

For the purposes of the present study, all 546 intact families for whom mothers and fathers participated in 5<sup>th</sup> and 6<sup>th</sup> grade data collection were included. Independent sample t-tests were computed to determine if and how variable means for intact families differed from

variable means for the overall sample at 5<sup>th</sup> and 6<sup>th</sup> grade. A second set of t-tests was computed to determine whether variable means from intact families where both parents participated in data collection differed from the greater pool of intact families in the dataset at 5<sup>th</sup> and 6<sup>th</sup> grade. The family Income: Needs ratio was significantly higher in the overall sample when compared with scores for intact families ( $t = -4.44, p < .01$ ). Maternal sensitivity was significantly lower in the overall sample when compared with scores for intact families ( $t = -4.78, p < .01$ ). The adolescent's perceived security with the mother was significantly lower in the overall sample when compared with scores for intact families ( $t = -2.03, p = .04$ ). Similarly, the adolescent's perceived security with the father was also significantly lower in the overall sample when compared with scores for intact families ( $t = -2.96, p < .01$ ). There were no significant differences found when t-tests were conducted between the broader intact family sample and the sample of intact families used in the present study.

Of the families in the present study, .4% of study children were identified as Native American, 1.5% as Asian or Pacific Islander, 4.0% as African American, 89.4% as Caucasian, and 4.6% as "Other." There were 276 boys and 270 girls.

## Measures

### *Control Variables*

Income: Needs Ratio: The family's income level was determined utilizing an Income to Needs ratio using the Family's 2001-2002 Pre-Tax Income. The mother was instructed to circle one of twenty-two income ranges that included the family income. To calculate the Income: Needs ratio, the midpoint of the range circled by the correspondent was used. The total family income is then divided by the poverty threshold for a household of the family's

size. The family Income: Needs ratio was utilized as a control variable in the present study. The mean family Income: Needs ratio for the present study was 5.46, collected from mothers during the 5<sup>th</sup> grade lab visit.

Maternal Education: The mother's education background was collected using information gathered from the mother at the 1 month postpartum home visit. Maternal education scores were rated as follows: any number less than 12 = number of years in school; 12 = high school graduate or G.E.D.; 14 = some college but without degree or associate's degree or vocational school beyond high school; 16 = Bachelor's degree from a college or university; 18 = some graduate work or a Master's degree; 19 = law degree; 21 = more than one Master's degree or a Ph.D. In the present study, the average maternal education was 15.05. Maternal education information was gathered from mothers during the 1 month postpartum home visit.

Child Gender: The child's gender was entered as a control variable for the analyses. For the present sample, there were 276 early adolescent boys and 270 early adolescent girls.

Child Race/Ethnicity: The child's race/ethnicity was entered as a control variable. As noted above, in the present study .4% of study children were identified as Native American, 1.5% as Asian or Pacific Islander, 4.0% as African American, 89.4% as Caucasian, and 4.6% as "Other." Child race/ethnicity information was gathered from mothers during the 1 month postpartum home visit.

Study Site: There were 10 data collection sites. Site 0 = 9.7%, Site 1 = 10.6%, Site 2 = 9.5%, Site 3 = 10.3%, Site 4 = 9.2%, Site 5 = 11.4% , Site 6 = 8.2%, Site 7 = 10.8%, Site 8 = 9.5%, Site 9 = 10.8%.

### *Predictor Variables*

Braiker-Kelly 4-Factor Index of the Marital Relationship (Braiker & Kelly, 1979): Information on marital conflict was collected from both mothers and fathers in the 5<sup>th</sup> grade home visit utilizing the conflict subscale from the Braiker-Kelly relationships measure. The questions that make up the 5-item conflict subscale involve each individual's report of how often they fight with their partner, try to change things about their partner, feel angry or resentful toward their partner, how serious the arguments are, and the extent to which the individual shares negative feelings with the partner. The questions use a 9-point Likert scale, with 1 = Not at all and 9 = Very Much. Higher scores indicate a higher level of marital conflict. The items that make up the conflict scale had adequate internal reliability for mothers (Cronbach's  $\alpha = .84$ ) and fathers (Cronbach's  $\alpha = .81$ ). There was a significant positive correlation between mother rated conflict and father rated marital conflict ( $r = .385$ ,  $p < .0001$ ).

Self-Expressiveness in the Family Questionnaire (Halberstadt, Cassidy, Stifter, Parke & Fox, 1995): The family emotional expressiveness self-report measure assesses positive and negative emotional expressiveness. Examples of positive expressiveness include spontaneously hugging another family member or showing admiration; examples of negative emotional expressiveness include expressing anger over another person's carelessness or showing unhappiness with someone else's behavior. Items are on a 5-point Likert scale, with a higher score indicating more emotional expressiveness. The present study utilized the total family emotional expressiveness score, which was composed of the sum of the 24 items assessing positive emotional expressiveness and negative emotional expressiveness by the parent. The total emotional expressiveness score could range from 24 to 120; in the present

sample, the score had a range of 63 to 119. Adequate internal reliability was found for both mothers' reported total emotional expressiveness (Cronbach's  $\alpha = .83$ ) and for fathers' reported total emotional expressiveness (Cronbach's  $\alpha = .85$ ).

Parent/Child Structured Interaction Qualitative Ratings (NICHD Early Child Care Network, 1999). At fifth grade, each parent-child dyad engaged in a discussion task and a shared problem-solving activity. Observational coding conducted on the interaction evaluated parent behavior, child behavior, and dyadic ratings. Parenting qualities assessed included supportive presence, respect for child autonomy, quality of assistance to the child, cognitive stimulation and hostility. Maternal sensitivity composite and paternal sensitivity composite scores were used in the present study. The sensitivity composite for each parent is composed of scores for supportive presence + respect for autonomy + reflected hostility. Mothers and their children were videotaped in the 5<sup>th</sup> grade lab visit, while fathers and their children were videotaped during the 5<sup>th</sup> grade home visit.

Child Reported Relationship With Parents: The Child Reported Relationship with Parents measure utilized items from the Relatedness Questionnaire (Cicchetti, 1997; Toth & Cicchetti, 1996) and the Security Questionnaire (Kerns, 1999). A four-point scale was used, with 1 = Not at all true and 4 = Very True. For the present study, the security in relationship score was used. This score is the mean of eleven items measuring the adolescent's perceived security in the parent-child relationship, including statements such as "Sometimes I worry my parent may leave me" and "I think my parent does not listen to me" and "I wish my parent would help me more with my problems." This score had adequate internal reliability (Cronbach's  $\alpha = .77$ ). Study children completed the measure in the 5<sup>th</sup> grade lab visit.

Child's Perceptions of Peer Social Support, Bullying and Victimization: The child's perceptions of peer support were evaluated using ten questions from the Perceptions of Social Support scale, a measure of peer friendship quality and acceptance (Ladd, Kochenderfer, & Coleman, 1997). Questions included items such as whether anyone at school picks on the child, hits the child, says mean things, lets the child play with them, or compliments the child. The items were coded using a 5-point Likert scale, with 1 = Never and 5 = Always. The social support from peers score was summed so that a higher score was indicative of a greater number of supportive behaviors received from classroom peers, with reverse coding for questions assessing an absence of supportive peer behaviors. Children completed this measure in the 5<sup>th</sup> grade lab visit. The items that make up the social support from peers score had adequate internal reliability (Cronbach's  $\alpha = .92$ ).

*Outcome Variable: Peer Competence*

Social Skills Rating System (Gresham & Elliott, 1990): The Social Skills Rating System is a multi-reporter instrument measuring child behaviors including cooperation, assertion, self-control, and responsibility. Raw and standard scores are computed from questions focusing on academic competence and social skills. In addition, the NICHD Study of Early Child Care created an *a priori* peer social competence score based on questions focusing on peers.

The Parent Report version of the Social Skills Rating System was used in the present study. Mothers and fathers completed the SSRS during the 6<sup>th</sup> grade home visit. The present study utilized the peer social competence score. The questions that make up the 10-item peer social competence score assessed the adolescent in the following areas: makes friends, controls his or her temper when arguing, responds appropriately to teasing, is liked by others,

joins group activities without having to be encouraged, gives and receives compliments from friends and peers, demonstrates self-confidence in social situations, and accepts friends' ideas during recreation. This score was specifically chosen for the present study because questions that make up the peer social competence score address areas of peer acceptance, interpersonal behaviors and adaptive behavior.

The questions use a 3-point Likert scale, with 0 = Never, 1 = Sometimes, and 2 = Very Often. Scores could range from 0 to 20, with actual scores ranging from 7 to 20. A higher score is indicative of higher peer social competence as rated by the parent. The items that make up the peer social competence score had adequate internal reliability (Cronbach's  $\alpha = .78$ ).



## CHAPTER 3

### RESULTS

#### *Descriptive Statistics*

Variables were examined to determine whether regression assumptions were being violated. It was decided that any variables that exhibited skewness or kurtosis greater than 2.00 would be transformed to create a more appropriate variable distribution for the regression analyses. Given that no variables exhibited skewness or kurtosis beyond the generally accepted limits, the variables did not require any type of transformation. Means, standard deviations, and ranges for variables in the present study are presented in Table 2.

