

DIFFICULTIES AMONG CHILDREN EXPOSED TO MULTIPLE RISKS AND THE
PROTECTIVE ROLE OF SOCIAL SUPPORT

BY

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DISSERTATION

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Abstract

The current study explored the difficulties faced by children exposed to multiple family-level risk factors, and examined the possibility that having one or more supportive relationships in their lives buffered the negative effects of these risks. Data from an ongoing longitudinal study, the MAKE IT! (Mother's and Kids' Experiences in Transition) Project were used for this dissertation study. Mother completed a face-to-face interview reporting on their marriage, separation, and divorce, several demographic factors, their mental and physical health and that of their children. The sample for the current study consisted of 103 children ages 3 to 17 (50% female). A cumulative risk score was created based on 9 family-level factors (e.g., low parental education, below poverty level, poor maternal mental health). Child adjustment was measured using the Strengths and Difficulties Questionnaire (Goodman, 1997). Social support was defined as a non-parental adult with whom the child regularly spent time and trusted. Step-wise regression was used to assess the association between risk and difficulties; descriptive and inferential statistics were used to explore the social supports of the children; moderation analyses (Baron & Kenny, 1986) were used to examine whether the presence of and/or the number of social supports moderated the relationship between risk and difficulties. Findings indicated that risk and difficulties were positively associated, such that as the cumulative risk score increased, so did child difficulties. The majority of the sample (85%) reported at least one non-parental adult support person. The moderation analyses were not significant for the whole sample, but differential effects based on age and gender were found. Results highlight the importance of exploring children's exposure to cumulative risk and support as a potential protective factor. Implications for further research and practice are discussed.

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Chapter One: Introduction and Literature Review

Healthy child development has been a focus of research for decades, and research has examined individual, family, and community characteristics, as well as larger societal effects, which inhibit children's development or contribute to adjustment difficulties or psychopathology. Indeed, prior research has identified many risk factors for children's development (e.g., Luthar, 1991; Masten & Garmezy, 1985; Rutter, 1979). However, in the course of this risk research, it was discovered that many children who experienced identified risk factors did not develop problems and lived well-adjusted, successful lives (Rutter, 1979; 1983); that is, they exhibited resilience. Resilience has been defined as successful adaptation despite adversity (Masten, Best, & Garmezy, 1991). As such, resilience research must encompass an assessment of both risk and protective factors. Rutter (1987) noted that protective factors did not eliminate risks, but provided a buffering effect which, in some cases, allowed the child to overcome the risk. Many researchers have identified protective factors which shield children from the negative effects of risk (e.g., Fergusson & Horwood, 2003; Luthar, 2003; Masten et al., 1991; Rutter, 1987; Sameroff, Gutman, & Peck, 2003).

Although many specific risk factors have been identified as having a negative impact on children (e.g., poverty, parental divorce, parental mental illness), more recent research has examined the co-occurrence of many of these risk factors (e.g., Deater-Deckard, Dodge, Bates, & Pettit, 1998; Fergusson & Horwood, 2003; Sameroff, Seifer, Baldwin, & Baldwin, 1993), with the assumption that the cumulative effects of multiple risk have the most negative effects on healthy development. Researchers have argued that multiple risk factors, regardless of the type of risk, add stress to the child's life, thus increasing the chances of negative outcomes (Sameroff et al., 1993). As noted, however, protective factors may buffer these negative effects.

One such protective factor identified in previous resilience research and examined in this study is social support (e.g., Garmezy, 1991; Luthar & Zigler, 1991; Werner & Smith, 1982). For example, connections to non-parental adults have been shown to be beneficial for adolescents—especially those at risk or in adverse situations—and may contribute to psychosocial adjustment (Beam, Chen, & Greenberger, 2002). Additionally, Werner and Smith (1992) suggested that a supportive relationship with at least one person promoted the development of self-esteem and self-efficacy in the young children at risk in their study.

This study explored emotional and behavioral problems of children facing multiple risk factors, and examined the possibility that having one or more supportive relationships in their lives buffered the negative effects of these risks. The paper begins with an overview of the divorce literature as a context for this study, as the study sample consisted of children whose parents were divorcing/divorced. This is followed by an overview of the multiple risk perspective and a summary of each of the specific risks examined in this study.

Divorce and its Negative Effects on Children

National divorce rates vary depending on the source, and are difficult to calculate due to inconsistent reporting from state to state (Amato, 2010). Approximately one third of U.S. children will experience parental separation or divorce by age 10 (Kennedy & Bumpass, 2008) and fifty percent of children born to married parents in 2000 will experience their parents' divorce by age 18 (Fagan & Rector, 2000). Thus, a large segment of the American population is affected by divorce.

Divorce is a widely researched topic in the family studies field. Approaches to the study of divorce and the findings related to its effects on children, however, have been very diverse. Researchers have focused broadly on children's responses to parental separation or divorce and in many cases, exposure to parental conflict during the separation or divorce proceedings and the many transitions that follow divorce. Findings from these studies are mixed, with some indicating children suffer numerous negative effects from their parents' divorce (Amato, 2000; Marsiglio, Amato, Day, & Lamb, 2000). For example, in a 1991 meta-analysis, Amato and Keith found that, on average, children from divorced families had more externalizing problems (e.g., negative behaviors, not getting along with parents) than children in non-divorced families; Amato's (2001) review supported these findings. Heatherington and Elmore (2003) reported that internalizing problems, such as depression or low self-esteem, are also associated with divorce. Other studies, however, have reported few long-term effects on children (Amato, 2001; Emery, 1999; Hetherington & Stanley-Hagan, 1999). Many of these studies compare children of divorce to children in two-parent nondivorced families (Heatherington & Elmore, 2003) as opposed to examining outcomes only among children with divorced parents. This approach fails to recognize the wide variability in the wellbeing of children of divorced families.

Children's age and gender have been examined in studies of adaptation to divorce, but the results are also somewhat inconsistent (Hetherington & Elmore, 2003). For example, some

studies have reported that boys tend toward externalizing behavior in response to divorce (e.g., Emery, 1982), while other research has reported that both sexes exhibit higher levels of both externalizing and internalizing behaviors compared to adolescents in nondivorced families (Hetherington, 1993; Hetherington & Clingempeel, 1992). Some research shows that gender differences are more likely in younger children than in older children or adolescents (e.g., Amato & Keith, 1991). Thus, age and gender differences are important areas for future research.

As noted, one shortcoming in the divorce literature is that the wide range in the outcomes among children of divorced families is often overlooked. The current study included a sample of children whose parents were divorced/divorcing, thus they were not compared to children from two-parent families. Another problem in the divorce literature is that too often, divorce is seen as a single event rather than a process with many required changes and adjustments (Emery, 1999). Change can be both good and bad, but all change requires adaptation – both for parents and for the children. Children in divorced families often encounter additional stressors that put them at risk (Amato, 1993, 2001; Hetherington, Bridges, & Isabella, 1998; Kelly & Emery, 2003). Multiple risks, or transitions related to divorce, that may especially affect children have been identified and include, for example, stress of the initial separation (e.g., Wallerstein & Kelly, 1980), parental conflict (both before and after the divorce; e.g., Emery 1982; Johnston & Roseby, 1997), financial hardship (Booth & Amato, 2001), and parents (typically mothers) becoming less psychologically available due to the burdens of being a newly-single parent or experiencing depression (Heatherington, 1999). Divorce is presented as the backdrop for this study and thereby was not assessed as a risk factor; other factors, many of which may be associated with divorce, were assessed as risks in this study and are briefly discussed below.

Negative Effects of Multiple Risks

Numerous studies now demonstrate that it is the accumulation of stressors which predicts a range of negative child outcomes (Deater-Deckard et al., 1998; Flouri, Buchanan, Tan, Griggs, & Attar-Schwartz, 2010; Jones, Forehand, Brody, Armistead, & the Family Health Project Research Group, 2002; Masten & Sesma, 1999; Rutter, 1979; Sameroff, 2000). For example, Rutter's (1979) early work focused on six risk factors associated with childhood psychiatric disorders (e.g., marital discord, low socioeconomic status, maternal psychiatric disorder). He discovered that while no single risk factor significantly increased a child's risk for diagnosis, the presence of two risk factors contributed a fourfold increase in the likelihood of psychopathology.

Additionally, the presence of four risk factors produced a tenfold increase. This supports the assertion that multiple risk factors increase a child's risk for developmental difficulties. Sameroff and colleagues' (1993; 1998) work likewise affirms that it is the number of risk factors that is important, and not any one particular risk. In their study, Sameroff, Bartko, Baldwin, Baldwin, and Seifer (1998), computed a multiple risk score based on ten environmental factors (e.g., maternal mental disorder, low maternal education, single parenthood, large family size). They found that children with 8 or more risk factors (the high-risk group) were nearly seven times more likely to have poor academic outcomes than children with 0 to 3 risk factors (the low-risk group). Masten and colleagues' research on homeless children (Masten, Miliotis, Graham-Bermann, Ramirez, & Neeman, 1993; Masten & Sesma, 1999) found that even when all children were experiencing the major stressor of homelessness, those who experienced higher numbers of other risk factors also experienced more problems. Thus, the negative effects of the accumulation of multiple risk factors have been established in the literature.

In some prior studies examining multiple risks, the risk score is confounded by the combination of family-level and individual-level vulnerabilities (see Gerard & Buehler, 2004; van der Laan et al., 2010). While individual-level risks are important and obviously contribute to a child's well-being, the current study focused on family-level risks only. By not including individual vulnerabilities (e.g., personality characteristics, lower IQ), the risk score solely represents the family context and its effects on the child. The family-level factors used in this study were selected based on prior research confirming the factor as a risk for children and available data. Following current recommendations in the field (discussed in the next section), these factors were combined to create a composite risk score.

Composite Risk Score as Indicator of Cumulative Risk

In studies of multiple risks, a composite risk score typically is created by summing selected risk factors that have each been scored as a dichotomy reflecting presence vs. absence (e.g., Deater-Deckard et al., 1998; Sameroff et al., 1998). Buehler and Gerard (2012) also note that the cumulative risk literature has not given enough attention to the risks within the family domain, thus this study makes an important contribution to the literature. The family-level risks examined in this study are presented below. With space limitations in mind, this is not an exhaustive review of the literature for each risk factor, as each has been the focus of several articles, chapters, and in most cases, books on the subject.

