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Associations between Parental and Sibling Family Subsystems and Adolescent Externalizing and Internalizing Problems

Jennifer Lynn Ducharme

A Thesis

in

The Department

of

Psychology

Presented in Partial Fulfilment of the Requirements
for the Degree of Doctor of Philosophy at
Concordia University
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Abstract

Associations between Parental and Sibling Family Subsystems

and Adolescent Externalizing and Internalizing Problems

Jennifer Ducharme, Ph.D.
Concordia University, 2002

Family relationships and family functioning have been identified by family systems, social learning, and attachment theories as important influences on child and adolescent development and psychopathology, including the development of internalizing and externalizing problems. Most studies have examined global family constructs in relation to adolescent adjustment, however. The present study investigated links between several family dyads (i.e., mother-adolescent, father-adolescent, sibling-adolescent, and marital dyads), their characteristics (i.e., support, negative interactions/conflict, conflict resolution) and adolescent internalizing and externalizing problems. The study's specific goals were to investigate the relative importance of each family subsystem for the prediction of adolescent outcomes, including whether the subsystems and their characteristics differentially predict internalizing and externalizing problems.

Using a short-term longitudinal design, adolescents (M age 13.1 years) initially in grades 7 and 8 were tested twice one year apart. At both Time 1 (N = 244; 145 girls) and Time 2 (N = 201; 127 girls), in groups at school, adolescents completed measures of adjustment and family subsystem relationship characteristics. Participating mothers (N = 80) completed parallel questionnaires, mailed to them at their homes.

Hierarchical regression analyses revealed that for teens from two-parent families, low social support in the adolescent-father dyad was uniquely associated with both

internalizing and externalizing problems, while for teens from single-mother families, low social support in the adolescent-sibling dyad was uniquely associated with more of the same types of adjustment problems. Further, for teens from two-parent families, negative dyadic interactions were associated with internalizing problems. In addition, for girls from these families, negative interactions in the mother-adolescent dyad were uniquely associated with externalizing problems, while for boys, negative interactions in the father-adolescent dyad were uniquely associated with externalizing problems. In these same families, parents' infrequent use of collaborative and frequent use of destructive conflict resolution in their own interactions together were associated with more internalizing problems for teens.

These findings highlight the importance of differentiating among adolescent-mother, adolescent-father, adolescent-sibling and marital dyadic relationships in families, as a means of evaluating both the unique and joint contributions of family relationships to adolescent adjustment and psychopathology.

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Associations between Parental and Sibling Family Subsystems and Adolescent Externalizing and Internalizing Problems

The identification of factors associated with the increased risk of emotional and behavioural maladjustment among children and adolescents is of clear importance. The family has been regarded as the primary context for understanding human behaviour and adjustment by both developmental psychologists and family therapists (Minuchin, 1985), and has been singled out as of prime importance in the development and maintenance of psychopathology in childhood and adolescence (Mathijssen, Koot, Verhulst, De Bruyn, & Oud, 1997). Moreover, poor family relations appear to be a nonspecific risk factor for the development and course of several psychiatric conditions. While it is widely recognized that general family functioning affects the emotional adjustment of family members (Peiser & Heaven, 1996), the present study is concerned with the role of specific (dyadic) family relationships and their associated characteristics in predicting adolescents' psychological adjustment.

Two approaches, genetic and environmental, typify studies investigating familial influences on child and adolescent psychopathology. Genetic studies, often in the form of twin or adoption methodology, concern themselves with genetic and biological influences on behaviour. Investigations of family environmental risk factors have identified maternal psychopathology, poverty and associated disadvantages, family dysfunction and discordant relationships as relevant to psychopathology in childhood (Cohen & Brook, 1987; Jensen, Bloedau, Degroot, Ussery, & Davis, 1990). The genetic and environmental distinction may be somewhat arbitrary, however, and overly simplistic by today's

standards (Zahn-Waxler, 1996). Genetic effects are probabilistic, not deterministic, in shaping individual differences (Rutter, 1996), which are also clearly influenced by environmental factors. The current investigation will have as its primary focus family environmental factors associated with adolescent adjustment. Genetic or heritable traits of both adolescents and their parents, however, will undoubtedly influence measures of family environment (Ge et al., 1996). As such, while the present study will focus on the environmental factors of dyadic family relationships and their characteristics as potential predictors of adolescent psychopathology, genetic influences, though not explicitly measured, must also be recognized as contributing to adolescent outcomes.

According to several theoretical approaches, relationships are seen as important to individual development. Children are socialized through their participation in close relationships, the family being the major arena (Maccoby, 1992). In adolescence, family relationships continue to be viewed as a key context for development (Collins, 1990), such that adolescent outcomes are often viewed as products of the quality of their familial relationships (Grotevant, 1998). Recent views of socialization, however, recognize the bidirectional influences of relationships, such that child and adolescent adjustment is seen as both a cause of and effect on the quality of marital, parent-child, and sibling relationships (O'Connor, Hetherington, & Clingempeel, 1997).

Within this relational framework, attachment, social learning, and family systems theories all highlight the family as an important contributing factor to the development of personality and psychopathology (Hetherington & Martin, 1986). The social learning perspective stresses how coercive interactions may be learned and reinforced within the

context of the family, culminating in aggressive and delinquent behaviors. Attachment theory highlights the importance of secure dyadic relationships with caregivers in fostering autonomy, self-esteem and positive psychosocial functioning (Wolkind & Rutter, 1985). On the other hand, specific forms of adolescent psychopathology have been found to be associated with different insecure attachment styles (dismissing attachment associated with externalizing problems, preoccupied attachment associated with internalizing problems: Rosenstein & Horowitz, 1996). Building on attachment theory, Davies and Cummings (1994) have argued that in addition to the parent-child bond, children's family experiences (e.g., marital interactions, parenting practices, relationships with siblings) influence their sense of emotional security. Children's experiential history of family conflict and insecure attachment leads to emotional insecurity, which in turn promotes adjustment problems (Davies & Cummings, 1994).

Family systems theory also provides a framework for investigating links between family relationships and adolescent adjustment. According to this view, psychopathology is reflected as part of a dysfunctional system, rather than as an attribute of an individual (Hetherington & Martin, 1986). One of the major features of family systems theory is the premise that while the larger family system should be viewed as an integral and organized whole, the within-family relationships, or subsystems, are the most important units of observation and intervention (Minuchin, 1985, 1988; Wagner & Reiss, 1995). Recent conceptualizations of the family's role in socialization are consistent with family systems theory in that parent-child, marital and sibling subsystems are all seen as contexts for socialization (Parke & Buriel, 1998). Moreover, given that relationships within the family

place constraints on the behaviour and adjustment of its members, problematic or symptomatic outcomes may best be understood within the social context of the family system. Further, within the family, relationship systems are central not only in the development and maintenance of dysfunctional behaviour or psychopathology, but in treatment and recovery as well (Combrinck-Graham, 1990).

The larger family system is composed of subsystems, including the marital subsystem, the parent-child subsystem, and the sibling subsystem (Minuchin, 1985); these smaller family units are arguably interrelated (Cromwell & Peterson, 1983). The family system perspective implies interdependence among relationships, such that the quality of one relationship influences and is influenced by other relationships (Gjerde, 1986; O'Connor et al., 1997). In fact, insight into the complex patterns of reciprocal influences between family relationships may be required in order to understand the contribution of any particular relationship to adolescent development (Lempers & Clark-Lempers, 1992). Moreover, the way a relationship or subsystem functions in isolation may not necessarily reflect its operation within the total family system (Gjerde, 1986); instead, relationship systems may function together to influence psychological well-being during childhood and adolescence (Gauze, Bukowski, Aquan-Assee, & Sippola, 1996). For example, children whose experiences within one relationship domain are inadequate may obtain the provisions that they are lacking within another relationship domain (Gauze et al., 1996). On the other hand, negative experiences in several relationships may compound the negative impact on adolescent's adjustment.

The role of family factors in child psychopathology points to the need to more

clearly delineate how specific family relationships (subsystems) are associated with negative psychological outcomes in children and adolescents. It is the aim of the proposed study to investigate the role of mother-adolescent, father-adolescent, sibling-adolescent, and marital family subsystem characteristics, in adolescent psychosocial adjustment, including externalizing and internalizing problems. Further, given the centrality of investigating how relationships complement, elaborate, extend, or impede each other in their respective contributions to adolescents' functioning and development (Lempers & Clark-Lempers, 1992), the present study aims to examine the way in which these family subsystems interact in the prediction of adolescent psychopathology.

Family Functioning and Adolescent Adjustment

Several studies have highlighted the importance of family relationship qualities as predictors of adolescent outcomes (Grotevant, 1998), as adolescents' perceptions of the family appear to play an important role in shaping their mental health (Peiser & Heaven, 1996). In general, adolescents who have negative perceptions of family functioning or family environment have more mental health problems, more behaviour problems and poorer academic performance (Shek, 1997a, b). Further, dysfunctional family relationships have been found to be associated with both behavioural and depressive disorders in preadolescents (Puig-Antich et al., 1993). Characteristics of family relationships (e.g., support, conflict) arguably operate as risk or protective factors in the development of internalizing and externalizing problems (Buysse, 1997). Indeed, the quality of family relationships have been found to be associated with both internalizing and externalizing problems in children (Mathijssen, Koot, & Verhulst, 1999).

General family characteristics such as cohesion, adaptability, and conflict are important parameters for evaluating family functioning (Prange, Greenbaum, Silver, Friedman, Kutash, & Duchnowski, 1992) and have been delineated as key family variables for adolescent development (Noller, 1994; Steinberg, 1990) and adjustment (e.g., Farrell & Barnes, 1993). These processes, in turn define the quality of family interactions that support and foster security, or alternatively, create estrangement and disengagement (Baer, 1999). Teens from families that are cohesive, expressive, and encourage independence are better adjusted, while teens from families that are high in conflict and control are less well-adjusted (Noller & Callan, 1991). The developmental tasks of adolescence, notably achieving increased independence, autonomy and sense of identity, are most effectively accomplished in families that encourage autonomy, exert low to moderate control, are low in conflict and high in love and support (Noller & Callan, 1991). The present study will investigate several of these relationship characteristics and their role in adolescent (mal)adjustment. Specifically, within each of the family subsystems, characteristics including social support (i.e., cohesion/closeness), negative interactions/conflict, and conflict resolution will be examined.

Previous research has demonstrated that family system characteristics such as cohesion and conflict are linked to teens' feelings of self-esteem, sense of self-efficacy and internalizing problems (e.g., Smets & Hartup, 1988). Adolescent depression has been found to be significantly inversely correlated with self-reported family cohesion, family social support, and satisfaction with family functioning (Barrera & Garrison-Jones,1992; Cumsille & Epstein, 1994). Similarly, close positive relationships with family members

appear to be related to a reduced likelihood of depression, while low family cohesion is associated with higher depressive affect among adolescents (Rubin et al., 1992).

Family relationship factors also appear to be associated with acting-out, externalizing behavioural problems, and adolescent delinquency. For example, a recent investigation revealed that high family cohesion and low rigidity were associated with fewer child problem behaviours (Mathijssen et al., 1997). In general, positive family relationships have been found to be negatively related to teen delinquency (Peiser & Heaven, 1996), with lack of family cohesion coming through as the strongest familial correlate of adolescent delinquent behaviour (Cashwell & Vacc, 1996). It has been suggested that adolescents who lack strong family support and communication are more susceptible to such delinquent behaviours as smoking, drinking, or drugs, due to a tendency to rely on the peer group for their main support, which makes them more vulnerable to peer pressure (Noller & Callan, 1991).

With the association between family factors, family relationship characteristics, and child and adolescent adjustment well-established, the question then becomes whether such family characteristics differentially predict teens' behavioural or emotional outcomes. In an early investigation of this question, in a clinical sample of 60 children (aged 6 to 11 years) and 60 adolescents (aged 12 to 16 years), internalizing and externalizing behaviour problems were expected to be differentially associated with family cohesion and adaptability (Smets & Hartup, 1988). Internalizing problems were postulated to characterize children from enmeshed (extremely high cohesiveness) or rigid (extremely low adaptability) families, while families that were disengaged (extremely low

cohesiveness) or chaotic (extremely high adaptability) would be typical of children with externalizing symptoms. Results revealed, however, that the family situations of internalizing compared to externalizing children did not differ (Smets & Hartup, 1988). While the dimensions of cohesion and adaptability were found to be associated with behaviour problems in children, extreme scores on either characteristic were associated with greater risk for either behaviour problem. These findings point to the importance of recognizing that there may be multiple pathways to the development of psychopathology in children, and in fact, similar family situations may be associated with different developmental patterns for different children (Hetherington & Martin, 1986). The results also suggest that an assessment of global family characteristics, or at least the characteristics of cohesion and adaptability, are inadequate for distinguishing between externalizing and internalizing problems.

In other studies, these same family relationship characteristics, have, however, been found to be associated with different adolescent outcomes. For example, in a recent study of fifth, eighth, and tenth grade adolescents, family cohesion and enmeshment were found to be differentially associated with internalized and externalized problems (Barber & Buehler, 1996). The importance of autonomy and independence for adolescent development would suggest that a controlling, constraining pattern of interaction that inhibits psychological autonomy (i.e., enmeshment; Barber & Buehler, 1996; Farrell & Barnes, 1993) may have particularly detrimental effects. While family cohesion was negatively associated with both externalizing and internalizing problems, enmeshment was positively associated particularly with internalizing difficulties. This study provides

evidence for the positive effects of close, supportive family relationships and the deleterious effects of enmeshed, intrusive relationships.

These findings are consistent with other recent studies that suggest specific associations between family relationship characteristics and psychological outcomes. For example, women's recollections of enmeshed, overinvolved father-daughter childhood relationships have been found to be associated with feelings of depression, anxiety and low self-esteem (i.e., internalizing problems; Jacobvitz & Bush, 1996). Further, Kerig (1995) found that different family structural relationships were related to different symptoms in a sample of 75 children aged 6 to 10 years. Mothers from families classified as separate (all family members distant from one another) rated their children highest in externalizing problems, while mothers from detouring families (child excluded from a cohesive parental subsystem) rated their children highest in internalizing symptoms (Kerig, 1995). These findings suggest that different adolescent outcomes may be differentially predicted depending on the particular relationship characteristic that is investigated.

In addition to cohesion and adaptability, conflict is another dimension of family functioning that family systems theory has stressed as important for the development of psychopathology. Consistent with this idea, according to both attachment and social learning theories, children are at increased risk for emotional or behavioural problems when the interpersonal relationships in their environments are characterized by anger and conflict (Jaycox & Repetti, 1993). Past research has indeed demonstrated that adolescent reports of high family conflict are associated with their feelings of distress and

psychological symptoms. In an investigation of adolescents from intact, divorced, and blended families, it was found that teens who reported high family conflict, regardless of parental marital status, also scored higher on a measure of psychological symptomatology (Borrine, Handal, Brown, & Searight, 1991). Among younger children (4th and 5th graders), psychological adjustment has also been found to be strongly related to family conflict, with angry or conflictual family climates having a greater impact on daughters' emotional well-being than sons (Jaycox & Repetti, 1993). Girls are thought to be more relationally oriented than boys, and perhaps as a result, are more affected by interpersonal conflict in their families. For both boys and girls, however, family conflict may lead to internalizing and externalizing problems through similar mechanisms: exposure to conflict may operate by (a) increasing emotional distress that manifests itself as internalizing problems, or (b) increasing externalizing behaviours through modeling (David, Steele, Forehand, & Armistead, 1996). In fact, while family conflict appears to be more closely related to externalizing than internalizing disorders, associations with both have been documented (Hetherington & Martin, 1986).

It is important to recognize that interpersonal conflict is composed of several interrelated features (e.g., frequency, intensity, resolution) that may influence its potential effects (Laursen & Collins, 1994). As such, a sole focus on conflict frequency may provide a limited understanding of the significance of conflict for adolescents and their relationships (Laursen & Collins, 1994). Further, while conflict is an inherent part of normal family functioning, the inability to resolve intra-familial conflict may be particularly problematic (Sroufe & Fleeson, 1988). Indeed, whether conflict can be

successfully resolved is a key aspect of interparental conflict that impacts on children (Grych & Fincham, 1990; Kerig, 1996). Moreover, it is important to distinguish between constructive conflict resolution strategies (e.g., negotiation, problem-solving) and destructive resolution strategies (e.g., disengagement, negative verbal behavior), as they are likely to be associated with different interpersonal outcomes (Rinaldi & Howe, 1998). Moreover, recent research suggests that preadolescents' conflict resolution strategies are particularly likely to impact the quality of their (sibling) relationships (Rinaldi & Howe, 1998). Given these findings, in addition to investigating the association between social support and adolescent adjustment, the present study will examine the associations of conflict (negative interactions) and conflict resolution, and more specifically, positive (constructive) versus negative (destructive) strategies.

Despite documented associations between general family characteristics and child and adolescent outcomes, investigators have recently highlighted fundamental flaws in studying such global constructs as family cohesion or family conflict. First, there is the question of which specific relationships are being considered when individuals respond to questions about family characteristics. For example, in a recent study, although the sibling subsystem was not specifically investigated, many subjects reported that they were thinking of sibling conflict when responding to items pertaining to family conflict (Jaycox & Repetti, 1993). In addition to highlighting the need to more carefully investigate sibling relationships, such findings call attention to the need to consider various relational subsystems and their characteristics separately as a means of more accurately characterizing results.

Similarly, researchers who investigate characteristics such as family cohesion or adaptability may overlook the possibility that subsystems within the family may vary in cohesiveness or adaptability (Cole & Jordan, 1989). Substantial variability in conflict, cohesion, and adaptability between different family subsystems (marital, mother-adolescent, father-adolescent) have in fact been found (Cole & Jordan, 1989; Cole & McPherson, 1993). Given that these subsystems have been found to differ from each other on such relationship dimensions, investigating the family as the unit of analysis, and ignoring the distinctiveness of its component relationships, may gloss over key family qualities (Cole & Jordan, 1989) resulting in a loss of important information about family subsystems (Mathijssen et al., 1997).

Determining whether family relations are associated with specific types of psychopathology is inherently difficult given the potential moderating influences of individual, developmental, and experiential factors (Hetherington & Martin, 1986). Adolescents typically are members of several family subsystems simultaneously, and may be best understood within these multiple contexts (Minuchin, 1985). Adolescents' perceptions of their specific family relationships, rather than global family traits, may better predict their psychological adjustment. Further, a more detailed understanding of the role of the family in adolescent psychopathology may emerge by investigating whether specific family subsystems predict different adolescent outcomes. For example, Cole and McPherson (1993) found father-adolescent conflict and cohesion to be more strongly associated with adolescent depression than were mother-adolescent conflict or cohesion. Thus, mother-adolescent and father-adolescent relationships may contribute differentially

to adolescents' psychological development (Youniss & Ketterlinus, 1987), and as such, should be considered separately.

Finally, while distinguishing between specific family subsystems is of importance, at the same time, dyadic family relationships should not be considered in isolation from one another (cf. family systems theory). Rather than a set of independent dyads, the family should be viewed as a collection of intertwining relationships (Steinberg, 1990). For example, the need to understand the joint contribution of different types of family conflict (marital, parent-child, sibling) to developmental outcomes appears important (Jaycox & Repetti, 1993). The present study, therefore, aims to investigate both the individual contribution of several family subsystems (mother-adolescent, father-adolescent, sibling-adolescent, and marital), and also their joint or additive contributions for the prediction of adolescent adjustment.

Parent-Adolescent Relationships

Parent-adolescent relationships hold great significance for adolescent adjustment (Steinberg, 1990). Notwithstanding the fact that teens become more autonomous from their families of origin (Grotevant, 1998; Steinberg, 1990), and that parent-adolescent conflict increases during the teen years, relationships with parents also typically remain supportive and important (Buysse, 1997). In fact, it is a balance between closeness to parents coupled with the encouragement of autonomy and independence that is particularly important for healthy adolescent development (Noller & Callan, 1991). Adolescent adjustment, in terms of self-esteem, ego identity, and competent peer interactions has been linked to warm and connected relationships with parents, while

delinquency, depression, and other psychiatric symptoms have been associated with disruptions in parent-adolescent relationships (DeVet, 1997; Phares & Renk, 1998; Steinberg, 1990).

Parent-adolescent communication patterns, frequency and resolution of conflict, and parental punishment and control are among the parent-adolescent relationship factors associated with adolescent adjustment, psychopathology, and problem behaviours (Noller, 1994). For example, in a recent study of mother, father and adolescent (aged 16 to 19 years) triads, effective communication between adolescents and their mothers and fathers was inversely associated with psychosocial risk for self-esteem, socialization, and academic problems (Marta, 1997). Further, ineffective communication (e.g., unclear parental demands, expectations and potential consequences) characterize the families of delinquent children (Rutter & Cox, 1985). Families with more effective communication tend to have less conflict: both qualities are inversely associated with adolescent psychopathology and delinquency (Noller & Callan, 1991).

Recent research suggests that positive adjustment in adolescence is related to parent variables such as closeness, parental monitoring and supervision, consistent and appropriate discipline, low parent-child conflict, and joint decision making between parents and adolescents (Bergeron et al., 2000; Hines, 1997; Prange et al., 1992). In studies of parental child rearing styles, positive social and emotional development in children is associated with authoritative (i.e., warm and responsive yet firm), not authoritarian or permissive, parenting (Parke & Buriel, 1998). Authoritative parenting appears to benefit adolescents by helping them become more self-reliant, independent,

and competent (Barber & Lyons, 1994). Furthermore, adolescents with authoritative parents score higher on measures of psychosocial competence and lower on measures of psychological and behavioural dysfunction than teens from authoritarian, indulgent, or neglectful homes (Lamborn, Mounts, Steinberg, & Dornbusch, 1991).

Differential associations between authoritarian and permissive parenting styles and child outcomes suggest that different parent-child relationship characteristics may also differentially predict adolescent adjustment. For example, authoritarian parents, who are harsh, demanding, and unresponsive, have been found to have children who feel they have little control over their environ nent and are fearful of asserting themselves, in turn resulting in unhappy, neurotic behaviour (Parke & Buriel, 1998). Moreover, a common correlate of children's anxiety and withdrawal is parental over-intrusiveness or control (Hetherington & Martin, 1986). Overinvolved or overprotective parenting, manifested by intruding on the child's psychological and physical privacy, actively encouraging dependency, or restrictively controlling the child's behaviour, has also been found to be associated with social phobia, agoraphobia, and generalized anxiety disorder (Hetherington & Martin, 1986).

In contrast, permissive parents, despite having a reasonably affectionate relationship with their children, are inconsistent in their monitoring and discipline, and tend to have children who show uncontrolled, impulsive behavior (Parke & Buriel, 1998). Indeed, children whose parents are disengaged and who do not monitor and supervise are at high risk for delinquent behavior (Rutter & Cox, 1985). In addition, parents in families with an antisocial or delinquent child have been found to be rejecting, harsh, aggressive,

and inconsistent in enforcing rules (Hetherington & Martin, 1986). By extension, in the present study, adolescents whose parents are unsupportive or distant may be expected to show high internalizing problems; while those with more lax, disengaged or conflictual parents may show higher externalizing symptoms.

The majority of past research investigating parent-adolescent relationships has included only mothers or has failed to distinguish between mothers and fathers. In general, there has been a lack of systematic investigation concerning fathers' roles in both normative and psychopathological child and adolescent development (Phares, 1992). Specifically, there is a need to identify mediators and moderators of paternal influences on adolescent functioning (Phares, 1996). Nonetheless, although fathers' influence on children's psychopathology has been studied less often than maternal influences, research suggests paternal personality, behaviour, and psychopathology are important, both directly and indirectly, in both positive and negative ways (Phares, 1992). According to the normative (nonclinical) developmental literature, overall, fathers appear to influence children in ways similar to mothers (Lamb, 1997); both parents may also have similar roles in child psychopathology (Phares, 1992).

In this vein, some argue that differences in mother-child and father-child interactions, and their implications for child development, may not be as marked as many theories imply (Collins & Russell, 1991). Results of large-scale studies, for example, have demonstrated that both maternal and paternal involvement are equally important for the well-being of both sons and daughters (Wenk, Hardesty, Morgan, & Blair, 1994). Further, whether the parent is a mother or a father, warmth, nurturance, and closeness have been

documented to be associated with positive child and adolescent adjustment (Grotevant, 1998; Lamb, 1997).

However, adolescents, rather than perceiving a single relationship with their parents, have been found to describe two distinct relationships, one with their mothers and one with their fathers (Youniss & Smollar, 1985). Moreover, several areas have been identified where fathers and mothers interact with their children differently. For example, during childhood and adolescence, in contrast to father-child relationships, mother-child relationships are characterized by more frequent interaction, more time spent together, and more caregiving (Collins & Russell, 1991; Hosley & Montemayor, 1997; Montemayor & Brownlee, 1987; Youniss & Smollar, 1985). In addition, mothers have more responsibility for children then fathers, taking on a comfort-giving role, while fathers serve a playmate role (Phares, 1996). Adolescents report feeling that their mothers are more understanding and accepting, while their fathers are more judgmental and less willing to negotiate (Noller & Callan, 1990).

Sex differences in patterns of family relationships suggest, in fact, that differentiating between the four parent-adolescent dyadic relationships (i.e., mother-daughter, mother-son, father-daughter, father-son) is particularly important (Steinberg, 1987, 1990; Grotevant, 1998). Relative to mothers, fathers generally have emotionally flat relations and low levels of interaction with their adolescents (Steinberg, 1990). For example, there appears to be more positive interactions, open communication, intimacy, and overt conflict between mothers and their adolescent children than between fathers and adolescents; particularly between mothers and daughters (Hosley & Montemayor, 1997;

Noller, 1994; Noller & Callan, 1991). Father-adolescent relationships, particularly father-son relationships, are typically characterized by more recreational activities and interactions associated with instrumental goals (Collins & Russell, 1991). Adolescent sons and daughters, while relatively similar in their relations with their mothers, have been found to differ most markedly in their relations with fathers (Lieberman, Doyle, & Markiewicz, 1999; Youniss & Smollar, 1985). For example, some findings suggest that fathers are more involved (both behaviourally and affectively) with sons than with daughters (Harris & Morgan, 1991; Starrels, 1994). And, while adolescents are generally more emotionally distant from fathers than mothers, daughters in particular are more distant from fathers than are sons (Youniss & Smollar, 1985). However, although mothers and fathers may spend different amounts of time with their children, both fathers' and mothers' quality rather than quantity of time is related to their children's adjustment (Phares, 1996).

Nonetheless, parent gender may also play a role in differentially predicting adolescents' psychological problems. In a recent meta-analysis, Rothbaum and Weisz (1994) found that mothers' quality of caregiving was more closely related to the absence of children's externalizing behaviour than was fathers' caregiving. Overall, fathers spend less time and are less emotionally involved with their adolescents than are mothers and so may be expected to have a lesser impact on teens (Hosley & Montemayor, 1997). Indeed, overall, mother-adolescent relationships have been found to be more predictive of adolescent outcomes than father-adolescent relationships (Hosley & Montemayor, 1997). There are, however, some areas in which fathers are more influential and/or have unique

influences on adolescent adjustment. For example, some findings suggest that the father-child relationship may be particularly important in the academic realm of adolescents' lives. In a recent study of 70 adolescents (aged 11 to 17 years) and their parents, for example, paternal (but not maternal) acceptance was found to significantly predict adolescents' school functioning, a key index of adolescent adjustment (Forehand & Nousiainen, 1993). Similarly, security of attachment to father was uniquely associated with 9- to 14-year-olds' academic self-concept (Doyle, Markiewicz, Brendgen, Lieberman, & Voss, 2000). Other work suggests fathers' involvement makes a unique contribution to their children's social development (Parke & Buriel, 1998). Father-adolescent relationships may also be particularly influential for adolescents' substance use (Hosley & Montemayor, 1997), antisocial behavior (Neighbors, Forehand, & Bau, 1997) and externalizing problems (Phares, 1997). Poor father-child relationships, defensive and unsupportive paternal communication, and low levels of paternal supervision have been found to be strongly associated with adolescent delinquency (Phares, 1997). Among clinically referred children, paternal characteristics are more consistently related to child externalizing problems, such as ADHD, conduct disorder, or delinquent behaviour, than internalizing problems, such as depression, or anxiety (Phares & Compas, 1992). On the other hand, in nonreferred children and adolescents, paternal factors appear to be related to both externalizing and internalizing problems (Phares & Compas, 1992).

However, evidence is not conclusive as to whether mother-child or father-child relationships have greater associations with child problem behaviour; some studies suggest the father-child dyad has stronger effects, and others that the mother-child dyad is

more influential. Fathers may have more influence on areas in which they are more directly involved (e.g., discipline) or serve as primary role models (e.g., use of alcohol: Hosley & Montemayor, 1997). In keeping with this view, fathers may have a greater influence on child externalizing behaviors than mothers because men model more externalizing behaviour than do women for children to observe (Rothbaum & Weisz, 1994).

As noted earlier, from the perspective of family systems theory, while the father-child subsystem differs from the mother-child subsystem (Minuchin, 1985), both are undoubtably important influences on one another and on child adjustment. Attachment and socialization theories likewise highlight the need to differentiate between parents to best assess their contributions to adolescent development. Attachment theory, for example, suggests that a primary attachment figure, typically mother, plays the most influential role in child development. Social learning theory, on the other hand, argues that children have a tendency to identify with, and model their behaviour on, their same-sex parent (Hetherington & Martin, 1986) and thus that the same-sex parent is particularly influential.

Therefore, relationships with mothers and fathers may be differentially associated with adolescent adjustment (DeVet, 1997; cf. Allen, Hauser, Bell, & O'Conner, 1994). Some evidence suggests that the same-sex parent may play a particularly salient role in the development of children's social competence (Hetherington & Martin, 1986). In adult children, qualitative differences in outcomes of father-son, father-daughter, mother-son, and mother-daughter relationships have been found, such that adults' relationships with

their same-sex parent are particularly important for the prediction of their own psychological adjustment. Specifically, the quality of sons' relationships with their fathers, but not their mothers, was a significant predictor of son's psychological distress (Barnett, Marshall, & Pleck, 1992). In contrast, daughters' psychological health was found to be more strongly associated with their relationships with their mothers than their fathers (Barnett, Kibria, Baruch, & Pleck, 1991).

In addition to the potentially unique contributions mothers and fathers may make to adolescent adjustment, differentiating between mother-adolescent and father-adolescent relationships is important to enable us to examine the protective function of having one positive parental relationship in the face of a negative one. The worst outcomes for adolescents (highest internalizing and externalizing problems) are likely to be seen when they have highly negative relationships with multiple family members, while the best outcomes would be expected among adolescents with warm, positive relationships with both parents (particularly in the context of having positive sibling relationships and parents with a positive marital relationship). It has been suggested that having a positive relationship with one parent may protect against the adverse effects of a poor relationship with the other parent (Hetherington & Martin, 1986). Recent research in fact suggests that a warm father-adolescent relationship within an otherwise conflictual family environment may buffer an adolescent against developing adjustment problems (O'Connor et al., 1997).

In sum, there are clear differences in terms of mothers' and fathers' degree of involvement, such that mothers interact much more with their adolescents than do fathers

(Parke & Buriel, 1998). As primary caregivers and typically more involved than fathers, mothers may be more likely to influence their adolescents' outcomes (cf. Rothbaum & Weisz, 1994). These differences may in turn hold implications for the influence of each relationship for the prediction of adolescent outcomes, such that the mother-adolescent subsystem holds more predictive power than the father-adolescent subsystem. However, positive relationships with father may contribute additionally, especially for sons.

The Parents' Marital Relationship

Within the family system, the marital relationship is often regarded as the cornerstone of family life and a key determinant of the quality of the family environment through its links to other family subsystems (Erel & Burman, 1995). Associations between marital quality and child adjustment are evident across development, from infancy through adolescence (Gable, Belsky, & Crnic, 1992). One of the characteristics of distressed families with problem children is a weak marital alliance (Christensen & Margolin, 1988). Moreover, marital conflict appears to be a factor that places children and adolescents at risk for a range of adjustment problems, especially externalizing but also internalizing emotional problems (Buehler, Krishnakamur, Stone, Anthony, Pemberton, Gerard, & Barber, 1998; Burman, John, & Margolin, 1987; Davies & Cummings, 1994; Seiffge-Krenke & Kollmar, 1998). While the association between parental divorce and children's externalizing problems has been well-established (Shaw, 1991), links between marital discord and children's psychological problems are so well documented that continuous marital conflict has been argued to be even more damaging to youth than divorce (David et al., 1996).

In addition, with the rise in number of children and adolescents raised in single-parent households, the influence of family structure on child and adolescent well-being is one facet of the marital relationship that has increasingly been investigated. Some studies report that teens from intact (first-marriage) families have fewer adjustment problems than teens from single-parent (never married or divorced) families (e.g., Demo & Acock, 1996; Spruijt & de Goede, 1997). However, in a recent review of research on the effects of single-parent households on child and adolescent well-being, Kleist (1999) concluded that single and two-parent families are similar in their ability to foster child well-being, and that family processes (e.g., parent-adolescent interaction) are more important than family structure for the prediction of adolescent outcomes. For example, quality of family life (assessed in terms of level of perceived family conflict) has been found to be related to the adjustment of teens from intact, blended and single-parent families, whereas parental marital status was not (Borrine et al., 1991). Family processes appear to be more central for the prediction of child outcomes than family structural variables. For example, a recent meta-analysis demonstrated that the quality of contact, not the quantity, that children from single-mother families had with their nonresident fathers was associated with child outcomes (Amato & Gilbreth, 1999). Specifically, while feelings of closeness to nonresident fathers were negatively associated with children's internalizing and externalizing problems, frequency of contact with nonresident fathers was not associated with child well-being (Amato & Gilbreth, 1999).

Interactions in single parent families, in comparison to two-parent families, have been reported to be more affectively charged, both in terms of higher levels of

affection/intimacy and higher levels of conflict (Walker & Hennig, 1997). For example, in a recent investigation of the effect of family structure on family processes in early adolescence, Baer (1999) documented that single-parent families were characterized by more conflict and less cohesion than were intact families. It has also been argued that family structure influences child adjustment through its impact on family processes (Simons, Lin, Gordon, Conger, & Lorenz, 1999). Results of a recent study suggest, for example, that children of divorce are at higher risk for adjustment problems because their parents engage in less competent parenting and more interparental conflict than do parents who are married (Simons et al., 1999). Given that family processes may differ as a function of family structure, family structure (single versus two-parent families) was investigated as a potential moderating variable in the present study.