#### *Data Analysis Plan: Actor-Partner Interdependence Model*

Research suggests that a parent's perception of conflict within the marriage impacts his or her behavior within the family unit. A family systems approach emphasizes that individual family members do not behave in a vacuum. Their emotions, perceptions and actions occur in context, influenced in part by the feelings, attitudes, and responses of other members of the family system. For example, a simple multiple regression approach predicting the adolescent's peer social competence as rated by the mother based on the predictors provided from that same parent would be insufficient; such a model does not account for the role of the father in contributing to the mother's views and vice versa. Therefore, the Actor-Partner Interdependence Model was chosen for the present study to take

into account the various factors both within and across parents which have influenced their individual perceptions of their early adolescent's peer social competence.

Analyses were designed in accordance with the Actor-Partner Interdependence Model for dyadic research (Campbell & Kashy, 2002; APIM; Kashy & Kenny, 2000). The Actor-Partner Interdependence Model (APIM) was uniquely suited to the present analysis because it allowed for a concurrent examination of both parents' individual perceptions of marital conflict as well as other potential moderators of marital conflict for the prediction of adolescent peer social competence. Campbell and Kashy (2002) summarized that when data is provided from members of a dyad, "a person's independent variable score affects both his or her own dependent variable score (known as the actor effect) and his or her partner's dependent variable score (known as the partner effect)" (Campbell & Kashy, 2002, p. 328). The basic Actor-Partner Interdependence Model is summarized in Figure 2 below.

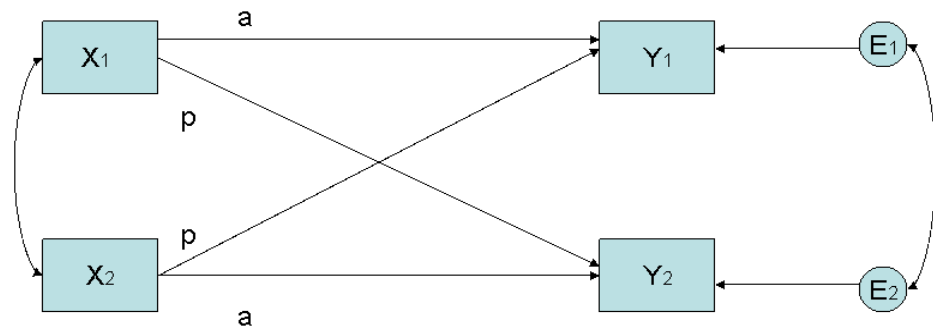


Figure 2: APIM Model where  $a$  is the actor effect and  $p$  is the partner effect (Kenny, Kashy, & Cook, 2006).

In the above figure by Kenny et al. (2006),  $X_1$  and  $X_2$  refer to the predictor variables for the mother and the father;  $Y_1$  and  $Y_2$  refer to the outcome variables by the mother and the father. In the model, “a” represents the actor effect and “p” represents the partner effect for a given outcome variable. Correlations among  $X_1$  and  $X_2$  are possible, as are correlations between the residual nonindependence of the outcome scores ( $E_1$  and  $E_2$ ). The presence of partner effects suggests individuals are part of an interdependent system (Kenny et al., 2006).

The present dataset was reorganized to facilitate actor, partner and interaction analyses. Each ID covered two lines of data, with the mother’s dependent variable (peer social competence) followed by the other father’s independent variables and father gender on the first line. The second line began with the father’s dependent variable followed by the mother’s independent variables and mother gender. Effects coding was conducted to differentiate between husbands and wives as actors and partners. Husbands were coded as “1” and wives were coded as “-1” for the actor gender variable. Only one parent gender variable needed to be included in each analysis because the partner gender could be inferred based on the knowledge of the actor gender.

In the present study, “actor conflict” referred to the conflict score of the parent who was also providing the adolescent’s peer social competence score, while “partner conflict” referred to the conflict score provided by the other member of the couple. Separate actor and partner conflict, emotional expressiveness, parenting sensitivity, and perceived security variables were created for the present study.

By structuring a model to reveal actor, partner and interaction effects, it was possible to evaluate the relative contributions of the individual parent as well as his or her partner in predicting their adolescent’s peer social competence. In addition, the Actor-Partner model

allowed for the examination of interaction effects across variables reported by the same individual or across the two parents.

In addition to the actor and partner variables, a number of control variables were included in the model for each analysis. The family Income: Needs ratio and maternal education were included as control variables. These variables were included to control for the possibility that differences in family economic resources or family educational backgrounds could affect parents' ratings of their adolescents' peer social competence. The data collection site was also included to determine whether the geographical location of the data collection would be associated with differences in parents' ratings of peer social competence. Given that the present study includes data from ten geographic locations around the United States, it was important to control for possible differences in results based on the site in which the data was gathered. Child race/ethnicity and child gender were included in each model to determine whether the child's gender or race/ethnicity were predictive of parent ratings of peer social competence in various analyses.

#### *Moderation Tests*

Tests for moderation were conducted using the procedure outlined by Baron and Kenny (1986) for testing moderation using multiple regression. All predictors were treated as continuous variables with the exception of child gender and actor gender. The specific hypotheses for the present study followed the general equation for two-way and three-way interactions below, where  $x$  is the independent variable and  $w$  and  $z$  are moderators.

$$\hat{y} = \hat{b}_0 + \hat{b}_1X + \hat{b}_2Z + \hat{b}_3W + \hat{b}_4XZ + \hat{b}_5XW + \hat{b}_6ZW + \hat{b}_7XZW$$

Because the dataset was organized to accommodate actor and partner effects, it was also possible to test for interactions using information provided by the actor (the actor's conflict score multiplied by the moderating variable to predict peer social competence) or by the partner (the partner's conflict score multiplied by the moderating variable to predict peer social competence) within the same model.

### *Missing Data Analysis*

To evaluate patterns of missingness in the data, a new variable called "miss" was created. If any data was missing for a given case, then that case would be given a score of 1 for the miss variable. If no data was missing for that case, then that case would be given a score of 0 for the miss variable. Patterns of missing data were also examined using the frequency program in SAS. The frequency program revealed a wide variety of patterns of missing data within the sample. Almost all of the missing data patterns occurred in less than 1% of the sample. Exceptions were the 4% of the sample which were missing only the father-child interaction and the 5% of the sample which were missing only the mother-child interaction. As summarized in Table 3, means and standard deviations were created separately for the group of cases with no missing data and the group of cases with missing data. Families with missing data had higher average mother conflict scores ( $t = -1.997, p = .05$ ). Families with missing data also had lower average child perceived security with the father ( $t = 2.32, p = .02$ ). There were no other significant differences between the groups.

In order to maximize the amount of information that could be examined from the sample data, a multiple imputation procedure was utilized. A range of options for dealing with missing data exist, and there are a number of reasons why multiple imputation is the preferred method for dealing with missing data in the present dataset. Unlike listwise

deletion, which removes any case for which data is not complete, multiple imputation allows for the retention of partial data so that results may be less biased than if entire cases were removed. With multiple imputation, researchers can choose the number of imputed datasets to create, guided by the amount of missing data in their datasets. Instead of creating single approximations for missing data points, multiple imputation “replaces each missing value with a set of plausible values that represent the uncertainty about the right value to compute” (SAS Manual, p.131). A series of complete datasets are created and then consolidated into a single dataset for use with SAS’s standard statistical procedures. Table 4 summarizes the relative efficiency of the multiple imputation procedure across different possible patterns of missing data. Because less than 15% of the data was missing across all variables in the present study, five imputations were chosen to maximize imputation efficiency. Data replacement efficiency was estimated to be approximately 97% using five imputed datasets.

Missing data can be imputed using either a monotone or Markov Chain Monte Carlo (MCMC) approach. A monotone approach is preferred when data is missing for one variable, with all subsequent data missing for that individual. A MCMC approach is preferred when the pattern of missing data is such so that data missing for a given variable does not necessarily indicate data is missing for other variables for that individual. The MCMC approach creates a series of random variables, with distributions for each variable dependent on the previous variable until a stabilized distribution among the elements is created (Yuan, 2002). Given that missing data for one variable in the present study would not automatically reflect missing data for other variables, the MCMC approach was utilized in the present study. Once the multiple imputed datasets were created, data from the imputed

datasets was consolidated using the SAS multiple imputation analysis procedure (PROC MIANALYZE).

Following the recommendation of Aiken and West (1991), once the data were imputed it was necessary to center the predictor variables before entering them into the regression models to reduce the likelihood of multicollinearity. As recommended by Campbell and Kashy (2002) for the Actor-Partner Independence Model, each predictor variable was centered by subtracting the mean score calculated across both husbands and wives from the individual's score on that variable.

To approximate correlation coefficients between study variables, first the Pearson  $r$  correlation between each two variables in the study was calculated for each imputation. For each calculated Pearson  $r$ , a Fisher  $Z$  transformation and variance estimate were calculated. Then the SAS MIANALYZE procedure was utilized for each pair of variables to create a summary estimated Fisher  $Z$  and estimated variance across imputations. Upper confidence limits and lower confidence limits were also calculated. These parameter estimates were then saved in a dataset. Fisher  $Z$  estimates, upper confidence limits, and lower confidence limits from the saved dataset were then utilized to create estimates of the Pearson  $r$  correlation coefficient for each pair.