Young mother. Research indicates that children born to young mothers are at risk for cognitive, emotional, behavioral, and developmental problems (Levine, Pollack, & Comfort, 2001; Nagin & Tremblay, 2001; Wakschlag, Gordon, Lahey, Loeber, Green, & Leventhal, 2000; Whitman, Borkowski, Schellenback, & Nath, 1997). Children born to young mothers (often defined as teenaged mothers, but including mothers up to age 21 in some studies) have been found to have increased rates of emotional difficulties, such as flattened affect, and an increased risk for aggressive behavior (Zahn-Waxler, Kockanska, Krupnik, & McKnew, 1990). General behavior problems have also been reported in children of young mothers (Brooks-Gunn & Furstenberg, 1986; Levine et al., 2001; Nagin & Tremblay, 2001), and Grogger (1997) found that sons born to teenaged mothers were incarcerated at slightly elevated rates compared to sons born to older mothers. Levine et al. (2001) reported that a young maternal age at first birth was significantly related to problem behaviors (e.g., fighting, truancy, early sexual activity) among adolescents, even after controlling for maternal characteristics. The significant association between young maternal age and negative children's outcomes has been documented in several studies as a risk factor for children (e.g., Dubow & Luster, 1990; Levine et al., 2001; Moore, Morrison, & Greene, 1997), and is thus included here.

Low parental education. Prior research has indicated that parental education level is significantly associated with children's educational and behavioral outcomes (e.g., Davis-Kean, 2005; Evans & Kim, 2010; Haveman & Wolfe, 1995; Nagin & Tremblay, 2001; Smith, Brooks-Gunn, & Klebanov, 1997). In some studies, education (and family income) was related to the climate of the home environment and parenting strategies (Corwyn & Bradley, 2002; Klebanov, Brooks-Gunn, & Duncan, 1994). In Klebanov's study, maternal education alone (i.e., not including income) was significantly associated with parental warmth, which is often related to child outcomes. Corwyn and Bradley (2002) also noted that maternal education had a direct influence on children's behavioral outcomes, in addition to some indirect influence through the home environment. In a study of the developmental trajectories of young boys, low maternal education was one of only two factors (the other being young maternal age) that distinguished the group with the highest levels of hyperactivity and opposition from the group with the lower levels of these symptoms (Nagin & Tremblay, 2001). Thus, low parental education was included as a risk factor for children in this study.

Below poverty threshold. The association of poverty with adverse developmental outcomes is well established (see the special issue of *Child Development* on children and poverty, Huston, McLoyd, & Coll, 1994). Heatherington and Elmore (2003) note that “some researchers have argued that as much as half of the psychological, behavioral, and academic differences observed between children from single-parent, divorced families and two-parent families can be attributed to the significant economic decline that custodial mothers typically experience in the aftermath of a divorce due to father absence” (p. 192). In addition, some researchers (e.g., Huston, 1991; Kaplan-Sanoff, Parker, & Zuckerman, 1991) have used the term “double jeopardy” in relation to children in poverty, acknowledging the fact that these children are at greater risk for many negative outcomes (e.g., illness, depression, family stress). Owens and Shaw (2003) noted that poverty affects multiple aspects of individual development and the family as a whole and should be considered a universal stressor; thus it was included as a risk factor for this sample.

Mother receiving public assistance. In their examination of current, recent, and non-welfare recipients, Tout, Scarpa, and Zaslow (2002) found that children in families receiving public assistance were at greater risk than other children – even other children living in low-income families. More specifically, children in families on welfare were more likely to have emotional and behavioral difficulties than those whose families were not on welfare, and adolescents whose families had recently left welfare were more likely to have been suspended or expelled from school than those whose families had never been on welfare (Tout et al., 2002). For low-income families, food insecurity and a lack of access to adequate transportation and/or housing cause high levels of stress (e.g., Block, He, Zaslavsky, Ding, & Ayanian, 2009; Lohman, Stewart, Gundersen, Garasky, & Eisenmann, 2009). Although receiving cash, food, and/or housing assistance helps to relieve the immediate stressor of lacking basic necessities, it is not a long-term solution and, as noted above, comes with risks of its own. Thus, receiving public assistance is included as a separate risk factor.

Child “exposure” to interparental domestic violence. Over 5 million incidents of domestic violence (DV) against women occur in the United States every year (Kracke & Hahn, 2008); more than half of women who experience domestic violence have children under the age of 12 (Fantuzzo, Boruch, Beriama, Atkins, & Marcus, 1997). Domestic violence is defined and measured in this study as acts of abuse perpetrated by a husband against his wife. In a recent

meta-analysis, children exposed to DV had an “increased risk of...developing emotional and behavioral problems and of increased exposure to the presence of other adversities in their lives” (Holt, Buckley, & Whelan, 2008, p. 797).

There is some debate in the literature, however, about the operational definition of the term *exposure* (Jouriles, McDonald, Norwood, Ware, Spiller, & Swank, 1998; Kracke & Hahn, 2009; Mohr, Lutz, Fantuzzo, & Perry, 2000). Some researchers have used *exposure* to indicate that DV was present in the home in which the child lived, while others limit the definition to the child actually witnessing violence occurring between their parents. Findings, then, are mixed regarding child outcomes, depending on the definition used. In some studies, no or few significant psychological and behavioral effects on children were found (Grych, Jouriles, Swank, McDonald, & Norwood, 2000; Hughes & Luke, 1998). However, other studies have reported that children exposed to parental violence have higher rates of physical, mental, and behavioral health problems such as gastrointestinal disorders, sleep difficulties, poorer social adjustment, low self-esteem, depressive and anxiety symptoms, aggressiveness, and externalizing and internalizing problems than other children (Berman, Hardesty, & Humphreys, 2004; Saltzman, Holden, & Holahan, 2005; Samuelson & Cashman, 2009). Several studies in recent years have linked children’s direct exposure to domestic violence to an increased risk for emotional and behavioral problems (e.g., Evans, Davies, & DiLillo, 2008; Holt et al., 2008; Kitzmann, Gaylord, Holt, & Kenny, 2003). For example, a recent study found that adolescents exposed to DV had higher levels of internalizing and externalizing behaviors than those not exposed (Moylan, Herrenkohl, Sousa, Tajima, Herrenkohl, & Russo, 2010), and McDonald and Jouriles (1991) found that many exposed children exhibited behavior problems at clinical levels (estimates range from approximately 25% to 70%).

There have also been conflicting findings regarding the differential effects of violence exposure based on gender and age. Fantuzzo and Mohr’s (1999) meta-analysis, for example, indicated that some studies have found no gender differences, while others report more negative outcomes for males. Levendosky and colleagues (Levendosky, Huth-Bocks, Semel, & Shapiro, 2002), reported that younger children are more negatively affected, while others reported no differences based on child age (Evans et al., 2008; Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffee, 2003).

Researchers agree that children may be aware of violence even if they did not directly witness it occurring (e.g., Cunningham & Baker, 2004; Mullender, Hagne, Iman, Kelly, Malos, & Regan, 2002), but others highlight the importance of making the distinction between children who are indirectly exposed and those who directly witness domestic violence (Kaufman Kantor & Little, 2003). Thus, in this study, two separate risk factors were assessed: *presence of domestic violence in the home* and *whether the child directly witnessed the violence*.

Presence of severe violence toward mother. Severe violence causing injury to the mother was included as an additional risk factor for this study. In Jouriles and colleagues' (1998) study of severe violence (i.e., using knives or guns), this form of severe violence increased the child's risk for behavior problems, whether or not they actually witnessed the abuse. Thus, the presence of severe violence – regardless of child witnessing – was an additional risk factor in this study.

Conflicted/hostile separation. Prior research has established that parental conflict, both during marriage and during or following divorce, has negative effects on children (see Amato & Keith, 1991; Cummings & Davies, 1994; Davies & Cummings, 1994; Emery, 1982; 1999; Lansford, 2009) Parental hostility and conflict related to divorce is significantly associated with behavioral and emotional difficulties, especially among boys (Emery, 1982; Shaw & Emery, 1987). Additionally, research has shown that children are often better off in conflict-free divorced families than in two-parent families with much conflict (Emery, 1982). An initially hostile or angry separation often worsens when parents do not agree on child custody or support and engage in legal battles to resolve these issues (Maccoby, Buchanan, Mnookin & Dornbusch, 1993).

Poor maternal mental health. Women who have experienced a divorce and other life stressors may struggle with depression (Thabes, 1997), and women who have been abused may exhibit symptoms of post-traumatic stress disorder and depression, among other disorders (e.g., Golding, 1999; Houskamp & Foy, 1991). In fact, “depression is one of the most common comorbid conditions associated with PTSD” (Nixon, Resick, & Nishith, 2004, p. 315). Both depression and PTSD are fairly common diagnoses among vulnerable mothers, and each of these conditions can negatively affect parenting by decreasing emotional availability and responsiveness (Cascardi & O’Leary, 1992; Onyskiw & Hayduk, 2001). Levendosky and Graham-Bermann (2001), however, found that mothers’ psychological functioning had direct

effects on children and was not solely mediated through its effects on parenting. Thus, even if mothers are able to parent effectively, their depressed mood or anxious behavior may still affect their children. Prior research on maternal psychopathology and its effects on children has largely focused on maternal depression (Galea, Ahern, Resnick, Kilpatrick, Bucuvalas, et al., 2002). For example, Beck's (1999) meta-analysis of maternal depression indicated that children of depressed mothers are at an increased risk for behavior problems and general psychopathology. Several studies have noted the high rates of diagnoses (of depression or other disorder) of adolescents of depressed mothers (e.g., Goodman, Adamson, Riniti, & Cole, 1994; Hammen, 2003), and the behavior problems of children of depressed mothers (Beck, 1999). Thus, maternal mental health is an important contributor to children's emotional and behavioral challenges and is included as a risk factor in this study.