In accounting for the impact of the marital relationship on children's developmental outcomes, both direct and indirect mechanisms have been proposed. Conflicting findings have emerged with regard to whether different mechanisms differentially predict externalizing and internalizing behaviors. Some findings suggest that the effect of marital conflict on externalizing behavior is entirely indirect, mediated by the parent-child relationship, while both direct and indirect effects exist for internalizing behaviors (Harold, Fincham, Osborne, & Conger, 1997). In contrast, other work indicates that while the pathway from parents' marital conflict to adolescent internalizing problems is indirect, mediated by parenting behavior and the parent-child relationship, the path between marital conflict and externalizing problems is a direct one (Fauber, Forehand, Thomas, & Wierson, 1990).

Parental modeling of antagonistic or aggressive behaviors that children observe and imitate may be the mechanism directly linking marital conflict and child adjustment (Emery, 1982; Parke & Buriel, 1998). The negative aspects of parents' unhappy marriages may rub off on teens, resulting in more undercontrolled, aggressive, and antisocial behaviours (Seiffge-Krenke & Kollmar, 1998). Externalizing adjustment problems may be fostered in children's attempts to distract parents from their marital problems or to interrupt interparental conflict by disruptive acting-out behaviour (Davies & Cummings, 1994; Katz & Gottman, 1993). Although some findings suggest marital distress predicts externalizing problems but not internalizing problems (Davies, Dumenci, & Windle, 1999), the latter may nonetheless arise in children from feelings of guilt, self-blame, or anxiety in response to parents' marital conflict (Katz & Gottman, 1993).

The marital relationship may indirectly influence children's adjustment via its effect on the quality of parenting and the parent-child relationship (Parke & Buriel, 1998). For example, parents' emotional withdrawal from their children, as a result of their increasing involvement in their own marital problems, may lead to negative outcomes in their children (Harold et al., 1997). In emphasizing that the impact of one relationship on adjustment is a function of the larger network of family relationships, family systems theory would argue there are no direct associations between marital conflict and child outcome; but rather, parent-child and sibling relationships play mediating and moderating roles (O'Connor et al., 1997). Documented associations between the marital and parent-child subsystems support the existence of an indirect relationship, with parent-child relations mediating the link between marital conflict and child adjustment. Parents whose

marital relationship is supportive and satisfying are believed to be more responsive and sensitive to the needs of their child (Easterbrooks & Emde, 1988; Erel & Burman, 1995). On the other hand, marital conflict may reduce parents' emotional availability and sensitivity, or lead to a breakdown in disciplinary practices, both of which may threaten children's emotional security (Davies & Cummings, 1994). Parents who engage in overt marital conflict may also be more likely to engage in more conflictual interactions with their children and to use more harsh disciplinary practices, both of which are correlates of delinquency in children (Hetherington & Martin, 1986). Finally, in families with discordant marriages, it is likely that conflict will spread from the marital subsystem to other family subsystems, particularly the parent-child dyad (Christensen & Margolin, 1988). In addition to interfering with the mother-child and father-child relationship, marital discord may interfere with how effective parents are in working together as caregivers (Parke & Buriel, 1998) by preventing them from establishing a unified alliance for parenting (Christensen & Margolin, 1988).

Results of a recent meta-analytic review provided clear evidence that the quality of the marital relationship is positively related to the quality of the parent-child relationship, thereby providing support for the spillover hypothesis, in which the behaviour or mood in one subsystem transfers to another (Erel & Burman, 1995). There are several different mechanisms through which the quality of the marital relationship may spillover and affect the parent-child relationship. First, negative feelings from the marriage are expressed toward the child in a process that family systems theory deems "detouring" or "scapegoating", whereby focusing on the child's problem behavior detracts

the parents from difficulty in the marital relationship (Erel & Burman, 1995). A social learning mechanism suggests that dysfunctional and functional marital interactions may elicit behaviour in children that is similar to the behaviour they observe in their parents, such as hostility and aggression, or warmth and caring, respectively (Easterbrooks & Emde, 1998). The socialization mechanism suggests that parents in dysfunctional marriages use less optimal parenting techniques and less consistent discipline than those in functional marriages (Easterbrooks & Emde, 1988).

The spillover hypothesis is contrasted with the compensatory hypothesis, in which individuals seek opposite experiences in one subsystem to compensate for deficits in another; the compensatory hypothesis suggests a negative association between the marital and parent-child relationship (Engfer, 1988; Erel & Burman, 1995). Parents whose needs are not met in their marriage attempt to fulfill them in their relationship with their child; therefore, a strong investment in the parent-child relationship will occur when there are deficits in the marital relationship (Easterbrooks & Emde, 1988; Erel & Burman, 1995). Little support for the compensatory hypothesis has been found, however, or for its associated idea that positive parent-child relations can buffer the child from negative effects of marital conflict (Erel & Burman, 1995).

Recent evidence suggests that fathers are more influenced by marriage than mothers (Gable et al., 1992) and that the father-child relationship may be more consistently associated with the quality of the marital relationship than is the mother-child relationship (Parke & Buriel, 1998). Fathering appears to be particularly sensitive to the effects of the marital relationship, with some findings suggesting that the father-daughter

relationship is particularly vulnerable to the influence of marital discord (Kerig, Cowan, & Cowan, 1993). Poor marital quality has a more negative impact on father-child relationships; yet why these relationships are more vulnerable to low marital satisfaction than are mother-child relationships is not well understood (Cummings & O'Reilly, 1997). It may be that in the face of marital discord, mothers invest more time and emotional involvement in their children, while fathers withdraw from both relationships. Indeed, some findings suggest that women are better at compartmentalizing their spouse and parent roles, while for men these roles are more fused, and therefore there is less spillover from the marital to mother-child relationship (Cummings & O'Reilly, 1997)

Whether the mechanism of influence is direct or indirect, and explained by attachment, social learning, or family systems theory, it is clear that marital discord is associated with an increased risk of emotional and behavioural disorders in children (Easterbrooks & Emde, 1988). However, the majority of research on marital discord and child problems has been correlational in nature and has focussed on latency-aged children (Fincham & Osborne, 1993). There is also much variability in the magnitude of association found between marital functioning and child adjustment. Our understanding of the marital discord-child problem association remains limited as well, as a function of our global approach to investigating marital functioning and child outcomes (Buehler et al., 1998) and our failure to more specifically delineate key constructs (Fincham & Osborne, 1993). A unidimensional focus in earlier studies of marital functioning has made the identification of specific aspects of marital quality as predictors of child adjustment difficult (Katz & Gottman, 1993). Several studies suggest that marital conflict is more

strongly associated with child adjustment than is marital satisfaction (e.g., Jaycox & Repetti, 1993).

Recent work also suggests that different styles of marital conflict are differentially associated with different problem behaviours in adolescents. Overt marital conflict (e.g., openly hostile affect or behaviour) has been found to be connected to teens' externalizing problems, while covert marital conflict (e.g., passive aggressive conflict management) has been associated with internalizing difficulties (Buehler et al., 1998). Modeling may explain the association between overt conflict and youth externalizing problems, as both may reflect physical or verbal aggression. Covert conflict style and internalizing behaviours share in common a more passive, indirect or suppressed quality (Buehler et al., 1998).

The way in which conflict is resolved may also influence children's adjustment (Parke & Buriel, 1998). In fact, specific conflict resolution strategies used by parents in their marital relationship have been found to differentially predict children's internalizing and externalizing behavior (Katz & Gottman, 1993). Parents with mutually hostile styles of conflict resolution had children who demonstrated more antisocial, acting out behaviors, while couples with husbands who were angry and emotionally distant in resolving conflict had children who showed anxiety and social withdrawal (Katz & Gottman, 1993). Through a process of modeling and observational learning, children may acquire parents' negative patterns of negotiating conflict (Katz & Gottman, 1993), which in turn may emerge as internalizing or externalizing behaviours. In contrast, children who observe parents' effective conflict resolution may learn constructive lessons for resolving

their own conflicts with peers or siblings (Davies & Cummings, 1994). These findings suggest that a more specific delineation of marital conflict and its moderators (e.g., resolution style) may lead to better prediction of different adolescent outcomes.

Inconsistent findings also exist in regard to the differential impact of marital conflict on adjustment for boys versus girls. While boys and girls have not been found to differ in their response to parents' marital dissolution (Allison & Furstenberg, 1989), some data suggest that marital discord is more strongly related to behaviour problems in boys than girls (e.g., Reid & Crisafulli, 1990). Burman et al. (1987), for example, found an association between marital problems and child adjustment among boys but not girls, while Neighbors et al. (1997) similarly found that interparental conflict was related to young adult functioning for males but not females. In contrast, however, other findings seem to suggest female adolescents may be more susceptible to the influence of the family emotional climate than males (Shek, 1997a). It has been suggested that boy's greater vulnerability to family risk factors reverses as children reach adolescence, such that teenage girls from discordant homes are at higher risk than boys for developing psychological problems (Davies & Windle, 1997). With respect to the suggestion that marital conflict affects boys more than girls, one explanation offered for this gender difference is that parents are more likely to expose their sons than their daughters to marital conflict (Hetherington & Martin, 1986). It has been argued, however, that the greater disturbance seen in boys is a function of the fact that boys' reactions, typically aggressiveness and conduct problems, are more salient and disruptive than girls' typical reactions of anxiety and withdrawal (Davies & Cummings, 1994). In general, rates of

externalizing problems are higher in boys than girls, while internalizing problems are more common in girls (Zahn-Waxler, 1996). Externalizing and internalizing difficulties may reflect expressions of male and female stereotypes (Zahn-Waxler, 1996). Thus, males and females may be predisposed to respond in a gender-specific manner to stressors such as parents' marital conflict with externalizing and internalizing problems, respectively (Easterbrooks & Emde, 1988). Other findings suggest that the intergenerational cross-sex relationships are especially affected by the parents' marital relationship, such that mother-son and father-daughter relationships in particular are influenced by marital quality (Cummings & O'Reilly, 1997). These gender differences in response to marital conflict point to the importance of investigating the moderating role of gender on adolescent outcomes.

In sum, while the significance of marital conflict for children's development is well established, the mechanisms through which the marital relationship impacts on children is less well understood (Davies & Cummings, 1994). It appears, however, that the marital relationship influences adolescent adjustment both directly and indirectly, through a spillover mechanism (via parent-adolescent relationship). Thus, in considering the marital relationship as the cornerstone for family functioning, in addition to assessing the direct effect of the marital subsystem on adolescents, assessing its indirect influences on adolescent adjustment via mother- father- and sibling-adolescent relationships is also warranted.

Sibling Relationships

Despite the increasing recognition that siblings are a crucial part of most children's

social worlds (Furman & Buhrmester, 1985a), the role of the sibling relationship and its qualities have been the focus of relatively little empirical attention. It is well-established that relationships with siblings are particularly high in conflict during pre-adolescence and early adolescence (Buhrmester, 1992; Furman & Buhrmester, 1992). However, sibling relationships have also been found to be important sources of intimacy, support, and companionship for teens (Hetherington & Martin, 1986; Lempers & Clark-Lempers, 1992). Moreover, most young adults, particularly women, report that their siblings are both close and important people in their lives (e.g., Pulakos, 1990). As the importance of sibling relationships has increasingly been recognized, links between the sibling relationship and other social relationships, and the contributions of sibling relationships to individual personality, social and cognitive development, are areas that have begun to receive empirical investigation (Hetherington, 1994).

Sibling relationships may have an influential effect on children's emotional security within the family, which in turn affects their adjustment (Davies & Cummings, 1994). Because sibling relationships are linked both to other family relationships and to the general emotional climate of the family, it is likely that the influence of the sibling relationship on adjustment depends on other family factors (Dunn, 1988). Cohesion and expressiveness in the general family environment, for example, have been found to be positively associated with closeness in young adult siblings' relationships (Pulakos, 1990). The affective quality of parent-child relationships (for example, positive affect and prosocial behavior) has also been found to be linked positively with the affective quality of sibling relationships (Brody, 1998). Positive father-child relationships have been

shown to be particularly salient in forecasting sibling relationship quality (Brody, Stoneman, & McCoy, 1994). Negative interparental relationships, and particularly marital conflict, may undermine sibling relationships, however. Parents who are more negative, unaffectionate, and unresponsive, have children who are more hostile, unaffectionate, and negative in their sibling relationships (Hetherington, 1988). Marital unhappiness and conflict have been found to be associated with more negativity and less positivity in children's sibling relationships (Brody, 1998). On the other hand, it has also been suggested that supportive sibling relationships may serve a positive, protective function by buffering against conflictua or distant parent-child relationships (Kerig, 1995). A satisfying sibling relationship may compensate for other problematic relationships by providing an alternate positive social context, and the opportunity to develop interpersonal competence, thereby protecting against the development of adjustment problems (Parke & Buriel, 1998).

While the contribution of sibling relationships to developmental outcomes may be best understood within the context of other family relationships (Hetherington, 1994), they have also been increasingly recognized for their contribution to overall family harmony or disharmony, and to patterns of child development within the family as well (Brody, 1998). Recent work suggests that sibling relationships are associated with adjustment and self-esteem in adolescence, for example. In a study of 39 sibling pairs, differences in the externalizing behaviour of the older siblings (aged 12 to 13 years), and in both the internalizing and externalizing behaviour of their younger siblings (aged 10 years) were associated with differences in their sibling relationships (Dunn, Slomkowski,

Beardsall, & Rende, 1994).

The association between positive parent-child relationships and prosocial sibling relationships are in accordance with both attachment and social learning theories (Brody, 1998). According to attachment theory, children develop internal representations of relationships based on their experiences with caregivers, that they subsequently use in other relationships. Thus, sibling relationships will be coloured by the affective quality of the parent-child relationship. Social learning theory would similarly argue that children generalize behaviour patterns from their interactions with parents to their sibling relationships (Brody, 1998). Children whose relationships with parents (or whose parents' marital relationships) are typified by conflict and unresolved anger, are more likely to approach their sibling relationships with aggressive, coercive behaviors (Brody, 1998). In examining the implications of sibling relationships for adolescent outcomes, social learning theory might suggest that siblings also learn from one another and model behavior after each other. In this way, siblings may play a role in precipitating and sustaining one another's aggressive behaviour (Hetherington & Martin, 1986). Attachment theory might recognize siblings as potential attachment figures, which in turn suggests these relationships would hold implications for adolescents' emotional security and therefore their adjustment (cf. Davies & Cummings, 1994). Family systems theory would argue that as one of many dyadic relationships within the overall system, the sibling relationship, particularly in interaction with other family subsystems, would play a role in the prediction of adolescent outcomes.

Although it is possible that problematic sibling relationships are an index of more

general disturbance (Dunn, 1992), qualities of sibling relationships, such as conflict, affection and warmth nonetheless appear to have developmental significance for child and adolescent adjustment (Dunn et al., 1994). To the extent that sibling-adolescent conflict is normative and may in fact enhance interpersonal skills when it is resolved through discussion and compromise, a balance of support and conflict in the sibling relationship may promote positive adjustment (Brody, 1998). Sibling relationships characterized by extreme levels of conflict promote aggressive behavior (Brody, 1998), while those with extreme levels of support (to the extent of being enmeshed), though rare, are associated with internalizing symptoms (Hetherington, 1988).

Multiple Family Subsystems

Despite the family systems view that component family dyads are interrelated and interdependent, much of the research investigating links between family relationships and child psychopathology has focused on isolated dyads: typically the parent-child or marital dyad. However, parent-child relations have infrequently been separately examined as father-child and mother-child relationships. Indeed, the association between father-child relationships and sibling relationships with child adjustment and psychopathology are particularly understudied (Hetherington, 1994; Phares, 1992). More typical of research in this area is the investigation of global family constructs as they are related to outcomes in childhood or adolescence. Perhaps not surprisingly, these global constructs have typically failed to differentiate between factors leading to internalizing and externalizing disorders in adolescence.

Relatively little work has systematically investigated links between several

specific family subsystems and adolescent adjustment. The concurrent examination of multiple family subsystems, however, may determine their relative importance in the prediction of child psychopathology, as well as highlight which dyads are particularly associated with different types of problem behaviour (Mathijssen, Koot, Verhulst, De Bruyn, & Oud 1998). A more detailed understanding, and indeed, the power to differentiate between problem behaviours may emerge from the investigation of specific relationship characteristics within specific family subsystems.

With the increased recognition that different family dyads are mutually interdependent, and as such, the family's influence on the child cannot be understood by investigating only one dyadic relationship (Mathijssen et al., 1998), some studies incorporating multiple family subsystems have recently emerged. Puig-Antich et al. (1993), for example, investigated the family relationships of adolescents with major depressive disorder, including marital, mother-adolescent, father-adolescent, and sibling-adolescent relationships. Their results revealed that depressed adolescents had significant psychosocial impairments in multiple domains; there were relational difficulties in all types of dyads assessed. However, while eight characteristics of father- and mother-child relationships were assessed, relationship quality with siblings was examined using only one item of a semi-structured interview, unfortunately preventing complete dyadic comparisons. Moreover, the nature of the participants studied (a clinical sample all of whom had an internalizing disorder) did not lend itself to an investigation of differential associations between particular family relationships and outcomes such as externalizing problems.

Other recent studies of multiple dyads, however, have found some differential prediction from familial dyads to adolescent symptomatology. Mathijssen et al. (1998) investigated the association between mother-child, father-child, and marital relationships and child psychopathology in a sample of 137 families with a child aged 9 to 16 years old referred for outpatient services. The authors found that qualities of both the mother-child and marital subsystems were associated with child problem behaviour: mother-child relationships were linked to externalizing problems while marital relationships were linked to internalizing problems (Mathijssen et al., 1998).

In contrast, however, others have contributed evidence suggesting associations between the parent-child relationship, but not the marital relationship, and both externalizing and internalizing problems (e.g., Jouriles et al., 1987). Further, other findings suggest that not only are parents' marital relationships associated with child adjustment problems, they are particularly associated with externalizing problems (e.g., Reid & Crisafulli, 1990). Perhaps these conflicting findings are a function of the different qualities or characteristics of the various relationships that were examined. When the parents' marital relationship is operationalized in terms of conflict, it appears particularly associated with externalizing behaviours; when it is operationalized in terms of justice, recognition, and trust (i.e., those investigated by Mathijssen et al., 1998), the marital relation seems more predictive of internalizing problems. Again, these findings point to the importance of considering multiple relational characteristics simultaneously, as they may potentially be differentially associated with adolescent outcomes.

The Present Study

The present study employs a short-term, longitudinal design and includes both parent and child self-report data. The short-term longitudinal design enables the investigation of the temporal association between family subsystems and adolescent psychopathology. In addition, parent and child self-report enables the evaluation of both mothers' and adolescents' perspectives on their relationships and allows for comparisons of their perspectives. However, more detailed information about family subsystem characteristics was collected at Time 2, when adolescent adjustment was concurrently evaluated. Thus, the concurrent (Time 2) data is the present study's major focus.

Despite documented associations of parent-child, marital and (to a lesser extent) sibling relationships with adolescent adjustment, few studies have simultaneously examined their relative contribution or investigated how they interact to predict adolescent outcome. The theoretical model guiding the present study is constructed so that the contributions of each subsystem (mother-adolescent, father-adolescent, sibling-adolescent, marital), alone and in combination, can be examined as predictors of both internalizing and externalizing problems. As shown in Figure 1, for each of the four subsystems, a composite variable, combining positive relationship characteristics in one model, and negative relationship characteristics in a second model, will be computed so that overall prediction from the various subsystems can be determined. For the marital subsystem, both direct links to adolescent outcome, as well as indirect effects through the mother-adolescent, father-adolescent, and sibling-adolescent subsystems, will be examined.

The present study will be guided by this overall model and by four main questions, as follows. First, what is the relative importance of different family subsystems (mother-adolescent, father-adolescent, sibling-adolescent, marital) for the prediction of adolescent adjustment? It is hypothesized that the subsystems within which adolescents are directly involved (mother- father- and sibling-adolescent relationships) will be direct predictors of adolescent adjustment. Stronger associations between the mother-child and father-child relationships and adolescent outcome are thus expected than between the marital relationship and adolescent outcome. This postulation is based on evidence that the parents' marital relationship and adolescent adjustment are only indirectly linked through the influence of the marital relationship on the parent-child relationship (e.g., Parke & Buriel, 1998). Therefore, it is predicted that the influence of the marital subsystem will be indirect via the mother-adolescent and/or father-adolescent subsystems. The father-adolescent relationship may be particularly influenced by the marital relationship, but is also expected to play a unique role in adolescent adjustment. Moreover, in considering the influence of the parent-adolescent relationship, given that mother-adolescent relationships are typically among the more close, supportive, and conflictual family relationships, and that teens spend more time interacting with mothers than fathers, it is expected that the mother-adolescent subsystem will be central to the prediction of adjustment, and will be more predictive of outcome (i.e., a larger unique effect) than the father-adolescent relationship.

The temporal dimension in the present study enables the investigation of whether characteristics of family relationships precede adolescent adjustment, and whether they

contribute to changes in adjustment over time. Therefore, conflict in the marital, mother-adolescent, and father-adolescent subsystems at Time 1 will also be used to predict to adolescent internalizing and externalizing problems at Time 2, controlling for adolescent behavior at Time 1. Conversely, the present study will assess whether adolescent problem behaviour at Time 1 predicts family relationship characteristics at Time 2. Given the increased recognition that parents and children mutually influence each other (i.e., bidirectional effects among relationships, Bell, 1968; Lytton, 1982) adolescents' externalizing or internalizing problems may in fact precede negative family relationship characteristics, rather than (or in addition to) vice-versa. This notwithstanding, it is hypothesized that conflict within these family subsystems will precede adolescent adjustment problems.

The study's second question asks about the relative importance of different family system characteristics (e.g., conflict, support) for the prediction of adolescent adjustment. A related question is whether the family subsystems characteristics differentially predict adolescents' internalizing and externalizing problems. Following attachment and social learning theories, it is predicted that conflict frequency and destructive conflict resolution will be associated with externalizing outcomes, while internalizing outcomes may be more closely associated with (low levels of) positive interactions (e.g., support, closeness). For example, family conflict or confrontational exchanges may make adolescents themselves more conflictual and more likely to behave in an aggressive, externalizing manner (Turner & Barrett, 1998).

The present investigation's third question aims to examine the role of parent and

adolescent gender for the prediction of adolescent adjustment. It is expected that father-adolescent relationships may be particularly predictive of adolescent externalizing problems. However, following findings in which teens identify most strongly with their same-sex parent, it is predicted that mother-adolescent relationship characteristics will be more strongly associated with daughters' outcomes, whereas father-adolescent relationship characteristics will be more strongly associated with sons' outcomes.

The present study's fourth question aims to investigate how the family subsystems and their characteristics relate to each other and how they interact in predicting adolescent adjustment. For example, interaction effects or compensatory effects among the various subsystems will be examined. Following findings of spillover effects between the quality of marital and parent-child relationships, positive associations between these family subsystems are expected. According to the family systems approach, for example, conflict within one subsystem will spill over to other relationships in the system (Cowan et al., 1996).

Finally, lack of a positive relationships (e.g., with parents or siblings) may be considered a risk factor for problematic outcomes. Indeed, previous research suggests that when lack of a positive family relationship is considered a risk factor, children with no positive relationships have more problem behaviors than those with either one, two, or three positive relationships (Mathijssen et al., 1998). Based these findings and on a cumulative risk model, where the accumulation of risk factors increases the likelihood of psychopathology (Sameroff & Seifer, 1983), it is anticipated that adolescents with no positive relationships with parents will show the most adjustment problems. In contrast, a

positive relationship with one parent may compensate for having a negative relationship with the other parent. Furthermore, supportive relationships may have the greatest impact on adolescent adjustment when they occur in the context of an otherwise conflictual family environment (cf. O'Connor, Hetherington, & Reiss, 1998). Thus, it is also predicted that the subsystems will interact such that when the marital subsystem is more negative (i.e., higher in conflict), the parent-adolescent subsystems or the sibling-adolescent subsystem might serve protective functions against adolescent adjustment problems.

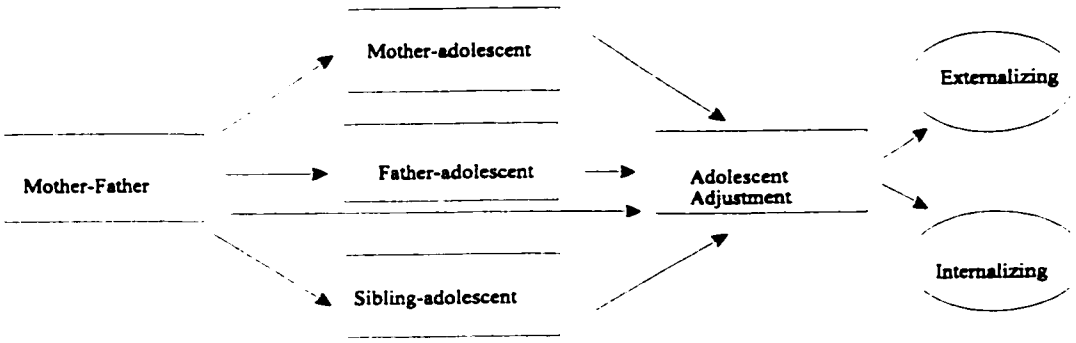

Figure 1. Overall model, predicting from family subsystem characteristics to adolescent adjustment (externalizing and internalizing problems).

Method

Participants

At Time 1, participants were recruited from the grade 7 and 8 students ($N = 460$) attending a local Montreal high school. Of these, 246 students and at least one of their parents (53.5%) consented for the adolescent to participate, 91 (19.8%) declined to participate and 119 (25.9%) did not return completed consent forms. Four students left the school in the course of collecting consents. Of these 246 students who consented to participate, two participants were absent during one or both phases of data collection (and on subsequent return visits to the school to collect data from absentees). Therefore, the final Time 1 sample included 244 adolescents, 145 girls and 99 boys, M age = 13.1 years ($SD = .84$), ranging from 11 to 16 years. Approximately one year later, adolescents (most now in grades 8 and 9) were recontacted and their participation was requested for year two of the study. Of the 244 Time 1 participants, 201 adolescents (82% of the Time 1 sample) consented to participate at Time 2[1].

T-tests were performed to determine whether significant differences on the variables of interest existed between adolescents who participated at Time 1 only and adolescents who participated at both Time 1 and Time 2. The two samples did not differ significantly in terms of the amount of conflict they reported in their relationships with their mothers or fathers or in their parents' martial relationship; nor did they differ in self-reported externalizing problems. Adolescents who participated at Time 1 only did,

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[1] Of the 43 participants lost to attrition, 28 did not return completed consent forms at Time 2, five refused to participate at Time 2, and ten moved and/or transferred to another school between Time 1 and Time 2.

however, report higher levels of internalizing symptoms (M = 10.69, SD = 9.43) than those participating at both phases of the study (M = 8.25, SD = 6.54), t (240) = 2.01, p < .05.

The primary focus of the present study was on (and thus the majority of statistical analyses were conducted with) the Time 2 sample. The Time 2 sample (N = 201) consisted of 127 girls and 74 boys, with a mean age of 14.0 years (SD = .80), ranging from 12 to 16 years. In terms of their ethnic/cultural background, 64.2% of the Time 2 sample endorsed one of the following categories: English Canadian (33.9%), European (16.9%), French Canadian (4.0%), Latin American (1.5%), African (1.5%), American (1.5%), Asian (1.5%), and other (3.4%). One percent of the sample did not report their ethnic background, and 28.8% reported having two, and 6.0% three ethnic backgrounds, the majority of which included European, English Canadian, and/or French Canadian backgrounds. Mean socioeconomic status (SES) was 43.31 (SD = 13.17) for mothers and 43.06 (SD = 13.76) for fathers, characteristic of teachers, social workers, personnel clerks and sales occupations, and comparable to the average SES in the general population, based on the Blishen, Carroll, and Moore (1987) index of socioeconomic status[2].

The majority of participants were from two-parent families (n = 143, 71.1%, including 16 step-families). Fifty-four participants were from single-parent families (50 living with mom only and four living with dad only). Data was missing for four participants who did not respond to the question "who lives in your house with you?".

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[2]The Time 1 sample was comparable to the Time 2 sample in terms of ethnic background and SES.

The majority of participating adolescents (n = 178, 88.6%) reported having siblings. In response to questions about relationships with their closest-in-age sibling, 47.1% (n =84) participants described relationships with a brother, while 52.8% (n = 94) described relationships with a sister. The mean age of the sibling teens described was 13.5 years (median age = 13.0 years, modal age = 16.0 years).

Mothers of adolescents who participated at Time 1 were also invited to take part in the study[3]. One hundred and seventy-five mothers (71.7%) agreed to participate, and received a set of questionnaires, mailed to their homes, approximately seven months after Time 1 data collection and four months prior to Time 2 data collection. Seven of these mothers had moved with no forwarding address, thereby leaving 168 potential participants. Of these, 95 mothers returned completed packages, a 57% response rate. The adolescents of 15 of these mothers, however, did not participate at Time 2. Therefore, data was available from a total of 80 mothers whose adolescents also provided complete data at Time 2. Upon receipt of the completed questionnaire package, mothers were paid an honorarium of $10.00. Mother-report measures of adolescent adjustment, family functioning and subsystem characteristics were parallel to adolescents' self-report measures at Time 2.

T-test comparisons were conducted to determine whether adolescents whose mothers participated differed significantly on the measures of interest from teens whose mothers did not participate. The two samples of teens did not differ significantly on any

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[3]Although fathers were also invited to participate, only 37 fathers returned completed questionnaire packages, too small a number for meaningful analyses.

measures, including social support or negative interactions in relationships with their mothers, fathers, or siblings, reports of social support and negative interactions in their parents' marital relationships, nor on self-reported externalizing or internalizing problems.

Procedure

Ethical approval of the larger research project (of which the current study was one part) was obtained from Concordia University's internal (departmental and university level) review committees. A public English-language school board in the Montreal area was then contacted, and approved the project. Administrators from the school that had participated in a previous project were contacted, sent a description of the research project, and gave their permission to conduct the study. A meeting was then held with the school's teachers to discuss the study and to obtain their permission to allow data collection during class time.

A month prior to data collection, a brief presentation explaining the study was given to students in their classrooms. Students were then given a letter describing the project and a consent form, to be completed by both themselves and by their parent/guardian (see Appendix A). Whether they chose to participate or not, the names of all students who returned completed consent forms were entered in a draw for movie passes and music store gift certificates. All participating students also had their names entered in a draw for a portable compact disc player. Data collection took place in two phases, conducted approximately two weeks apart. During phase one, adolescents completed measures of demographic information and family relationships. During phase

two. they completed adjustment measures. The questionnaires were administered to the adolescents in their classroom at school (if more than half of the class chose to participate), or otherwise in groups of about 15 in a separate room. Nonparticipating students remained in a separate room with their teachers. Each session lasted approximately 50 minutes.

The procedure followed at Time 2 was the same as at Time 1. That is, a letter describing the second year of the study was sent home with the students, and parental and student consent was again obtained (see Appendix B). Participating students again completed a series of questionnaires in two sessions (of 50 minutes each) in groups of 15 to 20 at school (see Appendix C for a list of all relevant measures administered).

Adolescent Report: Adolescent Adjustment Measures

The Child Depression Inventory (CDI). The CDI (Kovacs, 1981, 1985), a 26-item self-report measure of children's depressive symptomatology, served as a measure of adolescents' self-reported internalizing symptoms at Time 1 (see Appendix D). Each item consists of three alternate sentences reflecting different degrees of a symptom, with higher scores indicating higher levels of depressive symptoms; participants endorsed that which best described his/her experiences in the past two weeks. For example, participants endorsed one of the following statements, "I am sad once in a while...or...I am sad many times...or...I am sad all the time". The CDI is a frequently used instrument that has been documented to be both reliable and valid (e.g., Kazdin, 1981). In the current sample, the CDI showed good internal consistency (α = .86).

The Self-Report Delinquency Scale (SRD). The SRD (Elliott, Huizinga, &

Ageton, 1985) served as a measure of adolescents' externalizing, acting-out behaviours at Time 1 (see Appendix E). The SRD is a 39-item measure that assesses both the prevalence and frequency of involvement in delinquent acts. Items range in severity from theft under $5, purchasing alcohol as a minor, and vandalism, to breaking and entering and assault. For example, participants respond "yes" or "no" to items such as "Have you ever purposely damaged or destroyed property (includes vandalism/graffiti) belonging to your school or employer?". The number of "yes" responses are then summed in order to compute a delinquency score for each participant; thus, higher scores reflect more delinquent behaviours. The SRD has been found to be an internally consistent measure of delinquent behaviour (for the current sample, $\alpha = .91$), correlating both with official delinquency rates and parent and teacher reports of delinquent behaviour (Elliott & Ageton, 1980; Elliott & Huizinga, 1983; Elliott et al., 1985).

Youth Self-Report (YSR). At Time 2, adolescents' self-reported internalizing and externalizing problem behaviours were assessed with a modified version (given the low base rate among community samples, the items on the Thought Problems subscale were omitted) of the YSR (Achenbach, 1991a; see Appendix F). The YSR is a commonly used measure of children's behaviour problems and there is extensive evidence of its reliability and validity (Achenbach, 1991a). Participants indicate whether a series of internalizing symptoms (e.g., "I feel lonely", "I cry a lot", "I worry a lot") and externalizing symptoms (e.g., "I cut classes or skip school", "I hang around kids who get in trouble", "I have a hot temper") are "not true", "sometimes true", or "very true" of them (scored 0, 1, and 2, respectively). Internalizing problems are measured by summing scores on the withdrawn

(7 items), somatic complaints (9 items), and anxious/depressed (16 items) subscales, while externalizing problems are assessed by summing scores on the delinquent behaviour (11 items) and aggressive behaviour (19 items) subscales. Higher scores reflect higher problem behaviours. For the current sample, both scales showed good internal consistency (α = .92 and .91 for internalizing and externalizing, respectively).

Adolescent Report: Family Relationship Measures.

The Family Issues Questionnaire. Administered at Time 1 and again at Time 2, the family issues questionnaire assessed coercive interactions (i.e., conflict) between the adolescent and each parent (3 items for each parent from Metzler, Noell, Biglan, Ary, & Smolkowski, 1994; e.g., "My mom/dad and I have big arguments about little things"; see Appendix G). Participants responded to each question on a 4-point scale ranging from "never" to "always"; higher scores indicate higher parental coercive interactions. Both scales showed acceptable internal consistency in the current sample (for conflict with mom, α = .75 at Time 1 and .85 at Time 2; for conflict with dad, α = .82 at Time 1 and .85 at Time 2).

The Children's Perception of Interparental Conflict Scale (CPIC). At Time 1 and again at Time 2, adolescents completed a modified 12-item version of the CPIC (Grych, Seid, & Fincham, 1992), a measure of the frequency (e.g., "I often see my parents arguing"), intensity (e.g., "When my parents have an argument, they yell a lot", and resolution (e.g., "When my parents have an argument, they usually work it out" - Reversed) of parents' marital conflict (See Appendix H). Respondents indicate whether each statement is "true", "sort of true", or "false"; responses are then summed to create a

composite score of interparental conflict, with higher scores reflecting higher conflict. The CPIC has good internal consistency (in the current sample, $\alpha = .88$ at both Time 1 and at Time 2) and has been validated with parental reports of conflict and child adjustment measures (Grych et al., 1992).