The Pearson  $r$  correlations among the study variables across imputations can be found in Table 5. The family Income: Needs ratio was positively correlated with mother rated emotional expressiveness ( $r = .09, p < .01$ ), father rated emotional expressiveness ( $r = .10, p < .01$ ), maternal sensitivity ( $r = .25, p < .01$ ), and paternal sensitivity ( $r = .13, p < .01$ ). Mothers and fathers also showed positive correlations in their perceptions of conflict in the marriage ( $r = .40, p < .01$ ) and their perceptions of the emotional expressiveness in the home

( $r = .19, p < .01$ ). Mother and father ratings of emotional expressiveness in the home were negatively correlated with mother and father ratings of marital conflict. Children's perceived security with their mother and perceived security with their father were each also negatively correlated with mother and father ratings of marital conflict. There was also a significant positive correlation between children's perceived security with their mother and with their father ( $r = .70, p < .01$ ).

Because the Actor-Partner Interdependence Model was designed to evaluate different scores provided by members of the same dyad, it was necessary to determine the interdependence between mothers' and fathers' scores on the variables in the study. Table 6 summarizes the mixed-two way intraclass correlations for marital conflict, emotional expressiveness, parenting sensitivity, child's perceived parent-child security and the child's peer social competence. All intraclass correlations were statistically significant, revealing significant correlations between mothers and fathers in each dyad for the variables of interest.

Following the recommendations of Campbell and Kashy (2002), the SAS PROC MIXED procedure was used for each moderation test, specifying a "random intercept only" model with control variables, actor variables and partner variables to predict the actor's rating of the adolescent's peer social competence. As it was designed, the case ID served as the grouping variable. To determine the correlations between members of the same dyad for the predictor variables, type-two mixed intraclass correlations were computed for the study variables of interest. Table 6 summarizes the intraclass correlations for the Actor-Partner analyses.

The SAS MIANALYZE procedure was then used to provide a single set of regression coefficients and a covariance matrix for each model in the present study. The SAS



MIANALYZE procedure produced variance information for each parameter, both between and within imputations. The SAS MIANALYZE procedure also provided estimates, standard errors and significance tests for each parameter.

### *Effects of Control Variables*

The results below are presented by hypotheses. In each of the following analyses, as noted above, the family Income: Needs ratio, maternal education, data collection site, child race/ethnicity, and child gender were included as controls. Boys were identified with codes as “1” and girls were identified with codes as “2.” In each of the analyses below, the family Income: Needs ratio was a significant positive predictor of peer social competence, with consistent positive associations between families who reported greater economic resources relative to need and parents’ more positive peer social competence ratings for their children. The gender of the study child was also significant in predicting peer social competence in analyses testing possible moderators of marital conflict. In all analyses, girls were rated as demonstrating significantly higher peer social competence relative to boys in the study. Subsequent follow-up exploratory analyses to determine whether child gender interacted with other predictor variables did not reveal significant effects and therefore were not included in the present study.

*Hypothesis 1: It was hypothesized there would be a significant relationship with marital conflict and adolescent peer competence, such that higher marital conflict would be associated with lower peer social competence while lower marital conflict would be associated with higher peer social competence.*

Control variables, actor conflict, partner conflict, and actor gender were entered into the regression model to predict adolescent peer social competence. Table 7 summarizes the

multiple imputation variance information for the variables with imputed data in the model testing Hypothesis 1.

Table 8 summarizes the parameter estimates for the model testing Hypothesis 1. As summarized in Table 7, actor conflict was significantly associated with peer social competence,  $b = -.15$ ,  $p = .02$ . As anticipated, higher conflict scores were associated with lower peer social competence as rated by the same parent and lower conflict scores associated with higher peer social competence. Partner conflict was not significantly associated with peer social competence, indicating that the partner's view of conflict within the marriage did not contribute to the actor's perception of their adolescent's peer social competence. Actor gender was significantly associated with social competence,  $b = -.24$ ,  $p < .01$ , indicating that there were mean level differences in peer social competence ratings by mothers and fathers. On average, mothers rated their adolescents as higher in peer social competence than did fathers.

*Hypothesis 2: It was hypothesized that the relationship between marital conflict and adolescent peer social competence would be moderated by family emotional expressiveness such that marital conflict would have less of an impact on adolescent peer social competence in the presence of higher levels of family emotional expressiveness.*

Table 9 summarizes the multiple imputation variance information for the variables that required missing data replacement for the model testing Hypothesis 2. Control variables, actor and partner conflict, actor and partner total emotional expressiveness, and actor gender were entered into the regression model to predict adolescent peer social competence. In addition, two-way interaction variables assessing for possible significant interactions between actor and partner conflict, actor and partner emotional expressiveness,

conflict and emotional expressiveness interactions for both actor and partner, actor gender and conflict interactions for both actor and partner conflict, actor gender and emotional expressiveness for both actor and partner emotional expressiveness were included. Two three-way interaction variables were included to assess for possible three-way interactions among actor gender, conflict and emotional expressiveness for both actor and partner conflict and emotional expressiveness variables.

As summarized in Table 10, unlike previous and subsequent analyses, actor conflict and actor gender were not significantly associated with peer social competence when emotional expressiveness was included in the model. Both actor and partner effects were found for emotional expressiveness. Actor emotional expressiveness demonstrated a significant positive association with peer social competence,  $b = .10, p < .01$ , such that parents who reported greater emotional expressiveness in the home rated their children as having higher peer social competence than those who reported less emotional expressiveness in the home. Partner emotional expressiveness was also associated with higher levels of the actor parent's rating of adolescent peer social competence,  $b = .04, p < .01$ . The presence of a partner effect supported the idea that parents functioned as part of an interdependent system with regard to their views of emotional expressiveness in the home.

Although there were no main effects for actor conflict or partner conflict, significant two-way interactions were found for the interaction of actor gender and actor conflict,  $b = -.22, p < .01$ , and actor gender and partner conflict,  $b = .18, p < .01$ . These two-way interactions indicated that the actor and partner effects differed significantly for men versus women. Fathers were more negatively affected by their reported marital conflict in the home in their peer social competence ratings of their adolescents. Fathers also reported lower peer

social competence scores when mothers reported increased conflict in the home, while mothers were not as negatively affected by fathers' reported marital conflict.

*Hypothesis 3: It was hypothesized that positive parenting behavior would moderate the relationship between marital conflict and adolescent peer social competence, such that a higher level of marital conflict would be less predictive of adolescent peer social competence in the presence of positive parenting behavior.*

Table 11 summarizes the multiple imputation variance information for variables that required missing data replacement for the model testing Hypothesis 3. Control variables, actor and partner conflict, actor and partner sensitivity, and actor gender were entered into the regression model to predict adolescent peer social competence. In addition, two-way interaction variables assessing for possible significant interactions between actor and partner conflict, actor and partner sensitivity, conflict and sensitivity interactions for both actor and partner, actor gender and conflict interactions for both actor and partner conflict, actor gender and sensitivity for both actor and partner sensitivity were included. Two three-way interaction variables were included to assess for possible three-way interactions among actor gender, conflict and sensitivity for both actor and partner conflict and sensitivity variables.

As summarized in Table 12, actor conflict was significantly negatively associated with peer social competence,  $b = -.16, p = .02$ , while partner conflict was not. Actor gender was also significantly associated with peer social competence,  $b = -.24, p < .01$ . Both actor and partner effects were found for parenting sensitivity. Actor sensitivity was significantly positively associated with peer social competence,  $b = .16, p < .01$ , such that parents who demonstrated sensitivity in parent-child interactions rated their children as having higher peer social competence than those who demonstrated less sensitivity in the parent-child

interaction. Partner sensitivity was also associated with higher levels of the actor parent's rating of adolescent peer social competence,  $b = .14, p < .01$ . The presence of a partner effect for sensitivity supported the idea that parents functioned as part of an interdependent system, with parents influencing each other's parenting behavior.

In addition to main effects for actor conflict, significant two-way interactions were found for the interaction of actor gender and actor conflict,  $b = -.24, p < .01$ , and actor gender and partner conflict,  $b = .22, p < .01$ . These two-way interactions indicated that the actor and partner effects differed significantly for men versus women and were found in the same directions as described in the model testing Hypothesis 2. Relative to mothers, fathers appeared to be more negatively affected by their own reported marital conflict in the home when rating their adolescent's peer social competence. Fathers also reported lower peer social competence scores when mothers reported increased conflict in the home, while mothers were not as negatively affected by fathers' reported marital conflict.

*Hypothesis 4: It was hypothesized that children's perceived relationship security with each parent would moderate the relationship between marital conflict and adolescent peer social competence. It was anticipated that perceived parent-child relationship security would provide a buffer for adolescents experiencing marital conflict in the home, such that a higher level of marital conflict would be less predictive of adolescent peer social competence in the presence of perceived relationship security.*

Table 13 summarizes the multiple imputation variance information for variables that required missing data replacement for the model testing Hypothesis 4. Control variables, actor and partner conflict, perceived security with the actor and partner, and actor gender were entered into the regression model to predict adolescent peer social competence. In

addition, two-way interaction variables assessing for possible significant interactions between actor and partner conflict, perceived security with the actor and partner, conflict and perceived security interactions for both actor and partner, actor gender and conflict interactions for both actor and partner conflict, actor gender and perceived security with both actor and partner were included. Two three-way interaction variables were included to assess for possible three-way interactions among actor gender, conflict and perceived security with both actor and partner conflict and perceived security variables.