Special Considerations for Age and Gender

As noted throughout this literature review, there are some differences among risk factors in terms of child emotional and behavioral characteristics based on age and gender. Appleyard and colleagues (2005) hypothesized that the timing of risk exposure may affect the development of emotional or behavioral problems. They suggested that early experiences may be more powerful than experiences in middle childhood or adolescence, as they set the stage for later experiences, or that certain risk factors are more impactful at certain times in the developmental stages (Appleyard, Egeland, van Dulmen, & Sroufe, 2005). Additionally, many researchers have hypothesized that gender plays a role in a child's response to adversity (Fergusson & Horwood, 2003). In their study of multiple risks and long-term outcomes, they suggested that "the presence of gender-specific strengths and vulnerabilities that may act to mitigate or exacerbate the effects of family adversity on risks of problems in adolescence" (Fergusson & Horwood, 2003, p. 146). As such, age and gender are specifically examined in this study as personal characteristics that may play a role in the child's adjustment or response to risk.

Summary

As Sameroff and colleagues noted, "focusing on a single risk factor does not address the reality of most children's lives" (Sameroff et al., 2003, p. 367). Thus, a composite risk score better reflects the multiple risk factors faced by children. This study compiled children's family-level risks to create a composite risk score and examined child outcomes in relation to this score. Examining the child in the context of the family is a key concept in ecological systems theory

(Bronfenbrenner, 1979) and family systems theory (Minuchin, 1985), discussed in the next chapter. This study also examined social support as a potential moderator; thus, Chapter 2 also includes an overview of the resilience and social support theoretical perspectives.

Chapter Two: Theoretical Perspectives

This study was influenced by, and findings were interpreted using, ecological systems theory, family systems theory, and theories of resilience and social support. This chapter explains the main tenets of each of these approaches and how they played a role in the study, beginning with the ecological systems theory.

Ecological Systems Theory

Ecological systems theory (Bronfenbrenner, 1977, 1979; Bronfenbrenner & Ceci, 1994) provides a useful way to conceptualize the individual in context and assess how the interaction between the person and the context contributes to development and wellbeing. Ecological systems theory asserts that the individual exists within several systems and that human development occurs through complex interactions between the individual and these systems (Bronfenbrenner & Ceci, 1994).

Bronfenbrenner defines the ecology of human development as:

“...the scientific study of the progressive, mutual accommodation between an active, growing human being and the changing properties of the immediate settings in which the developing person lives, as this process is affected by relations between those settings, and by the larger contexts in which the settings are embedded” (Bronfenbrenner, 1993, p. 7).

According to the theory, an individual’s development is a result of four interrelated dimensions: person, process, time, and context. The person dimension includes individual characteristics (e.g., age, gender, race). Process refers to the interactions between the individual and environment and, according to Bronfenbrenner, is the most important aspect of the theory (Bronfenbrenner & Ceci, 1994). The time dimension takes into consideration the longitudinal nature of development. This is an important factor when examining developmental trajectories, as a person develops over time through interaction with his or her environment. The last dimension, context, refers to the physical and social environments in which an individual interacts and develops.

Bronfenbrenner (1994) explains that context is actually a set of “nested” contexts that influence development both directly and indirectly. The microsystem, mesosystem, exosystem, and macrosystem are discussed in the ecological model as comprising the environment or context for each individual. The first level, closest to the individual of study, is the microsystem.

This includes contexts, such as the family and the neighborhood, in which the individual directly participates and interacts. The mesosystem refers to connections between these various microsystems. The exosystem refers to the contexts in which the individual does not directly participate, but that affect the individual due to the influence on various microsystems. The final layer of context, the one most broad and disconnected from the individual is the macrosystem.

This study utilized ecological systems theory to examine child adjustment. For instance, the risk factors assessed in this study are family-level factors; thus, it is the process of the child's interaction in the family environment, or context, which establishes the presence of a risk factor. Both age and gender were examined in the current study as individual characteristics that may play a role in children's adjustment. This is an exploratory study linking certain risks to child emotional and behavioral characteristics and based on available data, thus the time dimension was not addressed. Data currently being collected for the larger (ongoing) study will allow future longitudinal examinations of these associations over time. This study examines the child in the context of the family; this microsystem was assessed for risk factors which may contribute to child emotional and behavioral difficulties. Because this study focused on factors within the family system, the basics of family systems theory are also presented here and family systems theory is applied to many of the findings of this study providing implications for practice and intervention.

Family Systems Theory

Taken from general systems theory (Bertalanffy, 1968) and evolved from family therapy, family systems theory asserts that the family is an organized system and that each family member contributes to the functioning of this system (Minuchin, 1985). The family system is characterized by six basic principles (see Minuchin, 1985, pp. 289-291):

1. Any system is an organized whole, and elements within the system are necessarily interdependent;
2. Patterns in a system are circular rather than linear;
3. Systems have homeostatic features that maintain the stability of their patterns;
4. Evolution and change are inherent in open systems;
5. Complex systems are composed of subsystems; and
6. The subsystems within a larger system are separated by boundaries, and interactions across boundaries are governed by implicit rules and patterns.

The theory views the family as a whole greater than the sum of its parts -- the family is not just a collection of individuals, but a system that interacts and interrelates with one another. The family system also has subsystems (e.g., marital subsystem, sibling subsystem) which may have rules of their own and interact with each other and with the larger family system in different ways. The theory asserts that subsystems can affect interactions within other subsystems and within the family system as a whole (Minuchin, 1985). Suprasystems, systems larger than families (e.g., communities, regions, racial/ethnic groups), also affect the family system.

Family systems theory indicates that parental wellbeing has a direct influence on child wellbeing. For example, problems in the marital subsystem will affect the parent-child and the sibling subsystems, and ultimately, individual behavior (Cox & Paley, 2003; Minuchin, 1985). Thus, when examining children's adjustment, taking the family context into consideration is of the upmost importance.

Ecological and Family Systems Theories: An Integrated View

The commonalities of the family and ecological systems theories are obvious. Both operate on the basis of systems theory, which acknowledges the importance of interdependence and relationships. Both theories look for multiple influences and causes for behaviors in expanding circles starting from the individual. In family systems theory, the circles include other family members in subsystems (e.g., parent-child, parental, sibling). In the ecological systems theory, the individual and family are in the center of the circle, with outer circles including other contexts in which the individual and family interacts. While other contexts were not assessed in this study, the findings do provide implications for viewing the child and the family in terms of the ecological systems theory for intervention and future research. Recognizing that the marital subsystem was in turmoil, this study examined this subsystem and other family-level risks in relation to child emotional and behavioral difficulties, applying family systems theory to the results of this study using the ecological model.

Resilience Theory

Examining child outcomes from an ecological perspective and exploring the protective role of social support indicates the expectation that not all children who experience risk will face negative outcomes. "Resilience refers to a dynamic process encompassing positive adaptation within the context of significant adversity" (Luthar, Cicchetti, & Becker, 2000, p. 543). Rutter noted that protection is "not in the evasion of the risk, but in successful engagement with it"

(1987, p. 318). Thus, individuals who exhibit resilience did not avoid adversity, but overcame it or successfully adapted despite their experiences (Luthar et al., 2000; Rutter, 1993).

Accordingly, resilience itself is not directly measured, but is inferred based on exposure to risk and an assessment of positive adaptation. Well-known resilience researchers Masten (1994) and Luthar and Cicchetti (2000), among others, note that the term *resilience* should be used as opposed to *resiliency*, as resiliency implies a characteristic that an individual possesses, rather than a process. Although this section is titled *resilience theory* there is no one theory per se. Rather, resilience is thought of as an overarching framework or a collection of models and hypotheses regarding how or why one person survives, or even thrives, despite adversity while another does not.

Luthar and Cicchetti (2000) also note that an important distinction of the resilience framework is the attention to positive outcomes despite adversity. Too often research is concerned with what went wrong, focusing on or emphasizing the negatives of a particular situation. The resilience framework is “a shift away from maladjustment to consider competence as well [and provides...] attention to at-risk individuals’ strengths in addition to their deficits” (Luthar & Cicchetti, 2000, p. 861). This study examined children’s adjustment in relation to multiple risk factors, and the hypothesis that a connection to a trusted, non-parental adult moderates the association between risk and adjustment. In addition to a brief historical view of resilience, key concepts such as risk factors (including statistical versus actual risk), promotive factors, and protective factors and processes are discussed below.

The study of resilience began with the exploration of children at risk (e.g., Garmezy, 1970; Rutter, 1979). Through exploring factors that contributed to child psychopathology, researchers discovered that not all children exposed to risks developed problems (Rutter, 1979), that is, they exhibited resilience. This unique perspective of at-risk children quickly expanded, and children in other disadvantaged circumstances (e.g., low socioeconomic status, maltreatment, chronic illness) were also studied (Beeghly & Cicchetti, 1994; Rutter, 1998; Wells & Schwebel, 1987; Werner & Smith, 1982, 1992). This early research was largely focused on personal characteristics that made a person “resilient” (Luthar et al., 2000) in the face of adversity or risk. Luthar et al. (2000) have noted, however, the wide range in outcomes among resilient individuals and have suggested that resilience be assessed within specific domains. For example, youth may have high academic achievement, but be depressed or have behavior

problems. Thus, they exhibit resilience in one area, but not another. It is also important to note that resilience is not a static construct; just because an individual is labeled resilient once does not mean that they are invincible or will always be resilient throughout their lifetime (Rutter, 1987).

Two concepts are key to understanding this phenomenon and to the study of resilience: risk and protective factors. Risk factors are defined as measurable characteristics that elevate the possibility of negative outcomes (Luthar et al., 2000). Multiple risk factors have been identified in the literature (e.g., maternal depression, poverty, as noted in the literature review above). There is some debate in the literature about *statistical* versus *actual risk*. Luthar et al. (2000) noted a trend in resilience research to treat certain indicators as risk factors if they have been significantly associated with negative outcomes in empirical research (indicating statistical risk), whereas actual risk takes into consideration the specific circumstances of the individual under study, such as level of exposure. The concept of cumulative risk is also important in the study of resilience and particularly relevant to this study. Sameroff et al. (2003) noted that the accumulation of negative events or contexts increased the likelihood of negative outcomes.