The Network of Relationships Inventory (NRI). More detailed information about adolescents' familial relationships was collected via the NRI at Time 2 (see Appendix I). To assess characteristics and functioning of their dyadic family relationships, adolescents completed the NRI (Furman & Burhmester, 1985b), modified to refer to their relationships with their mother, father, and closest-in-age sibling. The NRI was explicitly designed to make comparisons across relationships (Furman, 1996) and correlates highly with a more global measure of the quality of family relationships (Creasy & Jarvis, 1989). The NRI is a 30-item measure that asks adolescents about seven positive features of their relationships with their mother, father, and closest-in-age sibling, including companionship, instrumental aid, intimacy, nurturance, affection, admiration, and reliable alliance (i.e., a lasting, reliable bond). Respondents are also asked about two negative features (conflict, antagonism), and the relative power in each relationship. Although items pertaining to three additional relationship features (communication, disengagement, and enmeshment) were added to the NRI in the current study, they were subsequently dropped from analysis as problematic (see Appendix J for a detailed description). Adolescents rated the extent to which each of the nine features occurred in each relationship, on a 5-point Likert scale. Higher scores on each subscale reflect higher levels of each relationship characteristic. Internal consistencies of scale scores are good, with

typical *alphas* of .80 (Furman & Buhrmester, 1985, 1992). NRI subscale internal consistencies (*alphas*) for the current sample, ranging from .74 to .95, are shown in Appendix K.

Intercorrelations among the adolescent-report NRI subscales referring to the adolescent-mother, adolescent-father, adolescent-sibling, and marital dyads (see below) are presented in Appendix L. Given these patterns of correlations, and as suggested by the authors of the instrument (Furman & Burhmester, 1992), for each dyadic relationship, the companionship, instrumental aid, intimacy, nurturance, affection, admiration, and reliable alliance subscales were combined to form a social support dimension. Internal consistencies (*alphas*) were .92, .95, and .92 for social support in the adolescent-mother, -father, and -sibling dyads, respectively. The conflict and antagonism subscales were combined to form a negative interaction dimension. Internal consistencies (*alphas*) were .93, .92, and .93 for negative interactions in the adolescent-mother, -father, and -sibling dyads, respectively. The social support and negative interaction subscales were used in all subsequent analyses.

The Network of Relationships Inventory (NRI) - Marital. As a means of assessing adolescents' perceptions of the marital dyad, adolescents completed a second version of the NRI, modified to refer to their parents' marital relationship (see Appendix M). All but two of the original NRI subscales were administered (intimacy and admiration were dropped to shorten the measure). As detailed above, the companionship, instrumental aid, nurturance, affection, reliable alliance subscales were combined (the intimacy and admiration scales were omitted as unavailable) to form a social support composite (α =

.96); the conflict and antagonism subscales were combined to form a negative interactions composite (α = .92). The social support and negative interaction subscales were used in all subsequent analyses.

The Conflicts and Problem-Solving Scale (CPS). At Time 2, adolescents completed the CPS (Kerig, 1996), modified to assess their use of conflict resolution strategies within the three target (mother, father, sibling) dyadic relationships (see Appendix N). For each item, on a 4-point scale ranging from "never" to "often", subjects indicated how often they used each resolution strategy. The original CPS consisted of 44 items, loading on six factors (Verbal Aggression, Physical Aggression, Collaboration, Avoidance-Capitulation, Stalemate, and Child Involvement), and was designed to assess marital (interparental) conflict. The CPS is a reliable measure; internal consistencies of the conflict strategies subscales range from alphas of .70 to .86. Evidence of convergent and discriminant validity with other measures of marital conflict and functioning has also been found (Kerig, 1996).

For the present study, the Physical Aggression and Child Involvement factors were dropped. The CPS was further reduced to 20 items that were applicable and appropriate to conflict resolution within each of the three dyads. For each of the four factors, 5 items that showed high loadings (i.e., .30 or higher) on their respective factors were included: Collaboration (e.g., "Try to find a solution that meets both of our needs equally"), Stalemate (e.g., "Withdraw love or affection"), Avoidance-Capitulation (e.g., "Try to ignore the problem, avoid talking about it"), and Verbal Aggression (e.g., "Raise voice, yell, shout"). Internal consistencies for the all subscales except collaboration, however,

were somewhat problematic (see Appendix O). Moreover, the pattern of correlations among the conflict resolution subscales (see Appendix P) provided empirical support for combining them. As such, the Stalemate, Avoidance-Capitulation, and Verbal Aggression subscales were combined to form one scale for each dyad, termed *Destructive Conflict Resolution* (α = .82, .81, and .76 for adolescent-mother, -father, and -sibling dyads, respectively), which were used, along with the Collaboration subscales (α = .84, .89, and .86 for adolescent-mother, -father, and -sibling dyads, respectively), in all subsequent analyses.

The Conflicts and Problem-Solving Scale - Marital (CPS). Adolescents also responded to a truncated version of the CPS (Kerig, 1996) consisting of eight items adapted to refer to their parents' (martial) conflict resolution strategies (see Appendix Q). Four items, one for each of the four conflict resolution strategies (Collaboration, Avoidance-Capitulation, Stalemate, and Verbal Aggression) were modified to refer to *mothers'* conflict resolution within the marital relationship. Four parallel items were adapted to refer to *fathers'* use of conflict resolution strategies within the marital relationship. The corresponding items were then combined to create two subscales: Collaboration (α = .72) and, by combining the Stalemate, Avoidance-Capitulation, and Verbal Aggression items (which were correlated between .38 and .53, ps <.001), Destructive Conflict Resolution (α = .79).

Mother-Report: Adolescent Adjustment Measures

The Child Behaviour Checklist (CBCL). Participating mothers completed the CBCL (Achenbach, 1991b), a measure that closely parallels the YSR, and similarly

provides information about adolescents' internalizing and externalizing behaviours (see Appendix R) . The CBCL was modified for the present investigation by omitting items on the Thought Problems subscale. As with the YSR, scores on the Withdrawn, Somatic Complaints, and Anxious-Depressed subscales are summed and represent Internalizing problems; scores on the Aggressive Behaviour and Delinquent Behaviour subscales are summed and reflect Externalizing problems. Reliability and validity of the CBCL are well-established (Achenbach, 1991b). In the current sample, both the internalizing (α = .86) and externalizing scales (α = .91) showed good internal consistency.

Mother-Report: Family Relationship Measures

The Network of Relationships Inventory (NRI). Participating mothers also completed the NRI (i.e., all 10 original subscales plus the three additional subscales that were created for this study but later dropped; parallel to those administered to adolescents), modified to refer to their relationship with their adolescent and their spouse (see Appendix S). That is, they reported on the mother-adolescent and marital dyads. Mothers also completed a second, shortened version of the NRI (companionship, affection, conflict, and antagonism subscales only) modified to refer to their perceptions of these features in their adolescent's relationship with his/her closest-in-age sibling and with his/her father. Internal consistencies for each subscale are shown in Appendix T. Social support (α = .89, for each of adolescent-mother, -father, and -sibling subscales, and .97 for the marital subscale) and negative interaction (α = .88, .90, .95, and .93 for adolescent-mother, -father, -sibling and marital subscales, respectively) composite variables were used in all analyses.

The Conflicts and Problem-Solving Scale (CPS). Participating mothers also completed the collaboration, avoidance-capitulation, stalemate, and verbal aggression subscales on the CPS (Kerig, 1996), modified to refer to their use of conflict resolution strategies with (a) their adolescent and (b) their spouse (i.e., the mother-adolescent and marital dyads; see Appendix U). Internal consistencies for each subscale are shown in Appendix O.

Results

Data Reduction

As previously noted, the primary focus of the present study was on (and thus the majority of statistical analyses were conducted with) the Time 2 sample. Correlations between the adolescent-report predictor and criterion variables are presented in Table 1. Correlations among *within* subsystem predictors are shown in Tables 2, 3, 4, and 5. Intercorrelations among the social support and negative interaction relationship characteristics *across* the various subsystems are shown in Table 6. Correlations among the conflict resolution strategies are shown in Table 7. As expected, the correlations among these characteristics were found to reflect the positive associations across subsystem qualities. In addition, similar to intercorrelations reported in other studies, adolescents' self-reported internalizing and externalizing problems (YSR) were positively correlated, $r = .52$, $p < .001$, a finding reflecting the comorbidity between the two (Zahn-Waxler, Klimes-Dougan, & Slattery, 2000).

Table 1

Intercorrelations among Predictor and Criterion Variables.

Predictor Variables	Criterion Variables	
	YSR Internalizing	YSR Externalizing
Adolescent-mother, -father, -sibling dyads		
Social Support - Mother	-.24**	-.38**
Social Support - Father	-.29**	-.30**
Social Support - Sibling	-.32**	-.26**
Negative Interaction - Mother	.36**	.50**
Negative Interaction - Father	.28**	.35**
Negative Interaction - Sibling	.14 ^{t}	.17*
Conflict - Mother (T1)	.18*	.37**
Conflict - Mother (T2)	.36**	.50**
Conflict - Father (T1)	.09	.25**
Conflict - Father (T2)	.21**	.20**
Collaboration - Mother	-.13 ^{t}	-.29**
Collaboration - Father	-.18*	-.34**
Collaboration - Sibling	-.17*	-.26**
Destructive Conflict Resolution - Mother	.37**	.44**
Destructive Conflict Resolution - Father	.26**	.24**
Destructive Conflict Resolution - Sibling	.21*	.18*

Note. All variables are from Time 2, unless otherwise specified. YSR = Youth Self-Report.

$^{t}p < .10$. $*p < .05$. $**p < .01$.

Table 1 (continued)

Intercorrelations among Predictor and Criterion Variables.

Predictor Variables	Criterion Variables	
	YSR Internalizing	YSR Externalizing
Marital dyad		
Social Support - Marital	-.21*	-.24**
Negative Interaction - Marital	.22**	.24**
Conflict - Marital (T1)	.15*	.20**
Conflict - Marital (T2)	.26**	.29**
Collaboration - Marital	-.27**	-.18*
Destructive Conflict Resolution - Marital	.22*	.20*

Note. All variables are from Time 2, unless otherwise specified. YSR = Youth Self-Report.

$^{t}p < .10$. $^{*}p < .05$. $^{**}p < .01$.

Table 2

Correlations among Mother-Adolescent Subsystem Variables (n = 196).

	1	2	3	4	5	6
1. Social Support (NRI)	-	-.36**	-.38**	-.46**	.60**	-.21**
2. Negative Interaction (NRI)		-	.44**	.74**	-.49**	.48**
3. Conflict (T1: FI)			-	.57**	-.34**	.37**
4. Conflict (T2: FI)				-	-.46**	.54**
5. Collaborative CR (CPS)					-	-.21**
6. Destructive CR (CPS)						-

Note. All variables are from Time 2, unless otherwise specified. CR = conflict resolution; NRI = Network of Relationships Inventory; FI = Family Issues; CPS = Conflict and Problem Solving Scale.

**$p < .01$.

Table 3

Correlations among Father-Adolescent Subsystem Variables (n = 190).

	1	2	3	4	5	6
1. Social Support (NRI)	-	-.28**	-.35**	-.46**	.67**	-.12 '
2. Negative Interaction (NRI)		-	.46**	.67**	-.31**	.54**
3. Conflict (T1: FI)			-	.43**	-.26**	.23**
4. Conflict (T2: FI)				-	-.44**	.40**
5. Collaborative CR (CPS)					-	-.03
6. Destructive CR (CPS)						-

Note. All variables are from Time 2, unless otherwise specified. CR = conflict resolution; NRI = Network of Relationships Inventory; FI = Family Issues; CPS = Conflict and Problem Solving Scale.

'$p < .10$. **$p < .01$.

Table 4

Correlations among Sibling-Adolescent Subsystem Variables (n = 176).

	1	2	3	4
1. Social Support (NRI)	-	-.19**	.55**	-.18*
2. Negative Interaction (NRI)		-	-.38**	.45**
3. Collaborative CR (CPS)			-	-.25**
4. Destructive CR (CPS)				-

Note. All variables are from Time 2, unless otherwise specified. CR = conflict resolution; NRI = Network of Relationships Inventory; CPS = Conflict and Problem Solving Scale.

*$p < .05$. **$p < .01$.

Table 5

Correlations among Marital Subsystem Variables (n = 166).

	1	2	3	4	5	6
1. Social Support (NRI)	-	-.47**	-.56**	-.68**	.52**	-.34**
2. Negative Interaction (NRI)		-	.67**	.77**	-.43**	.47**
3. Conflict (T1: CPIC)			-	.74**	-.44**	.28**
4. Conflict (T2: CPIC)				-	-.59**	.48**
5. Collaborative CR (CPS)					-	-.21**
6. Destructive CR (CPS)						-

Note. All variables are from Time 2, unless otherwise specified. CR = conflict resolution; NRI = Network of Relationships Inventory; CPIC = Children's Perception of Interparental Conflict Scale CPS = Conflict and Problem Solving Scale.

**$p < .01$.

Table 6

NRI Social Support and Negative Interactions: Across Subsystem Correlations.

	1	2	3	4	5	6	7	8
1. SS-mother	-	.50**	.47**	.40**	-.36**	.02	-.02	-.12
2. SS-father		-	.35**	.52**	-.18*	-.28**	-.01	-.33**
3. SS-sibling			-	.28**	-.17*	-.14	-.19**	-.18*
4. SS-marital				-	-.30**	-.09	-.09	-.47**
5. NI-mother					-	.34**	.26**	.29**
6. NI-father						-	.25**	.42**
7. NI-sibling							-	.21**
8. NI-marital								-

Note. SS = social support: NI = negative interactions.

*$p < .05$. **$p < .01$.

Table 7

CPS Conflict Resolution Strategies: Across Subsystem Correlations.

	1	2	3	4	5	6	7	8
1. Adol - Mother Collaborative CR	-	.62**	.48**	.38**	-.21**	.01	-.08	-.20**
2. Adol - Father Collaborative CR		-	.46**	.50**	-.21**	-.03	-.04	-.16*
3. Adol - Sibling Collaborative CR			-	.30**	-.19**	-.10	-.25**	-.18*
4. Marital Collaborative CR				-	-.09	-.02	-.00	-.21**
5. Adol - Mother Destructive CR					-	.66**	.65**	.35**
6. Adol - Father Destructive CR						-	.63**	.30**
7. Adol - Sibling Destructive CR							-	.33**
8. Marital Destructive CR								-

Note. Adol= adolescent; CR = conflict resolution.

*$p < .05$. **$p < .01$.

Preliminary Analyses

Adolescents' self-reported internalizing and externalizing scores (YSR) were significantly positively skewed and subjected to a square root transformation for analysis. For ease of comprehension, original means are reported (although significance tests are based on transformed data). Means and standard deviations for all adolescent-report predictor and criterion variables are presented separately for male (n = 74) and female (n = 127) participants in Table 8. T-tests indicated no significant gender differences on measures of social support, negative interactions, or conflict in adolescent-mother, adolescent-father, adolescent-sibling, or marital dyads. However, significant gender differences were found in adolescents' reports of conflict resolution strategies. Specifically, compared to boys, girls reported more use of collaboration in resolving conflict with their mothers, t (196) = 1.96, $p < .05$, with their fathers, t (190) = 2.56, $p < .05$, and with their siblings, t (175) = 2.63, $p < .01$. Girls also reported that their parents used more collaboration in their resolution of marital conflict, t (173) = 2.23, $p < .05$. Finally, girls reported having significantly more internalizing adjustment problems on the YSR than boys, t (197) = 3.17, $p < .01$.

Means and standard deviations of all adolescent-report predictor and criterion variables are presented separately for participants from intact (n = 127) and blended (n = 16) families in Table 9. T-tests were conducted to determine whether significant differences existed between the two groups on any of the variables. Only the social support from dad, t (139) = 3.31, $p < .01$, and marital social support, t (140) = 2.08, $p < .05$, subscales differed significantly, with both being higher in the intact families.

Table 8

Means and Standard Deviations of Time 2 Predictor and Criterion Variables for Males and Females

	Males		Females		
Variable	*M*	*SD*	*M*	*SD*	*t*
Adolescent -Mother, -Father, -Sibling Dyads					
Social Support - Mother	3.67	0.68	3.67	0.78	0.02
Social Support - Father	3.38	0.85	3.26	0.90	-0.89
Social Support - Sibling	3.30	0.67	3.38	0.84	0.61
Negative Interaction - Mother	2.46	1.06	2.50	1.06	0.22
Negative Interaction - Father	2.25	0.94	2.19	1.02	-0.34
Negative Interaction - Sibling	3.27	1.15	3.20	1.17	-0.37
Conflict - Mother	0.93	0.85	1.14	0.89	1.62 [tt]
Conflict - Father	0.82	0.86	0.79	0.82	-0.18
Collaboration - Mother	1.97	0.69	2.17	0.67	1.96*
Collaboration - Father	1.71	0.82	2.02	0.77	2.56*
Collaboration - Sibling	1.54	0.78	1.86	0.79	2.63**
Destructive CR - Mother	1.27	0.51	1.41	0.55	1.76 [t]
Destructive CR - Father	1.18	0.53	1.29	0.55	1.35
Destructive CR - Sibling	1.45	0.53	1.47	0.51	0.81
Marital Dyad					
Social Support - Marital	3.27	1.18	3.58	1.00	1.81 [t]
Negative Interaction - Marital	2.28	0.85	2.19	0.98	-0.61
Conflict- Marital	1.69	0.47	1.64	0.48	-0.68
Collaboration-Marital	2.07	0.78	2.32	0.67	2.23*

Table 8 (continued)

Means and Standard Deviations of Time 2 Predictor and Criterion Variables for Males and Females

Variable	Males		Females		
	M	*SD*	*M*	*SD*	*t*
Marital Dyad (continued)					
Destructive CR - Marital	1.10	0.69	0.93	0.65	-1.59
Adolescent Adjustment					
YSR Internalizing	10.54	7.96	15.18	10.90	3.17**
YSR Externalizing	14.19	9.83	14.64	9.68	0.31

Note. CR = conflict resolution.

**$p < .01$. *$p < .05$. $^{t}p < .10$. $^{tt}p < .15$.

Table 9

Means and Standard Deviations of Time 2 Predictor and Criterion Variables for Adolescents from Intact and Blended Families.

	Intact		Blended		
Variable	*M*	*SD*	*M*	*SD*	*t*
Adolescent - Mother, -Father, -Sibling Dyads					
Social Support - Mother	3.73	0.68	3.60	0.89	0.67
Social Support - Father	3.49	0.76	2.81	0.88	3.31**
Social Support - Sibling	3.41	0.76	3.14	0.88	1.23
Negative Interaction - Mother	2.34	0.99	2.30	1.13	0.15
Negative Interaction - Father	2.28	0.97	2.47	1.30	-0.72
Negative Interaction - Sibling	3.31	1.11	3.13	1.23	0.59
Conflict - Mother	1.00	0.90	0.87	0.73	0.56
Conflict - Father	0.84	0.83	1.06	0.99	-0.94
Collaboration - Mother	2.16	0.65	2.14	0.74	0.08
Collaboration - Father	2.02	0.72	1.77	0.77	1.27
Collaboration - Sibling	1.80	0.77	1.52	0.90	1.33
Destructive CR - Mother	1.41	0.47	1.30	0.51	-0.82
Destructive CR - Father	1.28	0.51	1.32	0.63	-0.31
Destructive CR - Sibling	1.46	0.50	1.58	0.48	-0.89
Marital Dyad					
Social Support - Marital	3.76	0.81	3.28	1.12	2.08*
Negative Interaction - Marital	2.13	0.84	2.51	1.14	-1.57
Conflict - Marital	1.55	0.42	1.75	0.59	-1.71 †
Collaboration - Marital	2.35	0.63	2.09	0.82	1.47
Destructive CR - Marital	0.96	0.68	1.09	0.57	-0.73

Table 9 (continued)

Means and Standard Deviations of Time 2 Predictor and Criterion Variables for Adolescents from Intact and Blended Families.

	Intact		Blended		
Variable	*M*	*SD*	*M*	*SD*	*t*
Adolescent adjustment					
YSR Internalizing	12.80	10.11	13.25	9.44	-0.16
YSR Externalizing	13.82	9.63	16.00	7.94	-0.86

Note. CR = conflict resolution.

$^{**}p < .01$. $^{*}p < .05$. $^{\dagger}p < .10$.

Two hierarchical regressions, one with social support and one with negative interactions were conducted to further investigate the influence of type of two-parent family (intact or blended) on adolescents' internalizing problems. In the first regression, type of two-parent family was entered on step one; social support-mom, social support-dad, and social support-sibling was entered on step two; and three interaction terms (type of two-parent family by social support-mom, by social support-dad, and by social support-sibling) were entered at step three. In the second regression, type of two-parent family was again entered on step one; negative interaction-mom, negative interaction-dad, and negative interaction-sibling was entered on step two; and three interaction terms (type of two-parent family by negative interaction-mom, by negative interaction-dad, and by negative interaction-sibling) were entered at step three. These two regressions were also conducted with externalizing problems as the dependent variable. In all four of the above regressions, step one (type of two-parent family) and step three (two-way interactions between type of two-parent family and social support or negative interactions) never emerged as statistically significant. Given the results that type of two-parent family (intact or blended) and interactions involving type of two-parent family were nonsignificant, participants from blended families were combined with participants from intact families into one group (adolescents from two-parent families) for all subsequent analyses.

Means and standard deviations of all adolescent-report predictor and criterion variables are presented separately for participants from two-parent (n = 143) and

single-mother (n = 50)[4] families in Table 10. T-tests were conducted to determine whether significant differences existed between the two family structure groups on any of the variables. Compared to teens from two-parent families, adolescents from single-mother families reported significantly less social support from dad, t (180) = -2.95, p < .01, less use of collaboration as a conflict resolution strategy with dad, t (182) = -2.49, p < .05, fewer negative interactions with dad, t (180) = -2.05, p < .05, and more negative interactions with mom, t (188) = 3.62, p < .001.

As the present study has as its focus the simultaneous investigation of the associations (and potential interactions) of several family subsystems (adolescent-mother, adolescent-father, adolescent-sibling, marital) with adolescent adjustment, analyses were first conducted with participants from two-parent families with siblings who responded to questions about their relationships with their mothers and their fathers (n =131). Then, in the interest of investigating differences between single-mother (n = 50) and two-parent families (n = 143), participants from both groups were included in analyses evaluating the associations among mother-adolescent, father-adolescent[5], and sibling-adolescent subsystems with adolescent adjustment.

The present study's first two questions involved evaluating the relative importance of the four family subsystem (mother-adolescent, father-adolescent, sibling-adolescent, and marital) characteristics, for the prediction of (a) adolescent internalizing problems and

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[4]The four father-only single parent families were omitted from analyses as too small a sample.

[5]Forty-one of the 50 adolescents from single-mother families responded to questions about their relationships with their fathers.

Table 10

Means and Standard Deviations of Time 2 Predictor and Criterion Variables for Adolescents from Two-Parent and Single-Mother Families.

	Two-Parent		Single-Mother		
Variable	*M*	*SD*	*M*	*SD*	*t*
Adolescent -Mother, -Father, -Sibling dyads					
Social Support - Mother	3.72	0.71	3.62	0.77	-0.79
Social Support - Father	3.41	0.80	2.96	1.03	-2.95**
Social Support - Sibling	3.38	0.78	3.26	0.84	-0.75
Negative Interaction - Mother	2.33	1.00	2.96	1.12	3.62***
Negative Interaction - Father	2.30	1.01	1.94	0.88	-2.05*
Negative Interaction - Sibling	3.29	1.12	2.99	1.25	-1.41
Conflict - Mother	0.99	0.88	1.27	0.91	1.89 '
Conflict - Father	0.87	0.85	0.58	0.80	-1.96 '
Collaboration - Mother	2.16	0.66	1.97	0.71	-1.64
Collaboration - Father	1.99	0.73	1.64	0.98	-2.49*
Collaboration - Sibling	1.77	0.79	1.55	0.83	-1.49
Destructive CR - Mother	1.31	0.50	1.46	0.63	1.65 '
Destructive CR - Father	1.28	0.52	1.10	0.62	-1.84 '
Destructive CR - Sibling	1.47	0.49	1.43	0.60	-0.45
Adolescent Adjustment					
YSR Internalizing	12.85	10.01	15.30	10.68	1.45
YSR Externalizing	14.07	9.46	16.12	10.74	1.27

Note. CR = conflict resolution.

***$p < .001$. **$p < .01$. *$p < .05$. '$p < .10$.

(b) adolescent externalizing problems. Also of interest was examining the role of parent and adolescent gender in these predictions. To address these questions, (a) social support, (b) negative interactions/conflict, and (c) conflict resolution strategies were evaluated via hierarchical regression analyses. Comparisons were conducted *between* the four family subsystems on each of the above-named relationship characteristics[6].

Social Support: Direct Effects of the Adolescent-Mother, -Father, -Sibling, and Marital Dyads

It was hypothesized that the adolescent-mother and adolescent-father dyads would show the strongest associations with adolescent outcomes, and that social support within these dyads would be associated with internalizing problems in particular. A hierarchical multiple regression analysis was first conducted with social support in each subsystem as independent variables and adolescent internalizing problems as the dependent variable. The same analysis was then conducted with externalizing problems as the dependent variable. For both analyses, sex of adolescent was entered at step one; social support in the mother-adolescent, father-adolescent, sibling-adolescent, and marital dyads were entered at step two; and four interaction terms, created by the product of adolescent sex (0 = female, 1 = male) by each of the four social support variables, were entered at step three.

Internalizing problems. For the prediction of internalizing problems (n = 131), the overall regression was significant, F (9,121) = 5.15, p < .001 (see also Table 11).

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[6]As shown in Appendix V, the relationship characteristics as predictors were also compared *within* each family subsystem.

Table 11

Summary of Hierarchical Regression Analysis for Social Support Variables Predicting Adolescent Internalizing Problems (N = 131).

Variable	*B*	*SE B*	β
Step 1			
Sex	-0.77	0.22	-.28**
Step 2			
Social Support - Mother	0.04	0.18	-.02
Social Support - Father	-0.52	0.16	-.32**
Social Support - Sibling	-0.24	0.15	-.14
Social Support - Marital	0.08	0.13	-.00
Step 3			
Sex X Social Support - Mother	0.20	0.42	.28
Sex X Social Support - Father	-0.10	0.35	-.14
Sex X Social Support - Sibling	0.15	0.32	.19
Sex X Social Support - Marital	-0.13	0.28	-.18

Note. $R^2 = .08$, $p < .01$ for Step 1; $\Delta R^2 = .19$, $p < .01$ for Step 2, $\Delta R^2 = .00$, *ns* for Step 3.

**$p < .01$.

Adolescent sex emerged as a significant predictor at step one, with girls reporting significantly more internalizing problems than boys, R^2 =.08, ΔR^2 = .08, F (1, 129) = 11.48, p <. 01. At step two, the social support variables as a block significantly predicted adolescent internalizing problems, ΔR^2= .19, F (4, 125) = 8.20, p < .001; social support from father was the only unique predictor (sr^2 = .06, p < .01). Therefore, as expected, social support was negatively related to internalizing problems. The sex by social support interaction terms, entered at step three, did not emerge as statistically significant.

A second hierarchical regression was conducted, without the marital dyad variables, on participants with siblings from both two-parent and single-mother families (n = 163; see also Table 12). Sex of adolescent and family structure (single-mother or two-parent) were entered at step one; social support in each of the mother-adolescent, father-adolescent, and sibling-adolescent dyads were entered at step two; and three interaction terms, created by the product of family structure (0 = single-mother, 1 = two-parent) by each of the social support variables, were entered at step three. Two-way interactions (adolescent sex by each of the three social support variables, and adolescent sex by family structure) were also investigated, but did not reach statistical significance and are therefore not reported here.

The overall regression was significant, F (8, 154) = 7.84, p <.001. Adolescent sex and family structure as a block were significant at step one, R^2 =.08, F (2, 160) = 6.88, p < .01; however, sex was the only unique predictor (girls reporting significantly more internalizing problems than boys), sr^2 = .06, p <. 01. At step two, the social support variables as a block significantly predicted, ΔR^2 = .15, F (3, 157) = 10.75, p < .001; social

Table 12

Summary of Hierarchical Regression Analysis for Social Support Variables Predicting Adolescent Internalizing Problems for Teens from Two-Parent and Single-Mother Families (N = 163).

Variable	*B*	*SE B*	β
Step 1			
Sex	-0.67	0.20	-.25**
Family Structure	-0.45	0.25	-.13
Step 2			
Social Support - Mother	0.06	0.15	.00
Social Support - Father	-0.30	0.12	-.20*
Social Support - Sibling	-0.45	0.13	-.27**
Step 3			
Family Structure X Social Support - Mother	-0.25	0.34	-.30
Family Structure X Social Support - Father	-0.62	0.26	-.72*
Family Structure X Social Support - Sibling	0.68	0.30	.79*

Note. $R^2 = .08$, $p < .01$ for Step 1; $\Delta R^2 = .15$, $p < .01$ for Step 2; $\Delta R^2 = .05$, $p < .05$ for Step 3.

**$p < .01$. *$p < .05$.

support from adolescents' closest-in-age sibling (sr^2 = .06, p < .001) and from fathers (sr^2 = .06, p <. 05) were unique predictors. The family structure by social support interaction terms, entered at step three, as a block were also significant ΔR^2 = .05, F (3, 154) = 3.84, p < .05; with family structure by social support from father (sr^2 = .02, p < .05) and family structure by social support from sibling (sr^2 = .02, p < .01) emerging as unique predictors.

Follow-up regression analyses, with adolescent-mother, adolescent-father, and adolescent-sibling social support and predicting separately to each sample of adolescents (i.e., from two-parent families and single-mother families) were conducted to isolate these interaction effects. Results revealed that low social support from father (β = -.35, sr^2 = .08, p < .01) significantly predicted internalizing problems for adolescents from two-parent families only, R^2 = .18, F (3, 128) = 9.58, p < .001, replicating findings reported for that sample alone. In contrast, for adolescents from single-mother families, low social support from their sibling (β = -.63, sr^2 = .33, p < .001) was a significant predictor of internalizing problems, R^2 = .34, F (3, 27) = 4.78, p < .01.

Externalizing problems. For the prediction of externalizing problems from the social support variables (n = 131), the overall regression was significant, F (9, 121) = 4.35, p < .001 (see also Table 13). Step one, (sex of adolescent) did not emerge as significant, R^2 =.00, F (1, 129) = .42, *ns*. At step two, the social support variables as a block significantly predicted, ΔR^2 = .22, F (4, 125) = 9.22, p < .001; social support from mother (sr^2 = .03, p < .05) and from father (sr^2 = .06, p < .01) both uniquely predicted adolescents' reports of externalizing problems. The sex by social support interaction terms, entered at step three, did not emerge as statistically significant.

Table 13

Summary of Hierarchical Regression Analysis for Social Support Variables Predicting Adolescent Externalizing Problems (N = 131).

Variable	*B*	*SE B*	β
Step 1			
Sex	-0.14	0.21	-.05
Step 2			
Social Support - Mother	-0.37	0.17	-.23*
Social Support - Father	-0.46	0.14	-.32**
Social Support - Sibling	0.06	0.14	.04
Social Support - Marital	0.01	0.12	-.00
Step 3			
Sex X Social Support - Mother	-0.10	0.39	-0.15
Sex X Social Support - Father	-0.35	0.32	-0.51
Sex X Social Support - Sibling	0.27	0.30	0.37
Sex X Social Support - Marital	0.24	0.26	0.37

Note. R^2 = .00, *ns* for Step 1; ΔR^2 = .22, $p < .001$ for Step 2, ΔR^2 = .01, *ns* for Step 3.

*$p < .05$. **$p < .01$.

A second hierarchical regression was conducted, without the marital dyad variables, on participants from both two-parent and single-mother families (n =163). Sex of adolescent and family structure (two-parent or single-mother) were entered at step one; social support in each of the mother-adolescent, father-adolescent, and sibling-adolescent dyads were entered at step two; and three interaction terms, created by the product of family structure (0 = single-mother, 1 = two-parent) by each of the social support variables, were entered at step three. Two-way interactions (adolescent sex by each of the three social support variables, and adolescent sex by family structure) were also investigated, but did not reach statistical significance and are therefore not reported here. The overall regression was significant, F (8, 154) = 6.54, p < .001 (see also Table 14). Step one, adolescent sex and family structure, was not significant, R^2 =.01, F (2, 160) = 0.90, *ns*. At step two, the social support variables as a block were significant, ΔR^2 = .15, F (3, 157) = 9.72, p < .001, with social support from mother emerging as a unique predictor (sr^2 = .02, p < .05). Once again, the family structure by social support interaction terms, entered as a block at step three, were also significant, ΔR^2 = .08, F (3, 154) = 6.01, p < .001; with family structure by social support from father (sr^2 = .04, p < .01) and family structure by social support from sibling (sr^2 = .04, p < .01) emerging as unique predictors.

Follow-up regression analyses, with adolescent-mother, adolescent-father, and adolescent-sibling social support and predicting separately to each sample of adolescents (i.e., from two-parent families and single-mother families) were conducted to explore these interaction effects. As noted previously, results revealed that low social support from father (β = -.32, sr^2 = .07, p < .01) significantly predicted externalizing problems for

Table 14

Summary of Hierarchical Regression Analysis for Social Support Variables Predicting Adolescent Externalizing Problems for Teens from Two-Parent and Single-Mother Families (N =163).

Variable	*B*	*SE B*	β
Step 1			
Sex	-0.16	0.19	-.06
Family Structure	-0.25	0.23	-.08
Step 2			
Social Support - Mother	-0.32	0.15	-.20*
Social Support - Father	-0.19	0.12	-.14
Social Support - Sibling	-0.19	0.12	-.13
Step 3			
Family Structure X Social Support - Mother	-0.24	0.32	-.32
Family Structure X Social Support - Father	-0.74	0.25	-.95**
Family Structure X Social Support - Sibling	0.80	0.28	1.02**

Note. $R^2 = .01$, *ns* for Step 1; $\Delta R^2 = .15$, $p < .01$ for Step 2; $\Delta R^2 = .08$, $p < .01$ for Step 3.

**$p < .01$. *$p < .05$.

adolescents from two-parent families only, $R^2 = .22$, $F(3, 128) = 12.51$, $p < .001$. In contrast, for adolescents from single-mother families, low social support from their closest-in-age sibling ($\beta = -.52$, $sr^2 = .23$, $p < .01$) was significantly associated with externalizing problems, $R^2 = .31$, $F(3, 27) = 4.16$, $p < .05$.