Table 14 summarizes the parameter estimates for the model testing Hypothesis 4. As summarized in the table, only actor effects were found for the relationship between marital conflict and peer social competence. Actor reported conflict was a significantly negatively associated with peer social competence, such that parents who reported higher marital conflict rated their children as having lower peer social competence,  $b = -.15, p = .02$ , relative to parents who reported lower conflict in the marriage. Perceived security with the actor was positively associated with peer social competence,  $b = .55, p < .01$ , such that children who reported a secure relationship with the actor parent were rated by that parent as having higher peer social competence than those children who reported a less secure relationship. Perceived security with the partner was also a significant predictor of actor rated peer social competence,  $b = .61, p = .01$ . There was a significant main effect for actor gender,  $b = -.22, p = .01$ , indicating there was a mean difference between mothers' and fathers' peer social competence ratings, with mothers rating their adolescents as higher in peer social competence than fathers. The presence of both actor and partner effects for perceived security provided support for the notion that parents were functioning as part of an interdependent system.

Hypothesis 5: *It was hypothesized that children's perceived peer support would moderate the relationship between marital conflict and adolescent peer social competence. It was anticipated that perceived peer support would provide a buffer for adolescents experiencing significant marital conflict in the home, such that a higher level of marital conflict would have less of an impact on adolescent peer social competence in the presence of higher levels of peer support.*

Table 15 summarizes the multiple imputation variance information for variables that required missing data replacement for the model testing Hypothesis 5. Control variables, actor and partner conflict, the child's perceived peer support and actor gender were entered into the regression model to predict adolescent peer social competence. In addition, two-way interaction variables assessing for possible significant interactions between actor and partner conflict and perceived peer support with actor conflict or with partner conflict were included. Two three-way interaction variables were included to assess for possible three-way interactions among actor gender, conflict and perceived peer support with both actor and partner conflict variables.

Table 16 summarizes the parameter estimates for the model testing Hypothesis 5. As was found in previous analyses, only actor effects were found for the relationship between marital conflict and peer social competence. Actor reported conflict was negatively associated with peer social competence, such that parents who reported higher marital conflict rated their children as having lower peer social competence,  $b = -.18, p = .01$ . Actor gender was also a significant predictor,  $b = -.23, p < .01$ , indicating that mothers on average rated their children as more socially competent with peers than did fathers. There was also a significant main effect for perceived peer support,  $b = .94, p < .01$ , such that adolescents who

viewed peers as supportive were rated by their parents as more socially competent with peers in comparison with adolescents who did not view peers as supportive.



## **CHAPTER 4**

### **DISCUSSION**

A developmental psychopathology approach highlights the need to understand the contexts in which the effects of one risk factor may be attenuated or heightened when in the presence of additional risk and protective factors. A substantial body of research has established links between the specific risk factor of marital conflict and child and adolescent adjustment difficulties. Peer social competence is an important area to examine during the transition from elementary school to the middle school years. Acceptance from peers, appropriate interpersonal skills, and solid self-regulation abilities can all promote a sense of well-being for the individual in the present as well as set the stage for future development. Yet the inability to engage with one's peers in an effective and pro-social manner may lead individuals to become aggressive, socially withdrawn, and/or rejected by their peers when their efforts at contact are unsuccessful or unrewarding.

Although researchers have drawn connections between marital conflict and social difficulties, few have examined the specific contexts in which the negative effects of marital conflict for social functioning may be attenuated by other variables. In the present study, marital conflict was evaluated in combination with a range of family and child-level variables which were anticipated to attenuate the impact of marital conflict for early adolescents' peer social competence.

The analyses in the present study revealed a consistently negative association between a parent's report of marital conflict and that individual's assessment of the early adolescent's peer social competence. Across four of the five models tested, actor marital conflict was a significant negative predictor of peer social competence. Although no main effects were found for actor marital conflict when emotional expressiveness was in the same model, significant interactions remained between actor gender and actor conflict as well as between actor gender and partner-reported marital conflict. This pattern was repeated in subsequent models, highlighting the different responses to marital conflict across husbands and wives. Husbands' ratings of their adolescents' peer social competence were negatively affected to a greater degree by their own ratings of marital conflict than were wives' ratings of their adolescents; husbands' ratings of their adolescents' peer social competence were also more negatively affected by their partners' reported marital conflict than were wives' ratings. These results are consistent with studies that report fathers' parenting may be more disrupted as a result of marital conflict relative to mother's parenting (Amato & Booth, 2001; Katz & Gottman, 1996). In a similar manner, fathers may view their children in a more negative light if there are high levels of marital conflict in the home. Researchers have also suggested that wives may be more successful at balancing their marital relationship and parent-child relationship when there are difficulties in the marital relationship (Belsky et al., 1991; Davies & Lindsay, 2001).

Although the focus of the study was to examine marital conflict in relationship with additional potential protective factors, the analyses did not reveal significant interactions between marital conflict and other variables of interest. Yet even though there were no significant interactions between marital conflict and the identified potential moderators, the

examination of these additional variables revealed important aspects of family relationships which were positively associated with individuals' peer social competence in the transition to adolescence.

Both actor and partner effects were found for total emotional expressiveness in predicting peer social competence. It is likely that adolescents who come from homes where emotions are freely expressed and exchanged may be more comfortable identifying their own emotions and using their emotions to interact prosocially with others. Parents who viewed their families as high in emotional expressiveness rated their adolescents as demonstrating greater social competence with peers relative to families where emotions were not expressed clearly and openly. The presence of both actor and partner effects highlights that parents influence each others' perceptions of the family environment and may also influence each other's view of their children.

A substantial body of research supports the role of parenting sensitivity in promoting psychosocial adjustment in children and adolescents (Dekovic & Meeus, 1997; Parke & O'Neil, 2000; Putallaz, 1987). Children whose parents are responsive, engaged, and support their children's autonomy learn from watching their parents how to interact appropriately with others. As anticipated, both actor and partner sensitivity were significant predictors of peer social competence. Parents who demonstrated appropriate sensitivity to their children's needs rated their children as having greater social competence relative to parents who were not observed engaging in sensitive interactions with their children. The partner effect revealed that positive parenting behavior by the partner also had a positive effect on the other parent's assessment of the child's peer social competence.

Observed parenting sensitivity was associated with greater peer social competence. Not only was the parent's behavior important to assess, but the adolescent's perceptions of the parent-child relationship also had implications for the adolescent's success in the peer domain. The adolescent's perceived security in parent-child relationships was a significant predictor of parents' ratings of peer social competence. Both actor and partner effects were found for perceived security. Children who felt secure in their relationship with the actor parent were considered more socially competent with peers. The child's perceived relationship security with the partner was also an important predictor, with positive perceptions of the relationship with the partner parent associated with higher peer social competence as rating by the actor parent.

As anticipated, adolescents' perceived peer support was positively associated with parents' ratings of adolescents' peer social competence. This finding was consistent with research that suggests perceived support is associated with psychosocial adjustment (Rogers & Holmbeck, 1997; Wasserstein & LaGreca, 1996). Yet one must be cautious in interpreting the present finding given that the directionality of the relationship between perceived social support and social competence is unclear. It is possible that individuals who are more socially competent are also more likely to engender the acceptance of their peers and as a result, peers may be more supportive in interactions with them.

Control variables also revealed consistent relationships with peer social competence across the models tested in the present study. The family Income: Needs ratio was a significant predictor of peer social competence, with parents from homes with greater economic resources relative to need rating their children as demonstrating greater peer social competence relative to children from homes with fewer economic resources and greater

financial need. Child gender was also a significant predictor of parents' ratings of early adolescent peer social competence. Girls were rated as significantly more socially competent with peers relative to boys in the sample. Girls are generally understood to mature more quickly than boys; therefore, these results may reflect gender differences in social development at this time of transition. Girls are also socialized to place emphasis on maintaining and establishing interpersonal relationships, so they may also receive more direct feedback and monitoring of their social behavior than male peers.

A number of anticipated findings based on the literature in the field were not supported by the present dataset. Somewhat surprisingly, although actors' reports of marital conflict significantly predicted lower peer social competence, partners' reports of marital conflict did not contribute to the prediction of peer social competence. No significant main effect of partner rated marital conflict was found across any of the proposed models to predict peer social competence. This highlights potential bias in the results of the study due to a lack of source variation, wherein significant main effects were only found when predicting to one's own assessment of the child's functioning. A parent's rating of the child's social functioning may be colored by other aspects of his or her experience in the family system.