Protective factors are those aspects that help to moderate the effects of stress. Protective factors modify the “effects of risk in a positive direction,” (Luthar, Sawyer, & Brown, 2006, p. 106), and include personal characteristics as well as contextual characteristics (Luthar & Cicchetti, 2000). Most relevant to the current study, supportive relationships have been found to be a protective factor and to facilitate resilience (Masten, 1994; Werner & Smith, 1992). Rutter (1987) asserted that factors are only considered protective if they interact with or moderate a risk factor. He argued that the mere presence of a protective factor is not enough, but that the “focus of attention should be on protective *processes* or mechanisms, rather than on variables” (p. 329). Others have suggested that protective factors are merely the opposite of risk factors. For example, if poverty is considered a risk factor, having money would be considered a protective factor. However, Sameroff (1999) made a distinction between this view and Rutter’s and noted that *promotive factors* is perhaps a better name for the absence of a risk factor. Sameroff (1999) argued that promotive factors are beneficial for both high and low risk groups. *Protective* factors, according to Rutter (1987), would have no effect in low risk populations. He suggests four types of interactions between protective and risk factors: 1) reduction of risk impact, 2) reduction of negative chain reactions, 3) establishment and maintenance of self-esteem and self-

efficacy, and 4) opening of opportunities. These four protective mechanisms are important to consider when measuring resilience and are particularly relevant to the concept of social support as a protective factor. In this study, the role of relationships buffering the negative effects of risk was examined as a protective factor, consistent with the social support literature.

Social Support

In their pivotal review of the association between social support and well-being, Cohen and Wills (1985) examined studies that promoted one of two models: the direct or main effects model and the buffering model. The main effects model suggests that supportive relationships are positive or have positive effects on an individual, regardless of whether that individual is facing stress or *needs* support (this is what is called a promotive factor in resilience frameworks). The buffering model, however, suggests that support somehow “buffers” the effects of stress, therefore moderating the effects of stress on individuals (Cohen & Wills, 1985; i.e., operates as a protective factor as defined in resilience frameworks). Cohen and Wills found evidence for both models and note that “both conceptualizations of social support are correct in some respects, but each represents a different process through which social support may affect well-being” (p. 348). Both models are currently used in the literature, as most researchers accept that having supportive relationships can have a positive effect in one’s life and that, in some cases, these supports can safeguard or shield a person from other negative events in their lives. The buffering model is also referred to as the stress and coping perspective and is elaborated upon in Lakey and Cohen’s (2000) book chapter. This social support perspective ties in well with the resilience perspective utilized in this study.

Consistent with the notion of social support as a protective factor, some studies have examined social support as a moderator between risk and outcomes. For example, in their examination of the role of grandparents for children facing life stresses, Flouri et al. (2010) found that a close relationship with a grandparent moderated the association between proximal life stress and psychopathology. Similarly, in their study of maternal depression and the effects on children, Conrad and Hammen (1993), noted that a relationship with an adult served as a protective factor (or what they called a resource) to the children. Indeed, according to Luthar and colleagues (2000), connections to supportive adults in the community have consistently been linked to resilience among youth.

Other studies have also found benefits of adult connections for at-risk youth. Werner and Smith (1982; 1992) found that the most resilient youth in their longitudinal study had some connection to a mentor or other caring adult in their lives. In addition, the related body of literature on youth mentoring has noted positive effects on emotional, behavioral, and social, and academic outcomes (Greeson & Bowen, 2008) of youth who have mentors or positive relationships with caring adults.

As such, the presence of a social support figure (i.e., non-parental adult whom the child trusts and regularly spends time with) was assessed as a protective factor (e.g., moderator) in this study. Utilizing this definition of social support allowed for the broadest conceptualization of social support and is appropriate for this exploratory study. Future investigations utilizing this theoretical perspective might want to examine quality of the relationship (rather than mere presence) and/or the types of support the child receives from the relationship (e.g., emotional, tangible, financial; this is discussed further in Chapter 5).

Summary of Theoretical Perspectives

Each of these theoretical perspectives influenced the design of this study and/or the interpretation of the results. Taking an ecological perspective on children's emotional and behavioral characteristics allowed for a better understanding of the family's influence on child development. Viewing the family as a system dictated that a disruption in one subsystem will affect everyone in the family and contributed to the understanding of children's adjustment in the context of a divorce and multiple risk exposure. Taking a resilience perspective and examining potential protective factors allowed for the exploration of children's social supports and how they may play a role in ameliorating the negative impact of risk exposure. Thus, each of these theoretical perspectives is important.

The Current Study

Drawing upon these different theoretical perspectives, the current study examined the emotional and behavioral characteristics of children exposed to multiple risks and hypothesized that a supportive relationship with a non-parental adult would serve as a moderator between risk and child adjustment. Three specific research questions were addressed:

- 1) Is there an association between the children's cumulative risk exposure and their emotional and behavioral functioning?

2) How many and what types (e.g., grandparent, mentor) of non-parental supportive adults do the children have in their lives?

3) Does the presence of a relationship or the number of relationships moderate the association between risk and child functioning scores?

In exploring these three questions, this study made several important contributions to the literature. First, the study furthered the examination of multiple risks and child difficulties. Specifically, the study focused exclusively on family-level risks, a limitation of existing literature (Buehler & Gerard, 2012). Secondly, the study provided insight into the non-parental social relationships of children of divorcing parents. Divorce can cause many disruptions, including the loss of important connections and support persons (Heatherington, 1999). Exploring these networks is important, and this study provides new knowledge of the supports of these children. Finally, this study contributes to the literature on social support as a moderator and protective factor, in the association between risk and child emotional and behavioral functioning among children experiencing parental divorce – a large segment of American children.

Chapter Three: Methods

Procedure

The sample for this study was taken from a larger ongoing NICHD-funded project (*The Mothers' and Kids' Experiences in Transition Project*; MAKE IT! Project). The study was approved by the University of Illinois Institutional Review Board prior to the beginning of data collection. The methods for the larger study are first explained, followed by a description of the sample and measures used in this dissertation study.

The MAKE IT Project

The MAKE IT! Project involved face-to-face interviews with mothers in the process of a divorce filed in Champaign County (all child data is gathered through mother report). Interviews are being conducted at five time points: baseline (Time 1) and 3, 6, 9, and 12 months. Interviews covered a range of topics including demographic characteristics, information about the marriage, separation, and divorce (e.g., dates of these events, who initiated separation/divorce, custody agreements), current contact between the divorcing partners, contact between fathers and their children, conflict in the marriage, presence of intimate partner violence (DV) and child exposure to DV, and a range of maternal and child outcomes. The overarching goal of the study was to explore women's experiences of co-parenting with their former partner, with a focus on those who experienced DV, and how those experiences affect women's and children's mental and physical health outcomes.

To identify potential participants, project staff accessed public divorce records of women who were named in a divorce filing in the prior 12 weeks at the Champaign County Circuit Clerk's office. Mothers who had minor children with the partner they were divorcing were considered potential participants and mailed a letter inviting them to participate in a study of mothers' experiences of parenting after separation. Research assistants followed-up with non-responders by telephone, mail, or through attorneys (if one was identified in the case file). Upon phone contact with women who expressed interest in participating, staff explained the study and ensured they met the criteria for inclusion which included 1) separated less than two years, 2) had at least one child under the age of 18 with their former partner, 3) had at least 25% time with the child(ren), and 4) English-speaking. These criteria were set for several reasons. First, we wanted reports of the marital relationship and the time since separation to be recent, thus the criterion of being separated less than two years. Second, the study asked about parenting and co-

parenting, so having at least one child together and parenting that child at least 25% of the time (enough to have parental duties) was important. Speaking English was a criterion based on funding limitations, but did not seem to affect the sample as we did not turn anyone away from the project due to this criterion (approximately 15% of Champaign County speaks a language other than English at home; <http://quickfacts.census.gov/qfd/states/17/17019.html>).

Once research staff confirmed that the mother met these criteria and was willing to participate, the first interview was scheduled. Interviews were scheduled at a place chosen by the participant; most took place in our research offices on campus, in a public location (such as a library or coffee shop), or in the participant's home. Child care was offered during the interview if needed. As noted, five interviews took place over the course of a year. Participants were given a list of local and national resources at each interview, as well as \$35 for the first interview, \$40 for the second and third interviews, and \$45 for the fourth and fifth interviews. Recruitment for the Make It! Project began in October 2010 and ended in January 2013.

This Dissertation Study

Data from the first (baseline) interview was utilized in this dissertation study. Interviews ranged from 35 to 180 ($M = 71$) minutes. Mothers were asked about all of their children aged 18 and under with their former partner, but one child was selected from each family for this dissertation sample to avoid violating statistical assumptions regarding non-independence of the data. Due to the age restriction of one of the child outcome measures, only those children aged 3 and older were included in the sample. The following procedure was used in selecting children from the larger study:

- 1) Sixteen families were excluded because all children were under the age of 3.
- 2) Of the remaining 103 families, 47 had only one child or only one child within the age limits, so those children were selected for inclusion.
- 3) The remaining 56 families had more than one child aged 3 or older. In these cases, the child was selected based on age in an effort to balance the age groups represented in the study. Children were divided into two age groups: children aged 3 - 10 years old (young children) and children aged 11 - 17 years old (older children/adolescents). As there were a large number of young children in the Make It! Project sample, older youth were over-sampled during the process of constructing the dissertation study sample in an effort to balance age groups. When there were families with more than

one child in the same age group, the child whose name began with the letter closest to ‘A’ was selected ($n = 11$).

Sample

The child sample ($N = 103$) ranged in age from 3 to 17 years ($M = 8.45$, $SD = 4.29$). The sample was evenly split between boys (50.5%) and girls (49.5%). There were 72 children in the youngest age group (3 – 10 years) and 31 children in the older age group (11 – 17 years). See Table 1 for child and family characteristics.

Table 1

Sample Demographics

Variable	%	<i>M (SD)</i>
Child’s Age (in years)		8.45 (4.29)
Child’s Gender (% female)	49.5	
Mother’s Age (in years)		36.07 (6.27)
Father’s Age (in years)		39.09 (7.67)
Race/Ethnicity of Mother		
White, Non-Hispanic	76.7	
Non-White	23.3	
Race/Ethnicity of Father		
White, Non-Hispanic	75.7	
Non-White	24.3	
Length of Marriage (in years)		9.82 (5.54)
Time Since Separation (in months)		8.72 (6.21)

Measures

The core concepts and variables in this study, and the measures used to assess each, are displayed in Table 2 (see Appendix A for study measures).