In sum, as hypothesized, social support in the family subsystems significantly predicted internalizing outcomes. Associations with externalizing problems in adolescence also emerged. As predicted, the adolescent-mother and adolescent-father dyads showed strong associations with teen outcomes, however these results were qualified somewhat, as follows. For teens from two-parent families, low social support in the adolescent-father dyad was uniquely associated with more internalizing and externalizing problems, whereas for teens from single-mother families, low social support in the adolescent-sibling dyad was uniquely associated with more internalizing and externalizing outcomes. Social support in the adolescent-mother subsystem also contributed uniquely to externalizing outcomes for teens from two-parent families, although most of the variance explaining externalizing problems was shared among the three dyads.

Social Support: Indirect Effects of the Marital Dyad

It was hypothesized that the marital dyad would have an indirect effect on adolescent outcomes: the influence of the marital subsystem was postulated to be mediated by the family subsystems within which adolescents were directly involved (i.e., mother-adolescent, father-adolescent, sibling-adolescent; see also Figure 1). A series of

hierarchical regressions were conducted in order to evaluate these indirect effects[7].

A given variable is said to function as a mediator if it accounts for the relation between the predictor and the criterion (Baron & Kenny, 1986). As noted previously, the conditions necessary to demonstrate mediation were present. That is, marital social support was significantly correlated with both internalizing and externalizing problems (see Table 1) and with mother-adolescent, father-adolescent, and sibling-adolescent social support (see Table 6), which themselves were also associated with both outcomes.

In evaluating the indirect effect of the marital dyad, associations between social support in the marital dyad and internalizing problems were first established. For the prediction of internalizing problems, the overall regression was significant, $F(3, 137) = 7.84$, $p < .001$. Sex of adolescent was entered at step one as a control variable and was significant, $R^2 = .09$, $F(1, 139) = 13.80$, $p < .01$. Social support in the marital dyad, entered at step two, added significantly to the prediction of internalizing problems $\Delta R^2 = .06$, $F(1, 138) = 9.07$, $p < .01$. For the prediction of externalizing problems, the overall regression was significant, $F(3, 137) = 4.38$, $p < .01$. Sex of adolescent was entered at step one as a control variable but was not significant, $R^2 = .00$, $F(1, 139) = 0.31$, *ns*. Social support in the marital dyad, entered at step two, added significantly to the prediction of externalizing problems, $\Delta R^2 = .08$, $F(1, 138) = 12.62$, $p < .01$.

Two hierarchical regressions were then conducted to investigate the relationship between marital social support and (a) internalizing and (b) externalizing problems

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[7] Given that the cases to parameter ratio should be at least 10:1 (Kline, 1998), the sample size ($n = 142$) was insufficient to test the model (Figure 1; 18 parameters) using structural equation modelling as was originally planned.

controlling for the effects of adolescent-mother, adolescent-father, and adolescent-sibling social support. Sex of adolescent was entered at step one, social support in the adolescent-mother, adolescent-father, and adolescent-sibling dyads were entered as a block at step two, and social support in the marital dyad was entered at step three. Interactions between sex of adolescent and social support in each dyad (mother-adolescent, father-adolescent, sibling-adolescent, and marital) were entered as a block at step four, but did not reach significance in either of the following two regressions.

For the prediction of internalizing problems, the overall regression was significant, $F(9, 121) = 5.15$, $p < .001$. As previously reported, sex of adolescent, entered at step one as a control variable, was significant $R^2 = .08$, $F(1, 129) = 11.48$, $p < .01$. As a block, consistent with analyses conducted previously, social support in the mother-adolescent, father-adolescent, and sibling-adolescent dyads, entered at step two, added significantly to the prediction of internalizing outcomes, $\Delta R^2 = .19$, $F(3, 126) = 11.01$, $p < .001$. Social support in the marital dyad, entered at step three, did not add significantly to the prediction of adolescent internalizing problems, $\Delta R^2 = .00$, $F(1, 125) = .01$, *ns*.

For the prediction of externalizing problems, the overall regression was significant, $F(9, 121) = 4.35$, $p < .001$. As previously reported, sex of adolescent, entered at step one as a control variable, was not significant $R^2 = .00$, $F(1, 129) = 0.42$, *ns*. As a block, consistent with previously reported findings, social support in the mother-adolescent, father-adolescent, and sibling-adolescent dyads, entered at step two, added significantly to the prediction of externalizing outcomes, $\Delta R^2 = .22$, $F(3, 126) = 12.39$, $p < .001$. Social support in the marital dyad, entered at step three, did not add significantly

to the prediction of adolescent externalizing problems, $\Delta R^2 = .01$, $F(1, 125) = .57$, *ns*.

In sum, as hypothesized, the association between social support in the marital dyad and adolescent adjustment outcomes (both internalizing and externalizing problems) appears to be an indirect one, mediated by social support in the family subsystems within which the adolescent is more directly involved.

Positive Parental Relationships and Adolescent Adjustment

The present study also aimed to investigate how adolescent adjustment problems were associated with the number of positive parental relationships teens reported. It was anticipated that adolescents with no positive parental relationships would show the most adjustment problems. However, it was also expected that having one or more positive relationships within the subsystems of interest would have a compensatory effect. For example, a positive relationship with one parent may compensate for having a negative relationship with the other parent.

A new variable, representing the number of positive relationships adolescents had with their parents, was created as follows. For each dyad (mother-adolescent, father-adolescent), teens were divided into two groups, based on median splits, reflecting high versus low social support scores on the NRI. For each dyad, teens were considered to have a positive relationship (i.e., in the high social support group) when they scored above the median (*Mdn* = 3.76 and 3.47 for social support from mother and social support from father, respectively). A summed score was then created to reflect the number of positive relationships that the adolescent had: 0 ($n = 70$), 1 ($n = 37$), or 2 ($n = 75$).

A 3 X 2 X 2 ANOVA, conducted with the number of positive parent-adolescent

relationships (two positive relationships, one positive relationship, no positive relationship), family structure (two-parent or single-mother), and adolescent sex as the independent variables and adolescents' internalizing problems as the dependent variable, revealed a positive association between the number of positive relationships and teens' internalizing problems, F (2, 182) = 5.50, $p < .01$. Post-hoc analyses revealed that while teens with no (M = 14.83, SD = 9.31) or one (M = 16.23, SD = 10.78) positive parental relationship showed similar levels of internalizing disturbance to one another, they differed significantly from teens with two positive parental relationships (M = 10.37, SD = 10.02). Thus, having two positive parental relationships was associated with fewer internalizing problems. None of the interaction effects reached significance.

A somewhat different pattern emerged, however, when the association between positive parental relationships and adolescents' externalizing problems were examined. As with internalizing problems, a significant association emerged between the number of positive relationships and externalizing problems, F (2, 183) = 7.56, $p < .01$. Post-hoc analyses revealed that teens with one (M = 13.13, SD = 9.05) or two (M = 10.69, SD = 8.69) positive parental relationships showed similar levels of disturbance to one another and differed significantly from teens with no positive parental relationships (M = 18.57, SD = 8.76). Thus, contrary to internalizing problems, one positive parental relationship was associated with a decrease in teens' externalizing problems. Therefore, the hypothesis that one positive parental relationship could compensate for a negative relationship with the other parent was partially supported.

Negative Interactions: Direct Effects of the Adolescent-Mother, -Father, -Sibling, and Marital Dyads

Having examined the association between a positive relationship characteristic (social support) and adolescent adjustment, it was then of interest to investigate associations between a negative relationship characteristic and adolescent outcomes. Again, it was anticipated that the adolescent-mother and adolescent-father dyads would show the strongest associations with teen outcomes. Negative interactions within these dyads (and particularly the adolescent-father dyad) were anticipated to show strong associations with externalizing problems in particular.

Negative interactions (a composite variable, based on an average of the NRI subscales conflict and antagonism), served as the negative relationship characteristic for analysis. This variable was chosen for analysis as it was moderately to highly correlated with Time 1 and Time 2 conflict as assessed by The Family Issues and CPIC questionnaires (see Tables 2, 3, and 5), and was available for each of the subsystems of interest (mother-adolescent, father-adolescent, sibling-adolescent, and marital).

Similar to the social support analyses described previously, a hierarchical multiple regression analysis was first conducted with negative interactions in each subsystem as independent variables and adolescent internalizing problems as the dependent variable. The same analysis was then conducted with externalizing problems as the dependent variable. For both analyses, sex of adolescent was entered at step one; negative interactions in each of the mother-adolescent, father-adolescent, sibling-adolescent, and marital dyads were entered at step two; and four interaction terms, created by the product

of adolescent sex (0 = female, 1 = male) by each of the negative interaction variables, were entered at step three. Adolescent sex main effects revealed that, as before, girls reported more internalizing problems than boys. Due to the redundancy of these findings with previous analyses, these and the family structure main effects, where entered as control variables, are not repeated here.

Internalizing problems. For the prediction of internalizing problems (n = 131), the overall regression was significant, F (9,121) = 5.67, p < .001 (see also Table 15). At step two, although there were no unique predictors, the negative interaction variables as a block significantly predicted internalizing problems, ΔR^2 = .16, F (4, 125) = 6.51, p < .001. The sex by negative interactions interaction terms, entered at step three, were not statistically significant.

A second hierarchical regression was conducted, without the marital dyad variables, on participants from both two-parent and single-mother families (n = 163). Sex of adolescent and family structure (two-parent or single-mother) were entered at step one; negative interactions in each of the mother-adolescent, father-adolescent, and sibling-adolescent dyads were entered at step two; and three interaction terms, created by the product of family structure (0 = single-mother, 1 = two-parent) by each of the negative interaction variables, were entered at step three. Two-way interactions (adolescent sex by each of the three negative interaction variables, and adolescent sex by family structure) were also investigated, but did not reach statistical significance and are therefore not reported here.

The overall regression was significant, F (8, 154) = 7.54, p <.001 (see Table 16).

Table 15

Summary of Hierarchical Regression Analysis for Negative Interaction Variables Predicting Adolescent Internalizing Problems (N = 131).

Variable	*B*	*SE B*	β
Step 1			
Sex	-0.77	0.22	-.28**
Step 2			
Negative Interaction - Mother	0.17	0.11	.13
Negative Interaction - Father	0.2	0.12	.16 ^{t}
Negative Interaction - Sibling	0.16	0.10	.14 ^{t}
Negative Interaction - Marital	0.14	0.14	.09
Step 3			
Sex X Negative Interaction - Mother	-0.29	0.28	-.27
Sex X Negative Interaction - Father	0.64	0.28	.61
Sex X Negative Interaction - Sibling	-0.44	0.21	-.60
Sex X Negative Interaction - Marital	-0.03	0.31	-.03

Note. $R^2 = .08$, $p < .01$ for Step 1; $\Delta R^2 = .16$, $p < .01$ for Step 2; $\Delta R^2 = .05$, *ns* for Step 3.

$^{t}p < .10$. **$p < .01$.

Table 16

Summary of Hierarchical Regression Analysis for Negative Interaction Variables Predicting Adolescent Internalizing Problems for Teens from Two-Parent and Single-Mother Families (N = 163).

Variable	*B*	*SE B*	β
Step 1			
Sex	-0.67	0.20	-.25**
Family Structure	-0.45	0.25	-.13
Step 2			
Negative Interaction - Mother	0.28	0.09	.23**
Negative Interaction - Father	0.30	0.10	.23**
Negative Interaction - Sibling	0.06	0.08	.05
Step 3			
Family Structure X Negative Interaction - Mother	-0.27	0.21	-.27
Family Structure X Negative Interaction - Father	-0.30	0.26	-.30
Family Structure X Negative Interaction - Sibling	0.31	0.19	.39

Note. $R^2 = .07$, $p < .01$, for Step 1; $\Delta R^2 = .17$, $p < .01$, for Step 2; $\Delta R^2 = .03$, *ns* for Step 3.

**$p < .01$.

At step two, the negative interaction variables as a block significantly predicted internalizing problems. $\Delta R^2 = .17$, $F(3, 157) = 12.04$, $p < .001$. Both adolescent-mother negative interactions ($sr^2 = .04$, $p < .01$) and adolescent-father negative interactions ($sr^2 = .04$, $p < .01$) uniquely predicted adolescents' internalizing problems. The family structure by negative interactions interaction terms, entered at step three, were not statistically significant.

Externalizing problems. For the prediction of externalizing problems from the negative interaction variables ($n = 131$), the overall regression was significant, $F(9, 121) = 7.07$, $p < .001$ (see also Table 17). At step two, the negative interaction variables as a block significantly predicted, $\Delta R^2 = .28$, $F(4, 125) = 12.17$, $p < .001$; negative interactions in adolescents' relationships with mother ($sr^2 = .06$, $p < .01$) and with father ($sr^2 = .03$, $p < .05$) both uniquely predicted adolescents' reports of externalizing problems. The sex by negative interactions interaction terms, entered at step three, were also statistically significant, $\Delta R^2 = .06$, $F(4, 121) = 2.85$, $p < .05$, with sex by negative interactions with mother ($sr^2 = .03$, $p < .05$) and sex by negative interactions with father ($sr^2 = .03$, $p < .05$) emerging as unique predictors accounting for almost all of the block variance.

Follow-up regression analyses, with adolescent-mother, adolescent-father, adolescent-sibling, and marital negative interactions, predicting separately to girls and boys, were conducted to isolate these interaction effects. Results revealed that negative interactions with mother ($\beta = .43$, $sr^2 = .13$, $p < .001$) significantly and uniquely predicted externalizing problems for girls only, $R^2 = .37$, $F(4, 80) = 12.22$, $p < .001$. In contrast, for

Table 17

Summary of Hierarchical Regression Analysis for Negative Interaction Variables Predicting Adolescent Externalizing Problems (N = 131).

Variable	*B*	*SE B*	β
Step 1			
Sex	-0.14	0.21	-.05
Step 2			
Negative Interaction - Mother	0.36	0.10	.31**
Negative Interaction - Father	0.24	0.11	.21*
Negative Interaction - Sibling	0.03	0.08	.03
Negative Interaction - Marital	0.14	0.12	.10
Step 3			
Sex X Negative Interaction - Mother	-0.64	0.24	-.64**
Sex X Negative Interaction - Father	0.63	0.24	.66*
Sex X Negative Interaction - Sibling	0.19	0.18	-.29
Sex X Negative Interaction - Marital	-0.07	0.27	-.07

Note. $R^2 = .00$. *ns* for Step 1: $\Delta R^2 = .28$. $p < .001$ for Step 2. $\Delta R^2 = .06$. $p < .05$ for Step 3.

*$p < .05$ **$p < .01$.

boys, only negative interactions with father ($\beta = .57$, $sr^2 = .17$, $p < .01$) was a significant predictor of externalizing problems, $R^2 = .28$, $F(4, 41) = 4.00$, $p < .01$. These findings offer some support for the prediction that mother-adolescent relationship characteristics are uniquely associated with daughters' outcomes, whereas father-adolescent relationship characteristics are uniquely associated with sons' outcomes.

A second hierarchical regression was conducted with participants from both two-parent and single-mother families ($n = 163$): the overall regression was significant, $F(8, 154) = 9.62$, $p < .001$ (see also Table 18). Negative interactions in each of the adolescent-mother, adolescent-father, and adolescent-sibling dyads, entered at as a block at step two, were significant, $\Delta R^2 = .28$, $F(3, 157) = 20.89$, $p < .001$; negative interactions in adolescents' relationships with mother ($\beta = .40$, $sr^2 = .12$, $p < .001$) and with father ($\beta = .21$, $sr^2 = .03$, $p < .01$) both uniquely predicted adolescents' reports of externalizing problems. The three interaction terms (negative interactions in each dyad by family structure), entered at step three, were not statistically significant, $\Delta R^2 = .01$, $F(3, 154) = 0.54$, *ns*. In a separate regression, two way interactions (adolescent sex by negative interactions each of the three dyads and adolescent sex family structure) were also investigated, but were not statistically significant.

In sum, negative interactions in the family subsystems of interest were significantly associated with adolescent internalizing and externalizing problems. When teens from both single-mother and two-parent families were considered, negative interactions in both the mother-adolescent and father-adolescent dyads were unique predictors of internalizing outcomes. When externalizing problems among teens from

Table 18

Summary of Hierarchical Regression Analysis for Negative Interaction Variables Predicting Adolescent Externalizing Problems for Teens from Two-parent and Single-Mother Families (N =163).

Variable	*B*	*SE B*	β
Step 1			
Sex	-0.16	0.19	-.06
Family Structure	-0.25	0.23	-.08
Step 2			
Negative Interaction - Mother	0.45	0.08	.40**
Negative Interaction - Father	0.25	0.08	.21**
Negative Interaction - Sibling	0.02	0.07	.02
Step 3			
Family Structure X Negative Interaction - Mother	-0.26	0.19	-.28
Family Structure X Negative Interaction - Father	0.19	0.23	.21
Family Structure X Negative Interaction - Sibling	0.10	0.17	.14

Note. $R^2 = .01$, *ns* for Step 1; $\Delta R^2 = .28$, $p < .001$ for Step 2; $\Delta R^2 = .01$, *ns* for Step 3.

**$p < .01$.

two-parent families were considered, a different pattern emerged, one which was moderated by parent and adolescent gender. For adolescent boys, negative interactions with their fathers, and for adolescent girls, negative interactions with their mothers, were uniquely associated with externalizing outcomes.

Negative Interactions: Indirect effects of the Marital Dyad

As previously noted, it was hypothesized that the marital dyad would have an indirect effect on adolescent outcomes; the influence of the marital subsystem was postulated to be mediated by the family subsystems within which adolescents were directly involved (i.e., mother-adolescent, father-adolescent, sibling-adolescent; see also Figure 1). As with social support, the conditions necessary to demonstrate mediation were present with negative interactions as well. That is, negative interactions in the marital dyad were significantly correlated with both internalizing and externalizing problems (Table 1) and with negative interactions in the mother-adolescent, father-adolescent, and sibling-adolescent dyads (Table 6), which themselves were correlated with both outcomes.

In evaluating the indirect effect of the marital dyad, associations between negative interactions in the marital dyad and internalizing problems were first established. Sex of adolescent was entered at step one as a control variable, however, due to redundancy with previously reported findings, sex main effects will not be repeated here. For the prediction of internalizing problems, the overall regression was significant, $F(3, 137) = 8.51, p < .001$. Negative interactions in the marital dyad, entered at step two, added significantly to the prediction of internalizing problems, $\Delta R^2 = .06$, $F(1, 138) = 10.92, p < .01$. For the

prediction of externalizing problems, the overall regression was also significant, F (3, 137) = 5.30, p < .01. Negative interactions in the marital dyad, entered at step two, added significantly to the prediction of externalizing problems, ΔR^2 = .10, F (1, 138) = 15.43, p < .01.

Two hierarchical regressions were then conducted to investigate the relationship between marital negative interactions and (a) internalizing and (b) externalizing problems controlling for the effects of adolescent-mother, adolescent-father, and adolescent-sibling negative interactions. Sex of adolescent was entered at step one, negative interactions in the adolescent-mother, adolescent-father, and adolescent-sibling dyads were entered as a block at step two, and negative interactions in the marital dyad was entered at step three. Interactions between sex of adolescent and negative interactions in each dyad (mother-adolescent, father-adolescent, sibling-adolescent, and marital) were entered as a block at step four.

For the prediction of internalizing problems, the overall regression was significant, F (9, 121) = 5.67, p < .001. As a block, consistent with findings reported previously, negative interactions in the mother-adolescent, father-adolescent, and sibling-adolescent dyads, entered at step two, added significantly to the prediction of internalizing outcomes, ΔR^2= .15, F (3, 126) = 8.35, p < .001. Negative interactions in the marital dyad, entered at step three, did not add significantly to the prediction of adolescent internalizing problems ΔR^2 = .01, F (1, 125) = 1.00, *ns*, nor did the interaction terms entered as a block at step four.

For the prediction of externalizing problems, the overall regression was

significant. F (9, 121) = 7.07, $p < .001$. As a block, negative interactions in the mother-adolescent, father-adolescent, and sibling-adolescent dyads, entered at step two, added significantly to the prediction of externalizing outcomes, $\Delta R^2 = .27$, F (3, 126) = 15.71, $p < .001$. Negative interactions in the marital dyad, entered at step three, did not add significantly to the prediction of adolescent externalizing problems $\Delta R^2 = .01$, F (1, 125) = 1.41, *ns*. As previously reported (see above), the adolescent sex by negative interactions interaction terms, entered at step four, were also significant, $\Delta R^2 = .06$, F (4, 121) = 2.85, $p < .05$.

In sum, as hypothesized, the association between negative interactions in the marital dyad and adolescent adjustment outcomes (both internalizing and externalizing problems) appears to be an indirect one, mediated by negative interactions in the family subsystems within which the adolescent is more directly involved.

Direction of Influence: Longitudinal Analysis of Adjustment as a Function of Dyadic Conflict

The present study's longitudinal component (Time 1 and Time 2 measurement of mother-adolescent, father-adolescent, and marital conflict) afforded the opportunity to further investigate the direction of effects among conflict in these dyads and adolescent adjustment. For the conflict analyses that follow, at both Time 1 and 2, conflict in the mother-adolescent and father-adolescent dyads were assessed with the Family Issues Questionnaire, while conflict in the marital dyad was measured with the CPIC. As noted previously, conflict in all three dyads, as assessed by these instruments, was moderately to highly correlated with the negative interactions in each subsystem as assessed by the NRI

(see Tables 2, 3, and 5).

The conflict measures available at both Time 1 and Time 2 enabled the investigation of whether characteristics of family relationships contribute to changes in adolescent adjustment over time. Thus, conflict in the marital, mother-adolescent, and father-adolescent subsystems at Time 1 were used to predict to adolescent outcomes at Time 2, controlling for internalizing and externalizing problems at Time 1. It was anticipated that Time 1 dyadic conflict would continue to predict adolescent adjustment outcomes at Time 2. However, given that parents and children mutually influence each other (i.e., that there are bidirectional effects among relationships), another possibility is that adolescents' externalizing or internalizing problems may in fact exacerbate negative family relationship characteristics over time. In order to evaluate this possibility, whether adolescent problem behaviour at Time 1 predicted dyadic family conflict at Time 2, controlling for dyadic family conflict at Time 1, was also investigated.

Internalizing problems. First, for the prediction of adolescent internalizing problems at Time 2, a hierarchical multiple regression was conducted (n = 138) and was significant, F (8, 127) = 11.61, p < .001 (see also Table 19). Sex of adolescent and adolescent depression (as assessed with the CDI at Time 1), entered on step one, were significant predictors of internalizing problems at Time 2, R^2 = .40, F (2, 133) = 45.41, p < .001. Contrary to the prediction, Time 1 adolescent-mother, adolescent-father, and marital conflict, entered as a block at step two, did not, however, significantly add to the prediction of Time 2 internalizing problems as measured by the YSR, ΔR^2 = .00, F (3, 130) = 0.17, *ns*, nor did the adolescent sex by conflict interactions, entered at step three,

Table 19

Summary of Hierarchical Regression Analysis for Time 1 Conflict Variables Predicting Time 2 Adolescent Internalizing Problems (N = 138).

Variable	*B*	*SE B*	β
Step 1			
Sex	-0.68	0.18	-.25**
Time 1 Depression (CDI)	2.78	0.33	.56**
Step 2			
Adolescent - Mother Conflict	-0.03	0.13	-.02
Adolescent - Father Conflict	-0.03	0.12	.01
Marital Conflict	0.15	0.23	.05
Step 3			
Sex X Adolescent - Mother Conflict	-0.28	0.18	-.36
Sex X Adolescent - Father Conflict	0.01	0.23	.01
Sex X Marital Conflict	0.31	0.45	.19

Note. $R^2 = .40$, $p < .001$ for Step 1; $\Delta R^2 = .00$, *ns* for Step 2, $\Delta R^2 = .01$, *ns* for Step 3.

**$p < .001$.

$\Delta R^2 = .01$, $F(3, 127) = 1.04$, ns[8].

To further examine the temporal association and direction of effects among conflict in the three family subsystems and adolescent adjustment, Time 1 internalizing problems were used to predict to conflict in the three dyads as assessed at Time 2 (approximately one year later). Sex of adolescent, and Time 1 adolescent-mother, adolescent-father, and mother-father conflict were entered at step one; adolescent internalizing problems at Time 1 were entered at step two. This analysis was conducted three times, predicting to: (a) adolescent-mother conflict at Time 2, (b) adolescent-father conflict at Time 2 (subjected to square-root transformation due to significant positive skew), and (c) marital conflict at Time 2.

As might be expected, conflict in family subsystems at Time 1 predicted conflict in family subsystems at Time 2. The block of conflict variables entered at step one, for all three regressions, emerged as significant ($R^2 = .40$, $F(4, 134) = 22.83$, $p < .001$ for adolescent-mother conflict, $R^2 = .33$, $F(4, 134) = 16.89$, $p < .001$ for adolescent-father conflict, $R^2 = .51$, $F(4, 133) = 34.88$, $p < .001$ for marital conflict). Internalizing problems at Time 1, entered on the second step, was a significant predictor only for Time 2 adolescent-mother conflict, $\Delta R^2 = .03$, $F(1, 133) = 7.39$, $p < .01$. Thus, adolescent depression at Time 1 predicted conflict with mother a year later, but it did not predict later conflict with fathers nor conflict in adolescents' parents' marital relationship.

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[8]It is, however, noteworthy that when Time 1 depression (CDI) was not entered into the regression equation, as a block, conflict in the mother-adolescent, father-adolescent, and marital dyads, as assessed at Time 1, did significantly predict adolescents' internalizing problems at Time 2, $\Delta R^2 = .08$, $F(3, 131) = 4.11$, $p < .01$.

Externalizing problems. A hierarchical regression analysis, conducted with Time 1 conflict predicting externalizing problems at Time 2, was also significant $F(8, 127) = 10.29$, $p < .001$ (see also Table 20). Step one, sex of adolescent and adolescent delinquency (as assessed by the SRD at Time1), were significant predictors of adolescents' Time 2 externalizing problems, $R^2 = .29$, $F(2, 133) = 26.85$, $p < .001$. The block of variables entered at step two, conflict in the mother-adolescent, father-adolescent, and marital dyads, as assessed at Time 1, were also significant predictors, $\Delta R^2 = .09$, $F(3,130) = 6.46$, $p < .001$, with adolescent-mother conflict ($\beta = .23$, $sr^2 = .04$, $p < .01$) emerging as a unique predictor of adolescents' externalizing problems at Time 2. The sex by conflict interactions, entered at step three, were not statistically significant.

In order to further examine the temporal association and direction of effects among conflict in the three family subsystems and adolescent adjustment, Time 1 externalizing problems (delinquency) were used to predict to conflict in the three dyads as assessed approximately one year later, at Time 2. Sex of adolescent, and Time 1 adolescent-mother, adolescent-father, and marital conflict were entered at step one; adolescent delinquency at Time 1 was entered at step two. This analysis was conducted three times, predicting to: (a) adolescent-mother conflict at Time 2, (b) adolescent-father conflict at Time 2, and (c) marital conflict at Time 2. As previously reported for internalizing problems, conflict in family subsystems at Time 1 predicted conflict in family subsystems at Time 2 (see above). Delinquency at Time 1, entered on the second step, did not emerge as significant in regressions predicting to (a) Time 2 adolescent-mother conflict, (b) Time 2 adolescent-father conflict, nor for (c) Time 2 marital conflict.

Table 20

Summary of Hierarchical Regression Analysis for Time 1 Conflict Variables Predicting Time 2 Adolescent Externalizing Problems (N = 138).

Variable	*B*	*SE B*	β
Step 1			
Sex	-0.29	0.18	-.12
Time 1 Delinquency (SRD)	0.10	0.01	.53**
Step 2			
Adolescent - Mother Conflict	0.36	0.12	.23*
Adolescent - Father Conflic.	0.19	0.11	.13
Marital Conflict	0.09	0.21	.03
Step 3			
Sex X Adolescent - Mother Conflict	-0.27	0.17	-.38
Sex X Adolescent - Father Conflict	0.07	0.22	.04
Sex X Marital Conflict	-0.10	0.43	.07

Note. $R^2 = .28$, $p < .001$ for Step 1; $\Delta R^2 = .09$, $p < .001$ for Step 2. $\Delta R^2 = .01$, *ns* for Step 3.

**$p < .001$ *$p < .01$.

Thus, adolescent delinquency at Time 1 was not found to predict adolescent conflict with mother, father, nor in the parents' marital relationship one year later at Time 2.

In sum, the hypothesis was partially supported, as Time 1 conflict was found to predict Time 2 externalizing, but not internalizing, problems. However, with the exception of adolescent-mother conflict, which was found to be temporally preceded by adolescent internalizing problems as assessed one year earlier, teen internalizing problems did not predict later conflict in the adolescent-father nor marital dyads. Further, teen delinquency did not predict conflict in any of the family dyads as assessed one year later. Taken together, these findings suggest that rather than teen problem behavior leading to increased dyadic family conflict, for the most part, dyadic family conflict leads to teen adjustment problems.

Collaborative Conflict Resolution

It was hypothesized that collaborative and destructive conflict resolution strategies within the adolescent-mother and adolescent-father dyads would show the strongest associations with adolescent adjustment. Sex of adolescent and family structure, entered at step one as control variables, are redundant with previously reported findings and are therefore not repeated here.

Internalizing problems. For the prediction of internalizing problems from the collaboration conflict resolution strategy (n = 134), the overall regression was significant, F (9, 124) = 4.75, p < .001 (see also Table 21). Use of collaboration as a strategy for conflict resolution in each of the family subsystems (adolescent-mother, adolescent-father, adolescent-sibling, and marital) were entered at step two. The second step, as a block,

Table 21

Summary of Hierarchical Regression Analysis for Collaborative Conflict Resolution Predicting Adolescent Internalizing Problems (N = 134).

Variable	*B*	*SE B*	β
Step 1			
Sex	-0.81	0.22	-.30**
Step 2			
Adolescent - Mother Collaboration	0.30	0.24	.15
Adolescent - Father Collaboration	-0.40	0.22	-.23 '
Adolescent - Sibling Collaboration	-0.15	0.16	-.09
Marital Collaboration	-0.45	0.17	-.23*
Step 3			
Sex X Collaboration - Mother	0.96	0.55	.77
Sex X Collaboration - Father	-0.86	0.50	-.65
Sex X Collaboration - Sibling	0.24	0.32	.16
Sex X Collaboration - Marital	0.55	0.36	.47

Note. $R^2 = .09$, $p < .01$ for Step 1; $\Delta R^2 = .12$, $p < .01$ for Step 2; $\Delta R^2 = .04$, *ns* for Step 3.

'$p < .10$. *$p < .05$. **$p < .01$.

added significantly to the prediction of adolescents' internalizing problems. $\Delta R^2 = .12$, F (4, 128) = 4.99, $p < .01$, with low collaboration in the marital dyad emerging as uniquely associated ($\beta = -.23$, $sr^2 = .04$, $p < .05$). The adolescent sex by collaboration in each subsystem interaction terms, entered at step three, were not statistically significant.

A second hierarchical regression was conducted, without the marital dyad variables, on participants from both two-parent and single-mother families (n =166). Sex of adolescent and family structure (single-mother or two-parent) were entered at step one; collaboration in each of the mother-adolescent, father-adolescent, and sibling-adolescent dyads were entered at step two; and three interaction terms, created by the product of family structure (0 = single-mother, 1 = two-parent) by each of the collaboration variables, were entered at step three. Two-way interactions (adolescent sex by collaboration in each of the three dyads and adolescent sex by family structure) were also investigated but were not significant and are therefore not reported here. The overall regression was significant, F (8, 157) = 3.92, $p < .001$ (see also Table 22). At step two, the collaboration variables as a block significantly predicted internalizing problems, ΔR^2 = .07, F (3, 160) = 4.38, $p < .01$, with low collaboration with father emerging as a unique predictor ($\beta = -.20$, $sr^2 = .02$, $p < .05$). The family structure by collaboration interaction terms, entered at step three, were not statistically significant.

Externalizing problems. The overall regression predicting from collaborative conflict resolution to adolescents' externalizing problems (n = 134) was also significant, F (9, 124) = 4.40, $p < .001$ (see also Table 23). Collaboration in the adolescent-mother, adolescent-father, adolescent-sibling, and marital dyads, entered as a block at step two

Table 22

Summary of Hierarchical Regression Analysis for Collaborative Conflict Resolution Predicting Adolescent Internalizing Problems for Teens from Two-Parent and Single-Mother Families (N=166).

Variable	*B*	*SE B*	β
Step 1			
Sex	-0.67	0.20	-.24**
Family Structure	-0.54	0.25	-.16*
Step 2			
Adolescent - Mother Collaboration	0.12	0.19	.06
Adolescent - Father Coilaboration	-0.33	0.16	-.20*
Adolescent - Sibling Collaboration	-0.26	0.14	-.16 ^{t}
Step 3			
Family Structure X Collaboration - Mother	-0.14	0.42	.11
Family Structure X Collaboration - Father	-0.41	0.33	-.32
Family Structure X Collaboration - Sibling	0.39	0.35	.29

Note. $R^2 = .08$, $p < .01$ for Step 1; $\Delta R^2 = .07$, $p < .01$ for Step 2; $\Delta R^2 = .01$, *ns* for Step 3.

$^{t}p < .10$. *$p < .05$. **$p < .01$.

Table 23

Summary of Hierarchical Regression Analysis for Collaborative Conflict Resolution Predicting Adolescent Externalizing Problems (N = 134).

Variable	*B*	*SE B*	β
Step 1			
Sex	-0.19	0.21	-.07
Step 2			
Adolescent - Mother Collaboration	-0.10	0.23	-.05
Adolescent - Father Collaboration	-0.53	0.21	-.33*
Adolescent - Sibling Collaboration	0.03	0.15	-.02
Marital Collaboration	-0.11	0.16	-.06
Step 3			
Sex X Collaboration - Mother	1.32	0.51	1.16*
Sex X Collaboration - Father	-1.11	0.46	-.92*
Sex X Collaboration - Sibling	0.41	0.29	.30
Sex X Collaboration - Marital	-0.13	0.33	-.12

Note. $R^2 = .00$, *ns* for Step 1: $\Delta R^2 = .17$, $p < .001$ for Step 2; $\Delta R^2 = .06$, $p < .05$ for Step 3.

*$p < .05$.

were significant predictors, $\Delta R^2 = .17$, $F(4, 128) = 6.78$, $p < .001$, with collaboration in adolescent-father dyad emerging as a unique predictor ($\beta = -.33$, $sr^2 = .04$, $p < .05$). The adolescent sex by collaboration in each subsystem interaction terms, entered as block at step three, were also statistically significant, $\Delta R^2 = .06$, $F(4, 124) = 2.55$, $p < .05$. At step three, the adolescent sex by collaboration with mother ($\beta = 1.16$, $sr^2 = .03$, $p < .05$) and the adolescent sex by collaboration with father ($\beta = -.92$, $sr^2 = .03$, $p < .05$) both contributed uniquely to the prediction of externalizing problems.