In addition, although actor sensitivity and partner sensitivity in the present study were associated with peer social competence as anticipated, there were no significant interactions between positive parenting and marital conflict for either actors or their partners. Katz and Gottman (1995) found significant interactions between parental sensitivity and marital conflict to predict psychosocial adjustment; the lack of significant main effects for marital conflict or interactions between sensitivity and marital conflict in the present study suggests

the need to interpret the lack of results in the present study with caution. The lack of bivariate correlations between parenting sensitivity and marital conflict for either actors or partners and the lack of significant predictive interactions between parenting sensitivity and marital conflict for both actors and partners are contrary to the established pattern in the literature which suggests marital conflict may affect children's outcomes indirectly through the disruption of sensitive parenting (Cox et al., 2001; Katz & Woodin, 2002). Whereas in the past the disruption of parental sensitivity has been considered as a mediator through which marital conflict can affect children's outcomes, in the current study it was anticipated that the experience of consistent, sensitive parenting could serve as a buffer which protects early adolescents from the potentially detrimental effects of marital conflict. Because much of the work on parenting sensitivity and marital conflict focuses on younger families, it may be the case that other aspects of parent-child interactions may be more critical to assess during this developmental period in relation to conflict in the home. As early adolescents become more involved in extracurricular activities and face more challenging academic demands, monitoring, facilitating, and negotiating these activities may comprise a greater share of parent-child interactions. Parents' actions that support young adolescents' developing sense of identity and autonomy present another key aspect of parent-child relationships that may buffer children's response to marital conflict in the transition to adolescence.

The present study had a number of important strengths. Much of the existing work on marital conflict focuses on families of young children. Therefore, the focus in the present study on the period when young adolescents were moving from elementary school to middle school highlights a transition point during development that merits further exploration. Stressful family processes such as disruptive marital conflict may be particularly detrimental

to youth during this time of multiple social, academic, and biological changes. It was also important to evaluate the factors within the family which may be associated with early adolescents' successful navigation of the peer domain in spite of the various transitions they are going through. The present study identified a number of key areas within the family and beyond that were associated with successful peer social competence in the adolescent, including emotional expressiveness in the home, parenting sensitivity, the adolescent's perceived security in parent-child relationships, and the adolescent's perception of peer support. An additional strength of the study was the use of multiple reporters within the family. Self-report and observational data collected from mothers, fathers, and children made it possible to evaluate multiple perspectives on the family environment and assess multiple family relationships. The Actor-Partner Interdependence Model made it possible to evaluate the interdependence of marital partners' views of their marriage and their family when evaluating the adolescent's peer social competence.

Limitations of the present study should also be addressed. As noted above, anticipated partner effects for conflict were not found and expected relationships between conflict and identified possible moderators were not found. Aspects of the study design were also limiting. Because the study focused solely on data from intact families, results may not generalize as well to individuals from other family structures. Comparisons to the overall NICHD Study of Early Child Care and Youth Development sample revealed that the intact families included in the present sample had greater economic resources relative to the overall sample, as well as greater maternal sensitivity and greater perceived parent-child security for both mothers and fathers. Additional processes at work in intact families may differ from those in families with single parents, separated parents, or step-parents.

It will be critical for future research to examine to what extent the above or additional contextual factors affect the impact of conflict in intimate adult relationships in diverse family structures. The sample in the present study was also composed of predominantly Caucasian families. Processes and relationships among the study variables may differ in households with different cultural and ethnic backgrounds from the majority of the families used in the present study.

Although the Actor-Partner Interdependence Model was well-suited to examine both actor and partner variables to predict adolescent peer social competence, there were a number of issues that may not have been resolved using this method. The present study found significant differences in peer social competence based on actor gender, with mothers rating their adolescents as higher in peer social competence than fathers' ratings of their adolescents. It is possible that one parent may be a more accurate reporter of their adolescent's social competence. For example, if mothers were more accurate reporters of their children's social competence and fathers had less reliable outcome scores, then actor-rated predictors would be less accurate for half of the sample.

Variables from the present study were drawn entirely from data collected from within the family. Information about the adolescent's peer competence may have been quite different if rated by a teacher or rated by classroom peers. In addition, as with any dataset where self-report measures comprise a significant portion of the collected data, it is necessary to evaluate whether self-presentation bias may have affected the findings. For instance, it is possible that parents may have differed on the degree to which they were willing to admit to unflattering marital behaviors or may have differed in the degree to which they portrayed their emotional expressiveness in a positive light. It would also be beneficial to utilize a



richer measure of conflict within the marital dyad, such as using observational coding of marital interactions. Given the limits inherent in using archival data, it was not possible to assess marital conflict over time. It would be worthwhile to determine whether and how results may differ for families with varying histories of marital conflict. Families with a chronic pattern of marital conflict over many years may look very different from families who are experiencing a more recent increase in conflict.

In addition, it would be beneficial to have more detailed information about the adolescent's experience of conflict in the home. The specific qualities of marital conflict have received more attention in relation to child adjustment in recent years. One study found children's adjustment could be predicted by the frequency and intensity of marital conflict to which the children were exposed (O'Brien, Margolin, & John, 1995). In addition, researchers have examined whether the content and course of marital conflict lead to different outcomes. Conflict may be more upsetting to children when the content of the marital conflict is child-focused (Grych & Fincham, 1993; Jenkins et al., 2005). Cummings and colleagues found marital disagreements were less likely to lead to aggressive child and adolescent responses when conflicts were resolved, whereas aggressive child and adolescent responses were more likely when marital conflicts were unresolved (Cummings, Goeke-Morey, & Papp, 2004; Easterbrooks, Cummings, & Emde, 1994). Therefore, it appears a high level of marital conflict experienced with a corresponding resolution may have less of a negative impact on children than a high level of unresolved marital conflict in the home.

As research by Grych and Fincham (1993) and Davies and Cummings (1994) suggest, it may be necessary to understand the adolescent's perceptions of the causes and sequelae of interparental conflict to evaluate their feelings and their chosen coping strategies

in response to marital conflict. Not only are adolescents' perceptions of marital conflict important, but it is also important to consider the ways in which early adolescents respond to the conflict they witness. Children and adolescents have various coping strategies in response to marital conflict, from avoiding the situation and maintaining physical distance, to checking in with one or both parents after an argument to talk about what happened, to getting directly involved in the midst of a disagreement between parents. Unfortunately the dataset precluded evaluating such coping strategies, but it will be important for future researchers to consider marital conflict in combination with how the individual responds to that conflict. If an individual adolescent perceives conflict as frightening and becomes increasingly aroused and distressed by then choosing to become involved in some way, this individual may be at risk for greater difficulties interacting appropriately with others when in peer settings.

Marital conflict provides a unique opportunity to explore linkages across the family and social environments. The present study evaluated a subgroup of possible moderators hypothesized to attenuate the potentially negative effects of marital conflict on early adolescent peer social competence. Future researchers will need to continue evaluating in what contexts marital conflict is more or less detrimental to children's adjustment. The study also demonstrated the need to evaluate children's perspectives of their own family and peer support systems as an important aspect of understanding family and individual functioning. By continuing to explore the multifaceted nature of familial and social behaviors in the context of marital conflict, we can begin to address ways of intervening to help families bolster valuable protective mechanisms which may buffer children from the negative effects of marital conflict and facilitate positive social development.

Table 1

*Data Collection Schedule*

<u>Variable</u>	<u>Data Point</u>	<u>Location</u>	<u>Completed By</u>	<u>Data Type</u>
Child Gender	1 Month	Home	Mother	Questionnaire
Child Race/Ethnicity	1 Month	Home	Mother	Questionnaire
Maternal Education	1 Month	Home	Mother	Questionnaire
Income: Needs	5 <sup>th</sup> Grade	Lab	Mother	Questionnaire
Maternal Education	5 <sup>th</sup> Grade	Lab	Mother	Questionnaire
Marital Conflict	5 <sup>th</sup> Grade	Home	Mother	Questionnaire
	5 <sup>th</sup> Grade	Home	Father	Questionnaire
Family Emotional Expressiveness	5 <sup>th</sup> Grade	Home	Mother	Questionnaire
	5 <sup>th</sup> Grade	Home	Father	Questionnaire
Parenting Sensitivity	5 <sup>th</sup> Grade	Lab	Mother	Observation
	5 <sup>th</sup> Grade	Home	Father	Observation
Child's Perceived Relationship w/Mother	5 <sup>th</sup> Grade	Lab	Study Child	Questionnaire
Child's Perceived Relationship w/Father	5 <sup>th</sup> Grade	Lab	Study Child	Questionnaire
Child's Perceived Social Support	5 <sup>th</sup> Grade	Lab	Study Child	Questionnaire

Table 1 Continues

Variable	Data Point	Location	Completed By	Data Type
Peer Social Competence	6 <sup>th</sup> Grade	Lab	Mother	Questionnaire
	6 <sup>th</sup> Grade	Lab	Mother	Questionnaire

Table 2

*Sample Characteristics and Descriptive Statistics*

	N	%	Mean	SD	Min	Max
<u>Sample Characteristics</u>						
<u>Maternal, Paternal &amp; Child Predictors</u>						
Mother's Education	546		15.05	2.28	8	21
Mean Income-to-needs	518	95%	5.46	4.22	.32	27.84
Child Gender:	546					
Male	276	51%				
Female	270	49%				
Child Race/Ethnicity:	546					
Caucasian	487	89.2%				
African American	32	5.9%				
Asian/Pacific Islander	7	1.3%				
Native American	2	.4%				
Other	18	3.3%				
M Marital Conflict	525	97%	3.30	1.47	1	9.00
F Marital Conflict	504	92%	3.30	1.27	1	8.20
M Emotional Expressiveness	536	98%	96.39	6.12	69.00	119.00
F Emotional Expressiveness	505	92%	91.12	9.60	63.00	116.00
M Sensitivity	486	89%	17.07	2.07	10.00	21.00
F Sensitivity	477	87%	17.13	2.30	7.00	21.00
Perceived Security with Mother	529	97%	3.56	.385	1.73	4.00
Perceived Security with Father	527	97%	3.52	.40	1.82	4.00
Perceived Social Support from Peers	516	95%	4.24	.72	1.10	5.00
F SSRS Peer Competence	546		15.83	2.83	6	20
M SSRS Peer Competence	546		16.26	2.8	7	20