Demographic variables. Mothers reported their race/ethnicity as Black/African American (12.6%), Asian/Asian American (4.9%), Latino/Hispanic (1.9%), White, Non-Hispanic (76.7%), and Other (3.9%). Due to homogeneity of the sample, a dichotomous variable was created, 0 = *Non-White*, 1 = *White*. They also provided their former partner’s race/ethnicity as Black/African American (13.6%), Asian/Asian American (1.9%), Latino/Hispanic (1.9%), Middle Eastern (2.9%), White, Non-Hispanic (75.7%), and Other (3.9%). This was also recoded as 0 = *Non-White*, 1 = *White*. Mothers reported the date of their marriage and the date of their initial separation from their partner; this information was used to calculate length of marriage (in years) and time since separation (in months). For their children, mothers provided gender, coded as 0 = *male* and 1 = *female*, and birth date (used to calculate age in years).

Table 2

Study concepts, variables, and measures

Concepts	Variables (coded as 0/1; absence/presence)	Measures
Risk	Young mother (age 21 and under)	Mother's age (Demographics)
	Low parental education (less than bachelor's degree for both)	Level of education (Demographics)
	Below poverty threshold	Monthly income (Demographics) calculated and classified based on U.S. Census Bureau poverty guidelines
	Mother receiving public assistance (yes to at least 1 of 3 questions)	Receiving any type of support questions
	Presence of marital violence (1 or more acts of violence)	Conflict Tactics Scales, Revised, Physical Assault Subscale
	Severity of violence (1 or more severe acts of violence)	Conflict Tactics Scales, Revised, Injury Subscale
	Child witnessed violence (witnessed 1 or more acts of violence)	Kolbo's adapted version of the Conflict Tactics Scales, Revised
	Conflicted/hostile separation (yes to 2 of 3 questions)	Composite score based on three questions Rating of hostility at separation Agreement on child support at separation Agreement on child custody at separation
	Poor maternal mental (met cutoff for depression and/or PTSD)	Center for Epidemiologic Studies Depression Scale (CESD; depression) PTSD Checklist (PCL; PTSD)
	Composite risk score (total score)	Sum of all risk categories (categories were coded as 0/1, absence/presence of risk)
Outcomes	Behavioral/emotional functioning (total score and 5 subscales)	Strengths and Difficulties Questionnaire (SDQ)
Support	Presence of a relationship	Child Support Questions
	Number of relationship domains	Child Support Questions

Risk. Nine categories of risk were assessed and dichotomously coded (0/1) for the absence/presence of that risk factor. The nine dichotomous indicators were then summed to create a composite risk score for each child. This section describes each of the individual risk measures, as well as the composite risk score, including descriptive statistics for each. See Table 3 for percent of the sample with each risk factor. For descriptive purposes, Table 3 also includes means, standard deviations, and ranges of continuous variables.

Table 3

Percent endorsement of each risk factor

Risk Factor	% of sample coded as 1 (presence of risk factor)	<i>M (SD)</i> (for full sample)	Range (for full sample)
Young mother	18.4	27.11 years (4.73)	17.3 – 37.17 years
Low parental education	42.7		
Mothers < B.A.	49.5	Associates	High school-Doctorate
Fathers < B.A.	67.0	“Some college”	Less than high school-Doctorate
Below poverty threshold	29.1		\$5,988 - >\$60,000
Receiving public assistance	25.2		
Cash	3.9		
Food	24.3		
Housing	3.9		
Presence of marital violence	33.0	2.49 (3.18) ^a	0 - 12 ^a
Presence of severe violence	27.2	.55 (1.06) ^a	0 - 4 ^a
Child witnessed violence	19.4	2.65 (2.98) ^a	0 - 9 ^a
Conflicted/hostile separation	30.1		
Hostility at time of separation	58.3		
No custody agreement	18.4		
No support agreement	35.9		
Poor maternal mental health	57.3		
Depression	48.5	10.48 (6.61)	0 - 29
PTSD	42.7	13.45 (5.10)	6 - 28
Composite Risk Score		2.83 (2.03)	0 - 9

^a number of acts

Young mother. Mothers reported their birth date and the birth date of each of their children in the demographics section of the interview. Mother’s age at the birth of her first child was calculated based upon this information. Mothers aged 21 years and under at the birth of their first child (18.4% of the sample) were assigned a ‘1’ (presence of risk factor), indicating that they were considered a young mother (Levine et al., 2001).

Low parental education. Mothers reported their and their former partners' highest level of education. This information was recoded to indicate whether the parent had a bachelor's degree or higher. If both parents had less than a bachelor's degree (42.7% of the sample), participants were given a '1' (presence of risk factor). The cutoff of obtaining a college degree was used based on prior research (e.g., Moore, Kinghorn, & Brandy, 2011) and recent research indicating that, in today's society, a college degree is becoming more and more essential in obtaining a job (see Carnevale, Jayasundera, & Cheah, 2012). In the full sample, parents' highest level of education ranged from completing high school to a doctorate.

Below poverty threshold. Mothers reported monthly income for the month prior to the interview. Based on this information, annual income was approximated and compared to the poverty threshold spreadsheet from the U.S. Census Bureau (2012; see Appendix B), taking into consideration the number of individuals in the household. Those that met or fell below the threshold (29.1% of the sample) were assigned a '1' for presence of risk factor. The poverty threshold for a single mother and one child is listed as \$15,504/year; for a single mother and two children it is \$18,123. Incomes in the full sample ranged from \$5,988/year to greater than \$60,000/year.

Mothers receiving public assistance. Mothers responded yes/no to whether they were receiving five different types of public assistance: cash, food, health care, child care, or housing assistance. For this analysis, only cash, food, and housing assistance were examined, as they provide the most basic assistance families need. Mothers who responded that they were receiving at least one of these three services were coded as '1' (presence of risk factor; 25.2% of the sample).

Marital violence. The Physical Assault subscale of the Revised Conflict Tactics Scales (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) was used to measure violence directed against participants by their former partners during marriage. Items include, for example, "He pushed or shoved me" and "He grabbed me." Participants indicated whether their partner committed each act at any time during their marriage. The CTS2 has demonstrated adequate psychometric properties (Straus et al., 1996), and was used in this study to assess presence of violence: mothers who reported at least 1 act of violence were coded as '1' (presence of risk factor) for marital violence. For descriptive purposes, Table 3 also displays the range and mean number of acts of violence reported.

Severe violence. The CTS2 severity scoring guidelines were used to distinguish between minor (e.g., grabbing) and severe (e.g., choking) acts of violence. Mothers who responded affirmatively to at least 1 severe act (out of a possible 6) were coded as ‘1’ (presence of risk factor) for severe violence. For descriptive purposes, the range and mean number of severe acts reported by the respondents are included in Table 3.

Child witnessing domestic violence. Children’s direct exposure to marital violence was measured using Kolbo’s (1996) adapted version of the CTS2. For each item on the CTS2 which the mother indicated had occurred during her marriage, she was then asked whether each of her children witnessed the act (yes/no). Children who witnessed at least 1 act of violence were coded as ‘1’ (presence of risk factor). Again, for descriptive purposes, the range and mean number of acts children witnessed are reported in Table 3.

Conflicted/hostile separation. Whether the separation was hostile or conflicted (regarding support and custody agreements) was assessed by three questions created for the larger study. Mothers rated the level of hostility at the time of their separation on a five-point scale (1 = *not at all hostile*, 3 = *moderately hostile*, and 5 = *very hostile*). Those responding with a 3, 4, or 5 (at least moderately hostile) were coded as ‘1’ (presence of risk factor) on this question (58.3% of the sample). Mothers also reported their level of agreement with their former partner about child support and child custody at the time of their initial separation on a five-point scale (1 = *no agreement*, 3 = *moderate agreement*, and 5 = *complete agreement*). Those responding with a 1 or 2 (*no/little agreement*) to these questions were coded as ‘1’ (presence of risk factor); 18.4% of mothers reported little to no agreement on custody, and 35.9% of mothers reported little to no agreement on support. These three presence/absence scores were summed and mothers who had a score of 2 or 3 were coded as ‘1’ for presence of a hostile or conflicted separation.

Poor maternal mental health. The Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) asks participants to indicate the number of days (0 = *none* and 7 = *seven days*) in the last week each symptom on the scale was experienced. A modified 12-item version (Anderson, Malmgren, Carter, & Patrick, 1994) was used in this study. Participants were asked “How many days in the past 7 days did you...” for example, “sleep restlessly,” “feel sad,” or “feel angry or hostile for several hours at a time.” An overall score was calculated by summing the responses to each item. The scale includes cutoff scores (a score of 10 or higher) to indicate

clinical levels of depression. Mothers who met the cutoff score levels were coded as ‘1’ for presence of clinical-level depressive symptoms.

The PTSD Checklist (PCL; Blanchard, Jones-Alexander, Buckley, & Forneris, 1996) corresponds directly to the DSM-IV criteria for PTSD. A modified 6-item version (Lang & Stein, 2005) was administered. Items are rated on a 5-point scale (1 = *not at all*, 3 = *moderately*, and 5 = *extremely*), as to how much they have been bothered by each problem in the past month. Items include, for example, “avoiding activities or situations because they remind you of a stressful experience,” or “feeling distant or cutoff from other people.” An overall score was calculated by summing the responses to each item. The scale includes cutoff scores (a score of 14 or higher), indicating clinical levels of PTSD symptoms. Mothers who met the cutoff score levels were coded as ‘1’ for presence of PTSD symptoms.

Because of the comorbidity of PTSD and depression (Breslau, Davis, Peterson, & Schultz, 2000; Nixon et al., 2004), the association between the two scores was investigated using a Pearson correlation coefficient. There was a strong, positive correlation between the two variables, $r = .74, p < .01$. Thus, PTSD and depressive symptoms were combined into one mental health risk score. Mothers who met the cutoff scores for depression and/or PTSD were assigned a ‘1’ (presence of risk factor); 57.3% of the sample met the cutoff for one (23.3%) or both (34%) conditions.