Follow-up regression analyses, with adolescent-mother, adolescent-father, adolescent-sibling, and marital collaboration and predicting separately to girls and boys were conducted to explore these interaction effects. Results revealed that while the collaboration variables as a block were significant for girls, $R^2 = .21$, $F(4, 81) = 5.68$, $p < .001$, there were no unique predictors. Collaboration as a block was also significant for boys, with collaboration with father ($\beta = -.80$, $sr^2 = .17$, $p < .01$) uniquely predicting externalizing problems, $R^2 = .26$, $F(4, 43) = 3.89$, $p < .01$.

A second hierarchical regression was conducted, without the marital dyad variables, on participants from both two-parent and single-mother families (n =166). Sex of adolescent and family structure (single-mother or two-parent) were entered at step one; collaboration in each of the mother-adolescent, father-adolescent, and sibling-adolescent dyads were entered at step two; and three interaction terms, created by the product of family structure (0 = single-mother, 1 = two-parent) by each of the collaboration variables, were entered at step three. In a separate regression, two-way interactions between adolescent sex and collaboration within the three dyads were also found to be

significant, replicating findings for the sample of teens from two-parent families. Three-way interactions (adolescent sex by family structure by collaboration in each of the three dyads) were investigated but were not statistically significant.

The overall regression predicting to externalizing problems was significant, F (8, 157) = 4.53, $p < .001$ (see also Table 24). At step two, the collaborative conflict resolution variables as a block significantly predicted, $\Delta R^2 = .14$, F (3, 160) = 8.67, $p < .001$, and collaboration with father uniquely predicted, $\beta = -.20$, $sr^2 = .02$, $p < .05$. The family structure by collaboration interaction terms, entered at step three were not statistically significant.

In sum, collaborative conflict resolution in the family dyads of interest significantly predicted adolescent internalizing problems. In addition, for teens from two-parent families, collaborative conflict resolution in their parents' marital relationship was uniquely and negatively associated with internalizing outcomes. Collaborative conflict resolution in the family dyads of interest as a block also significantly predicted externalizing problems among teens from both single-mother and two parent families. For boys from two-parent families, collaborative conflict resolution with their fathers was uniquely and negatively associated with externalizing outcomes.

Destructive Conflict Resolution

As previously reported, given the pattern of correlations among the conflict resolution subscales (see Appendix P), the stalemate, avoidance-capitulation, and verbal aggression subscales were combined to form, for each dyad, a scale termed destructive conflict resolution. This was relatively interrelated with collaboration (see Tables 2-5).

Table 24

Summary of Hierarchical Regression Analysis for Collaborative Conflict Resolution Predicting Adolescent Externalizing Problems for Teens from Two-Parent and Single-Mother Families (N=166).

Variable	*B*	*SE B*	β
Step 1			
Sex	-0.17	0.19	-.07
Family Marital Status	-0.34	0.23	-.11
Step 2			
Adolescent - Mother Collaboration	-0.20	0.17	-.11
Adolescent - Father Collaboration	-0.31	0.15	-.20*
Adolescent - Sibling Collaboration	-0.20	0.13	-.13
Step 3			
Marital Status X Collaboration - Mother	-0.12	0.18	-.10
Marital Status X Collaboration - Father	-0.57	0.30	-.48
Marital Status X Collaboration - Sibling	0.64	0.31	.53

Note. $R^2 = .01$. *ns* for Step 1; $\Delta R^2 = .14$. $p < .001$ for Step 2; $\Delta R^2 = .03$. *ns* for Step 3.

*$p < .05$.

It was hypothesized that destructive conflict resolution would be particularly strongly associated with teen externalizing problems.

Internalizing problems. A series of hierarchical regressions were conducted using destructive conflict resolution in the family dyads of interest as predictors. The overall regression predicting to internalizing problems (n = 134) was significant, F (9, 124) = 4.03, $p < .001$ (see also Table 25). Destructive conflict resolution in the adolescent-mother, adolescent-father, adolescent-sibling, and marital subsystems were entered at step two and as a block were significant, $\Delta R^2 = .12$, F (4, 128) = 4.98, $p < .01$, with the destructive strategy in the marital dyad making a unique prediction ($\beta = .19$, $sr^2 = .03$, $p < .05$). The third step, consisting of the adolescent sex by destructive conflict resolution interaction terms, was not statistically significant.

A second hierarchical regression was conducted, without the marital dyad variables, on participants from both two-parent and single-mother families (n =165). Sex of adolescent and family structure (single-mother or two-parent) were entered at step one; destructive conflict resolution in each of the mother-adolescent, father-adolescent, and sibling-adolescent dyads were entered at step two; and three interaction terms, created by the product of family structure (0 = single-mother, 1 = two-parent) by each of the destructive conflict resolution variables, were entered at step three. Two-way interactions (adolescent sex by each of the three destructive conflict resolution variables, and adolescent sex by family structure) were also investigated, but did not reach statistical significance and are therefore not reported here.

The overall regression was significant, F (8, 156) = 5.48, $p < .001$ (see Table 26).

Table 25

Summary of Hierarchical Regression Analysis for Destructive Conflict Resolution (CR) Predicting Adolescent Internalizing Problems (N = 134).

Variable	*B*	*SE B*	β
Step 1			
Sex	-0.81	0.22	-.30**
Step 2			
Adolescent - Mother Destructive CR	0.33	0.35	.13
Adolescent - Father Destructive CR	0.02	0.35	.00
Adolescent - Sibling Destructive CR	0.30	0.29	.11
Marital Destructive CR	0.37	0.16	.19*
Step 3			
Sex X Destructive CR - Mother	-0.04	0.89	-.02
Sex X Destructive CR - Father	-0.43	0.90	-.21
Sex X Destructive CR - Sibling	-0.01	0.60	-.01
Sex X Destructive CR - Marital	0.48	0.35	.24

Note. $R^2 = .09$, $p < .01$ for Step 1; $\Delta R^2 = .12$, $p < .01$ for Step 2; $\Delta R^2 = .01$, *ns* for Step 3.

*$p < .05$. **$p < .01$.

Table 26

Summary of Hierarchical Regression Analysis for Destructive Conflict Resolution (CR) Predicting Adolescent Internalizing Problems for Teens from Two-Parent and Single-Mother Families (N = 165).

Variable	*B*	*SE B*	β
Step 1			
Sex	-0.67	0.20	-.24**
Family Structure	-0.54	0.25	-.16*
Step 2			
Adolescent - Mother Destructive CR	0.66	0.27	.27**
Adolescent - Father Destructive CR	0.21	0.25	.08
Adolescent - Sibling Destructive CR	0.05	0.25	-.02
Step 3			
Family Structure X Destructive CR - Mother	-0.89	0.60	-.46
Family Structure X Destructive CR - Father	-0.55	0.52	-.29
Family Structure X Destructive CR - Sibling	1.49	0.58	.97

Note. $R^2 = .08$, $p < .01$ for Step 1; $\Delta R^2 = .10$, $p < .01$ for Step 2; $\Delta R^2 = .03$, *ns* for Step 3.

*$p < .05$. **$p < .01$.

At step two, the destructive conflict resolution variables as a block significantly predicted internalizing problems, $\Delta R^2 = .10$, $F(3, 159) = 6.54$, $p < .001$, with destructive conflict resolution in the adolescent-mother relationship emerging as a unique predictor ($\beta = .27$, $sr^2 = .03$, $p < .05$), but only partially accounting for this effect. The family structure by destructive conflict resolution interaction terms, entered at step three, were not statistically significant.

Externalizing problems. The overall regression predicting from the destructive conflict resolution strategy to adolescents' externalizing problems ($n = 134$) was also significant, $F(9, 124) = 3.37$, $p < .01$ (see also Table 27). Destructive conflict resolution in each of the adolescent-mother, adolescent-father, adolescent-sibling, and marital dyads, entered as a block at step two, were significant predictors, $\Delta R^2 = .18$, $F(4, 128) = 7.41$, $p < .001$, with destructive conflict resolution in the adolescent-mother dyad emerging as a unique predictor ($\beta = .44$, $sr^2 = .06$, $p < .01$). The adolescent sex by destructive conflict resolution in each subsystem interaction terms, entered as block at step three, were not statistically significant.

The overall regression predicting to externalizing problems when teens from both two-parent and single-mother families were included in the analysis ($n = 165$) was also significant, $F(8, 156) = 6.38$, $p < .001$ (see also Table 28). Destructive conflict resolution in each of the adolescent-mother, adolescent-father, and adolescent-sibling dyads, entered as a block at step two, was significant, $\Delta R^2 = .22$, $F(3, 159) = 15.23$, $p < .001$, with destructive conflict resolution in the adolescent-mother dyad ($\beta = .57$, $sr^2 = .14$, $p < .001$) emerging a as unique predictor. The family structure by destructive conflict resolution

Table 27

Summary of Hierarchical Regression Analysis for Destructive Conflict Resolution (CR) Predicting Adolescent Externalizing Problems (N = 134).

Variable	*B*	*SE B*	β
Step 1			
Sex	-0.19	0.21	-.07
Step 2			
Adolescent - Mother Destructive CR	1.02	0.33	.44**
Adolescent - Father Destructive CR	0.04	0.32	.02
Adolescent - Sibling Destructive CR	-0.32	0.27	-.13
Marital Destructive CR	0.18	0.15	.10
Step 3			
Sex X Destructive CR - Mother	-0.52	0.82	-.28
Sex X Destructive CR - Father	0.36	0.84	.19
Sex X Destructive CR - Sibling	0.19	0.56	.12
Sex X Destructive CR - Marital	0.06	0.32	-.03

Note. $R^2 = .00$, *ns* for Step 1; $\Delta R^2 = .18$, $p < .001$ for Step 2; $\Delta R^2 = .00$, *ns* for Step 3.

**$p < .01$.

Table 28

Summary of Hierarchical Regression Analysis for Destructive Conflict Resolution (CR) Predicting Adolescent Externalizing Problems for Teens from Two-Parent and Single-Mother Families (N =165).

Variable	*B*	*SE B*	β
Step 1			
Sex	-0.18	0.19	-.06
Family Structure	-0.32	0.24	-.11
Step 2			
Adolescent - Mother Destructive CR	1.31	0.24	.57**
Adolescent - Father Destructive CR	0.01	0.22	.00
Adolescent - Sibling Destructive CR	-0.44	0.22	-.18[t]
Step 3			
Family Structure X Destructive CR - Mother	-0.71	0.54	-.40
Family Structure X Destructive CR - Father	-0.04	0.47	-.02
Family Structure X Destructive CR - Sibling	0.68	0.53	.41

Note. $R^2 = .01$, *ns* for Step 1; $\Delta R^2 = .22$, $p < .001$ for Step 2; $\Delta R^2 = .01$, *ns* for Step 3.

[t] $p < .10$. ** $p < .01$.

interaction terms, entered at step three, were not statistically significant. Two-way interactions (adolescent sex by each of the three destructive conflict resolution variables, and adolescent sex by family structure) were also investigated, but were not found to reach statistical significance.

In sum, for teens from both two-parent and single-mother families, destructive conflict resolution was positively associated with both internalizing and externalizing outcomes. Although with two-parent families, it was destructive conflict resolution in the marital dyad that made a unique contribution, this did not account for all of the variance in the amount of destructive conflict resolution in the family as a whole. Rather, mother-adolescent destructive conflict resolution was also large, though not significant, and when all families were included and the marital dyad omitted, it was the adolescent-mother dyad that made a unique contribution. It was however, only for externalizing problems did this account for more than 50% of the variance attributed to destructive conflict resolution in the family overall.

Interactions among Family Subsystems

Next, a series of analyses were conducted to investigate whether adolescent adjustment problems could be better predicted by interactions among the various subsystems. It was anticipated that the subsystems would interact such that when the marital subsystem was more negative, the parent-adolescent subsystems or the sibling-adolescent subsystem (when high in social support) might serve protective functions against adolescent adjustment problems.

First, two hierarchical regressions (one predicting to internalizing problems, the

second predicting to externalizing problems) were conducted to investigate potential interactions between the parent-adolescent and marital subsystems. For participants from two-parent families, sex of adolescent and negative interactions in the marital dyad were entered at step one; adolescent-mother and adolescent-father social support were entered at step two. At step three, two interaction terms were entered: the product of negative interactions in the marital dyad (a) by adolescent-mother social support and (b) by adolescent-father social support.

For the prediction of internalizing problems (n = 139), the overall regression was significant, F (6, 132) = 9.79, p < .001 (see also Table 29). The variables entered at step one (negative interactions in the marital dyad, and sex of adolescent), were significant predictors, R^2 = .18, F (2, 136) = 14.94, p < .001. Consistent with results from previous analyses, social support in the mother-adolescent and father-adolescent dyads, entered at step two, added significantly to the prediction, ΔR^2 = .11, F (2, 134) = 10.54, p < .001. Contrary to the prediction, the marital dyad by adolescent-mother and adolescent-father dyad interaction terms, entered as a block at step three, were not statistically significant, ΔR^2 = .02, F (2, 132) = 1.57, *ns*.

Parallel findings emerged for the prediction of externalizing problems; the overall regression was significant, F (6, 132) = 8.36, p < .001 (see Table 29). Adolescent sex and negative interactions in the marital dyad, entered at step one, were significant predictors, R^2 = .11, F (2, 136) = 8.96, p < .001. Social support in the mother-adolescent and father-adolescent dyads, entered at step two, added significantly to the prediction, ΔR^2 = .15, F (2, 134) = 14.39, p < .001. Once again, however, the marital dyad by adolescent-mother

Table 29

Summary of Hierarchical Regression Analyses for Relationship Characteristics in the Marital and Parent-Adolescent Dyads Predicting Adolescent Adjustment Problems (N = 139).

	Internalizing Problems			Externalizing Problems		
Variable	*B*	*SE B*	β	*B*	*SE B*	β
Step 1						
Sex	-0.92	0.21	-.34**	-0.24	0.20	-.09
Negative Interactions-Marital	0.41	0.11	.28**	0.45	0.11	.33**
Step 2						
Social Support - Mother	-0.20	0.15	-0.11	-0.38	0.14	-.23*
Social Support - Father	-0.45	0.14	-.28**	-0.35	0.13	-.24*
Step 3						
Negative Interactions-Marital X Social Support - Mother	0.08	0.15	.22	0.03	0.14	.08
Negative Interactions-Marital X Social Support - Father	0.18	0.12	.42	0.07	0.11	.17

Note. For internalizing problems, $R^2 = .18$, $p < .001$ for Step 1; $\Delta R^2 = .11$, $p < .001$ for Step 2; $\Delta R^2 = .02$, *ns* for Step 3. For externalizing problems, $R^2 = .11$, $p < .001$ for Step 1; $\Delta R^2 = .15$, $p < .001$ for Step 2; $\Delta R^2 = .00$, *ns* for Step 3.

$^{t}p < .10$. $*p < .05$. $**p < .01$.

and adolescent-father dyad interaction terms, entered as a block at step three, were not statistically significant.

Two hierarchical regressions (one predicting to internalizing problems, the second predicting to externalizing problems) were next conducted to investigate potential interactions between the social support in the adolescent-sibling dyad and negative interactions in the marital dyad. Adolescent sex and negative interactions in the marital dyad were entered at step one; adolescent-sibling social support was entered at step two. At step three, the interaction term (the product of negative interactions in the marital dyad by adolescent-sibling social support) was entered.

For the prediction of internalizing problems, the overall regression was significant, $F(4, 127) = 11.34$, $p < .001$ (see also Table 30). Adolescent sex and negative interactions in the marital dyad, entered at step one, were, as before, significant predictors, $R^2 = .14$, $F(2, 129) = 11.95$, $p < .001$. Social support in the sibling-adolescent dyad, entered at step two, added significantly to the prediction, $\Delta R^2 = .07$, $F(1, 128) = 11.91$, $p < .001$. The marital dyad by sibling-adolescent dyad interaction term, entered at step three, was also statistically significant, $\Delta R^2 = .04$, $F(1, 127) = 6.06$, $p < .05$.

In order to isolate these interaction effects, a median split ($Mdn = 2.00$) was performed on the negative interactions variable and two groups were formed: a high negative marital interactions group (i.e., those scoring above the median, $n = 63$) and a low negative marital interactions group (i.e., those scoring at or below the median, $n = 69$). Follow-up regression analyses, with adolescent-sibling social support predicting separately to adolescents from (a) families with high negative marital interactions and (b)

Table 30

Summary of Hierarchical Regression Analyses for Relationship Characteristics in the Marital and Sibling-Adolescent Dyads Predicting Adolescent Adjustment Problems (N = 132).

	Internalizing Problems			Externalizing Problems		
Variable	B	*SE B*	β	*B*	*SE B*	β
Step 1						
Sex	-0.88	0.22	-.32**	-0.28	0.20	-.11
Negative Interactions - Marital	0.40	0.12	.25**	0.47	0.11	.33**
Step 2						
Social Support - Sibling	-0.45	0.13	-.27**	-0.27	0.12	-.17*
Step 3						
Negative Interactions - Marital X						
Social Support - Sibling	0.42	0.17	.99*	0.06	0.16	0.16

Note. For internalizing problems, $R^2 = .15$, $p < .001$ for Step 1; $\Delta R^2 = .07$, $p < .01$ for Step 2; $\Delta R^2 = .04$, $p < .05$ for Step 3. For externalizing problems, $R^2 = .11$, $p < .01$ for Step 1; $\Delta R^2 = .03$, $p < .05$ for Step 2; $\Delta R^2 = .00$, *ns* for Step 3.

*$p < .05$. **$p < .01$.

families with low negative marital interactions, were then conducted. Contrary to the expectation that social support in the sibling-adolescent dyad would serve a protective function when the marital relationship was particularly negative, results revealed that low sibling social support ($\beta = -.32$, $sr^2 = .10$, $p < .01$) was associated with higher internalizing problems only for adolescents from families with low negative marital interactions, $R^2 = 10$, $F(1, 67) = 7.87$, $p < .01$.

For the prediction of externalizing problems, the overall regression was significant, $F(4, 127) = 5.49$, $p < .001$ (see also Table 30). Adolescent sex and negative interactions in the marital dyad, entered at step one, were significant predictors, $R^2 = .11$, $F(2, 129) = 8.49$, $p < .001$. Social support in the sibling-adolescent dyad, entered at step two, was also significant, $\Delta R^2 = .03$, $F(1, 128) = 4.53$, $p < .05$. The marital dyad by sibling-adolescent dyad interaction term, entered at step three, was not statistically significant.

Predictions of Adolescent Adjustment Problems as Reported by Mother

Correlations between parallel variables reported by mothers and adolescents are presented in Table 31. In order to replicate/validate the adolescent self-report data, all analyses presented previously were repeated using mothers' reports of adolescent internalizing and externalizing problems as dependent variables, for the sample of adolescents whose mothers participated in the study. When adolescents' reports of family relationship variables at Time 2 were used as predictors of mothers' reports of adolescent adjustment problems (30 analyses), no statistically significant effects were found. A somewhat different picture emerged, however, when teens' from two-parent families

Table 31

Intercorrelations among Adolescent-Report and Mother-Report Variables

Variable	Correlation
Social Support	
Adolescent - Mother Social Support	.27*
Adolescent - Father Social Support	.16
Adolescent - Sibling Social Support	.32*
Marital Social Support	.62**
Negative Interaction	
Adolescent - Mother Negative Interaction	.27*
Adolescent - Father Negative Interaction	.28*
Adolescent - Sibling Negative Interaction	.30*
Marital Negative Interaction	.68**
Conflict Resolution	
Adolescent - Mother Collaboration	.17
Marital Collaboration	.10
Adolescent - Mother Destructive conflict resolution	.10
Marital Destructive conflict resolution	.12
Adjustment	
Internalizing problems (Time 1)	.17 '
Internalizing problems (Time 2)	.35**
Externalizing problems (Time 1)	.29**
Externalizing problems (Time 2)	.19 '

'$p < .10$. *$p < .05$. **$p < .01$.

reports of family relationship variables at Time 1 were used as predictors (4 analyses).

For the prediction of mother reported internalizing problems (CBCL), a hierarchical multiple regression was conducted with adolescents from two-parent families (n = 54) and was significant. F (8, 45) = 2.35, p < .05 (see Table 32). Sex of adolescent and adolescent depression (as assessed with the CDI at Time 1), entered on step one, were significant predictors of mother-reported internalizing problems, R^2 = .12, F (2, 51) = 3.42, p < .05. Time 1 adolescent-mother, adolescent-father, and marital conflict, entered as a block at step two, significantly added to the prediction of internalizing problems as measured by the CBCL, ΔR^2 = .14, F (3, 48) = 3.04, p < .05, with teens' reports of Time 1 conflict in the marital dyad emerging as a unique predictor (β = .29, sr^2 = .07, p < .05). The adolescent sex by conflict interactions, entered at step three, were not statistically significant.

A second hierarchical multiple regression, predicting mother-reported adolescent internalizing problems (CBCL) conducted with teens from both single-mother and two-parent families (n = 73) was also significant, F (6, 66) = 2.63, p < .05. Sex of adolescent and adolescent depression (as assessed with the CDI at Time 1), entered on step one, were significant predictors of mother-reported internalizing problems, R^2 = .13, F (2, 70) = 5.36, p < .01. However, with conflict in the marital dyad dropped, Time 1 adolescent-mother and adolescent-father conflict, entered as a block at step two, did not significantly added to the prediction of internalizing problems as measured by the CBCL, ΔR^2 = .04, F (2, 68) = 0.52, ns.

A hierarchical regression analysis was then conducted with adolescent-reported

Table 32

Summary of Hierarchical Regression Analysis for Time 1 Conflict Variables Predicting Mothers' Reports of Adolescent Internalizing Problems (N = 54).

Variable	*B*	*SE B*	β
Step 1			
Sex	-2.57	1.61	-.21
Time 1 Depression (CDI)	5.42	3.16	.23 ^{t}
Step 2			
Adolescent - Mother Conflict	1.28	0.95	.18
Adolescent - Father Conflict	-1.91	0.96	-.27 ^{t}
Marital Conflict	3.57	1.66	.29*
Step 3			
Sex X Adolescent - Mother Conflict	-2.22	1.82	-.61
Sex X Adolescent - Father Conflict	-2.11	2.09	-.26
Sex X Marital Conflict	3.45	3.40	.51

Note. $R^2 = .12$, $p < .05$ for Step 1; $\Delta R^2 = .14$, $p < .05$ for Step 2, $\Delta R^2 = .03$, *ns* for Step 3.

$^{t}p < .10$. $*p < .05$.

Time 1 conflict predicting to mother-reported adolescent externalizing problems among teens from two-parent families (n = 52). Sex of adolescent and adolescent delinquency (as assessed with the SRD at Time 1) was entered at step one. Time 1 mother-adolescent, father-adolescent, and marital conflict were entered at step two, and adolescent sex by conflict interactions were entered at step three. The results of this analysis were not statistically significant[9].

A second hierarchical multiple regression, predicting mother-reported adolescent externalizing problems (CBCL) conducted with teens from both single-mother and two-parent families (n = 73) was, however, significant, F (6, 66) = 3.22, p < .01 (see Table 33). Sex of adolescent and adolescent delinquency (as assessed with the SRD at Time 1), entered on step one, were significant predictors of mother-reported externalizing problems, R^2 = .08, F (2, 70) = 3.23, p < .05. Further, with conflict in the marital dyad dropped, Time 1 adolescent-mother and adolescent-father conflict, entered as a block at step two, significantly added to the prediction of externalizing problems as measured by the CBCL, ΔR^2 = .12, F (2, 68) = 5.11, p < .01, with teens' reports of Time 1 conflict with mother emerging as a unique predictor (β = .32, sr^2 = .09, p < .01). The adolescent sex by conflict interactions, entered at step three, were not statistically significant.

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[9]It is, however, noteworthy that when Time 1 delinquency (SRD) was not entered into the regression equation, as a block, conflict in the mother-adolescent, father-adolescent, and marital dyads, as assessed at Time 1, did significantly predict adolescents' externalizing problems as reported by mother, ΔR^2 = .17, F (3, 49) = 3.51, p < .05.

Table 33

Summary of Hierarchical Regression Analysis for Time 1 Conflict Variables Predicting Mothers' Reports of Adolescent Externalizing Problems (N = 73).

Variable	*B*	*SE B*	β
Step 1			
Sex	0.06	0.24	.03
Time 1 Delinquency (SRD)	0.04	0.01	.28*
Step 2			
Adolescent - Mother Conflict	0.42	0.15	.32**
Adolescent - Father Conflict	0.13	0.14	.10
Step 3			
Sex X Adolescent - Mother Conflict	-0.18	0.21	-.29
Sex X Adolescent - Father Conflict	-0.33	0.27	-.22

Note. $R^2 = .08$, $p < .05$ for Step 1; $\Delta R^2 = .12$, $p < .01$ for Step 2, $\Delta R^2 = .02$, *ns* for Step 3.

*$p < .05$. **$p < .01$.

Discussion

The present study investigated the associations between multiple family subsystems (marital, mother-adolescent, father-adolescent, and sibling adolescent dyads) and adolescent internalizing and externalizing problems. Within these family dyads, relational characteristics of interest included social support, negative interactions/conflict, and (collaborative and destructive) conflict resolution. By virtue of its focus on the component family subsystems, the results of the present study contribute a detailed understanding of the role of family relationships for adolescent (mal)adjustment. Further, concurrent examination of these four family relationships provides relevant information concerning which dyad has the largest associations with which adolescent problem behavior (Mathijssen et al., 1998).

To address the study's central questions, the relative importance of the four family subsystem (mother-adolescent, father-adolescent, sibling-adolescent, and marital) characteristics (social support, negative interactions/conflict, and conflict resolution) in adolescent internalizing and externalizing problems were evaluated by a series of hierarchical regressions. The potential moderating influence of adolescent gender and family structure (i.e., two-parent and single-mother families) were also evaluated. The study's main findings, discussed in more detail below, revealed that both internalizing and externalizing problems among adolescents were associated with the family subsystem characteristics (social support, negative interactions/conflict, and conflict resolution), with adolescent gender and family structure qualifying some findings.

Gender and Family Structure Differences

Analyses revealed few gender differences in the relational characteristics assessed. Girls did, however, report using more collaboration than did boys, as a (constructive) strategy to resolve conflict with their mothers, fathers, and siblings. Compared to boys, girls also reported that their parents used more collaboration to resolve conflict in the marital dyad. Females may see their relationships as more central to their lives then do males (Slavin & Rainer, 1990), and, as they are more relationally oriented than boys, girls may be more sensitive to the quality of family relationships (Sheeber, Hops, Alpert, Davis, & Andrews, 1997) and therefore more attuned to the use of such strategies. In line with these findings, compared to sons, daughters have been found to more often intervene in family conflicts, assuming a peace-keeping role (Vuchinich, Emery, & Cassidy, 1988). Finally, girls reported more internalizing symptoms on the YSR than did boys, a finding consistent with the well-documented gender difference in adolescent psychopathology (e.g., Lamborn et al., 1991; Zahn-Waxler et al., 2000).

In terms of family structure differences, compared to teens from blended (step) families, those from intact families reported more social support in their relationships with their fathers and in their parents' marital relationship. However, consistent with other research demonstrating that step- and non-step-families exhibit relatively similar patterns of affective relations (e.g., O'Connor et al.,1998), no other differences on the variables of interest were found.

Not surprisingly, likely owing to the fact that they have less contact with their fathers, adolescents from single-mother families reported less social support, less

collaborative conflict resolution, and fewer negative interactions with their fathers than did teens from two-parent families. Consistent with previous findings in which single-parent families evidence greater conflict and negativity than two-parent families (Baer, 1999; Walker & Hennig, 1997), teens from single-mother households also reported more negative interactions with their mothers. These higher conflict levels may stem from the stresses associated with single parenting (e.g., lower family income) and/or the lack of a second parent to assist with discipline and control (Walker & Hennig, 1997).

Consistent with research suggesting that family processes (e.g., social support, level of conflict) have greater effects on child adjustment than does family structure (Cumsille & Epstein, 1994; Kleist, 1999), adolescents from single-mother and two-parent families did not differ in terms of their self-reported internalizing and externalizing problems. The results also suggest that in general, family relationship characteristics are related to adolescent adjustment in similar ways across single and intact families (cf. Barber & Lyons, 1994). These similarities notwithstanding, as discussed in further detail below, some differences did emerge in terms of the specific family process variables associated with adjustment for teens from different family structures.

Social Support

For adolescents from two-parent families, social support (i.e., social support in each of the mother-adolescent, father-adolescent, sibling-adolescent, and marital dyads, taken together) was significantly negatively associated with internalizing problems. Teens reporting more internalizing problems view these dyadic family relationships as a whole as less close and supportive, a result consistent with the more general finding that

adolescents with less family support report more depressive symptoms (Slavin & Rainer, 1990). Teens' perceived social support from fathers was uniquely associated with internalizing outcomes. This finding is consistent with previous work in which teens' satisfaction with the supportiveness of their fathers was found to be uniquely associated with depressive symptoms in adolescent inpatients (Barrera & Garrison-Jones, 1992). Past research has also identified father-adolescent cohesion as being more strongly associated with adolescent depression than mother-adolescent cohesion (Cole & McPherson, 1993). As found in this as well as in previous studies, fathers' supportiveness, because of its lower level of occurrence in the adolescent-father relationship (in comparison to the adolescent-mother relationship), may have an increased impact on teens when it is present (Barrera & Garrison-Jones, 1992; Forehand & Nousiainen, 1993).

When teens from single-mother and two-parent families were compared, social support in the adolescent-father subsystem continued to show significant associations with internalizing outcomes for teens from two-parent families. However, for teens from single-mother families, low social support in the adolescent-sibling dyad was a uniquely and significantly associated with the same outcome. Thus, the adolescent-sibling relationship appears to play a particularly salient role in the lives of teens who do not live with their fathers.

For adolescents from two-parent families, social support within the four dyads of interest together were significantly associated with adolescent externalizing problems. Social support from mother and from father each made unique contributions to externalizing problems, together accounting for about half of the joint effect. These

findings are consistent with the results of a recent meta-analysis, whereby both mothers' and fathers' caregiving was associated with the absence of child externalizing problems (Rothbaum & Weisz, 1994). When teens from both family structures were considered, social support from mothers, fathers, and siblings together predicted externalizing problems. However, for teens from two-parent families, social support from father, and for teens from single-mother families, social support from siblings, were uniquely associated with externalizing problems.

Sibling relationships have been increasingly recognized for their contributions to adolescent adjustment (Brody, 1998). While the present study's findings provide further evidence of such a contribution, they more specifically reflect the important role that sibling relations play in the lives of adolescents from single-mother families. Sibling relationships appear to be associated with psychosocial adjustment problems when the balance between support and conflict is heavily weighted toward conflict (Brody, 1998). Although conflict among siblings is more common when they are from disharmonious homes, children growing up in such environments have fewer adjustment problems if they have relatively supportive sibling relationships (Dunn, 1992). It has been suggested that siblings from families who have experienced marital transitions may be more likely to turn to each other for support as they may view relationships with adults as unstable and untrustworthy (Hetherington, 1988). Thus, when sibling support is lacking, it may have particularly detrimental effects on adolescent outcomes, as the results of the present study suggest.

In sum, the present study's findings are in line with research demonstrating that in

adults under stress, social support decreases the likelihood of adjustment difficulties and/or developing psychopathology (Cohen & Wills, 1985; Slavin & Rainer, 1990), and in which children with high levels of social support have fewer emotional and behavioural problems than those with low levels of social support (Jenkins, 1992). Consistent with previous findings documenting an association between family support and adolescent depression and delinquency (Windle, 1992) the results of the present study suggest that having supportive familial relationships is associated specifically with fewer internalizing and externalizing adjustment problems in adolescents.

In evaluating the association between number of positive parental relationships and adolescent adjustment, teens with two positive parental relationships reported significantly fewer internalizing problems than did teens with a positive parental relationship with one parent or with neither parent. A somewhat different pattern emerged when externalizing problems were considered: in support of the hypothesis, teens with no positive parental relationships reported significantly more externalizing problems than did teens with either one or two positive parental relationships. Thus, while having a positive relationship with both their mother and their father was associated with fewer internalizing problems in teens, having a positive relationship with either parent appeared to make a significant difference in the amount of externalizing problems teens reported. Overall, these results are consistent with the well-documented finding that warm and authoritative parenting is negatively associated with psychopathology and positively associated with psychosocial adjustment (e.g., Lamborn et al., 1991).

Negative Interactions

Notwithstanding the fact that conflict among teens and their family members is a normal and regular part of adolescence (Collins & Repinski, 1994), consistent with previous research suggesting a positive association between family conflict and adolescent depression and conduct problems (e.g., Formoso, Gonzales, & Aiken, 2000) associations between conflict and antagonism (i.e., negative interactions) and adolescent adjustment problems were found in the present study. For adolescents from two-parent families, overall negative interactions (the combined contribution of adolescent-mother, adolescent-father, adolescent-sibling and marital negative interactions) were significantly associated with internalizing problems. No unique contributions of specific dyads were found. When teens from single-mother and two-parent families were considered together, negative interactions continued to be associated with internalizing problems, with negative interactions in the adolescent-mother and adolescent-father dyads each emerging as small but important predictors. The lack of a unique contribution of the marital dyad is consistent with past research in which only conflict in the parent-child relationship, and not the marital relationship, was predictive of adolescent depression (Forehand, Brody, Slotkin, Fauber, McCombs, & Long, 1988).

In terms of externalizing problems in teens from two-parent families, negative interactions in the adolescent-mother, adolescent-father, adolescent-sibling, and marital dyads were jointly associated with externalizing outcomes; negative interactions with mothers and with fathers played a unique role. These findings were qualified by a significant interaction with adolescent sex, such that negative interactions with mother

were uniquely associated with externalizing problems for girls only, while negative interactions with father were uniquely associated with externalizing problems for boys only. Perhaps because adolescents identify more with their same-sex than their opposite-sex parent (Starrels, 1994), conflict within these same-sex familial relationships is particularly important for the prediction of teens' adjustment problems.

When adolescents from both family structures were considered, negative interactions in the adolescent-mother and adolescent-father dyads remained uniquely associated with externalizing problems, although the mother-daughter, father-son finding was not replicated. Perhaps in single-mother homes, mothers play as an important role for their sons as they do for their daughters.

Taken together, these results are consistent with the well-documented association between parent-adolescent conflict and teen psychopathology (e.g., Noller, 1994). They are in line with findings in which teens' reports of support and communication with both mothers and fathers were inversely related to adolescent psychosocial risk (Marta, 1997). In contrast to literature suggesting that teens' relationships with mothers and fathers differentially contribute to psychological development (Youniss & Ketterlinus, 1987), however, characteristics of the mother-adolescent and father-adolescent relationship were found to have similar associations with adolescent adjustment in the present study. Although some minor differences in terms of the unique contributions of the characteristics emerged, it appears as though the joint contribution of these relationship characteristics, in both dyadic relationships, hold similar implications for adolescent adjustment.