Table 3

*Variable Means and Standard Deviations for Cases with Missing and Complete Data*

<u>Variable</u>	<u>Complete Data</u>	<u>Missing Data</u>
Income: Needs	5.26 (3.61)	5.72 (4.87)
Maternal Education	15.16 (2.29)	15.00 (2.27)
Mother Conflict	3.49 (1.35)*	3.73 (1.61)*
Father Conflict	3.28 (1.30)	3.37 (1.22)
Mother Sensitivity	17.00 (2.09)	17.06 (2.05)
Father Sensitivity	17.25 (2.28)	16.95 (2.25)
Perceived Security with Mother	3.56 (.37)	3.54 (.38)
Perceived Security with Father	3.54 (.39)*	3.46 (.46)*
Perceived Social Support	4.26 (.70)	4.26 (.74)
Mother Rated Peer Competence	16.19 (2.80)	16.34 (2.91)
Father Rated Peer Competence	15.77 (2.71)	15.88 (3.04)

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*Note.* \* = Significant independent samples two-way *t*-test at  $p < .05$ .

Table 4

*Multiple Imputation Efficiency (Rubin, 1987)*

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<u>Number of Imputations</u>	<u>Multiple Imputation Relative Efficiency</u>				
	<u>Percent of Data That Is Missing</u>				
	<u>10%</u>	<u>20%</u>	<u>30%</u>	<u>50%</u>	<u>70%</u>
3	0.97	0.94	0.91	0.86	0.81
5	0.98	0.96	0.94	0.91	0.88
10	0.99	0.98	0.97	0.95	0.93
20	0.99	0.99	0.99	0.98	0.97

Table 5

Estimated Pearson  $r$  Correlations Among Predictor Variables and Outcome Variables Across Imputations

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Income: needs ratio	<b>1</b>												
2. Maternal education	.42***	<b>1</b>											
3. Mother rated marital conflict	-.03	.09**	<b>1</b>										
4. Father rated marital conflict	.03	.08*	.40***	<b>1</b>									
5. Mother rated emotional expressiveness	.09**	.04	-.31***	-.24***	<b>1</b>								
6. Father rated emotional expressiveness	.10**	.10**	-.19***	-.37***	.19***	<b>1</b>							
7. Maternal sensitivity	.25***	.25***	-.02	.01	-.02	.15***	<b>1</b>						
8. Paternal sensitivity	.13**	.24***	-.06	-.03	-.06	.17***	.28***	<b>1</b>					
9. Child's perc. security with mother	.05	.05	-.08**	-.10**	-.09**	.09**	.11**	.02	<b>1</b>				
10. Child's perc. security with father	.07	.07*	-.06***	-.17**	-.06***	.07*	.07	.02	.70***	<b>1</b>			
11. Child's perc. peer support	.10**	.06	<.01	-.03	<.01	.07*	.13***	.07	.38***	.40***	<b>1</b>		
12. Mother rated peer competence	.19***	.10*	-.02	-.08	.30**	.19**	.21**	.15**	.20**	.20**	.30**	<b>1</b>	
13. Father rated peer competence	.24***	.12**	.06	-.09*	.20**	.30**	.19**	.18**	.20**	.18**	.27**	.56**	<b>1</b>

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



Table 6

*Intraclass Correlations Among Study Variables Provided By Mothers and Fathers*

Variable	Intraclass Correlation	95% Confidence Interval		F-Value
Marital Conflict	.38	.30	.46	2.24***
Family Emotional Expressiveness	.24	.16	.32	1.64***
Parenting Sensitivity	.25	.16	.34	1.67***
Perceived Security With Parent	.70	.65	.74	5.57***
Peer Social Competence	.56	.50	.62	3.55***

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

Table 7

*Multiple Imputation Variance Information for Imputed Variables for the Prediction of Peer Social Competence from Actor and Partner Conflict*

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<u>Variable</u>	<u>Between-Imputations Variance</u>	<u>Within-Imputations Variance</u>	<u>Total</u>	<u>DF</u>	<u>Relative Increase</u>	<u>Fraction Missing</u>	<u>Relative Efficiency</u>
Income: Needs	<.01	<.01	<.01	2235.50	0.04	0.04	0.99
Actor Conflict	<.01	<.01	<.01	3959.90	0.03	0.03	0.99
Partner Conflict	<.01	<.01	<.01	321.62	0.13	0.12	0.98

Table 8

*Multiple Imputation Parameter Estimates for the Prediction of Peer Social Competence from Actor and Partner Conflict and Actor Gender*

Variable	Beta	Std Error	95% Confidence Limits		DF	Minimum	Maximum	Parameter=Theta0	Pr>  t
Intercept	-1.55	1.05	-3.62	0.51	<.01	-1.60	-1.49	-1.47	0.14
Income: Needs	0.12	0.03	0.07	0.17	2235.50	0.12	0.13	4.41	<.01
Maternal Education	0.04	0.05	-0.06	0.14	17465.00	0.03	0.05	0.83	0.41
Child Gender	0.55	0.21	0.14	0.96	483155.00	0.53	0.56	2.62	0.01
Child Race/Ethnicity	0.21	0.25	-0.28	0.70	<.01	0.20	0.22	0.85	0.40
Site	-0.02	0.04	-0.09	0.05	<.01	-0.02	-0.02	-0.64	0.52
Actor Conflict	-0.15	0.06	-0.26	-0.02	3959.00	-0.15	-0.13	-2.33	0.02
Partner Conflict	0.03	0.06	-0.09	0.15	321.62	<.01	0.05	0.49	0.63
Actor Gender	-0.24	0.06	-0.35	-0.12	<.01	-0.24	-0.23	-4.08	<.01

Table 9

*Multiple Imputation Variance Information for Imputed Variables for the Prediction of Peer Social Competence from Actor and Partner Conflict, Actor and Partner Total Emotional Expressiveness, Actor Gender, and Interactions Among the Predictors*

Variable	Between-Imputations Variance	Within-Imputations Variance	Total	DF	Relative Increase	Fraction Missing	Relative Efficiency
Income: Needs	<.01	<.01	<.01	1847.40	0.05	0.05	0.99
Actor Conflict	<.01	<.01	<.01	22745.00	0.01	0.01	0.99
Partner Conflict	<.01	<.01	<.01	208.74	0.16	0.15	0.97
Actor Emotional Expressiveness	<.01	<.01	<.01	2592.50	0.04	0.04	0.99
Partner Emotional Expressiveness	<.01	<.01	<.01	4052.70	0.03	0.03	0.99
Actor Conflict x Partner Conflict	<.01	<.01	<.01	3904.60	0.03	0.03	0.99
Actor Emotional Expressiveness x Partner Emotional Expressiveness	<.01	<.01	<.01	4880.10	0.03	0.03	0.99
Partner Conflict x Partner Emotional Expressiveness	<.01	<.01	<.01	5431.4	0.03	0.03	0.99

Table 9 Continues

Variable	Between-Imputations Variance	Within-Imputations Variance	Total	DF	Relative Increase	Fraction Missing	Relative Efficiency
Actor Conflict x Actor Emotional Expressiveness	<.01	<.01	<.01	107245.00	0.01	0.01	0.99
Actor Gender x Actor Conflict	<.01	<.01	<.01	714.08	0.08	0.08	0.98
Actor Gender x Actor Emotional Expressiveness	<.01	<.01	<.01	5436.90	0.03	0.03	0.99
Actor Gender x Partner Emotional Expressiveness	<.01	<.01	<.01	3375.90	0.04	0.03	0.99
Actor Gender x Partner Conflict	<.01	<.01	<.01	811.37	0.08	0.08	0.99
Actor Gender x Partner Conflict x Partner Emotional Expressiveness	<.01	<.01	<.01	301.90	0.13	0.12	0.98

Table 9 Continues

Variable	Between-Imputations Variance	Within-Imputations Variance	Total	DF	Relative Increase	Fraction Missing	Relative Efficiency
Actor Gender x	<.01	<.01	<.01	1258.10	0.06	0.06	0.99
Actor Conflict x							
Actor Emotional							
Expressiveness							

Table 10

*Multiple Imputation Parameter Estimates for the Prediction of Peer Social Competence from Actor and Partner Conflict, Actor and Partner Total Emotional Expressiveness, Actor Gender, and Interactions Among the Predictors*