Composite risk score. Consistent with prior research (e.g., Evans, Kim, Ting, Teshler, & Shannis, 2007; Sameroff et al., 2003), a composite risk score was generated by summing the presence/absence scores for each of the individual risk factors (total score of 9 possible). Scores ranged from 0 to 9 with a mean of 2.83 ($SD = 2.03$).

Outcomes measure: Child adjustment. Mothers reported on their children’s adjustment using the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997; 2001). The SDQ is a 25-item behavioral screening questionnaire for children ages 3 – 17. It asks about positive and negative attributes in 5 domains, yielding scores (range 0 to 10) for conduct problems, hyperactivity, emotional symptoms, peer problems, and prosocial behavior. Mothers were asked to respond *not true* (0), *somewhat true* (1), or *certainly true* (2) for each item. Sample scale items include: “considerate of other people’s feelings,” “often loses temper,” “often unhappy depressed or tearful,” and “thinks things out before acting.” Two questions (out of 5) on the SDQ conduct problems subscale are only for children aged 4 and above. In order to include 3-

year-old children, scores on the conduct problems subscale were calculated based on having at least three items (allowing for missing data on the age-restricted questions). Responses to all but the prosocial subscale are summed to general a total difficulties score (range 0 to 40; higher scores indicate more difficulties). See Table 4 for descriptive statistics for the total difficulties score and each subscale. The SDQ has strong psychometric properties; Table 4 lists Chronbach's alphas obtained in the current study and a nationally representative sample for comparison (Goodman, 2001).

Table 4

Descriptive Characteristics for Strengths and Difficulties Questionnaire Scales

Scale	N of items	M (SD)	Range	α (this study)	α (from Goodman, 2001 for comparison)
Emotional Symptoms	5	2.15 (1.98)	0 - 10	0.66	0.67
Conduct Problems	5	1.70 (2.03)	0 - 10	0.72	0.63
Hyperactivity	5	3.65 (1.78)	0 - 10	0.82	0.77
Peer Problems	5	1.56 (1.78)	0 - 10	0.61	0.57
Prosocial	5	8.21 (2.03)	0 - 10	0.76	0.65
Total Difficulties Score	20	9.21 (6.50)	0 - 40	0.86	0.82

Support. Two aspects of support were assessed using measures created for the larger study. Mothers were asked to report whether their child had an adult over age 18 in their lives (other than her or their father) whom they trusted and with whom s/he regularly spent time. If they responded positively, mothers were then asked to identify these individual(s) by domain (e.g., grandparent, aunt, neighbor). Data was coded as 0/1 for the absence/presence of relationships; 85.4% of the sample reported at least one relationship. Those with identified relationships also received a number indicating the number of domains of identified relationships. Domains included on the interview protocol were grandparent(s), neighbor, mentor (e.g., teacher, coach), other relatives (e.g., aunt, uncle), and other (e.g., a step-parent). If the mother identified the *other* domain, she was asked to identify that person's relationship to the child. These responses were analyzed for common responses and new domains created for the current study: grandparent, another relative, babysitter/daycare provider, family friend/mother's friend, and other. Domains in which fewer than 10% of the sample indicated were combined

into the *other* domain. Thus, if the mother identified a babysitter, aunts and uncles, and a grandparent, the child would have a score of 3 for the categories of identified relationships (babysitter/daycare provider, another relative, grandparent). Research question two explored these relationships and descriptive data is reported in that section.

Analytic Approach

The data were analyzed using IBM SPSS Statistics 20. Data was cleaned and prepared for analysis; variables were inspected for missing data and outliers. Composite scales were computed as described above and descriptive statistics were computed for each study variable. Following this, the three research questions were addressed: 1) Are risk and child difficulties associated? And if so, how are the children doing despite facing adversity?; 2) How many and what types of non-parental supportive adults do the children have in their lives? and 3) Does the presence and/or numbers of support domains affect the children's subsequent psychological and behavioral difficulties?

The first research question, which examined child difficulties based on exposure to risks, involved correlational and regression analysis. Correlations were used to assess the associations between overall risk and difficulties. Stepwise linear regression was used to assess the association between total risk score and the total difficulties score, controlling for the influence of child age and gender. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity. Child age and gender were entered at Step 1 and the total risk score was entered at Step 2. To examine the association between total risk score and each of the five SDQ subscales, five additional regression models were calculated, again controlling for child age and gender. To further explore gender and age effects, the sample was split by gender (male $n = 52$, female $n = 51$) and regressions were re-run, controlling for age. Similarly, to examine the effects of age, the sample was split into two age groups: younger children aged 3-10 ($n = 72$) and older children aged 11-17 ($n = 31$), and associations between risk scores and outcomes were examined, controlling for gender.

The second research question was descriptive and addressed the children's social support. Presence/absence of support and the number of support domains were explored with descriptive statistics, and differences based on child age and gender, were examined through correlations, chi-square tests, and t-tests.

The third research question explored the hypothesis that either presence of social support and/or the number of support domains moderated the association between risk and child difficulties. Correlational analyses were used to explore associations between social support and the outcome variable. To examine whether support diminished the association between risk and outcomes, moderation analyses were conducted according to Baron and Kenny's approach (1986). The absence/presence of a supportive relationship was coded as 0/1 and thus did not need transformation for the moderation analyses. In order to avoid multicollinearity, the continuous variables (child age, risk score, and the number of support domains) were centered. To center the variables, for each variable, the mean score was subtracted from each individual's score, resulting in a mean of zero for each variable. Two interaction terms were then created by multiplying the centered risk score by the support presence/absence variable and the centered risk score by the centered support domains. Two stepwise regressions were computed to examine the association between risk score and total SDQ scores using the new centered variables and the interaction terms looking at the presence of support as the moderator in the first regression, and the number of support domains as the moderator in the second regression. In each regression, age (centered) and gender were entered in Step 1 as the control variables, centered risk score and the proposed moderator (support presence/absence or number of support domains) were added in Step 2, and the respective interaction term in Step 3.

To fully examine the potential moderating effects, the regressions were repeated for the five subscales of the SDQ. A regression model was calculated for each subscale examining the association between risk and outcomes with presence of support as the proposed moderator. A regression model was also calculated for each subscale examining the association between risk and outcomes with the number of support domains as the proposed moderator. According to Baron and Kenny (1986), the moderation effect is significant if there is a significant change in the R^2 when the interaction term is entered in Step 3.

An additional set of moderation regressions were computed to further examine age and gender effects. First, the sample was split by gender and the regressions were repeated, controlling for age, using the presence of support as the moderator in the first regression and the number of support domains in the second regression. Next, the data was split by age and the regressions were run controlling for gender, using the presence of support as the moderator in the first regression and the number of support domains as the moderator in the second regression.

To interpret the interaction effects, the regression coefficients were entered into Dr. Jeremy Dawson's online program (Dawson, 2012); a program based on the instruction of Aiken & West (1991). To probe the interaction effects, simple slope analysis (Aiken & West, 1991) was conducted to examine the statistical significance of the slopes. Regression lines were plotted and a regression analysis was conducted for each line to test if the slope differed significantly from zero.

Chapter Four: Results

Preliminary Analyses

Bivariate associations between demographic and outcome variables were examined to determine potential control variables (see Table 5). Control variables were identified by significant correlations. Of the five potential control variables examined, two were significantly correlated with at least one of the outcome variables: child’s age and gender. The other three potential controls (length of marriage, time since separation, mother’s race) were not significantly associated with the outcome variables. Therefore, child age and gender were used as control variables in the regression analyses examining the association between risk and outcomes (research question 1) and in the moderation analyses examining social support as a potential moderator (research question 3).

Table 5

Two-tailed Correlations Between Demographic and Outcome Variables

	Total Difficulties	Emotional Symptoms	Conduct Problems	Hyperactivity	Peer Problems	Prosocial Behaviors
1. Target child age	.04	.16	-.02	-.19	.23*	-.18
2. Target child gender	-.18	-.04	-.19*	-.17	-.11	.27**
3. Length of marriage	.04	.15	-.02	-.14	.18	-.16
4. Time since separation	-.01	-.02	.01	-.06	.06	.02
5. Mother’s race	-.05	.00	-.01	.00	.08	-.09

Note: $N = 103$; Race coded 1 = *White*, 0 = *Non-White*.

** $p < 0.01$, * $p < 0.05$

Research Question 1: Association between Risk and Outcomes

The first research question asked whether there was an association between cumulative risk exposure and child outcomes. Thus, analyses were performed to examine the scores on the outcome measures in relation to the individual and composite risk score.

Correlations between each risk indicator and child outcomes are presented in Table 6. Significant positive correlations were noted between low parental education and the total difficulties score, as well as the conduct problems, hyperactivity, and peer problems subscales, indicating that these difficulty scores were higher when the risk factor of low parental education was present. Significant correlations were also found between the poor maternal mental health risk factor and the total difficulties score, and the emotional symptoms and conduct problems

subscales, indicating that children whose mothers met the cutoff levels for PTSD and/or depressive symptoms had a higher total SDQ score (i.e., more difficulties), as well as higher scores on the emotional and conduct problems subscales.

The last row of Table 6 displays correlations between the composite risk score and child outcomes. Significant correlations were found between the total risk score and the total difficulties score, as well as the conduct problems subscale. This indicates that children with higher composite risk scores (i.e., presence of multiple risks) had higher total SDQ scores (more difficulties) and more specifically, higher conduct problems scores (more reported conduct problems). Although there were no significant findings related to prosocial behavior, it is important to note that all but one of these correlations were negative, reflecting the fact that a higher score on the prosocial behavior subscale indicates fewer problems (whereas for the total score and the other subscales, a higher score indicates more difficulties).