Social Support and Negative Interactions: Indirect Effects of the Marital Dyad

Neither social support nor negative interactions in the marital dyad made unique contributions to the prediction of teen outcomes as assessed in the present study. While this is in contrast with studies demonstrating a direct effect of marital conflict on adolescent adjustment (e.g., Turner & Barrett, 1998), the association between marital discord and child adjustment problems has in fact been found to be weaker when community (non-clinic) samples are used (e.g., Emery & O'Leary, 1984). Overall family conflict has been found to be a stronger correlate of child adjustment than marital conflict (Jaycox & Repetti, 1993). Other studies have likewise documented that for the prediction of child adjustment, the quality of the marital relationship did not make a unique contribution over and above that of the parent-child relationship (Burman et al., 1987).

That the association between problems in the marital relationship and adolescent adjustment disappeared once problems in the parent-adolescent relationship were statistically controlled, suggests that the marital relationship is particularly important for understanding parenting, as it influences the emotional tone of the parent-child relationship (Harold et al., 1997; Simons et al., 1999). In line with the results of the present study, the parent-adolescent relationship has been found to mediate the effect of marital conflict on teen internalizing (Cole & McPherson, 1993) and externalizing problems (Harold et al., 1997). Positive marital adjustment has been documented to facilitate sensitive parenting, which in turn holds implications for adolescent adjustment (Easterbrooks & Emde, 1988). In a similar vein, in the present study, social support in parents' marital relationship indirectly impacted teen adjustment via its association with

the perceived social support in adolescent-mother, -father, and -sibling dyads.

Similarly, the influence of negative interactions in the marital dyad on adolescent adjustment was also an indirect one, mediated by the negative interactions in teens' other family relationships. In support of the "spillover hypothesis", whereby the emotions and tensions arising from negative marital interactions are then carried over into parent-child interactions (Erel & Burman,1995; Krishnakumar & Buehler, 2000), the present study's findings suggest that it is the impact of marital conflict expression on parenting practices that in turn, affects adolescent adjustment (cf. Krishnakumar & Buehler, 2000).

Collaborative and Destructive Conflict Resolution

For teens from two-parent families, collaborative conflict resolution in the mother-adolescent, father-adolescent, sibling-adolescent, and marital dyads were jointly associated with internalizing problems; low collaboration in the marital dyad was uniquely associated with this adjustment outcome. Similar findings emerged when teens from single-mother and two-parent families were considered together, however, low collaborative conflict resolution with father emerged as a small but unique predictor of internalizing problems.

For teens from two-parent families, destructive conflict resolution in the family subsystems (mother-adolescent, father-adolescent, sibling-adolescent, marital) were together jointly associated with internalizing problems; high destructive conflict resolution in the marital dyad was uniquely associated. When teens from single-mother and two-parent families were considered together, destructive conflict resolution overall continued to be significantly associated; high destructive conflict resolution with mother

emerged as a small but unique predictor of internalizing problems.

In sum, both collaborative and destructive conflict resolution in the four dyads of interest were jointly associated with adolescent internalizing problems. For teens from two-parent families, both collaborative and destructive conflict resolution in the marital dyad made small but unique contributions to this outcome. These findings highlight the importance of investigating resolution in addition to the frequency of marital conflict, as the degree to which interparental conflict is resolved is an important aspect that influences child and adolescent adjustment (Kerig, 1996; Grych & Fincham, 1990). Beyond the ways in which parents engage in conflict, the manner in which their marital conflict is resolved has increasingly been recognized as having consequences for their children (e.g., Katz & Gottman, 1993). For example, the successful resolution of marital conflict provides positive models for problem solving for children that in turn leads to increased social competence (Fincham & Osborne, 1993). Moreover, conflict that is not resolved satisfactorily likely upsets youth more than conflicts that are successfully resolved (Grych & Fincham, 1990).

For teens from two-parent families, overall collaborative conflict resolution in the mother-adolescent, father-adolescent, sibling-adolescent, marital subsystems was also associated with externalizing problems. For boys only, low collaboration in the adolescent-father dyad was uniquely associated with externalizing problems. Fathers have been found to be more involved with their sons than their daughters (Starrels, 1994), which may in part explain their unique role in the prediction of boys' externalizing problems. However, when teens from single-mother and two-parent families were

considered together, while collaboration overall continued to significantly predict, low collaborative conflict resolution with father emerged as a small but unique predictor of externalizing problems for both boys and girls. Perhaps in single-mother families, non-custodial fathers spend smaller yet equal amounts of time (and thus have a similar influence) with their sons and daughters.

For teens from two-parent families, overall destructive conflict resolution in the mother-adolescent, father-adolescent, sibling-adolescent, and marital subsystems were significantly associated with externalizing problems; high destructive conflict resolution in the mother-adolescent dyad was uniquely associated. When teens from single-mother and two-parent families were considered together, the same pattern of findings emerged. These results are in agreement with the postulation that verbally aggressive conflict resolution strategies used by teens and their mothers may be a nonspecific risk factor in the etiology or maintenance of adolescent psychopathology (Kashani, Burbach, & Rosenberg, 1988). Given that the destructive conflict resolution in the adolescent-mother dyad accounted uniquely for only a small portion of the variance, these findings also suggest that the conflict resolution strategies used in other family dyads also warrant consideration for the prediction of adolescent externalizing outcomes.

Protective Interactions among Family Subsystems

Having a supportive parent-adolescent relationship has been found to maintain teens' sense of security, thereby buffering the stress associated with marital conflict and reducing its impact (Turner & Barrett, 1998). However, in the present study, contrary to the hypothesis, positive parent-adolescent relationships did not appear to compensate for

the parents' negative marital relationship. These findings are in line with other studies in which no significant interaction between the quality of the parent-child relationship (mother and father) and the marital relationship has been found (e.g., Jenkins, 1992). Irrespective of whether parents' marriages were harmonious or disharmonious, parent-child relationships were equally important predictors of children's adjustment (Jenkins, 1992).

It was anticipated that supportive sibling relationships would be most strongly related to teens' adjustment (i.e., act in a compensatory way) in families with high marital disharmony, a finding documented in previous studies (e.g., Jenkins, 1992). Family systems theorists argue that the effect of an individual relationship on adolescent outcomes is moderated by the broader network of relationships in which it is embedded (O'Connor et al., 1998). Results of the present study, in which the quality of the sibling-adolescent and the parents' marital relationship interacted to predict teen internalizing problems are in agreement with this idea. However, the direction of results was opposite to the prediction. Only for adolescents who perceived their parents' marital relationship as being lower in negative interactions was social support from siblings negatively associated with internalizing problems. Social support in the sibling-adolescent dyad did not predict teen internalizing outcomes for those whose parents' marriage was characterized as being high in negative interactions. These findings are in line with the suggestion that marital conflict may undermine sibling relationships (Davies & Cummings, 1994).

Thus, although these findings are not in accord with the family systems tenet that

the sibling relations may play compensatory or exacerbating roles in the link between marital conflict and adolescent adjustment (O'Connor et al., 1998), it may be that the compensatory effect of sibling relations is most commonly found in extreme groups rather than nonclinical populations (Dunn, 1992). The present study's findings highlight the importance of investigating component family dyads within the larger network of family relationships in order to more fully understand the association between family relationships and adolescent adjustment.

Directionality of Conflict Effects

Conflict in the mother-adolescent, father-adolescent, and marital dyads was assessed longitudinally, affording the opportunity to investigate the direction of effects among conflict in these dyads and adolescent adjustment, as well as whether conflict contributes to changes in adjustment over time. It has been highlighted that conflictual parent-adolescent relations may precede adolescent adjustment problems, or, the reverse may be true, in that adolescent adjustment problems may precede difficulties in parent-adolescent relationships (e.g., teens who are disruptive or depressed may elicit conflict from parents; Neiderhiser, Reiss, Hetherington, & Plomin, 1999); the present study's findings support the former. That is, the temporal dimension incorporated into the present study indeed suggests that for the most part, family conflict does precede child adjustment problems (cf. Fincham & Osborne, 1993).

In examining whether Time 1 family conflict temporally preceded adolescent adjustment problems at Time 2, results revealed that conflict in the adolescent-mother, adolescent-father, and marital dyads jointly predicted teens' internalizing problems. With

appropriate controls, however (Time 1 internalizing problems on the CDI), teens' Time 1 reports of conflict within these three dyads no longer significantly predicted their internalizing problems at Time 2.

Nonetheless, evidence supporting the reverse (adjustment problems preceding conflict) was also for the most part not found. In further examining the direction of effects among conflict in the three family subsystems and adolescent adjustment, analyses were undertaken to evaluate whether internalizing problems at Time 1 significantly predicted Time 2 conflict in (a) the mother- adolescent, (b) the father-adolescent, and (c) the marital dyads. With appropriate controls (adolescent sex and Time 1 mother-adolescent, father-adolescent and marital conflict), although adolescent internalizing problems at Time 1 significantly predicted mother-adolescent conflict as assessed at Time 2, internalizing problems *did not* predict (i.e. precede) father-adolescent nor marital conflict at Time 2. Thus, adolescent depression at Time 1 did not predict later conflict with fathers nor did it predict conflict in adolescents' parents' marital relationship (although it did predict conflict with mother) a year later. These nonsignificant findings, coupled with the previously reported results in which overall negative interactions (i.e., Time 2 antagonism/conflict) were found to jointly predict Time 2 internalizing problems, provide support for the notion that for most forms of family conflict, the conflict precedes adolescent internalizing problems (depression, anxiety, withdrawal), and suggest that conflict within adolescent-father and marital relationships are antecedent to, rather than merely correlated with, internalizing problems (cf. Duggal, Carlson, Sroufe, & Egeland, 2001). Moreover, they are consistent with findings in which less supportive and more

conflictual family environments were predictive of adolescent depression one year later, whereas the converse was not found (i.e., adolescent depression was not predictive of deterioration in family relationships one year later; Sheeber et al., 1997).

With appropriate controls (adolescent sex and Time 1 delinquency), teens' Time 1 reports of conflict with mother, with father, and in their parents' marital relationship significantly predicted adolescents' externalizing problems at Time 2. Thus, even after controlling for adolescent delinquency at Time 1, conflict in teens' familial relationships continued to significantly predict their externalizing problems one year later.

In examining the direction of effects among conflict in the three family subsystems and adolescent adjustment, after controlling for adolescent sex and Time 1 mother-adolescent, father-adolescent and marital conflict, adolescent externalizing problems at Time 1 did not significantly predict conflict in any of the three subsystems as assessed at Time 2. Thus, adolescent delinquency at Time 1 was not found to predict adolescent conflict with mother, father, nor in the parents' marital relationship one year later at Time 2. These findings support the theoretical postulation that family conflict leads to adolescent acting out, as opposed to the teens' acting out behaviour leading to heightened family conflict. Thus, the present findings extend those set forth by Sheeber et al. (1997), in that as disruptions in family relationships did not appear reactive to teen internalizing symptoms, family relationship disruptions also do not appear reactive to teens' externalizing behavior.

Cross-Informant Validity of Findings

For the sub-sample of adolescents whose mothers agreed to participate in the

study, attempts were made to validate the study's findings using these mothers as informants. However, in analyses using Time 2 adolescent reports of family relationships as independent variables and mothers' reports of adolescent adjustment problems as dependent variables, no significant findings emerged. The dramatic reduction in sample size (i.e., the *n* available for analysis was reduced to about one-third of the original sample ($n = 50$) when the sample included teens from two-parent families with complete self-report data on their relationships with mother, father, and sibling and whose mothers participated) may partially explain why no significant effects (nor nonsignificant trends) emerged in analyses conducted using mothers' reports of adolescent adjustment. That is, the relatively small parent sample may have resulted in reduced power to evaluate effects.

Another potential explanation for the failure to replicate findings from the adolescent-report data is a function of the timing between when the data from mothers was collected (between November 1999 and January 2000) and data from the adolescents was collected (Time 1: March 1999, Time 2: April 2000). The only significant findings that emerged with the mother-report data was that (adolescent-reported) family conflict, as assessed at Time 1, predicted maternal reports of adolescents' internalizing and externalizing problems. This is consistent with the suggestion that family conflict temporally precedes adolescent adjustment problems. Perhaps the life circumstances, family relationship characteristics and/or adjustment of the adolescents as reported by the participating mothers were more similar to that reported by the teens at Time 1 of the study.

In terms of the agreement between mothers' and adolescents' ratings of adolescent

problem behaviours, the present study's findings are consistent with previous research that has documented correlations in the .20 to .30 range among different informants (e.g., Achenbach, McConaughy, & Howell, 1987). In the present study, adolescent-parent agreement was found to be higher for internalizing than externalizing symptomatology, a finding that has been documented elsewhere as well (e.g., Seiffge-Krenke & Kollmar, 1998). This higher agreement may partially explain why the cross-informant analyses emerged as significant only for the prediction of internalizing problems.

The failure to find cross-informant effects does not necessarily invalidate the present study's findings. Adolescents may be particularly important informants of problems hidden from parents' view (Seiffge-Krenke & Kollmar, 1998), either as a function of the fact that they are internal feeling states or symptoms (i.e., internalizing problems) or aggressive or delinquent behaviours (i.e., externalizing problems) that teens may tend to more actively hide from parents. Moreover, adolescents have access to the whole array of their own behaviours in multiple settings, and are more aware of their internal feelings than are other informants (Buehler et al., 1998). Finally, maternal perceptions of their children's problem behaviour may be more a reflection of their (the mothers') own adjustment, rather than the child's true level of difficulties (Seiffge-Krenke & Kollmar, 1998).

Limitations

Before concluding, the following limitations of the current study should be noted. In terms of the sibling relationships investigated, the present study did not examine sibship constellation variables (i.e., birth order, age-spacing between siblings, child and

sibling gender: Buhrmester, 1992), as doing so would likely have resulted in groups too small for meaningful analysis. As a result, the present study's findings reflect the relationship between teens and their "closest-in-age" sibling, and may or may not extend across the above constellation variables. For example, same-sex sibling pairs report greater companionship, affection, and intimacy than do opposite-sex siblings (Buhrmester, 1992), which in turn may hold different implications for adolescent adjustment. Nonetheless, employing closest-in-age siblings for sibling comparisons is a commonly used strategy in sibling research (e.g., Hetherington, 1988), and represents an important first step in evaluating the influence of the sibling relationship for adolescent outcomes.

A second potential limitation of the present study concerns the fact that the findings are primarily based on data from a single source, adolescent self-report. When information on the variables of interest is collected from a single source, the reporter's response set or level of social desirability may increase the correlation between relevant variables, thereby creating a method variance bias (Erel & Burman, 1995). For example, a negative halo effect, whereby adolescents in conflictual family relationships also perceive that they are more poorly adjusted, is possible (cf. Emery & O'Leary, 1984). Nonetheless, the importance of utilizing adolescent self-report should be recognized, in light of previous work demonstrating child reports of adjustment problems (Seiffge-Krenke & Kollmar, 1998) and marital conflict (Grych et al., 1992) may be more relevant than parental reports, as they represent a better estimate of what the adolescent is aware of and observes (Buehler et al., 1998). Moreover, the importance of studying family relationships

as they are experienced from the child's perspective (given that it is the child's perceptions of the family that likely contributes to their adjustment) has been highlighted by several investigators (e.g., Grych & Fincham, 1990; Kerig, 1995).

The present study focused on the environmental factors of dyadic family relationships and their characteristics as potential predictors of adolescent psychopathology. Genetic influences, though not explicitly measured, must also be recognized as contributing to adolescent outcomes. The present study was predicated on the notion that the association between family relationship characteristics and adolescent adjustment is such that the family dyad characteristics affect teen outcomes. While the longitudinal component of the study provided support for this notion, other explanations must also be considered. The direction of effects may run the other way as well, such that more well-adjusted adolescents elicit more supportive and less conflictual relationships with family members (cf. Amato & Gilbreth, 1999), or that teens with adjustment problems have more difficulty reaching out and forming close relationships with family members because of their disturbance (Jenkins, 1992). In the present study, the short-term longitudinal assessment of family conflict suggested, for example, that teens' depressive symptoms predicted conflict with their mothers one year later. Thus, as Hartup and Laursen (1999) have pointed out, while relationships affect the kinds of individuals we become, the kinds of individuals we are also affects the relationships we establish and construct.

Conclusions

In conclusion, consistent with the hypothesis, the dyadic relationships within

which teens were directly involved (i.e., adolescent-mother, adolescent-father, and adolescent-sibling) were indeed associated with both internalizing and externalizing outcomes. While these dyads (as well as the marital dyad, for teens from two-parent families) accounted for most of the association with adjustment outcomes, unique aspects of certain dyads were also independently important. In terms of social support, the adolescent-father and adolescent-sibling dyads were uniquely associated with teens' internalizing problems, while the adolescent-mother and adolescent-father dyads were uniquely associated with teens' externalizing problems. Negative interactions in the mother-adolescent and father-adolescent dyads were also uniquely associated with both internalizing and externalizing problems; this finding provided partial support for the prediction that the mother-adolescent relationship would be more important (i.e., show a larger unique effect) than the father-adolescent relationship. Finally, findings involving both social support and negative interactions were also in support of the hypothesis that the marital relationship would indirectly influence adolescent adjustment (both internalizing and externalizing outcomes) via the mother-adolescent and father-adolescent subsystems.

The current study's findings are in line with the large body of literature that argues that family functioning plays an important role in the onset and maintenance of psychopathology (e.g., Hetherington & Martin, 1986). Among depressed adolescents, for example, problems in multiple family relationships (i.e., with mothers, fathers, siblings and the martial relationship) have been documented (e.g., Puig-Antich et al., 1993). In the present study, links between the family relationship characteristics of interest (social

support, negative interactions/conflict, and conflict resolution) and adolescent internalizing and externalizing problems were established. Contrary to the prediction (the study's second question), these characteristics, however, did not clearly differentiate between internalizing and externalizing problems, although some subtle differences were found. These findings are consistent with those reported by Smets and Hartup (1988) who did not find significant differences in family cohesion and adaptability among the families of internalizing children and the families of externalizing children, and of those reported by Prange et al. (1992), who found low parent-adolescent cohesion to be associated with both internalizing and externalizing problems. Similarly, contrary to the hypothesis, the general measure of negative interactions employed in the present study did not distinguish among adolescent adjustment problems. Perhaps marital (and other forms of family) conflict is only associated with externalizing disorders (as opposed to internalizing disorders) when the conflict is more physically aggressive in nature, through children learning through modelling aggressive ways of coping with conflict (Fincham & Osborne, 1993).

In terms of the role of parent and adolescent gender in predicting teen adjustment, there were also few findings to suggest that associations between family relationship characteristics and teen adjustment problems were stronger for girls than for boys. As in other studies (e.g., Cohen & Brook, 1987), family risk factors appeared to operate similarly for boys and girls. Moreover, contrary to the hypothesis, the father-adolescent relationship did not appear to be particularly associated with teen externalizing problems. That characteristics of teens' relationships with their fathers were associated with both

externalizing and internalizing problems is consistent with the literature reviewed by Phares and Compas (1992), in which paternal factors were associated with both externalizing and internalizing disorders in nonreferred children (as opposed to clinical samples, where paternal factors are more strongly associated with externalizing problems).

Partial support was, however, found for the hypothesis that parent and adolescent gender moderate the associations between family relationship characteristics and adolescent well-being. Based on traditional gender role socialization, that father-son and mother-daughter relationships may be expected to hold special significance for boys' and girls' adjustment, respectively. The only finding in support of this notion was that negative interactions in the mother-daughter dyad played a unique role in girls' externalizing problems, whereas negative interactions in the father-son dyad played a unique role in boys' externalizing problems. Thus, for the most part, relationships with fathers and mothers are equally important for the adjustment of both daughters and sons (cf. Wenk et al., 1994).

There are clinical implications stemming from this work that warrant consideration. In general, the results of this study point to the importance of focussing on family relationships in intervention or prevention strategies for children and adolescents (cf. Jenkins & Keating, 1998). For example, interventions designed to increase familial social support and decrease negative interactions may be effective in reducing adolescent internalizing and externalizing symptoms. More specifically, clinicians working with teens in single-mother families in particular may want to consider the adolescent-sibling

relationship as an aspect of the family system with which to intervene. The supportive quality of the sibling relationship may be a particularly important one, and increasing the felt support may serve a protective function for teens. Second, assessing the potential for change within both the adolescent-mother and adolescent-father subsystems may be fruitful (cf. Jenkins, 1992) when a teen presents for therapy, as intervening within either of these relationships may be beneficial given that characteristics of both appear to be associated with teen outcomes.

Third, indirectly through its effect on the parent-adolescent relationship, the marital relationship carries implications for teens' adjustment problems. As such, clinicians may want to consider an assessment of the marital relationship as well as parent-adolescent relationships when a teen presents with emotional or behavioural difficulties. Further, therapists working with couples whose marital relationship is characterized by negative interactions or lacking in support should also be aware of the potential risk this holds for their (the couples') children. Therapists may need to address the effects of a conflictual marital relationships in individual work with the adolescent, marital therapy with the couple, or in family therapy with the broader family system.

Finally, in terms of directions for future research, employing clinical samples may be beneficial in order to investigate the association between dyadic family relationships and adjustment outcomes among teens with more severe psychopathology or clinical diagnoses. Relatedly, perhaps investigating outcomes that are more specific than those employed in the present study (e.g., anxiety or depressive disorders as opposed to internalizing problems; conduct disorder instead of externalizing problems) would lead to

more definitive conclusions about the associations between dyadic relationship characteristics and teen adjustment. Similarly, due to poor psychometric properties of the measures employed, the present study was unable to examine the potential role of enmeshment and disengagement in teen outcomes; these and other relationship characteristics (e.g., power and control) may contribute to adolescent adjustment and warrant future consideration. Although the present study made a beginning contribution, future investigations that employ longer-term longitudinal designs would also allow for more definitive conclusions to be drawn in regard to causal directions between dyadic relationship characteristics and adolescent adjustment. Finally, future research on adolescent family relationships should continue to differentiate among adolescent-mother, adolescent-father, adolescent-sibling and marital dyadic relationships, as a means of evaluating both their unique and joint contributions to adolescent adjustment, and in turn potentially holding implications for the prevention of, and intervention with, teen psychopathology.

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Appendix A

Time 1 Letter and Consent Form

Concordia
UNIVERSITY

Centre for Research in Human Development
Department of Psychology
tel: (514) 848-7560
fax: (514) 848-2815

JHS-YR1

March, 1999

Dear Parent(s) and Student,

We are writing to ask for your participation in a study of adolescents' relationships and emotional and behavioural adjustment. This study concerns changes with age in adolescents' relationships, the degree to which children's relationships are similar to, or different from their parents' relationships, and the contribution of the family and friendship factors to adolescents' relationships and adjustment.

We are asking permission for <u>you, the student,</u> to complete <u>questionnaires</u> at school. The questionnaires ask students about their relationships with parents and friends, their perceptions of family functioning, the ways they cope with stress, and their emotional and behavioural adjustment (e.g., mood, involvement in rule breaking activities, substance use, and sexual behaviour). These questionnaires have been used extensively in research with adolescents and deal with problems that adolescents often face. The questionnaires will take about 1.5 hours to complete in total. Students will complete these questionnaires, at times which are convenient for the teacher, during class time. Participation will be voluntary, and by written consent. Of course no student is ever forced to participate and all answers are confidential. Because it is important to understand changes over time, students will be approached again in one year, and again the next year, to complete similar questionnaires. However, there is no obligation to continue.

We are also asking **<u>parents</u> to complete similar <u>questionnaires</u>** about their relationships, self perceptions, and family functioning, this year only. The questionnaires will be mailed to you in the early fall to complete at your convenience, and will take about one hour of your time.

We would like as many **<u>mothers and fathers</u>** as possible to participate. Little is known about the role of fathers in children's social development; hence fathers' participation is very important. However, **if only one parent can participate, your help is still very important.** In return for participation, each parent will receive $10 for his/her time. We will be pleased to send you a summary of the group results of the study when completed.

This project is funded by the Social Sciences and Humanities Research Council of Canada, and is concerned with how adolescents' relationships change with age, and what helps them have good relationships with friends, romantic partners, and family members. This work is important because good relationships foster the child's sense of well-being and school achievement. We also believe that this research will be helpful for understanding how adolescents cope with various

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challenges they face, and for developing effective intervention programs for adolescents (and their families) who are experiencing difficulties.

We hope that both students and their parents will consent to participate in this project, as your help is important to us. Please complete the enclosed consent form and return it to your French teacher. **We would like to know your decision even if you do not agree to participate.**

All students returning the form (whether the answer is yes or no) will have their names entered in a draw. Students returning forms will be eligible for a raffle to win: **Cineplex Odeon movie passes, Laser Quest Passes, or HMV gift certificates!!**

If you have any questions or would like further information before you decide about participating, please do not hesitate to call one of us at the numbers below. We look forward to hearing from you.

Sincerely,

Anna-Beth Doyle, Ph.D.
Professor of Psychology
(848-7538)

Dorothy Markiewicz, Ph.D.
Associate Professor of Applied Human Science and Psychology
(848-2268)

Jennifer Ducharme, M.A.
Ph.D. Candidate
(848-7560)

Stephanie Margolese, M.A.
Ph.D. Candidate
(848-7560)

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Department of Psychology
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March 1999 (JHS-YR1)

Consent Form To Participate in Research

Student's Name_____

School_____Grade_____

French Teacher's name/class:_____

Check as many as apply:

_____ I/We agree to **the student's participation** in the Relationships and Well-being study conducted by Drs. A.B. Doyle and D. Markiewicz. (Student and one parent please sign below).

_____ I, **the student's parent**, agree to participate. (Please sign below).

_____ My **spouse** also agrees to participate. (Please sign below).

_____ I wish to be called to discuss the project.
Please indicate your name and phone number:

_____

____ I do not agree to any of the above.

IF YOU AGREE TO PARTICIPATE, please complete the following:

I/We have been informed that the purpose of the research is to study students' relationships with peers and family, their adjustment and well-being. Participation will involve 1.5 hours of students' time, and, if parents consent, 1 hour of their time, completing questionnaires about friendships and family relationships, ways of dealing with stress, self-perceptions, and emotional and behavioral adjustment. I/We understand that all information will be confidential to the research team and identified only by number, and that general results may be published. I/We understand that I/we may withdraw my/our consent and may discontinue participation at any time.

Parent(s) Name(s)_____

Address_____

City & Postal Code_____Phone Number_____

Mother's Signature (if applicable)_____

Father's Signature (if applicable)_____

Student's Signature_____Date_____

PLEASE RETURN THIS FORM TO YOUR FRENCH TEACHER AS SOON AS POSSIBLE.

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Appendix B

Time 2 Letter and Consent Form

Concordia
UNIVERSITY

Centre for Research in Human Development
Department of Psychology
tel: (514) 848-7560 fax: (514) 848-2815

JHS-YR2

February, 2000

Dear Student,

Last April, as you may remember, we began part one of The Relationships and Well-Being Project at your school. **We are now writing to ask permission for <u>you, the student,</u> to participate in the second phase of our study** on adolescent relationships and emotional and behavioural adjustment.

Taking part in the study will involve completing questionnaires during class time at school, at times convenient for the teacher. Just like last year, the questionnaires will take about 1 ½ hours (two separate class periods, two weeks apart) to complete. The questionnaires are a lot like the ones you completed last year, and ask about your relationships with parents and friends, your view of family functioning, the ways you deal with stress, and how you feel and behave (e.g., mood, breaking rules, drug use, and sex).

We really appreciate that you took part in our study last year. **We need your participation again** this year because we need to understand changes in your relationships and adjustment over time. **Those students who choose to participate this year will be entered in THE GRAND-PRIZE draw for a SONY DISCMAN!!!**

Please complete the enclosed consent form, take it home to have one of your parents sign it, and return it to your French teacher as soon as possible. We need to know your decision even if you do not agree to participate. **<u>All students returning the form (whether the answer is yes or no) will have their names entered in a draw</u>** and will be eligible for a raffle to win **Cineplex Odeon movie passes or HMV gift certificates!!**

If you have any questions feel free to ask or call one of us at the numbers below.

Thank you.

Jennifer Ducharme, M.A.,
Ph.D. Candidate
(848-7560)

Anna-Beth Doyle, Ph.D.
Professor of Psychology
(848-7538)

Dorothy Markiewicz, Ph.D.
Associate Professor of
Psychology and Applied
Human Sciences
(848-2268)

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Concordia
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Department of Psychology
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February 2000 (JHS-YR2)

Consent Form To Participate in Research

Student's Name:_____

Student's Date of Birth:_____Age:_____

School: LCCHS Grade:_____ French Teacher's name/class: _____

Check where applicable:

_____ We agree to **the student's participation** in the Relationships and Well-being study conducted by Jennifer Ducharme, Dr. Anna Beth Doyle, and Dr. Dorothy Markiewicz.
(Student and parent please sign below).

_____ Before we agree to the student's participation, please call to discuss the project.
Please indicate name_____ and phone number:_____.

_____ We do not agree to the student's participation.

IF YOU AGREE TO THE STUDENT'S PARTICIPATION, please complete the following:

We have been informed that the purpose of the research is to study students' relationships with peers and family, their adjustment and well-being. Participation will involve 1 ½ hours of students' class time, completing questionnaires about friendships and family relationships, ways of dealing with stress, self-perceptions, and emotional and behavioral adjustment. We understand that all information will be confidential to the research team and identified only by number, and that general results may be published. We understand that the student may withdraw consent and may discontinue participation at any time.

Student's Signature:_____

Parent's Signature _____Date_____

Parent(s) Name(s)_____

Address_____

City & Postal Code_____Phone Number:_____

PLEASE RETURN THIS FORM TO YOUR FRENCH TEACHER AS SOON AS POSSIBLE.

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Appendix C

List of Time 1, Time 2, and Mother-Report Measures

Time 1 Measures:

General Information

Child Depression Inventory (CDI)

Self-Report Delinquency Scale (SRD)

Family Issues Questionnaire

Children's Perception of Interparental Conflict Scale (CPIC)

Time 2 Measures

Network of Relationships Inventory (NRI)

Conflict and Problem Solving Scale (CPS)

Network of Relationships Inventory - Marital

Conflict and Problem Solving Scale - Marital

Youth Self Report (YSR)

Mother-report Measures

Network of Relationships Inventory (NRI)

Conflict and Problem Solving Scale (CPS)

Child Behavior Checklist (CBCL)

Appendix D

Child Depression Inventory (CDI)

FEELINGS AND IDEAS (CDI)

Please do not mark in this area

				1

People sometimes have different feelings and ideas. This form lists feelings and ideas in groups. From each group, pick **one** sentence that describes you best for the past two weeks. There are no right or wrong answers. Just pick the sentence that best describes the way you have been recently. Put an ☒ in the box next to your answer.

Here is an example of how this form works. Try it. Put an ☒ next to the sentence that describes you **best**.

Example:

- ☐ I read books all the time
- ☐ I read books once in a while
- ☐ I never read books

REMEMBER, PICK OUT THE SENTENCES THAT DESCRIBE YOUR FEELINGS AND IDEAS IN THE PAST TWO WEEKS.

---

1. ☐ I am sad once in a while.
   ☐ I am sad many times.
   ☐ I am sad all the time.

---

2. ☐ Nothing will ever work out for me.
   ☐ I am not sure if things will work out for me.
   ☐ Things will work out for me O.K.

---

3. ☐ I do most things O.K.
   ☐ I do many things wrong
   ☐ I do everything wrong.

---

4. ☐ I have fun in many things.
   ☐ I have fun in some things.
   ☐ Nothing is fun at all.

---

5. ☐ I am bad all the time.
   ☐ I am bad many times.
   ☐ I am bad once in a while.

---

6. ☐ I think about bad things happening to me once in a while.
   ☐ I worry that bad things will happen to me.
   ☐ I am sure that terrible things will happen to me.

7. ☐ I hate myself.
   ☐ I do not like myself.
   ☐ I like myself.

---

8. ☐ All bad things are my fault.
   ☐ Many bad things are my fault.
   ☐ Bad things are not usually my fault.

---

9. ☐ I feel like crying everyday.
   ☐ I feel like crying many days.
   ☐ I feel like crying once in a while.

---

10. ☐ Things bother me all the time.
    ☐ Things bother me many times.
    ☐ Things bother me once in a while.

---

11. ☐ I like being with people.
    ☐ I do not like being with people many times.
    ☐ I do not want to be with people at all.

---

12. ☐ I cannot make up my mind about things.
    ☐ It is hard to make up my mind about things.
    ☐ I make up my mind about things easily.

---

13. ☐ I look O.K.
    ☐ There are some bad things about my looks.
    ☐ I look ugly.

---

14. ☐ I have to push myself all the time to do my school work.
    ☐ I have to push myself many times to do my school work.
    ☐ Doing school work is not a big problem.

---

15. ☐ I have trouble sleeping every night.
    ☐ I have trouble sleeping many nights.
    ☐ I sleep pretty well.

---

16. ☐ I am tired once in a while.
    ☐ I am tired many days.
    ☐ I am tired all the time.

17. ☐ Most days I do not feel like eating.
☐ Many days I do not feel like eating.
☐ I eat pretty well.

---

18. ☐ I do not worry about aches and pains.
☐ I worry about aches and pains many times.
☐ I worry about aches and pains all the time.

---

19. ☐ I do not feel alone.
☐ I feel alone many times.
☐ I feel alone all the time.

---

20. ☐ I never have fun at school.
☐ I have fun at school only once in a while.
☐ I have fun at school many times.

---

21. ☐ I have plenty of friends.
☐ I have some friends but I wish I had more.
☐ I do not have any friends.

---

22. ☐ My school work is alright.
☐ My school work is not as good as before.
☐ I do very badly in subjects I used to be good in.

---

23. ☐ I can never be as good as other kids.
☐ I can be as good as other kids if I want to.
☐ I am just as good as other kids.

---

24. ☐ Nobody really loves me.
☐ I am not sure if anybody loves me.
☐ I am sure that somebody loves me.

---

25. ☐ I usually do what I am told.
☐ I do not do what I am told most times.
☐ I never do what I am told.

---

26. ☐ I get along with people.
☐ I get into fights many times.
☐ I get into fights all the time.

Appendix E

Self-Report Delinquency Scale (SRD)

BEHAVIOURS

Please do not mark in this area

				1

This section asks about different behaviours that teenagers are sometimes involved in. Your answers are very important to us: we want to know what really happens for people your age so please answer all questions **honestly**. Remember, **ALL YOUR ANSWERS ARE CONFIDENTIAL**.