Variable	Estimate	Std Error	95% Confidence Limits		DF	Minimum	Maximum	Parameter=Theta0	Pr>  t
Intercept	-0.78	1.02	-2.78	.23	267	-0.94	-0.66	-0.76	0.45
Income: Needs	0.11	0.03	0.06	0.16	1847.40	0.10	0.11	4.10	<.01
Site	<.01	0.03	-0.07	0.06	9588.80	-0.01	<.01	-0.10	0.91
Child Gender	0.50	0.20	0.11	0.89	108146.00	0.49	0.52	2.50	0.01
Maternal Education	0.03	0.05	-0.07	0.12	22466.00	0.02	0.03	0.48	0.63
Child Race	-0.02	0.24	-0.50	0.45	55038.00	-0.05	0.01	-0.09	0.93
Actor Conflict	-0.12	0.07	-0.25	0.01	22745.00	-0.13	-0.11	-1.83	0.07
Partner Conflict	0.04	0.07	-0.10	0.18	208.74	<.01	0.07	0.57	0.57
Actor Emotional Expressiveness	0.10	0.01	0.08	0.13	2592.50	0.10	0.11	7.99	<.01
Partner Emotional Expressiveness	0.04	0.01	0.02	0.07	4052.70	0.04	0.05	3.29	<.01
Actor Gender	-0.07	0.07	-0.21	0.07	4312.80	-0.09	-0.05	-1.00	0.32
Actor Conflict x Partner Conflict	<.01	0.05	-0.10	0.10	3904.60	-0.01	0.01	0.03	0.98

Table 10 Continues

Variable	Estimate	Std Error	95% Confidence Limits	DF	Minimum	Maximum	Parameter=Theta0	Pr>  t
Actor Emotional Expressiveness x Partner Emotional Expressiveness	<.01	<.01	<.01 0.01	4880.10	<.01	<.01	-0.10	0.92
Partner Conflict x Partner Emotional Expressiveness	-0.01	0.01	-0.03 0.01	5431.40	-0.01	-0.01	-0.75	0.45
Actor Emotional Expressiveness x Actor Conflict	-0.02	0.01	-0.04 <.01	107245	-0.02	-0.02	-1.76	0.08
Actor Gender x Actor Conflict	-0.22	0.08	-0.35 -0.05	714.08	-0.22	-0.17	-2.56	0.01
Actor Gender x Actor Emotional Expressiveness	-0.02	0.01	-0.05 0.02	5436.90	-0.02	-0.01	-0.98	0.33



Table 10 Continues

Variable	Estimate	Std Error	95% Confidence Limits		DF	Minimum	Maximum	Parameter=Theta0	Pr> t
Actor Gender x Partner Emotional Expressiveness	<.01	0.02	-0.03	0.03	3375.90	<-.01	0.01	0.16	0.88
Actor Gender x Partner Conflict	0.18	0.08	0.05	0.35	811.37	0.18	0.23	2.57	0.01
Actor Gender x Actor Conflict x Actor Emotional Expressiveness	<.01	0.01	-0.01	0.02	301.90	<.01	0.01	0.62	0.54
Actor Gender x Partner Conflict x Partner Emotional Expressiveness	-0.01	0.01	-0.03	0.01	1258.10	-0.01	-0.01	-1.13	0.26

Table 11

*Multiple Imputation Variance Information for Imputed Variables for the Prediction of Peer Social Competence from Actor and Partner Conflict, Actor and Partner Sensitivity, Actor Gender, and Interactions Among the Predictors*

Variable	Between-Imputations Variance	Within-Imputations Variance	Total	DF	Relative Increase	Fraction Missing	Relative Efficiency
Income: Needs	<.01	<.01	<.01	1847.4	0.13	0.12	0.98
Maternal Education	<.01	<.01	<.01	20351.00	<.01	0.01	0.99
Actor Conflict	<.01	<.01	<.01	14268.00	0.02	0.02	0.99
Partner Conflict	<.01	<.01	0.01	251.76	0.14	0.13	0.97
Actor Sensitivity	<.01	<.01	<.01	60.96	0.34	0.28	0.95
Partner Sensitivity	<.01	<.01	<.01	959.70	0.07	0.07	0.99
Actor Sensitivity x Partner Sensitivity	<.01	<.01	<.01	24.13	0.69	0.45	0.92
Actor Conflict x Partner Conflict	<.01	<.01	<.01	3753.20	0.03	0.03	0.99
Actor Gender	<.01	0.01	0.01	<.01	<.01	<.01	0.99
Actor Conflict x Actor Sensitivity	<.01	<.01	<.01	33.062	0.53	0.38	0.93
Actor Gender x Actor Conflict	<.01	<.01	<.01	222.00	0.16	0.14	0.97

Table 11 Continues

Variable	Between-Imputations Variance	Within-Imputations Variance	Total	DF	Relative Increase	Fraction Missing	Relative Efficiency
Actor Gender x Actor Sensitivity	<.01	<.01	<.01	1386.20	0.06	0.06	0.99
Actor Gender x Actor Conflict x Actor Sensitivity	<.01	<.01	<.01	1236.50	0.06	0.06	0.99
Partner Conflict x Sensitivity	<.01	<.01	<.01	169.39	0.18	0.16	0.97
Actor Gender x Partner Conflict	<.01	<.01	<.01	282.86	0.13	0.13	0.98
Actor Gender x Partner Sensitivity	<.01	<.01	<.01	3856.4	0.03	0.03	0.99
Actor Gender x Partner Conflict x Partner Sensitivity	<.01	<.01	<.01	517.08	0.10	0.09	0.98

Table 12

*Multiple Imputation Parameter Estimates for the Prediction of Peer Social Competence from Actor and Partner Conflict, Actor and Partner Sensitivity, Actor Gender, and Interactions Among the Predictors*

Variable	Estimate	Std Error	95% Confidence Limits		DF	Minimum	Maximum	Parameter=Theta0	Pr>  t
Intercept	-0.89	0.84	-2.54	0.77	<.01	-0.91	-0.85	-1.05	0.29
Income: Needs	0.11	0.02	0.06	0.15	309.29	0.10	0.12	4.80	<.01
Site	-0.04	0.03	-0.10	0.02	11021.00	-0.05	-0.04	-1.42	0.16
Child Gender	0.50	0.17	0.17	0.82	<.01	0.49	0.50	3.00	0.01
Maternal Education	-0.03	0.04	-0.11	0.05	20351	-0.04	-0.03	-0.74	0.46
Child Race	0.07	0.20	-0.32	0.46	<.01	0.06	0.08	0.34	0.73
Actor Conflict	-0.16	0.07	-0.27	-0.01	14268.00	-0.16	-0.14	-2.11	0.04
Partner Conflict	0.01	0.07	-0.13	0.15	251.76	-0.02	0.03	0.17	0.87
Actor Sensitivity	0.16	0.05	0.10	0.28	60.96	0.16	0.21	4.09	<.01
Partner Sensitivity	0.14	0.04	0.07	0.23	959.70	0.14	0.17	3.66	<.01
Actor Sensitivity x Partner Sensitivity	<.01	0.02	-0.04	0.04	24.13	-0.01	0.02	0.07	0.95
Actor Conflict x Partner Conflict	<.01	0.04	-0.07	0.09	3753.20	<.01	0.02	0.16	0.87
Actor Gender	-0.24	0.08	-0.40	-0.07	<.01	-0.24	-0.23	-2.85	<.01

Table 12 Continues

Variable	Estimate	Std Error	95% Confidence Limits		DF	Minimum	Maximum	Parameter=Theta0	Pr>  t
Actor Conflict x Actor Sensitivity	<.01	0.03	-0.06	0.07	33.06	-0.02	0.02	0.12	0.90
Actor Gender x Actor Conflict	-0.24	0.07	-0.35	-0.07	222	-0.24	-0.17	-2.93	<.01
Actor Gender x Actor Sensitivity	-0.01	0.04	-0.09	0.07	1386.20	-0.03	-0.01	-0.30	0.76
Actor Gender x Actor Conflict x Actor Sensitivity	<.01	0.03	-0.05	0.05	1236.50	-0.01	0.01	0.04	0.97
Partner Conflict x Sensitivity	<.01	0.03	-0.05	0.06	169.39	-0.01	0.02	0.04	0.99
Actor Gender x Partner Conflict	0.22	0.07	0.11	0.39	282.86	0.22	0.28	3.54	<.01
Actor Gender x Partner Sensitivity	0.02	0.04	-0.06	0.10	3856.40	<.01	0.02	0.46	0.64
Actor Gender x Partner Conflict x P. Sensitivity	-0.02	0.03	-0.08	0.03	517.08	-0.03	-0.01	-0.85	0.40

Table 13

*Multiple Imputation Variance Information for Imputed Variables for the Prediction of Peer Social Competence from Actor and Partner Conflict, Actor and Partner Security, Actor Gender, and Interactions Among the Predictors*

Variable	Between-Imputations Variance	Within-Imputations Variance	Total	DF	Relative Increase	Fraction Missing	Relative Efficiency
Income: Needs	<.01	<.01	<.01	1890.5	0.05	0.05	0.99
Maternal Education	<.01	<.01	<.01	9596.50	0.02	0.02	0.99
Actor Conflict	<.01	<.01	<.01	4628.8	0.03	0.03	0.99
Partner Conflict	<.01	<.01	<.01	141.19	0.20	0.18	0.97
Security with Actor	<.01	0.06	0.07	866.89	0.07	0.07	0.98
Security with Partner	<.01	0.06	0.06	53851	0.01	0.01	0.99
Actor Gender	<.01	<.01	<.01	<.01	<.01	0.01	0.99
Actor Conflict x Partner Conflict	<.01	<.01	<.01	989.53	0.07	0.07	0.99
Actor Security x Partner Security	0.01	0.23	0.24	2745.00	0.04	0.04	0.99
Actor Conflict x Actor Security	<.01	0.02	0.02	83474.00	0.01	0.01	0.99
Actor Conflict x Actor Gender	<.01	<.01	0.01	449.78	0.10	0.10	0.98