Table 6

Correlations Between Risk and Total SDQ Score and SDQ Subscales

	Total Difficulties	Emotional Symptoms	Conduct Problems	Hyperactivity	Peer Problems	Prosocial Behavior
Young Mother	.04	-.05	.04	.08	.02	.01
Low Parental Education	.26**	.08	.23*	.23*	.25*	-.13
Below Poverty Threshold	.08	-.01	.17	.03	.06	-.09
Receiving Assistance	-.10	-.02	.12	-.11	.07	-.01
Presence of Violence	.06	.04	.08	-.01	.09	-.07
Presence of Severe violence	.09	.02	.13	.05	.09	-.04
Child Witnessed Violence	.06	.04	-.02	.02	.15	-.08
Hostile Separation	.02	-.03	.16	.02	-.07	-.08
Poor Maternal Mental Health	.21*	.21*	.21*	.16	.03	-.13
Total Risk Score	.21*	.07	.26**	.16	.16	-.14

Note: $N = 103$. Risk variables coded as 0/1.

** $p < 0.01$, * $p < 0.05$

Multivariate Analyses: Total SDQ. Stepwise linear regression was used to assess the association between total risk score and the total difficulties score, controlling for the influence of child age and gender. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity. Child age and

gender were entered at Step 1 and the total risk score was entered at Step 2. The total risk score was significant in predicting the total SDQ score (the risk and difficulty scores were positively associated) and the model was marginally significant. See Table 7 (first column) for coefficients.

Multivariate Analyses: SDQ subscales. Five more regression models were calculated to examine the association between total risk score and each of the five SDQ subscales, again controlling for child age and gender. Results are presented in Table 7. In these five models, the total risk score was significant in predicting scores on the conduct problems subscale (step 2 of the model), but not in the other scales. Four of the final models were significant (conduct problems, hyperactivity, peer problems, and prosocial). Step 1 of the model was significant for the hyperactivity, peer problems and prosocial subscales, indicating that gender and/or age played a role in the models. Thus, further analyses were computed to explore gender and age effects.

Table 7

Multiple Linear Regression Predicting SDQ Scores from Total Risk Score, Controlling for Age and Gender

	Total Difficulties	Emotional Symptoms	Conduct Problems	Hyperactivity	Peer Problems	Prosocial
	<i>B</i> (SE <i>B</i>) <i>B</i>	<i>B</i> (SE <i>B</i>) <i>β</i>	<i>B</i> (SE <i>B</i>) <i>B</i>	<i>B</i> (SE <i>B</i>) <i>B</i>	<i>B</i> (SE <i>B</i>) <i>β</i>	<i>B</i> (SE <i>B</i>) <i>β</i>
Step 1						
Child age	0.04 (0.15) 0.03	0.08(0.05) 0.16 ^a	-0.02 (0.05) -.04	-0.13 (0.06) -.20*	0.09 (0.04) .23*	-0.08 (0.05) -.17 ^a
Child gender	-2.21 (1.24) -.18 ^a	-0.13 (0.39) -.03	-0.79 (0.40) -.20*	-1.01 (0.54) -.18 ^a	-0.33 (0.34) -.09	1.05 (0.39) .26**
Step 2						
Child age	0.04 (0.14) .02	0.08 (0.05) .16	-0.02 (0.05) -.04	-0.13(0.06) -.20*	0.09 (0.04) .22*	-0.08 (0.05) -.16 ^a
Child gender	-2.07 (1.22) -.17 ^a	-0.12 (0.39) -.03	-0.74 (0.39) -.18 ^a	-0.96 (0.53) -.17 ^a	-0.30 (0.34) -.08	1.02 (0.38) .25**
Total risk score	0.62 (0.30) .20*	0.06 (0.10) .07	0.25 (0.10) .25**	0.21 (0.13) .15	0.13 (0.09) .14	-0.12 (0.10) -.12
Step and model statistics						
Step 1	R ² = .03 , F = 1.69	R ² = .03 , F = 1.46	R ² = .04, F = 2.02	R ² = .07 , F = 3.60*	R ² = .06, F = 3.30*	R ² = .10, F = 5.54**
Step 2	ΔR ² = .04, ΔF = 4.22*	ΔR ² = .00, ΔF = .44	ΔR ² = .06, ΔF = 6.66**	ΔR ² = .02, ΔF = 2.54	ΔR ² = .03, ΔF = 2.21	ΔR ² = .02, ΔF = 1.70
Model	R ² = .07, F = 2.57 ^a	R ² = .03, F = 1.12	R ² = .10, F = 3.65*	R ² = .09, F = 3.28*	R ² = .08, F = 2.97*	R ² = .12, F = 4.29**

Note: *N* = 103.

***p* < 0.01, **p* < 0.05, ^a *p* < .10

Gender differences. The sample was split by gender (male $n = 52$, female $n = 51$) and regressions were re-run, controlling for age. None of the models were significant for boys (Table 8) and only the peer problems and prosocial subscales were significant for girls (Table 9). Age (step 1) was a contributing factor in the hyperactivity subscale for boys, indicating that younger boys had higher scores on the hyperactivity subscale. Consistent with the prior results, the total risk score was marginally significant in predicting scores on the conduct problems subscale (step 2 of the model), indicating that as risk scores increased, conduct problem scores increased. Age was also a significant factor in the peer problems and prosocial subscale scores for girls (and remained significant after risk score was added), such that older girls had higher peer problem scores (indicating peer difficulties) and lower prosocial scores (indicating they engaged in fewer prosocial behaviors). Among girls, total risk score was marginally significant for the total SDQ and significant for the conduct problems subscale.

Table 8

Multiple Linear Regression Predicting Male SDQ Scores from Total Risk Score, Controlling for Age

	Total Difficulties	Emotional Symptoms	Conduct Problems	Hyperactivity	Peer Problems	Prosocial
	<i>B</i> (SE <i>B</i>) β	<i>B</i> (SE <i>B</i>) β	<i>B</i> (SE <i>B</i>) β	<i>B</i> (SE <i>B</i>) β	<i>B</i> (SE <i>B</i>) β	<i>B</i> (SE <i>B</i>) β
Step 1						
Child age	-0.01 (0.27) -.01	0.09 (0.08) .17	-0.03 (0.08) -.05	-0.19 (0.10) -.25 ^a	0.09 (0.07) .18	-0.08 (0.09) -.13
Step 2						
Child age	0.00 (0.26) .00	0.09 (0.08) .17	-0.02 (0.08) -.04	-0.18 (0.10) -.25 ^a	0.09 (0.07) .18	-0.08 (0.09) -.13
Total risk score	0.66 (0.54) .17	0.10 (0.15) .09	0.30 (0.17) .25 ^a	0.17 (0.21) .11	0.26 (0.14) .12	-0.13 (0.18) -.10
Step 1	R ² = .00, F = .00	R ² = .03, F = 1.35	R ² = .00, F = .12	R ² = .06, F = 3.33 ^a	R ² = .03, F = 1.61	R ² = .02, F = .79
Step 2	Δ R ² = .03, Δ F = 1.49	Δ R ² = .01, Δ F = .38	Δ R ² = .06, Δ F = 3.17 ^a	Δ R ² = .01, Δ F = .68	Δ R ² = .02, Δ F = .75	Δ R ² = .01, Δ F = .50
Model	R ² = .03, F = .74	R ² = .03, F = .86	R ² = .06, F = 1.65	R ² = .08, F = 1.99	R ² = .05, F = 1.18	R ² = .30, F = .64

Note: $n = 52$.** $p < 0.01$, * $p < 0.05$, ^a $p < .10$

Table 9

Multiple Linear Regression Predicting Female SDQ Scores from Total Risk Score, Controlling for Age

	Total Difficulties	Emotional Symptoms	Conduct Problems	Hyperactivity	Peer Problems	Prosocial
	<i>B</i> (SE <i>B</i>) β	<i>B</i> (SE <i>B</i>) β	<i>B</i> (SE <i>B</i>) β	<i>B</i> (SE <i>B</i>) β	<i>B</i> (SE <i>B</i>) β	<i>B</i> (SE <i>B</i>) β
Step 1						
Child age	0.08 (0.15) .08	0.07 (0.06) .17	-0.01 (0.05) -.02	-0.08 (0.08) -.15	0.10 (0.05) .29*	-0.08 (0.04) -.29*
Step 2						
Child age	0.06 (0.14) .06	0.07 (0.06) .16	-0.02 (0.05) -.04	-0.09 (0.08) -.17	0.09 (0.05) .28*	-0.07 (0.04) -.27*
Total risk score	0.58 (0.31) .26 ^a	0.04 (0.12) .05	0.20(0.10) .23*	0.23 (0.17) .20	0.13 (0.10) .18	-0.12 (0.08) -.21
Step 1	R ² = .01, F = .33	R ² = .03, F = 1.40	R ² = .00, F = .03	R ² = .02, F = 1.16	R ² = .09, F = 4.53*	R ² = .08, F = 4.40*
Step 2	Δ R ² = .07, Δ F = 3.50 ^a	Δ R ² = .00, Δ F = .11	Δ R ² = .01, Δ F = 3.94*	Δ R ² = .04, Δ F = 1.93	Δ R ² = .03, Δ F = 1.66	Δ R ² = .04, Δ F = 2.31
Model	R ² = .07, F = 1.92	R ² = .03, F = .74	R ² = .08, F = 1.98	R ² = .06, F = 1.55	R ² = .12, F = 3.13*	R ² = .13, F = 3.41*

Note: $n = 51$.** $p < 0.01$, * $p < 0.05$, ^a $p < .10$

Age differences. Similarly, to examine the effects of age, the sample was split into two age groups: younger children aged 3-10 ($n = 72$) and older children aged 11-17 ($n = 31$), and associations between risk scores and outcomes were examined, controlling for gender. As shown in Table 10, all but one of the models (emotional symptoms subscale) were significant for the younger age group. In the younger group, gender was a significant contributor to the prosocial subscale and remained significant after the addition of the total risk score in step 2. The total risk score was a significant contributor to the total SDQ score, and the conduct problems, hyperactivity, and peer problems subscales, indicating that as the total risk scores increase, so do the SDQ scores. There were no significant findings for the older age group (see Table 11).

Research Question 1: Summary.

The first set of analyses revealed a significant association between risk and difficulty in the overall sample. In the overall sample, increased risk scores were positively associated with total difficulty scores and conduct problem scores, indicating that as risk increased, children experienced higher levels of difficulties and conduct problems. For younger children especially, higher levels of risks were associated with overall difficulties, as well as conduct problems, hyperactivity, and peer problems. These analyses established an association between family-level risks and child difficulties (as reported by mothers). The next set of analyses examined the relationships of the sample, in preparation to explore the potential moderating effects of relationships on the association between risk and outcomes.