For each question,

- First indicate whether or not you have **ever** done what is described (☒ YES or NO).
- Then, **if** you answer **YES**, indicate how many times **in the last year** you have done each behaviour.
- **If** you answer **NO**, skip to the next question.

Have you ever ...?

1. **Purposely damaged or destroyed property (includes vandalism/graffiti) belonging to your parents or other family members?** ☐ Yes ☐ No

If "YES", how many times in the last year? If "NO", skip to the next question.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

2. **Purposely damaged or destroyed property (includes vandalism/graffiti) belonging to your school or employer?** ☐ Yes ☐ No

If "YES", how many times in the last year? If "NO", skip to the next question.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

3. **Purposely damaged or destroyed other property (includes vandalism/graffiti) that did not belong to you, not counting family, school, or work property?** ☐ Yes ☐ No

If "YES", how many times in the last year? If "NO", skip to the next question.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

4. **Stolen or tried to steal a motor vehicle such as a car or motorcycle?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

5. **Stolen or tried to steal something worth more than $50.00?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

6. **Knowingly bought, sold or held stolen goods or tried to do any of these things?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

7. **Purposely set fire to a building, car, or other property or tried to do so?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

8. **Carried a hidden weapon other than a plain pocket knife?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

9. **Stolen or tried to steal things worth $5.00 or less?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

10. **Attacked someone with the idea of seriously hurting that person?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

11. **Been involved in gang fights?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

12. **Used checks illegally or used phony money to pay for something (includes intentional overdrafts)?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

13. **Sold marijuana or hashish (weed, pot, grass, hash)?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

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14. **Hitchhiked where it was illegal to do so?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

15. **Stolen money or other things from your parents or other members of your family?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

16. **Stolen money, goods, or property from school or from the place where you work?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

17. **Hit or threatened to hit one of your parents?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

18. **Hit or threatened to hit your teacher, your supervisor or another employee?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

19. **Hit or threatened to hit anyone else (e.g., friends, strangers)?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

20. **Been loud, rowdy, or unruly in a public place (disorderly conduct)?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

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21. **Sold hard drugs such as cocaine, LSD (acid), heroin (or others)?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

22. **Tried to cheat someone by selling them something that was worthless or not what you said it was?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

23. Taken a vehicle for a ride or drive without the owner's permission? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

24. Bought liquor as a minor? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

25. Used force or "strong arm" methods to get money or things from people? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

26. Avoided paying for such things as movies, bus or metro rides, and food? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

27. Been drunk in a public place? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

28. Stolen or tried to steal things worth between $5.00 and $50.00? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

29. **Broken into or tried to break into a building (including an abandoned building) or vehicle to steal something or just to look around?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

30. **Begged for money or things from strangers?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

31. **Failed to return extra change that a cashier gave you by mistake?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

32. **Used or tried to use credit cards without the owner's permission?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

33. **Made obscene telephone calls (such as calling someone and saying dirty things)?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

34. **Snatched someone's purse or wallet or picked someone's pocket?** ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

35. Used money or funds entrusted to your care for some purpose other than that intended (embezzled money)? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

36. Ganged up with friends, and used force or intimidation to get money or things from people (taxing)? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

37. Been stopped by the police for questioning? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

---

38. Been arrested? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

If "Yes", what were you charged with? _____

---

39. Been expelled from school? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

If 13 or more times, how often?

☐ 2-3 times per month ☐ 1 or more times per week

Appendix F

Youth Self Report (YSR)

38895

YOUTH SELF-REPORT

Please do not mark in this area

				2

Please fill out this form to reflect *your* views, even if other people might not agree.

I. Please list the sports you most like to take part in. For example: swimming, baseball, skating, skate boarding, bike riding, fishing, etc.

☐ None

Compared to others of your age, about how much time do you spend in each?

Compared to others of your age, how well do you do each one?

	Less Than Average	Average	More Than Average	Below Average	Average	Above Average
a. _____	☐	☐	☐	☐	☐	☐
b. _____	☐	☐	☐	☐	☐	☐
___ c. _____	☐	☐	☐	☐	☐	☐

II. Please list your favorite hobbies, activities, and games, other than sports. For example: cards, books, piano, autos, crafts, etc. (Do not include listening to radio or TV.)

☐ None

Compared to others of your age, about how much time do you spend in each?

Compared to others of your age, how well do you do each one?

	Less Than Average	Average	More Than Average	Below Average	Average	Above Average
a. _____	☐	☐	☐	☐	☐	☐
b. _____	☐	☐	☐	☐	☐	☐
___ c. _____	☐	☐	☐	☐	☐	☐

III. Please list any organizations, clubs, teams, or groups you belong to:

☐ None

Compared to others of your age, how active are you in each?

	Less Active	Average	More Active
a. _____	☐	☐	☐
b. _____	☐	☐	☐
___ c. _____	☐	☐	☐

IV. Please list any jobs or chores you have. For example: paper route, babysitting, making bed, working in store, etc. (Include *both* paid and unpaid jobs and chores.)

☐ None

Compared to others of your age, how well do you carry them out?

	Below Average	Average	Above Average
a. _____	☐	☐	☐
b. _____	☐	☐	☐
___ c. _____	☐	☐	☐

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V. 1. About how many close friends do you have? (Do *not* include brothers and sisters) ☐ None ☐ 1 ☐ 2 or 3 ☐ 4 or more

2. About how many times a week do you do things with any friends outside of regular school hours? (Do *not* include brothers and sisters) ☐ Less than 1 ☐ 1 or 2 ☐ 3 or more

---

VI. Compared to others of your age, how well do you:

	Worse	About the same	Better	
a. Get along with your brothers and sisters?	☐	☐	☐	☐ *I have no brothers or sisters*
b. Get along with other kids?	☐	☐	☐	
c. Get along with your parents?	☐	☐	☐	
d. Do things by yourself?	☐	☐	☐	

VII. 1. Performance in academic subjects.

☒ *a box for each subject that you take*	Failing	Below Average	Average	Above Average
a. Reading, English, or Language Arts	☐	☐	☐	☐
b. History or Social Studies	☐	☐	☐	☐
c. Arithmetic or Math	☐	☐	☐	☐
d. Science	☐	☐	☐	☐
Other academic subjects. For example computer courses, foreign language, business. Do *not* include gym, shop, driver's ed., etc. e. _____	☐	☐	☐	☐
f. _____	☐	☐	☐	☐
g. _____	☐	☐	☐	☐

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Please do not mark in this area

Below is a list of items that describe kids. For each item that describes you *now or within the past 6 months*, please respond by making an ☒ in the appropriate box, as follows:

Make an ☒ in the box labelled **2** if the item is *very true or often true* of you. Make an ☒ in the box labelled **1** if the item is *somewhat or sometimes true* of you. If the item is *not true* of you, make an ☒ in the box labelled **0**.

0 = Not True **1 = Somewhat or Sometimes True** **2 = Very True or Often True**

☐0 ☐1 ☐2	1.	I act too young for my age
☐0 ☐1 ☐2	2.	I argue a lot
☐0 ☐1 ☐2	3.	I brag
☐0 ☐1 ☐2	4.	I have trouble concentrating or paying attention
☐0 ☐1 ☐2	5.	I have trouble sitting still
☐0 ☐1 ☐2	6.	I am too dependent on adults
☐0 ☐1 ☐2	7.	I feel lonely
☐0 ☐1 ☐2	8.	I feel confused or in a fog
☐0 ☐1 ☐2	9.	I cry a lot
☐0 ☐1 ☐2	10.	I am mean to others
☐0 ☐1 ☐2	11.	I daydream a lot
☐0 ☐1 ☐2	12.	I deliberately try to hurt or kill myself
☐0 ☐1 ☐2	13.	I try to get a lot of attention
☐0 ☐1 ☐2	14.	I destroy my own things
☐0 ☐1 ☐2	15.	I destroy things belonging to others
☐0 ☐1 ☐2	16.	I disobey my parents
☐0 ☐1 ☐2	17.	I disobey at school
☐0 ☐1 ☐2	18.	I don't get along with other kids
☐0 ☐1 ☐2	19.	I don't feel guilty after doing something I shouldn't
☐0 ☐1 ☐2	20.	I am jealous of others
☐0 ☐1 ☐2	21.	I am afraid of certain animals, situations, or places, other than school (describe): _____ _____
☐0 ☐1 ☐2	22.	I am afraid of going to school
☐0 ☐1 ☐2	23.	I am afraid I might think or do something bad
☐0 ☐1 ☐2	24.	I feel that I have to be perfect
☐0 ☐1 ☐2	25.	I feel that no one loves me
☐0 ☐1 ☐2	26.	I feel that others are out to get me
☐0 ☐1 ☐2	27.	I feel worthless or inferior
☐0 ☐1 ☐2	28.	I get in many fights
☐0 ☐1 ☐2	29.	I get teased a lot
☐0 ☐1 ☐2	30.	I hang around with kids who get in trouble
☐0 ☐1 ☐2	31.	I act without stopping to think
☐0 ☐1 ☐2	32.	I would rather be alone than with others
☐0 ☐1 ☐2	33.	I lie or cheat
☐0 ☐1 ☐2	34.	I am nervous or tense
☐0 ☐1 ☐2	35.	I have nightmares
☐0 ☐1 ☐2	36.	I am not liked by other kids

38895

0 = Not True 1 = Somewhat or Sometimes True 2 = Very True or Often True

☐0 ☐1 ☐2 37. I am too fearful or anxious

☐0 ☐1 ☐2 38. I feel dizzy

☐0 ☐1 ☐2 39. I feel too guilty

☐0 ☐1 ☐2 40. I feel overtired

41. Physical problems *without known medical cause:*

☐0 ☐1 ☐2 a. Aches or pains (*not* headaches)

☐0 ☐1 ☐2 b. Headaches

☐0 ☐1 ☐2 c. Nausea, feel sick

☐0 ☐1 ☐2 d. Problems with eyes (describe) _____

_____

☐0 ☐1 ☐2 e. Rashes or other skin problems

☐0 ☐1 ☐2 f. Stomach aches or cramps

☐0 ☐1 ☐2 g. Vomiting, throwing up

☐0 ☐1 ☐2 42. I physically attack people

☐0 ☐1 ☐2 43. My school work is poor

☐0 ☐1 ☐2 44. I am poorly coordinated or clumsy

☐0 ☐1 ☐2 45. I would rather be with older kids than with kids my own age

☐0 ☐1 ☐2 46. I would rather be with younger kids than with kids my own age

☐0 ☐1 ☐2 47. I refuse to talk

☐0 ☐1 ☐2 48. I run away from home

☐0 ☐1 ☐2 49. I scream a lot

☐0 ☐1 ☐2 50. I am secretive or keep things to myself

☐0 ☐1 ☐2 51. I am self-conscious or easily embarrassed

☐0 ☐1 ☐2 52. I set fires

☐0 ☐1 ☐2 53. I show off or clown

☐0 ☐1 ☐2 54. I am shy

☐0 ☐1 ☐2 55. I steal at home

☐0 ☐1 ☐2 56. I steal from places other than home

☐0 ☐1 ☐2 57. I am stubborn

☐0 ☐1 ☐2 58. My moods or feelings change suddenly

☐0 ☐1 ☐2 59. I am suspicious

☐0 ☐1 ☐2 60. I swear or use dirty language

☐0 ☐1 ☐2 61. I think about killing myself

☐0 ☐1 ☐2 62. I talk too much

☐0 ☐1 ☐2 63. I tease others a lot

☐0 ☐1 ☐2 64. I have a hot temper

☐0 ☐1 ☐2 65. I threaten to hurt people

☐0 ☐1 ☐2 66. I cut classes or skip school

☐0 ☐1 ☐2 67. I don't have much energy

☐0 ☐1 ☐2 68. I am unhappy, sad, or depressed

☐0 ☐1 ☐2 69. I am louder than other kids

☐0 ☐1 ☐2 70. I use alcohol or drugs for nonmedical purposes (describe) _____

_____

☐0 ☐1 ☐2 71. I keep from getting involved with others

☐0 ☐1 ☐2 72. I worry a lot

Appendix G

Family Issues Questionnaire

FAMILY ISSUES

Please do not mark in this area

					1

The following questions ask about the rules some families have at home. Please read each question carefully and ☒ the box which best describes your experience. Tell us about the parents you currently or most recently live(d) with.

	0 Not Important	1 Somewhat Important	2 Very Important	3 Extremely Important
1. How important is it to your parents to know where you are?	☐ 0	☐ 1	☐ 2	☐ 3
2. How important is it to your parents to know who your friends are?	☐ 0	☐ 1	☐ 2	☐ 3

	0 Never	1 Sometimes	2 Several Times	3 Often
3. Do your parents punish you by slapping or hitting you?	☐ 0	☐ 1	☐ 2	☐ 3
4. Do your parents punish you by not letting you do things you would like to do?	☐ 0	☐ 1	☐ 2	☐ 3
5. Do your parents punish you by arguing?	☐ 0	☐ 1	☐ 2	☐ 3
6. Do your parents punish you by saying you cause them distress?	☐ 0	☐ 1	☐ 2	☐ 3
7. Do your parents punish you by calling you names?	☐ 0	☐ 1	☐ 2	☐ 3

	0 Never	1 Sometimes	2 Often	3 Always
8. In the course of a day, how often do your parents actually know where you are?	☐ 0	☐ 1	☐ 2	☐ 3
9. How often would your parents know who you are with when you are away from home?	☐ 0	☐ 1	☐ 2	☐ 3
10. How often do your parents follow through with a punishment after you're told to stop doing something but you don't stop?	☐ 0	☐ 1	☐ 2	☐ 3
11. When you are punished, how often does the punishment work?	☐ 0	☐ 1	☐ 2	☐ 3
12. When you do something that your parents like or approve of, how often do they ignore it or not say anything about it?	☐ 0	☐ 1	☐ 2	☐ 3

FAMILY ISSUES cont'd

Please do not mark in this area

	0 Never	1 Sometimes	2 Often	3 Always
13. How often do you know how to reach your parents if they're out?	☐	☐	☐	☐
14. How often do you talk to your parents about daily plans?	☐	☐	☐	☐
15. When I get a good grade, my parents praise me.	☐	☐	☐	☐
16. When I get a poor grade, my parents encourage me to try harder.	☐	☐	☐	☐
17. My parents spend time just talking with me.	☐	☐	☐	☐
18. My family does something fun together.	☐	☐	☐	☐
19. My mom and I have big arguments about little things.	☐	☐	☐	☐
20. My mom and I get angry with each other at least three times a week.	☐	☐	☐	☐
21. When my mom and I talk, it is frustrating	☐	☐	☐	☐
22. I can count on my mom to help me out, if I have some kind of problem.	☐	☐	☐	☐
23. My mom helps me with my schoolwork, if there is something I don't understand.	☐	☐	☐	☐
24. My dad and I have big arguments about little things.	☐	☐	☐	☐
25. My dad and I get angry with each other at least three times a week.	☐	☐	☐	☐
26. When my dad and I talk, it is frustrating.	☐	☐	☐	☐
27. I can count on my father to help me out, if I have some kind of problem.	☐	☐	☐	☐
28. My father helps me with my schoolwork, if there is something I don't understand.	☐	☐	☐	☐

Appendix H

Children's Perception of Interparental Conflict Scale (CPIC)

57330

FAMILY DISAGREEMENTS

Please do not mark in this area

				1

In every family, there are times when parents (or step-parents) don't get along. We would like to know about the kinds of arguments your parents have. Tell us about the parents (step-parents) you currently or most recently live(d) with. If there is only one parent in the home, think about times that your parents are together when they don't agree, or when your parents lived in the same house.

Please indicate whether the statements are "True" (T), "Sort of True" (ST), or "False" (F), by putting an ☒ in the appropriate box.

	True	Sort of True	False
1. When my parents have an argument they usually work it out.	☐ T	☐ ST	☐ F
2. They may not think I know it, but my parents argue or disagree a lot.	☐ T	☐ ST	☐ F
3. Even after my parents stop arguing they stay mad at each other.	☐ T	☐ ST	☐ F
4. When my parents have a disagreement, they discuss it quietly.	☐ T	☐ ST	☐ F
5. My parents are often mean to each other even when I m around.	☐ T	☐ ST	☐ F
6. I often see my parents arguing.	☐ T	☐ ST	☐ F
7. When my parents have an argument, they say mean things to each other.	☐ T	☐ ST	☐ F
8. My parents hardly ever argue.	☐ T	☐ ST	☐ F
9. When my parents argue, they usually make up right away.	☐ T	☐ ST	☐ F
10. When my parents have an argument, they yell alot.	☐ T	☐ ST	☐ F
11. My parents have broken or thrown things during an argument.	☐ T	☐ ST	☐ F
12. After my parents stop arguing, they are friendly toward each other.	☐ T	☐ ST	☐ F

57330

Appendix I

Network of Relationships Inventory (NRI)

NETWORK OF RELATIONSHIPS INVENTORY (NRI)

51646

Please do not mark in this area

				2

These questions ask about your relationships with each of the following people:

1) **your Mom** (or Stepmom)
2) **your Dad** (or Stepdad)
3) **your closest in age sibling** (brother or sister)

If you don't have a mom/stepmom, ☒ this box ⟶ ☐ and leave the "mom" items blank.

If you don't have a dad/stepdad, ☒ this box ⟶ ☐ and leave the "dad" items blank.

If you have no brothers or sisters, ☒ this box ⟶ ☐ and leave the "sibling" items blank.

Please tell us about your closest in age sibling.

a. How old is your closest in age brother or sister? _____ years old.

b. Is this sibling a ☐ brother or ☐ sister?

c. Is this a step-sibling? ☐ Yes ☐ No

Remember to think about this sibling when answering these questions.

Please answer each of the following questions by making an ☒ in the appropriate box.
Sometimes the answers for different people may be the same; sometimes they may be different.

1. How much free time do you spend with this person?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

2. How much do you and this person get upset with or mad at each other?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

3. How much does this person teach you how to do things that you don't know?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

4. How much do you and this person get on each other's nerves?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

51646

5. How much do you talk to this person about everything?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

8. How much does this person treat you like you're admired and respected?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

9. Who tells the other person what to do more often, you or this person?

	She/he almost always does	She/he often does	About the same	I often do	I almost always do
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

11. How much do you play around and have fun with this person?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

12. How much do you and this person disagree and quarrel?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

13. How much does this person help you figure out or fix things?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

19. Between you and this person, who tends to be the BOSS in this relationship?

	She/he almost always does	She/he often does	About the same	I often do	I almost always do
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

21. How often do you go places and do enjoyable things with this person?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

22. How much do you and this person argue with each other?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

23. How often does this person help you when you need to get something done?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

24. How much do you and this person hassle or nag one another?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

29. In your relationship with this person, who tends to take charge and decide what should be done?

	She/he almost always does	She/he often does	About the same	I often do	I almost always do
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

31. How much does this person allow you to take part in family decisions concerning yourself?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

32. How much does this person encourage you to give your ideas and opinions even if they might disagree?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

33. How often do you and this person discuss problems and feel good about the solutions?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

34. How difficult is it to keep track of things this person does?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

35. How much do you and this person find it hard to get away from each other?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

36. How important is it for you and this person to express your opinions to one another?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

37. How often do you know where this person is all the time?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

38. How difficult is it for you and this person to take time away from one another?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

39. How often do you and this person come right out and say things instead of hinting at them?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

40. How often do you and this person check with each other when making decisions?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

41. How much do you feel pressured to spend most free time together with this person?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

42. How much do you and this person encourage each other to say what you really mean?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

43. How independent do you feel from this person?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

44. How much do you feel guilty if you want to spend some time alone from this person?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

45. When you and this person express your opinions, how often do you consider each other's feelings?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

46. How often are you expected to have this person's approval before making decisions?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

47. If you are in trouble, how much does this person become too involved?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

48. How often does this person ignore you if you say something?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

49. Even though you may mean well, how often do you and this person intrude too much into each other's lives?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

50. How difficult is it for you to be yourself around this person?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Mom	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Dad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

Appendix J

Deleted Subscales

(Communication. Disengagement. Enmeshment)

Appendix J

Three additional subscales (enmeshment, disengagement, and communication) were added to the original NRI and administered in the same format. Items on these subscales were taken from the Family Functioning Scales (FFS; Bloom, 1985), the Family Assessment Device (FAD; Epstein, Baldwin, & Bishop, 1983) and The Family Functioning in Adolescence Questionnaire (FFAQ; Roelofse & Middleton, 1985). Enmeshment (6 items; e.g., "Even though you may mean well, how often do you and this person intrude too much into each other's lives?"), disengagement (5 items; e.g., "How often do you know where this person is all the time?"), and communication (6 items; e.g., "How important is it for you and this person to express your opinions to one another?") were assessed in each dyad.

In terms of the enmeshment and disengagement subscales, items stemmed primarily from the FFS (Bloom, 1985). The original FFS (Bloom, 1985) is a 75-item measure, assessing 15 family functioning dimensions, and based on an amalgamation of four other self-report measures of whole-family functioning. For the present study, four items from the enmeshment and five items from the disengagement subscales were modified from asking about the family in general (FFS) to be dyad-specific for the present study. Two items from the affective involvement subscale on the FAD (Epstein et al., 1983) were likewise modified to be dyad-specific and were added to the enmeshment subscale. The communication subscale was made up of items from the communication subscales of the FAD (Epstein et al., 1983; 1 item), and the FFAQ (Roelofse & Middleton, 1985; 3 items) as well as the expressiveness subscale on the FFS (Bloom,

1985; 2 items). These items were similarly modified, from their original general-family wording, to assess each dyadic relationship (adolescent-mother, adolescent-father, adolescent-sibling, and mother-father (marital) subsystems).

Examination of subscale internal consistencies and intercorrelations (see Appendix L), cast serious doubt on the reliability and validity of the enmeshment and disengagement subscales. The enmeshment subscales, for example, were found to positively correlate more highly with the NRI social support component subscales (e.g., companionship) then with the negative interaction component subscales. Thus the validity of the subscale is questionable, as the enmeshment subscales are not tapping the negative relationship characteristic they were conceptually intended to measure. Moreover, the *alphas* for the enmeshment-mom, -dad, -sibling, and -marital subscales were .52, .53, .60, and .67 respectively (poor to adequate), while the alphas for the disengagement subscales were even lower (.27, .55, .27, and .50 for the disengagement-mom, -dad, -sibling, and -marital subscales, respectively). Therefore, given the questionable validity and reliability of the enmeshment and disengagement subscales, they were dropped from further analysis.

Examination of the communication subscales revealed that the internal consistencies were quite good (*alphas* = .84, .82, .78, and .80 for the communication-mom -dad, -sibling, and -marital subscales, respectively) the communication subscales were highly correlated with the other positive relationship characteristics already assessed by the NRI. Thus, for the sake of parsimony, they were dropped from further analysis.

Appendix K

Internal Consistencies for (Adolescent-report) NRI Subscales

Table K1

Internal Consistencies for (Adolescent-report) NRI Subscales

Subscale	Alpha		
	Mother	Father	Sibling
Companionship	.77	.82	.83
Conflict	.90	.86	.86
Instrumental Aid	.79	.88	.81
Antagonism	.87	.84	.87
Intimacy	.90	.88	.89
Nurturance	.74	.79	.74
Affection	.81	.91	.88
Admiration	.78	.80	.76
Relative Power	.79	.70	.83
Reliable Alliance	.78	.87	.82
Social Support[a]	.92	.95	.92
Negative Interaction[b]	.93	.92	.93

Note. [a]A composite scale, based on the average of the companionship, instrumental aid, intimacy, nurturance, affection, admiration, and reliable alliance scores. [b]A composite scale, based on the average of scores on the conflict and antagonism subscales.

Appendix L

Intercorrelations among NRI Subscales

Table L1

Intercorrelations among NRI (Relationship with Mother) Subscales.

Subscale	1	2	3	4	5	6	7	8	9	10	11	12	13
1. companionship	--	.70**	.66**	.59**	.43**	.65**	.12	.43**	.69**	-.60**	.37**	-.23**	-.20**
2. instrumental aid		--	.62**	.53**	.55**	.64**	.00	.41**	.63**	-.60**	.36**	-.25**	-.24**
3. intimacy			--	.38**	.34**	.51**	.05	.31**	.71**	-.51**	.42**	-.24**	-.17*
4. nurturance				--	.44**	.54**	.14*	.40**	.48**	-.51**	.30**	-.24**	-.26**
5. affection					--	.66**	.11	.64**	.49**	-.40**	.19**	-.27**	-.31**
6. admiration						--	.17*	.59**	.68**	-.50**	.28**	-.43**	-.41**
7. relative power							--	.10	.15*	.01	.09	-.05	.01
8. reliable alliance								--	.47**	-.39**	.15*	-.26**	-.26**
9. communication									--	-.64**	.32**	-.41**	-.39**
10. disengagement										--	-.47**	.18**	.17*
11. enmeshment											--	.14*	.19**
12. conflict												--	.86**
13. antagonism													--

** $p < .01$. * $p < .05$.

Table L2

Intercorrelations among NRI (Relationship with Father) Subscales

Subscale	1	2	3	4	5	6	7	8	9	10	11	12	13
1. companionship	--	.77**	.66**	.64**	.50**	.72**	-.15*	.56**	.67**	-.63**	.43**	-.20**	-.19**
2. instrumental aid		--	.56**	.66**	.62**	.76**	-.20**	.60**	.67**	-.70**	.48**	-.16*	-.15*
3. intimacy			--	.43**	.32**	.54**	-.13	.35**	.64**	-.50**	.39**	-.15**	-.19*
4. nurturance				--	.54**	.65**	-.05	.59**	.51**	-.60**	.35**	-.24**	-.24**
5. affection					--	.74**	-.05	.79**	.55**	-.50**	.23**	-.23**	-.31**
6. admiration						--	-.10	.71**	.71**	-.63**	.37**	-.30**	-.30**
7. relative power							--	-.15*	-.16*	.26**	-.03	.03	.04
8. reliable alliance								--	.60**	-.53**	.19**	-.29**	-.30**
9. communication									--	-.64**	.41**	-.25**	-.27**
10. disengagement										--	-.51**	.10	.11
11. enmeshment											--	.18*	.21**
12. conflict												--	.85**
13. antagonism													--

** $p < .01$. * $p < .05$.

Table L3

Intercorrelations among NRI (Relationship with Sibling) Subscales.

Subscale	1	2	3	4	5	6	7	8	9	10	11	12	13
1. companionship	--	.58**	.59**	.45**	.47**	.51**	.00	.45**	.60**	-.63**	.36**	-.06	-.01
2. instrumental aid		--	.49**	.32**	.43**	.46**	-.40**	.38**	.50**	-.50**	.34**	-.14	-.11
3. intimacy			--	.24**	.25**	.37**	-.09	.22**	.55**	-.49**	.37**	.00	-.05
4. nurturance				--	.57**	.50**	.22**	.56**	.36**	-.42**	.20**	-.13	-.08
5. affection					--	.75**	.03	.71**	.55**	-.42**	.17**	-.31**	-.24**
6. admiration						--	.09	.65**	.62**	-.47**	.19*	-.26**	-.23**
7. relative power							--	.02	-.08	.01	.05	.20**	.22**
8. reliable alliance								--	.46**	-.42**	.12	-.19**	-.18*
9. communication									--	-.68**	.26**	-.27**	-.31**
10. disengagement										--	-.36**	.13	.11
11. enmeshment											--	.28*	.25**
12. conflict												--	.88**
13. antagonism													--

** $p < .01$. * $p < .05$.

Table L4

Intercorrelations among NRI (Marital Relationship) subscales.

Subscale	1	2	3	4	5	6	7	8	9	10	11
1. companionship	--	.79**	.75**	.73**	.17*	.69**	.76**	-.75**	.43**	-.40**	-.44**
2. instrumental aid		--	.83**	.71**	.18*	.65**	.80**	-.74**	.42**	-.37**	-.36**
3. nurturance			--	.84**	.17*	.75**	.80**	-.74*	.39**	-.40**	-.39**
4. affection				--	.21**	.82**	.75**	-.71**	.35**	-.38**	-.38**
5. relative power					--	.14	.17*	-.14	-.01	-.17*	-.20*
6. reliable alliance						--	.73**	-.73**	.33**	-.47**	-.48**
7. communication							--	-.81**	.34**	-.48**	-.45**
8. disengagement								--	-.45**	.39**	.40**
9. enmeshment									--	.07	.10
10. conflict										--	.87**
11. antagonism											--

** $p < .01$. * $p < .05$.

Appendix M

The Network of Relationships Inventory (NRI) - Marital

42027

NRI (Mom and Dad)

Please do not mark in this area

					2

The following questions ask about **your Mom and Dad's relationship**. Tell us about the parents or stepparents who live(d) together with you currently or most recently. Please answer each of the following questions by making an ☒ in the appropriate box.

If you don't have parents or stepparents who live(d) together with you, ☒ this box ⟶ ☐ and go to the next questionnaire.

	1 Little or None	2 Somewhat	3 Very Much	4 Extremely Much	5 The Most
1. How much free time do your mom and dad spend together?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
2. How much do your mom and dad get upset or mad at each other?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
3. How much do your mom and dad teach each other how to do things they don't know?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
4. How much do your mom and dad get on each other's nerves?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
5. How much do your mom and dad help each other with things they can't do by themselves?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
6. How much do your mom and dad like or love each other?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
7. How sure are you that your mom and dad's relationship will last no matter what?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
8. How much do your mom and dad play around and have fun together?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
9. How much do your mom and dad disagree and quarrel?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
10. How much do your mom and dad help each other figure out or fix things?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
11. How much do your mom and dad get annoyed with each other's behavior?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
12. How much do your mom and dad protect and look out for each other?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
13. How much do your mom and dad really care about each other?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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	1 Little or None	2 Somewhat	3 Very Much	4 Extremely Much	5 The Most
14. How sure are you that your mom and dad's relationship will last in spite of fights?	☐1	☐2	☐3	☐4	☐5
15. How often do your mom and dad go places and do enjoyable things together?	☐1	☐2	☐3	☐4	☐5
16. How much do your mom and dad argue with each other?	☐1	☐2	☐3	☐4	☐5
17. How much do your mom and dad help each other when they need to get something done?	☐1	☐2	☐3	☐4	☐5
18. How much do your mom and dad hassle or nag one another?	☐1	☐2	☐3	☐4	☐5
19. How much do your mom and dad take care of each other?	☐1	☐2	☐3	☐4	☐5
20. How much do your mom and dad have a strong feeling of affection (love or liking) toward each other?	☐1	☐2	☐3	☐4	☐5
21. How sure are you that your mom and dad's relationship will continue in the years to come?	☐1	☐2	☐3	☐4	☐5
22. How often do your mom and dad discuss their problems together and feel good about the solutions?	☐1	☐2	☐3	☐4	☐5
23. How difficult is it for your mom and dad to keep track of the things that each do?	☐1	☐2	☐3	☐4	☐5
24. How much do your mom and dad find it hard to get away from each other?	☐1	☐2	☐3	☐4	☐5
25. How important is it for your mom and dad to express their opinions to each other?	☐1	☐2	☐3	☐4	☐5
26. How often do your mom and dad know where the other is all the time?	☐1	☐2	☐3	☐4	☐5
27. How difficult is it for your mom and dad to take time away from one another?	☐1	☐2	☐3	☐4	☐5
28. How often do your mom and dad come right out and say things to each other instead of hinting at them?	☐1	☐2	☐3	☐4	☐5
29. How often do your mom and dad check with each other when making decisions?	☐1	☐2	☐3	☐4	☐5

	1 Little or None	2 Somewhat	3 Very Much	4 Extremely Much	5 The Most
30. How much do your mom and dad feel pressured to spend most of their free time together?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
31. How often do your mom and dad encourage each other to say what they really mean?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
32. How independent are your mom and dad from each other?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
33. How much do your mom and dad feel guilty if they want to spend some time alone from one another?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
34. When your mom and dad express their opinions, how often do they consider each other's feelings?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
35. How often are your mom and dad expected to have each other's approval before making decisions?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
36. If one of your parents is in trouble, how much does the other become too involved?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
37. How often do your mom and dad ignore each other if they say something?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
38. Even though they may mean well, how often do your parents intrude too much into each other's lives?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

	1 My Mom almost always does	2 My Mom often does	3 About the same	4 My Dad often does	5 My Dad almost always does
39. Who tells the other person what to do more often, your mom or your dad?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
40. Between your mom and your dad, who tends to be the BOSS in the relationship?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
41. In your mom and dad's relationship with one another, who tends to take charge and decide what should be done?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

42. How happy is your mom in her relationship with your dad?

☐ Extremely Unhappy ☐ Somewhat Unhappy ☐ Happy ☐ Very Happy ☐ Perfectly Happy

43. How happy is your dad in his relationship with your mom?

☐ Extremely Unhappy ☐ Somewhat Unhappy ☐ Happy ☐ Very Happy ☐ Perfectly Happy

Appendix N

Conflict and Problem Solving Scale

CONFLICTS AND PROBLEM-SOLVING SCALE

8074

Please do not mark in this area

				2

All family members disagree once in a while. We would like to know how you deal with conflict in your relationship with **your mom, your dad,** and **your closest in age sibling** (brother or sister).

The following questions describe various strategies you may use to deal with conflict with **your mom, your dad** and **your sibling.** Please indicate how often YOU use each strategy, by making an ☒ in the box which best corresponds to your situation.

(If you have no brothers or sisters, ☒ this box ⟶ ☐ and leave the "sibling" items blank.)

When dealing with conflict with your mom, dad, or sibling, how often do YOU:

1. Talk it out with the other person.

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

2. Listen to the other's point of view.

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

3. Try to reason with the other.

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

4. Try to find a solution that meets both of our needs equally.

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

5. Compromise, meet the other half way, "split the difference".

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

6. Give in to the other's viewpoint to escape argument.

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

7. Try to ignore the problem, avoid talking about it.

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

8. Change the subject.

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

8074

Please do not mark in this area

When dealing with conflict with your mom, dad, or sibling, how often do YOU:

9. Clam up, hold in feelings.

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

10. Leave the room.

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

11. Cry.

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

12. Sulk, refuse to talk, give the 'silent treatment'.

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

13. Complain, bicker without really getting anywhere.

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

14. Enlist friends or family to support my own point of view.

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

15. Insist on my point of view.

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

16. Raise voice, yell, shout.

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

17. Interrupt, don't listen to the other.

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

18. Become sarcastic.

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

19. Name-call, curse, insult.

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

20. Withdraw love or affection.

Mom:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Dad:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often
Sibling:	☐ Never	☐ Rarely	☐ Sometimes	☐ Often

Appendix O

Internal Consistencies for CPS Subscales

Table O

Internal Consistencies for CPS Subscales

Subscale	Alpha				
	Adolescent-report			Mother-report	
	mother	father	sibling	adolescent	spouse
Collaboration	.84	.89	.86	.65	.82
Avoidance-Capitulation	.62	.60	.55	.73	.77
Stalemate	.56	.60	.54	.67	.62
Verbal Aggression	.75	.76	.76	.72	.72
Destructive Conflict Resolution[a]	.82	.81	.76	.84	.86

Note. [a]A composite scale, based on the average of the avoidance-capitulation, stalemate, and verbal aggression subscales.

n = 196 adolescents, 80 mothers.