Table 13 Continues

Variable	Between-Imputations Variance	Within-Imputations Variance	Total	DF	Relative Increase	Fraction Missing	Relative Efficiency
Actor Gender x Actor Security	<.01	0.12	0.12	33764.00	0.01	0.01	0.99
Actor Gender x Actor Security x Actor Conflict	<.01	0.03	0.03	381.14	0.11	0.11	0.98
Partner Conflict x Partner Security	<.01	0.03	0.03	1345.80	0.06	0.06	0.99
Partner Conflict x Actor Gender	<.01	<.01	0.01	435.24	0.11	0.10	0.98
Partner Security x Actor Gender	<.01	0.12	0.12	5726.10	0.03	0.03	0.99
Actor Gender x Partner Conflict x Partner Security	<.01	0.03	0.03	858.38	0.07	0.07	0.99

Table 14

*Multiple Imputation Parameter Estimates for the Prediction of Peer Social Competence from Actor and Partner Conflict, Relationship Security with Actor and Partner, Actor Gender, and Interactions Among the Predictors*

Variable	Estimate	Std Error	95% Confidence Limits		DF	Minimum	Maximum	Parameter=Theta0	Pr>  t
Intercept	-1.11	1.04	-3.15	0.92	45252.00	-1.22	-1.03	-1.07	0.28
Site	-0.02	0.04	-0.09	0.05	44283.00	-0.02	-0.02	-0.59	0.56
Income: Needs	0.12	0.039	0.07	0.18	1890.50	0.12	0.13	4.61	<.01
Child Gender	0.61	0.21	0.20	1.01	79989.00	0.58	0.62	2.95	<.01
Child Race/Ethnicity	0.07	0.25	-0.41	0.56	62862.00	0.06	0.10	0.30	0.77
Maternal Education	0.02	0.05	-0.08	0.12	9596.50	0.01	0.03	0.41	0.68
Actor Conflict	-0.15	0.06	-0.26	-0.02	4628.80	-0.15	-0.13	-2.26	0.02
Partner Conflict	0.01	0.07	-0.12	0.15	141.19	-0.03	0.04	0.19	0.85
Actor Security	0.55	0.26	0.12	1.15	866.89	0.55	0.71	2.45	0.01
Partner Security	0.61	0.25	0.14	1.13	53851.00	0.61	0.66	2.51	0.01
Actor Gender	-0.22	0.06	-0.34	-0.11	<.01	-0.23	-0.22	-3.87	<.01
Actor Conflict x Partner Conflict	0.03	0.05	-0.07	0.14	989.53	0.02	0.05	0.64	0.52
Actor Security x Partner Security	-0.40	0.49	-1.35	0.56	2745.00	-0.51	-0.31	-0.82	0.41



Table 14 Continues

Variable	Estimate	Std Error	95% Confidence Limits		DF	Minimum	Maximum	Parameter=Theta0	Pr> t
Actor Conflict x Actor Security	0.14	0.16	-0.17	0.44	83474.00	0.12	0.15	0.88	0.38
Actor Gender x Actor Security	0.15	0.35	-0.53	0.84	33764.00	0.12	0.15	0.88	0.38
Actor Gender x Actor Conflict	-0.20	0.08	-0.35	-0.05	449.78	-0.22	-0.16	-2.59	<.01
Actor Gender x Actor Conflict x Actor Security	-0.14	0.19	-0.50	0.23	381.14	-0.21	-0.06	-0.75	0.45
Partner Conflict x Partner Security	0.26	0.16	-0.06	0.57	1345.80	0.23	0.31	1.61	0.11
Actor Gender x Partner Conflict	0.23	0.08	0.08	0.38	435.24	0.21	0.27	3.05	<.01
Actor Gender x Partner Security	-0.19	0.35	-0.88	0.50	5726.10	-0.26	-0.13	-0.53	0.60

Table 14 Continues

Variable	Estimate	Std Error	95% Confidence Limits		DF	Minimum	Maximum	Parameter=Theta0	Pr> t
Actor Gender x	0.26	0.18	-0.10	0.61	858.38	0.21	0.32	1.42	0.16
Partner Conflict x									
Partner Security									

Table 15

*Multiple Imputation Variance Information for Imputed Variables for the Prediction of Peer Social Competence from Actor and Partner Conflict, Child's Perceived Peer Support,, Actor Gender, and Interactions Among the Predictors*

Variable	Between-Imputations Variance	Within-Imputations Variance	Total	DF	Relative Increase	Fraction Missing	Relative Efficiency
Intercept	<.01	1.01	1.02	181109.00	<.01	<.01	0.99
Income: Needs	<.01	<.01	<.01	1353.30	0.06	0.06	0.99
Child Gender	<.01	0.04	0.04	28959.00	0.01	0.01	0.99
Child Race/Ethnicity	<.01	0.06	0.06	531445.00	<.01	<.01	0.99
Maternal Education	<.01	<.01	<.01	1568.90	0.05	0.05	0.99
Actor Conflict	<.01	<.01	<.01	1387.00	0.06	0.06	0.99
Partner Conflict	<.01	<.01	<.01	174.18	0.18	0.16	0.97
Peer Support	<.01	0.02	0.02	996.40	0.07	0.07	0.99
Actor Gender	<.01	<.01	<.01	<.01	<.01	<.01	0.99
Actor Gender x Actor Conflict	<.01	<.01	<.01	1277.60	0.06	0.06	0.99
Actor Gender x Partner Conflict	<.01	<.01	<.01	1694.70	0.05	0.05	0.99
Actor Conflict x Peer Support	<.01	<.01	<.01	666.48	0.08	0.08	0.98

Table 15 Continues

Variable	Between-Imputations Variance	Within-Imputations Variance	Total	DF	Relative Increase	Fraction Missing	Relative Efficiency
Partner Conflict x Peer Support	<.01	<.01	<.01	3413.60	0.04	0.03	0.99
Actor Conflict x Partner Conflict	<.01	<.01	<.01	757.33	0.15	0.14	0.97
Actor Conflict x Peer Support x Actor Gender	<.01	0.01	0.01	230.00	0.08	0.08	0.99
Partner Conflict x Peer Support x Actor Gender	<.01	0.01	0.01	323.37	0.13	0.12	0.98

Table 16

*Multiple Imputation Parameter Estimates for the Prediction of Peer Social Competence from Actor and Partner Conflict, Child's Perceived Peer Support, Actor Gender, and Interactions Among the Predictors*

Variable	Estimate	Std Error	95% Confidence Limits		DF	Minimum	Maximum	Parameter=Theta0	Pr>  t
Intercept	-0.96	1.01	-2.93	1.02	181109.00	-1.04	-0.90	-0.95	0.34
Site	-0.03	0.03	-0.10	0.03	9916.40	-0.04	-0.03	-1.00	0.32
Income: Needs	0.11	0.03	0.06	0.17	1353.30	0.11	0.12	4.35	<.01
Child Gender	0.32	0.20	-0.07	0.72	28959.00	0.30	0.35	1.60	0.11
Child Race/Ethnicity	0.14	0.24	-0.33	0.61	531445.00	0.13	0.16	0.59	0.55
Maternal Education	0.03	0.05	-0.06	0.13	1568.90	0.02	0.05	0.67	0.50
Actor Conflict	-0.23	0.06	-0.28	-0.04	1387.00	-0.17	-0.14	-2.58	0.01
Partner Conflict	<.01	0.06	-0.13	0.13	174.18	-0.04	0.03	0.03	0.98
Peer Support	0.94	0.15	0.68	1.25	996.40	0.94	1.02	6.63	<.01
Actor Gender	-0.23	0.06	-0.35	-0.12	<.01	-0.23	-0.23	-4.06	<.01
Actor Gender x Actor Conflict	-0.18	0.07	-0.33	-0.04	1277.60	-0.20	-0.16	-2.50	0.01
Actor Gender x Partner Conflict	0.22	0.07	0.08	0.36	1694.70	0.20	0.24	3.03	<.01

Table 16 Continues

Variable	Estimate	Std Error	95% Confidence Limits		DF	Minimum	Maximum	Parameter=Theta0	Pr>  t
Actor Conflict x Peer Support	0.06	0.08	-0.10	0.23	666.48	0.04	0.10	0.76	0.45
Partner Conflict x Peer Support	0.11	0.08	-0.06	0.27	3413.60	0.09	0.12	1.29	0.20
Actor Conflict x Partner Conflict	0.02	0.05	-0.07	0.12	757.33	0.01	0.04	0.49	0.62
Actor Conflict x Actor Gender x Peer Support	-0.07	0.11	-0.29	0.14	230.00	-0.11	-0.03	-0.68	0.49
Partner Conflict x Actor Gender x Peer Support	0.09	0.11	-0.11	0.30	323.37	0.05	0.13	0.88	0.38

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