Appendix P

Intercorrelations among (Adolescent-Report) CPS Subscales

Table P1

Intercorrelations among (Adolescent report) CPS subscales

Subscale	1	2	3	4	5	6	7	8	9	10	11	12
1. Collaboration-Mom	--	-0.13	-.21**	-.20**	.62**	-.00	-.01	.03	.48**	-.03	-.02	-.02
2. Stalemate-Mom		--	.54**	.61**	-.14	.73**	.44**	.42**	-.14	.65**	.31**	.39**
3. Avoid/Capit.-Mom			--	.46**	-.16*	.32**	.59**	.26**	-.24**	.32**	.57**	.33**
4. Verbal Aggress.-Mom				--	-.21**	.38**	.27**	.70**	-.11	.39**	.20**	.65**
5. Collaboration-Dad					--	-.04	-.01	-.04	.46**	-.04	-.02	-.06
6. Stalemate-Dad						--	.54**	.57**	-.15	.60**	.26**	.38**
7. Avoid/Capit.-Dad							--	.45**	-.09	.35**	.43**	.31**
8. Verbal Aggress-Dad								--	-.02	.38**	.16*	.64**
9. Collaboration-Sib									--	-.12	-.17*	-.26**
10. Stalemate-Sib										--	.41**	.49**
11. Avoid/Capit.-Sib											--	.30**
12. Verbal Aggress-Sib												--

Note. Avoid/Capit. = Avoidance - Capitulation.

** $p < .01$. * $p < .05$.

Appendix Q

Conflict and Problem Solving Scale - Marital

PARENTS' CONFLICTS AND PROBLEM SOLVING SCALE

Please do not mark in this area

				2

The following questions describe strategies that your parents may use in dealing with conflict. Indicate how often they use each strategy by making an ☒ in the box below each question.

If your parents (or step-parents) have never lived together with you, ☒ this box ⟶ ☐ and go to the next questionnaire.

<u>This first set of questions asks about how your MOM deals with conflicts with your dad.</u>

When dealing with conflict with your dad, how often does your MOM:

1. Listen or talk it out; try to compromise or find a fair solution.
   ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

2. Give in, ignore the problem, avoid talking about it or leave the room.
   ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

3. Cry, sulk, give "the silent treatment"; complain or bicker without getting anywhere.
   ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

4. Yell, become sarcastic, insult or interrupt without listening.
   ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

<u>This next set of questions asks about how your DAD deals with conflicts with your mom.</u>

When dealing with conflict with your mom, how often does your DAD:

1. Listen or talk it out; try to compromise or find a fair solution.
   ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

2. Give in, ignore the problem, avoid talking about it or leave the room.
   ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

3. Cry, sulk, give "the silent treatment"; complain or bicker without getting anywhere.
   ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

4. Yell, become sarcastic, insult or interrupt without listening.
   ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Appendix R

Child Behavior Checklist

Child Behavior Checklist (CBCL)

32147

Please do not mark in this area

Marking an X in the appropriate box(es), please fill out this form to reflect *your* view of **your child's** behavior even if other people might not agree.

I. Please list the sports your child most likes to take part in. For example: swimming, baseball, skating, skate boarding, bike riding, fishing, etc.

☐ None

	Compared to others of the same age, about how much time does he/she spend on each?				Compared to others of the same age, how well does he/she do each one?			
	Don't Know	Less Than Average	Average	More Than Average	Don't Know	Below Average	Average	Above Average
a. _____	☐	☐	☐	☐	☐	☐	☐	☐
b. _____	☐	☐	☐	☐	☐	☐	☐	☐
c. _____	☐	☐	☐	☐	☐	☐	☐	☐

II. Please list your child's favorite hobbies, activities, and games, other than sports. For example: stamps, dolls, books, piano, crafts, cars, singing, etc. (Do *not* include radio or TV.)

☐ None

	Compared to others of the same age, about how much time does he/she spend on each?				Compared to others of the same age, how well does he/she do each one?			
	Don't Know	Less Than Average	Average	More Than Average	Don't Know	Below Average	Average	Above Average
a. _____	☐	☐	☐	☐	☐	☐	☐	☐
b. _____	☐	☐	☐	☐	☐	☐	☐	☐
c. _____	☐	☐	☐	☐	☐	☐	☐	☐

III. Please list any organizations, clubs, teams, or groups your child belongs to.

☐ None

	Compared to others of the same age, how active is he/she in each?			
	Don't Know	Less Active	Average	More Active
a. _____	☐	☐	☐	☐
b. _____	☐	☐	☐	☐
c. _____	☐	☐	☐	☐

IV. Please list any jobs or chores your child has. For example: paper route, babysitting, making bed, working in store, etc. (Include *both* paid and unpaid jobs and chores.)

☐ None

	Compared to others of the same age, how well does he/she carry them out?			
	Don't Know	Below Average	Average	Above Average
a. _____	☐	☐	☐	☐
b. _____	☐	☐	☐	☐
c. _____	☐	☐	☐	☐

V. 1. About how many close friends does your child have? (Do *not* include brothers and sisters) ☐ None ☐ 1 ☐ 2 or 3 ☐ 4 or more

2. About how many times a week does your child do things with any friends outside of regular school hours? (Do *not* include brothers and sisters) ☐ Less than 1 ☐ 1 or 2 ☐ 3 or more

32147

VI. Compared to others of his/her age, how well does your child:

	Worse	About Average	Better	
a. Get along with his/her brothers and sisters?	☐	☐	☐	☐ *Has no brothers or sisters*
b. Get along with other kids?	☐	☐	☐	
c. Behave with his/her parents?	☐	☐	☐	
d. Play and work alone?	☐	☐	☐	

VII. 1. Performance in academic subjects. ☐ *Does not attend school because* _____

Put an ☒ *in one box for each subject that child takes.*

	Failing	Below Average	Average	Above Average
a. Reading, English, or Language Arts	☐	☐	☐	☐
b. History or Social Studies	☐	☐	☐	☐
c. Arithmetic or Math	☐	☐	☐	☐
d. Science	☐	☐	☐	☐
Other academic subjects. For example, computer courses, foreign language, business. Do *not* include gym, shop, drivers ed., etc. e. _____	☐	☐	☐	☐
f. _____	☐	☐	☐	☐
g. _____	☐	☐	☐	☐

2. Does your child receive special remedial services or attend a special class or special school? ☐ No ☐ Yes – kind of services, class, or school:

3. Has your child repeated any grades? ☐ No ☐ Yes – grades and reasons:

4. Has your child had any academic or other problems in school? ☐ No ☐ Yes – please describe:

When did these problems start? ____ year ____ month

Have these problems ended? ☐ No ☐ Yes – when? ____ year ____ month

Does your child have any illness or disability (either physical or mental)? ☐ No ☐ Yes – please describe:

What concerns you most about your child?

Please describe the best things about your child:

32147

Please do not mark in this area

Below is a list of items that describe children and youth. For each item that describes your child *now or within the past 6 months*, please respond by making an ☒ in the appropriate box, as follows:

Make an ☒ in the box labelled "2" if the item is *very true or often true* of your child. Make an ☒ in the box labelled "1" if the item is *somewhat or sometimes true* of your child. If the item is *not true* of your child, make an ☒ in the box labelled "0". Please answer all items as well as you can, even if some do not seem to apply to your child.

0 = Not True (as far as you know) 1 = Somewhat or Sometimes True 2 = Very True or Often True

☐0 ☐1 ☐2 1. Acts too young for his/her age

☐0 ☐1 ☐2 2. Argues a lot

☐0 ☐1 ☐2 3. Bragging, boasting

☐0 ☐1 ☐2 4. Can't concentrate, can't pay attention for long

☐0 ☐1 ☐2 5. Can't sit still, restless, or hyperactive

☐0 ☐1 ☐2 6. Clings to adults or too dependent

☐0 ☐1 ☐2 7. Complains of loneliness

☐0 ☐1 ☐2 8. Confused or seems to be in a fog

☐0 ☐1 ☐2 9. Cries a lot

☐0 ☐1 ☐2 10. Cruelty, bullying, or meanness to others

☐0 ☐1 ☐2 11. Day-dreams or gets lost in his/her thoughts

☐0 ☐1 ☐2 12. Demands a lot of attention

☐0 ☐1 ☐2 13. Destroys his/her own things

☐0 ☐1 ☐2 14. Destroys things belonging to his/her family or others

☐0 ☐1 ☐2 15. Disobedient at home

☐0 ☐1 ☐2 16. Disobedient at school

☐0 ☐1 ☐2 17. Doesn't get along with other kids

☐0 ☐1 ☐2 18. Doesn't seem to feel guilty after misbehaving

☐0 ☐1 ☐2 19. Easily jealous

☐0 ☐1 ☐2 20. Fears certain animals, situations, or places, other than school (describe): _____

_____

☐0 ☐1 ☐2 21. Fears going to school

☐0 ☐1 ☐2 22. Fears he/she might think or do something bad

☐0 ☐1 ☐2 23. Feels he/she has to be perfect

☐0 ☐1 ☐2 24. Feels or complains that no one loves him/her

☐0 ☐1 ☐2 25. Feels others are out to get him/her

☐0 ☐1 ☐2 26. Feels worthless or inferior

☐0 ☐1 ☐2 27. Gets in many fights

☐0 ☐1 ☐2 28. Gets teased a lot

☐0 ☐1 ☐2 29. Hangs around with others who get in trouble

☐0 ☐1 ☐2 30. Impulsive or acts without thinking

☐0 ☐1 ☐2 31. Would rather be alone than with others

☐0 ☐1 ☐2 32. Lying or cheating

☐0 ☐1 ☐2 33. Nervous, highstrung, or tense

☐0 ☐1 ☐2 34. Nervous movements or twitching (describe): _____

_____

☐0 ☐1 ☐2 35. Nightmares

32147

0 = Not True (as far as you know) 1 = Somewhat or Sometimes True 2 = Very True or Often True

☐0 ☐1 ☐2 36. Not liked by other kids

☐0 ☐1 ☐2 37. Too fearful or anxious

☐0 ☐1 ☐2 38. Feels dizzy

☐0 ☐1 ☐2 39. Feels too guilty

☐0 ☐1 ☐2 40. Overtired

☐0 ☐1 ☐2 41. Overweight

42. Physical problems *without known medical cause:*

☐0 ☐1 ☐2 a. Aches or pains *not* stomach or headaches

☐0 ☐1 ☐2 b. Headaches

☐0 ☐1 ☐2 c. Nausea, feels sick

☐0 ☐1 ☐2 d. Problems with eyes *not* corrected by glasses. Describe: _____

_____

☐0 ☐1 ☐2 e. Rashes or other skin problems

☐0 ☐1 ☐2 f. Stomach aches or cramps

☐0 ☐1 ☐2 g. Vomiting, throwing up

☐0 ☐1 ☐2 43. Physically attacks people

☐0 ☐1 ☐2 44. Poor school work

☐0 ☐1 ☐2 45. Poorly coordinated or clumsy

☐0 ☐1 ☐2 46. Prefers being with older kids

☐0 ☐1 ☐2 47. Prefers being with younger kids

☐0 ☐1 ☐2 48. Refuses to talk

☐0 ☐1 ☐2 49. Runs away from home

☐0 ☐1 ☐2 50. Screams a lot

☐0 ☐1 ☐2 51. Secretive, keeps things to self

☐0 ☐1 ☐2 52. Self-conscious or easily embarrassed

☐0 ☐1 ☐2 53. Sets fires

☐0 ☐1 ☐2 54. Showing off or clowning

☐0 ☐1 ☐2 55. Shy or timid

☐0 ☐1 ☐2 56. Stares blankly

☐0 ☐1 ☐2 57. Steals at home

☐0 ☐1 ☐2 58. Steals outside the home

☐0 ☐1 ☐2 59. Stubborn, sullen, or irritable

☐0 ☐1 ☐2 60. Sudden changes in mood or feelings

☐0 ☐1 ☐2 61. Sulks a lot

☐0 ☐1 ☐2 62. Suspicious

☐0 ☐1 ☐2 63. Swearing or obscene language

☐0 ☐1 ☐2 64. Talks too much

☐0 ☐1 ☐2 65. Teases a lot

☐0 ☐1 ☐2 66. Temper tantrums or hot temper

☐0 ☐1 ☐2 67. Thinks about sex too much

☐0 ☐1 ☐2 68. Threatens people

☐0 ☐1 ☐2 69. Truancy, skips school

☐0 ☐1 ☐2 70. Underactive, slow moving, or lacks energy

☐0 ☐1 ☐2 71. Unhappy, sad, or depressed

☐0 ☐1 ☐2 72. Unusually loud

☐0 ☐1 ☐2 73. Uses alcohol or drugs for nonmedical purposes (describe): _____

_____

☐0 ☐1 ☐2 74. Vandalism

☐0 ☐1 ☐2 75. Withdrawn, doesn't get involved with others

☐0 ☐1 ☐2 76. Worries

Appendix S

Network of Relationships Inventory (Mother-Report)

NETWORK OF RELATIONSHIPS INVENTORY (NRI)

60126

Please do not mark in this area

The following questions ask about your relationship with **your child** and with **your spouse/partner**.

Please answer each of the following questions for each person, by making an ☒ in the appropriate box. Sometimes the answers for both people may be the same; sometimes they may be different.

1. How much free time do you spend with this person?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

2. How much do you and this person get upset with or mad at each other?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

3. How much does this person teach you how to do things that you don't know?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

4. How much do you and this person get on each other's nerves?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

5. How much do you talk to this person about everything?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

8. How much does this person treat you like you're admired and respected?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

9. Who tells the other person what to do more often, you or this person?

	She/he almost always does	She/he often does	About the same	I often do	I almost always do
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

11. How much do you play around and have fun with this person?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

12. How much do you and this person disagree and quarrel?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

13. How much does this person help you figure out or fix things?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

19. Between you and this person, who tends to be the BOSS in this relationship?

	She/he almost always does	She/he often does	About the same	I often do	I almost always do
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

21. How often do you go places and do enjoyable things with this person?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

22. How much do you and this person argue with each other?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

23. How often does this person help you when you need to get something done?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

24. How much do you and this person hassle or nag one another?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

29. In your relationship with this person, who tends to take charge and decide what should be done?

	She/he almost always does	She/he often does	About the same	I often do	I almost always do
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

31. How much does this person take part in family decisions concerning him/herself?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

32. How much do you encourage this person to give their ideas and opinions even if you might disagree?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

33. How often do you and this person discuss problems and feel good about the solutions?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

34. How difficult is it to keep track of things this person does?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

35. How much do you and this person find it hard to get away from each other?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

36. How important is it for you and this person to express your opinions to one another?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

37. How often do you know where this person is all the time?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

38. How difficult is it for you and this person to take time away from one another?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

39. How often do you and this person come right out and say things instead of hinting at them?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

40. How often do you and this person check with each other when making decisions?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

41. How much do you feel pressured to spend most free time together with this person?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

42. How much do you and this person encourage each other to say what you really mean?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

43. How independent do you feel from this person?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

44. How much do you feel guilty if you want to spend some time alone from this person?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

45 When you and this person express your opinions, how often do you consider each other s feelings?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

46. How often are you expected to have this person's approval before making decisions?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

47 If you are in trouble, how much does this person become too involved?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

48 How often does this person ignore you if you say something?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

49 Even though you may mean well, how often do you and this person intrude too much into each other s lives?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

50 How difficult is it for you to be yourself around this person?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Child	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

Spouse and Sibling NRI

Please do not mark in this area

We would like to know about **your child's** relationship with his/her other family members.

These questions ask about:

1. **your child's** relationship with your **partner/spouse** (the parent/stepparent with whom your child lives).
2. **your child's** relationship with his/her closest in age **sibling** (brother or sister).

If your child has no brothers or sisters, ☒ this box ⟶ ☐ and leave the "sibling" items blank.

a. How old is your child's closest in age brother or sister? ____ years old.

b. Is this sibling a ☐ brother or ☐ sister?

c. Is this a step-sibling? ☐ Yes ☐ No

Please answer each of the following questions by making an ☒ in the appropriate box.

1. How much free time does your child spend with this person?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Your Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
This Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

2. How much do your child and this person get upset with or mad at each other?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Your Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
This Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

3. How much does this person like or love your child?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Your Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
This Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

4. How much do your child and this person get on each other's nerves?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Your Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
This Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

5. How much does your child play around and have fun with this person?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Your Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
This Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

6. How much do your child and this person disagree and quarrel?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Your Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
This Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

7. How much does this person really care about your child?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Your Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
This Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

8. How much do your child and this person get annoyed with each other's behavior?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Your Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
This Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

9. How often does your child go places and do enjoyable things with this person?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Your Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
This Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

10. How much do your child and this person argue with each other?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Your Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
This Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

11. How much does this person have a strong feeling of affection (love or liking) toward your child?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Your Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
This Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

12. How much do your child and this person hassle or nag one another?

	Little or None	Some-what	Very Much	Extremely Much	The Most
Your Spouse	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
This Sibling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

Appendix T

Internal Consistencies for (Mother-Report) NRI Subscales

Table T

Internal Consistencies for (Mother-Report) NRI Subscales

Subscale	Alpha			
	mother-adolescent	marital	father-adolescent	sibling-adolescent
Companionship	.78	.86	.87	.88
Conflict	.78	.89	.80	.91
Instrumental Aid	.52	.72		
Antagonism	.79	.80	.81	.92
Intimacy	.71	.90		
Nurturance	.64	.80		
Affection	.86	.96	.93	.88
Admiration	.79	.89		
Relative Power	.82	.59		
Reliable Alliance	.83	.97		
Social Support	.89[a]	.97[a]	.89[b]	.89[b]
Negative Interaction	.88[c]	.93[c]	.90[c]	.95[c]

Note. [a]A composite scale, based on the average of the companionship, instrumental aid, intimacy, nurturance, affection, admiration, and reliable alliance scores. [b]A composite scale, based on the average of the companionship and affection subscales. [c]A composite scale, based on the average of scores on the conflict and antagonism subscales.

Appendix U

Conflicts and Problem Solving Scale (Mother-Report)

CONFLICTS AND PROBLEM-SOLVING SCALE

22388

Please do not mark in this area

All family members disagree once in a while. We would like to know how you deal with conflict in your relationship with **your child** and with **your spouse**.

The following questions describe various strategies you may use to deal with conflict with **your child** and with **your spouse**. Please indicate how often YOU use each strategy, by making an ☒ in the box which best corresponds to your situation.

When dealing with conflict with your child or spouse, how often do YOU:

1. Talk it out with the other person.

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

2. Express thoughts and feelings openly

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

3. Listen to the other's point of view

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

4. Try to understand what the other is really feeling

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

5. Try to reason with the other.

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

6. Try to find a solution that meets both of our needs equally

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

7. Work it out with the help of a counselor, a therapist, a friend.

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

8. Compromise, meet the other half way, "split the difference"

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

9. Try to smooth things over

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

10. Give in to the other's viewpoint to escape argument.

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

22388

When dealing with conflict with your child or spouse, how often do YOU:

11. Accept the blame, apologize.

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

12. Placate, humor, indulge the other.

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

13. Try to ignore the problem, avoid talking about it.

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

14. Change the subject.

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

15. Clam up, hold in feelings

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

16. Leave the room.

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

17. Storm out of the house.

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

18. Cry.

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

19. Sulk, refuse to talk, give the "silent treatment".

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

20. Complain, bicker without really getting anywhere.

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

21. Enlist friends or family to support my own point of view.

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

22. Insist on my own point of view

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

23. Try to convince the other of my way of thinking.

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

24. Raise voice, yell, shout.

Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

When dealing with conflict with your child or spouse, how often do YOU:

25. Interrupt/don't listen to the other.
Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often
Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

26. Become sarcastic.
Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often
Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

27. Make accusations.
Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often
Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

28. Name-call, curse, insult.
Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often
Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

29. Say or do something to hurt the other's feelings.
Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often
Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

30. Threaten to end relationship.
Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often
Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

31. Withdraw love or affection.
Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often
Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

32. Throw objects, slam doors, break things.
Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often
Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

33. Throw something.
Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often
Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

34. Threaten physical harm to other.
Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often
Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

35. Push, pull, shove, grab other person.
Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often
Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

36. Slap other person.
Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often
Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

37. Harm self.
Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often
Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

38. Others (please specify): _____
Child: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often
Spouse: ☐ Never ☐ Rarely ☐ Sometimes ☐ Often

Appendix V

Within-Subsystem Analyses

Within-Subsystem Comparisons: The Adolescent-Mother Dyad

To evaluate the association between the various relationship characteristics within each family subsystem and adolescent externalizing and internalizing problems, a series of hierarchical regressions were conducted, as follows. Sex of adolescent was entered at step one; social support, negative interactions, and the two conflict resolution strategies (collaboration and destructive conflict resolution) in the mother-adolescent dyad were entered at step two; and four interaction terms, created by the product of adolescent sex (0 = female, 1 = male) by each of the relationship characteristic variables, were entered at step three. Main effects of adolescent sex are redundant with previous analyses and are therefore not repeated here.

Internalizing problems. For the prediction of internalizing problems (n = 194), the overall regression was significant, F (9, 184) = 7.09, p <.001 (see also Table V1). The block of relationship characteristics, entered at step two, added significantly to the prediction, ΔR^2 = .20, F (4, 188) = 12.37, p < .001. At step two, consistent with previously reported findings, three relationship characteristics in the mother-adolescent dyad contributed uniquely to the prediction of adolescent internalizing problems: social support (β = -.18, sr^2 = .02, p < .05), negative interactions (β = .25, sr^2 = .04, p < .01), and the destructive conflict resolution strategy, (β = .22, sr^2 = .04, p < .01). The adolescent sex by relationship characteristic interaction terms, entered as a block at step three, were not statistically significant.

Table V1

Summary of Hierarchical Regression Analysis for Relationship Characteristics in the Adolescent-Mother Dyad Predicting Adolescent Adjustment Problems (N = 185).

Variable	Internalizing Problems			Externalizing Problems		
	B	*SE B*	β	*B*	*SE B*	β
Step 1						
Sex	-0.62	0.19	-.22**	-0.08	0.18	-.03
Step 2						
Social Support - Mother	-0.32	0.14	-.18*	-0.38	0.12	-.23**
Negative Interactions - Mother	0.31	0.10	.25**	0.35	0.08	.31**
Collaborative CR - Mother	-0.26	0.16	.13	0.11	0.14	.06
Destructive CR - Mother	0.56	0.17	.22**	0.59	0.14	.27**
Step 3						
Sex X Social Support - Mother	-0.13	0.30	-.18	-0.53	0.25	-.80
Sex X Negative Interactions - Mother	0.24	0.20	.24	-0.18	0.17	-.20
Sex X Collaborative CR - Mother	0.38	0.34	.30	0.46	0.28	.39
Sex X Destructive CR - Mother	0.06	0.37	-.03	0.47	0.32	.26

Note. CR = Conflict Resolution.

For internalizing problems, $R^2 = .05$, $p < .01$ for Step 1; $\Delta R^2 = .20$, $p < .001$ for Step 2; $\Delta R^2 = .00$, *ns* for Step 3. For externalizing problems, $R^2 = .00$, *ns* for Step 1; $\Delta R^2 = .35$, $p < .001$ for Step 2; $\Delta R^2 = .02$, *ns* for Step 3.

*$p < .05$. **$p < .01$.

Externalizing problems. For the prediction of externalizing problems (n = 194), the overall regression was significant, F (9, 184) = 12.53, p < .001 (see also Table V1). The block of relationship characteristics, entered at step two, added significantly to the prediction, ΔR^2 = .35, F (4, 188) = 25.64, p <.001. At step two, three relationship characteristics in the mother-adolescent dyad contributed uniquely to the prediction of adolescent externalizing problems: social support (β = -.23, sr^2 = .03, p < .01), negative interactions (β = .31, sr^2 = .06, p < .001), and the destructive conflict resolution strategy (β = .27, sr^2 = .06, p < .001). The adolescent sex by relationship characteristic interaction terms, entered as a block at step three, were not statistically significant.

In sum, mother-adolescent relationship characteristics significantly predicted adolescent internalizing and externalizing problems. Moreover, the social support, negative interactions, and destructive conflict resolution relationship characteristics all uniquely added to the prediction of each outcome. However, their shared contribution accounted for more than 50% of the variance accounted for by the mother-adolescent dyad relationship characteristics in both outcomes.

Within-Subsystem Comparisons: The Adolescent-Father Dyad

The relationship characteristics of the adolescent-father subsystem were examined via hierarchical regression. Sex of adolescent was entered at step one; social support, negative interactions, and the two conflict resolution strategies (collaboration and destructive conflict resolution) in the father-adolescent dyad were entered at step two; and four interaction terms, created by the product of adolescent sex (0 = female, 1 = male) by

each of the relationship characteristic variables, were entered at step three.

Internalizing problems. For the prediction of internalizing problems (n = 185), the overall regression was significant, F (9, 175) = 5.84, p < .001 (see also Table V2). The block of relationship characteristics, entered at step two, added significantly to the prediction, ΔR^2 = .15, F (4, 179) = 8.80, p < .001. At step two, the destructive conflict resolution strategy (β = .18, sr^2 = .02, p < .05) and social support (β = -.23, sr^2 = .03, p < .05) in the father-adolescent dyad contributed uniquely to the prediction of adolescent internalizing problems. The adolescent sex by relationship characteristic interaction terms, entered as a block at step three, were not statistically significant.

Externalizing problems. For the prediction of externalizing problems (n = 185), the overall regression was significant, F (9, 175) = 5.79, p < .001 (see also Table V2). The block of relationship characteristics, entered at step two, added significantly to the prediction, ΔR^2 = .20, F (4, 179) = 11.80, p < .001. At step two, three relationship characteristics in the father-adolescent dyad contributed uniquely to the prediction of adolescent externalizing problems: negative interactions (β = .17, sr^2 = .02, p < .05), and the collaborative (β = .15, sr^2 = .02, p < .05) and destructive (β = .15, sr^2 = .02, p < .05) conflict resolution strategies. The adolescent sex by relationship characteristic interaction terms, entered as a block at step three, were not statistically significant.

In sum, relationship characteristics in the adolescent-father dyad as a block significantly predicted adolescent internalizing and externalizing problems. For the prediction of both outcomes, most of the variance was shared among the four relationship

Table V2

Summary of Hierarchical Regression Analysis for Relationship Characteristics in the Adolescent-Father Dyad Predicting Adolescent Adjustment Problems (N = 185).

	Internalizing Problems			Externalizing Problems		
Variable	*B*	*SE B*	β	*B*	*SE B*	β
Step 1						
Sex	-0.68	0.19	-.25**	-0.14	0.18	-.06
Step 2						
Social Support - Father	-0.34	0.13	-.23*	-0.12	0.12	-.09
Negative Interactions - Father	0.16	0.11	.12	0.20	0.10	.17*
Collaborative CR - Father	0.01	0.15	.00	-0.30	0.14	-.20*
Destructive CR - Father	0.43	0.19	.18*	0.34	0.17	.15*
Step 3						
Sex X Social Support - Father	-0.26	0.29	-.33	-0.45	0.26	-.63
Sex X Negative Interactions - Father	0.34	0.25	.31	-0.07	0.22	-.07
Sex X Collaborative CR - Father	0.23	0.32	.16	0.07	0.29	.06
Sex X Destructive CR - Father	-0.31	0.42	-.15	-0.07	0.38	.03

Note. CR = Conflict Resolution.

For internalizing problems, $R^2 = .06$, $p < .01$ for Step 1; $\Delta R^2 = .15$, $p < .001$ for Step 2; $\Delta R^2 = .01$, *ns* for Step 3. For externalizing problems, $R^2 = .00$, *ns* for Step 1; $\Delta R^2 = .20$, $p < .001$ for Step 2; $\Delta R^2 = .01$, *ns* for Step 3.

*$p < .05$. **$p < .01$.

characteristics. However, less social support and more destructive conflict resolution uniquely predicted internalizing problems, while more negative interactions and destructive conflict resolution, and less collaborative conflict resolution, uniquely predicted externalizing problems.

Within-Subsystem Comparisons: The Adolescent-Sibling Dyad

The relationship characteristics of the adolescent-sibling subsystem were also examined via hierarchical regressions. Sex of adolescent was entered at step one; social support, negative interactions, and the two conflict resolution strategies (collaboration and destructive conflict resolution) in the adolescent-sibling dyad were entered at step two; and four interaction terms, created by the product of adolescent sex (0 = female, 1 = male) by each of the relationship characteristic variables, were entered at step three.

Internalizing problems. For the prediction of internalizing problems (n = 175), the overall regression was significant, F (9, 165) = 4.49, $p < .001$ (see also Table V3). The block of relationship characteristics, entered at step two, added significantly to the prediction, $\Delta R^2 = .13$, F (4, 169) = 6.89, $p < .001$. At step two, low social support (β = -.30, $sr^2 = .06$, $p < .001$) in the adolescent-sibling dyad contributed uniquely to the prediction of adolescent internalizing problems. The adolescent sex by relationship characteristic interaction terms, entered as a block at step three, were not statistically significant.

Externalizing problems. For the prediction of externalizing problems (n = 175), the overall regression was significant, F (9, 165) = 2.75, $p < .01$ (see also Table V3).

Table V3

Summary of Hierarchical Regression Analysis for Relationship Characteristics in the Adolescent-Sibling Dyad Predicting Adolescent Adjustment Problems (N = 175).

	Internalizing Problems			Externalizing Problems		
Variable	*B*	*SE B*	β	*B*	*SE B*	β
Step 1						
Sex	-0.62	0.20	-.23**	-0.16	0.18	-.06
Step 2						
Social Support - Sibling	-0.50	0.14	-.30**	-0.22	0.13	-.15 ^{t}
Negative Interactions - Sibling	0.03	0.09	.03	0.03	0.08	.03
Collaborative CR - Sibling	-0.08	0.14	.00	-0.24	0.14	-.16 ^{t}
Destructive CR - Sibling	0.33	0.19	.13	0.22	0.18	.09
Step 3						
Sex X Social Support - Sibling	0.27	0.30	.34	0.01	0.28	.01
Sex X Negative Interactions - Sibling	-0.21	0.19	-.27	-0.09	0.18	-.14
Sex X Collaborative CR - Sibling	-0.11	0.30	-.07	0.33	0.28	.24
Sex X Destructive CR - Sibling	0.35	0.41	.20	0.44	0.38	.28

Note. CR = Conflict Resolution.

For internalizing problems, $R^2 = .05$, $p < .01$ for Step 1; $\Delta R^2 = .13$, $p < .001$ for Step 2; $\Delta R^2 = .01$, *ns* for Step 3. For externalizing problems, $R^2 = .00$, *ns* for Step 1; $\Delta R^2 = .11$, $p < .01$ for Step 2; $\Delta R^2 = .01$, *ns* for Step 3.

$^{t}p < .10$. **$p < .01$.

Although there were no unique predictors, the block of relationship characteristics, entered at step two, added significantly to the prediction of externalizing problems, ΔR^2 = .11, F (4, 169) = 5.24, p < .01. The adolescent sex by relationship characteristic interaction terms, entered as a block at step three, were not statistically significant. In sum, the block of relationship characteristics (i.e., less social support and collaborative conflict resolution, more negative interactions and destructive conflict resolution) in the adolescent-sibling dyad significantly predicted more internalizing and externalizing problems.

Within-Subsystem Comparisons: The Marital Dyad

The relationship characteristics of the marital subsystem were examined via hierarchical regressions for the sub-sample of adolescents from two-parent families (n = 140). Sex of adolescent was entered at step one; social support, negative interactions, and the two conflict resolution strategies (collaboration and destructive conflict resolution) in the marital dyad were entered at step two; and four interaction terms, created by the product of adolescent sex (0 = female, 1 = male) by each of the relationship characteristic variables, were entered at step three.

Internalizing problems. For the prediction of internalizing problems (n = 140), the overall regression was significant, F (9, 130) = 6.15, p <.001 (see Table V4). The block of relationship characteristics, entered at step two, added significantly to the prediction, ΔR^2 = .15, F (4, 134) = 6.85, p < .001. At step two, the collaboration (β = -.20, sr^2 = .03, p < .05) and destructive (β = .21, sr^2 = .03, p < .05) conflict resolution strategies in the marital

Table V4

Summary of Hierarchical Regression Analysis for Relationship Characteristics in the Marital Dyad Predicting Adolescent Adjustment Problems (N = 140).

Variable	Internalizing Problems			Externalizing Problems		
	B	*SE B*	β	*B*	*SE B*	β
Step 1						
Sex	-0.86	0.22	-.31**	-0.18	0.21	-.07
Step 2						
Social Support - Marital	-0.04	0.14	-.03	-0.17	0.14	-.12
Negative Interactions - Marital	0.12	0.15	.07	0.29	0.14	.19'
Collaborative CR - Marital	-0.41	0.18	-.20*	-0.12	0.18	-.07
Destructive CR - Marital	0.42	0.17	.21*	0.22	0.16	.12
Step 3						
Sex X Social Support - Marital	-0.45	0.29	-.62	-0.12	0.30	-.18
Sex X Negative Interactions - Marital	0.14	0.31	.13	0.02	0.32	.02
Sex X Collaborative CR - Marital	0.96	0.37	.82	0.03	0.37	.04
Sex X Destructive CR - Marital	0.27	0.34	.34	0.01	0.34	.00

Note. CR = Conflict Resolution

For internalizing problems, $R^2 = .09$, p <.001 for Step 1; $\Delta R^2 = .15$, $p < .001$ for Step 2; $\Delta R^2 = .04$, *ns* for Step 3. For externalizing problems, $R^2 = .00$, *ns* for Step 1; $\Delta R^2 = .15$, $p < .01$ for Step 2; $\Delta R^2 = .00$, *ns* for Step 3.

'$p < .10$. *$p < .05$. **$p < .01$.

dyad contributed uniquely to the prediction of adolescent internalizing problems. The adolescent sex by relationship characteristic interaction terms, entered as a block at step three, were not statistically significant.

Externalizing problems. For the prediction of externalizing problems (n = 140), the overall regression was significant, F (9, 130) = 2.80, $p < .01$ (see Table V4). The block of relationship characteristics, entered at step two, added significantly to the prediction, $\Delta R^2 = .15$, F (4, 134) = 6.21, $p < .001$. At step two, there was a nonsignificant trend for negative interactions in the marital dyad ($\beta = .19$, $sr^2 = .02$, $p < .06$) to contribute uniquely to the prediction of adolescent externalizing problems. The adolescent sex by relationship characteristic interaction terms, entered as a block at step three, were not statistically significant.

In sum, the block of relationship characteristics in the marital dyad significantly predicted both adolescent internalizing and externalizing problems, with both collaborative and destructive conflict resolution strategies adding uniquely to the prediction of internalizing problems.