Table 10

Multiple Linear Regression Predicting Younger Age Group SDQ Scores from Total Risk Score, Controlling for Gender

	Total Difficulties	Emotional Symptoms	Conduct Problems	Hyperactivity	Peer Problems	Prosocial
	<i>B</i> (SE <i>B</i>) <i>B</i>	<i>B</i> (SE <i>B</i>) β	<i>B</i> (SE <i>B</i>) β	<i>B</i> (SE <i>B</i>) <i>B</i>	<i>B</i> (SE <i>B</i>) β	<i>B</i> (SE <i>B</i>) β
Step 1						
Child gender	-2.50 (1.26) -.23*	-0.20 (0.43) -.06	-0.77 (0.46) -.20 ^a	-1.09 (0.64) -.20 ^a	-0.49 (0.33) -.18	1.30 (0.45) .33**
Step 2						
Child gender	-1.95 (1.19) -.18	-0.13 (0.43) -.04	-0.56 (0.43) -.14	-0.92 (0.63) -.17	-0.37 (0.32) -.14	1.22 (0.45) .30**
Total risk score	0.92 (0.28) .36**	0.12 (0.10) .14	0.36 (0.10) .39**	0.29 (0.15) .22 ^a	.019 (0.08) .29**	-0.13 (0.11) -.14
Step 1	R ² = .05, F = 3.95*	R ² = .00, F = .22	R ² = .04, F = 2.80 ^a	R ² = .04, F = 2.93 ^a	R ² = .03, F = 2.24	R ² = .11, F = 8.36*
Step 2	$\Delta R^2 = .13$, $\Delta F = 10.57^{**}$	$\Delta R^2 = .02$, $\Delta F = 1.31$	$\Delta R^2 = .14$, $\Delta F = 12.35^{**}$	$\Delta R^2 = .05$, $\Delta F = 3.71^a$	$\Delta R^2 = .08$, $\Delta F = 6.39^{**}$	$\Delta R^2 = .02$, $\Delta F = 1.46$
Model	R ² = .18, F = 7.53**	R ² = .02, F = .77	R ² = .18, F = 7.80**	R ² = .09, F = 3.38*	R ² = .11, F = 4.40*	R ² = .13, F = 4.93**

Note: $n = 72$.** $p < 0.01$, * $p < 0.05$, ^a $p < .10$

Table 11

Multiple Linear Regression Predicting Older Age Group SDQ Scores from Total Risk Score, Controlling for Gender

	Total Difficulties	Emotional Symptoms	Conduct Problems	Hyperactivity	Peer Problems	Prosocial
	<i>B</i> (SE <i>B</i>) <i>B</i>	<i>B</i> (SE <i>B</i>) β	<i>B</i> (SE <i>B</i>) β	<i>B</i> (SE <i>B</i>) <i>B</i>	<i>B</i> (SE <i>B</i>) β	<i>B</i> (SE <i>B</i>) β
Step 1						
Child gender	-1.75 (2.87) -.11	-0.18 (0.82) -.04	-0.83 (0.78) -.20	-0.53 (1.04) -.10	-0.21 (0.85) -.05	0.66 (0.75) .16
Step 2						
Child gender	-1.48 (2.95) -.10	-0.09 (0.84) -.02	-0.76 (0.80) -.18	-0.50 (1.07) -.09	-0.13 (0.87) -.03	0.69 (0.77) .17
Total risk score	-0.46 (0.83) -.11	-0.14 (0.24) -.12	-0.12 (0.22) -.10	-0.06 (0.30) -.04	-.014 (0.24) -.11	-0.05 (0.22) -.04
Step 1	R ² = .01, F = .37	R ² = .00, F = .06	R ² = .04, F = 1.14	R ² = .01, F = .26	R ² = .00, F = .06	R ² = .03, F = .78
Step 2	$\Delta R^2 = .01$, $\Delta F = .31$	$\Delta R^2 = .01$, $\Delta F = .38$	$\Delta R^2 = .01$, $\Delta F = .27$	$\Delta R^2 = .00$, $\Delta F = .04$	$\Delta R^2 = .01$, $\Delta F = .32$	$\Delta R^2 = .00$, $\Delta F = .05$
Model	R ² = .02, F = .34	R ² = .02, F = .21	R ² = .05, F = .69	R ² = .01, F = .15	R ² = .01, F = .19	R ² = .03, F = .40

Note: $n = 31$.** $p < 0.01$, * $p < 0.05$, ^a $p < .10$

Research Question 2: Presence and Number of Support Domains

The second research question was descriptive in nature and focused on children’s social support from non-parental adults. Mothers reported whether their child had an adult over age 18 in their lives (other than her or their father) with whom they regularly spent time and trusted. If they responded positively, mothers were then asked to identify these individual(s) by domain (e.g., grandparent, aunt, neighbor). Those with identified relationships also received a number indicating the number of domains of identified relationships.

Approximately 85% of the mothers indicated that their child had at least one relationship. Table 12 displays a breakdown of the support domains endorsed. Relatives were the most common relationship domain identified, with over half of the sample identifying a grandparent and over one-third identifying another relative (e.g., aunt, cousin) as a support person. Non-relatives, however, were also reported with over a quarter of the mothers reporting that their child had a relationship with a family friend or babysitter/daycare provider. (Age differences in support are discussed in the next section.)

Table 12

Percent of Sample that Indicated Relationships in Various Domains

Support Domain	% of full sample	% of older age group ($n = 31$)	% of younger age group ($n = 72$)
Grandparent	54.4	41.9	58.3
Another Relative	35.9	25.8	40.3
Babysitter/Daycare Provider	15.5	6.5	19.4
Family Friend/Friend of Mother	11.7	6.5	13.9
Other (e.g., mentor, coach, mother’s new partner)	16.5	9.7	19.4

Note: $N = 103$. Categories are not mutually exclusive.

About 45% of the mothers reported that their child had relationships in only one domain, whereas approximately 40% reported relationships in two or more domains (see Table 13). The mean number of domains reported was 1.37 ($SD = 0.86$). A much larger percentage of mothers of children in the older group did not report a relationship (32%) compared to the younger group (7%). In addition, 50% mothers of children in the younger group reported 2 or 3 relationships compared to only 19% of mothers of children in the older group.

Table 13

Number of Domains Endorsed	% of full sample	% of older age group	% of younger age group
0	14.6	32.3	6.9
1	44.7	48.4	43.1
2	30.1	16.1	36.1
3	10.7	3.2	13.9

Note: $N = 103$.

To examine the associations between support and child age, gender, risk score, and outcomes, correlations were computed (see Table 14). There was a significant negative correlation between the presence of support (coded as 0/1; absence/presence) and child age, indicating that mothers were less likely to report support for older children. Likewise, there was a significant negative correlation between the number of support domains and age, indicating that mothers were less likely to endorse multiple domains for older children. There were no significant associations between support and the total risk score, total SDQ scores, or child gender.

Table 14

Two-tailed Correlations Between Presence of Support, Number of Support Domains, and Other Study Variables

	1	2	3	4	5	6
1. Presence of Support	--					
2. Number of Support Domains	.57**	--				
3. Total Risk Score	-.022	-.16	--			
4. Total SDQ Score	.048	-.04	.21*	--		
5. Child Age	-.37**	-.30**	.04	.41	--	
6. Child Gender	-.09	-.12	-.05	-.18	-.06	--

Note: $N = 103$.

** $p < 0.01$, * $p < 0.05$

Presence of Relationships by Age and Gender

To examine the associations of relationships with age and gender more descriptively, two chi-square tests were computed for gender and presence of relationships and age and presence of relationships (two groups: younger children aged 3-10 and older children aged 11-17). See Table 12 for the percentage of each age group that identified the different domains and Table 15 for a breakdown of the presence of relationships based on age and gender. The chi-square test for gender was not significant, $X^2(1, N = 103) = 0.36, p = .55$. As shown in Table 15, similar proportions of girls and boys had a supportive non-parental relationship. The test for age,

however, was significant, $X^2(1, N = 103) = 9.22, p = .002$, indicating that fewer mothers of the older group identified relationships for their children than the mothers of children in the younger group. As shown in Table 15, over 90% of younger children had a supportive adult in their lives, compared to just over two thirds of older children. As shown in Table 12, nearly 60% of mothers of younger children identified a grandparent and nearly 40% identified another relative; approximately 40% of mothers of older children identified a grandparent and only about a quarter identified another relative as a support for their older children. Other relationships (i.e., babysitter/daycare provider, family friends) were also more commonly identified by mothers of younger children than older children. For example, nearly 20% of mothers of younger children identified someone in the “other” category, compared to only 10% of mothers of older children.

Table 15

Presence of Relationship Based on Child Age and Gender

	% Relationship Reported	% No Relationship Reported
Gender		
Males	88.5	11.5
Females	82.4	17.6
Age Group		
Younger (aged 3-10)	93.1	6.9
Older (aged 11-17)	67.7	32.3

Note: $N = 103$.

Number of Domains Examined by Age and Gender

T-tests were computed to compare the number of relationship domains across child age and gender. There were no significant differences in number of relationships for males ($M = 1.54, SD = 1.04$) and females ($M = 1.29, SD = 1.01$), $t(101) = 1.21, p = .23$. Consistent with the correlational analysis, there was a significant difference in number of relationship domains reported for the younger age group ($M = 1.61, SD = 1.03$) compared to the older age group ($M = 0.97, SD = .88$), $t(101) = 3.04, p = .003$. Mothers of children in the younger age group were more likely to report relationships in multiple domains than mothers of children in the older age group; only 7% of mothers of younger children did not identify a support person for their children compared with nearly 33% of mothers of older children (see Table 13).

Research Question 2: Summary

These analyses showed that the majority of mothers reported that their children had at least one supportive, trusted person in their lives with whom they regularly spend time (other than the child’s parents). In addition, many of the children (40%) had more than one of these

relationships. The results indicated that mothers of younger children were more likely to report a relationship and more likely to report multiple relationships than mothers of older children. The following analyses examine these relationships (both presence of a relationship and the number of domains) as potential moderators in the association between risk and outcomes.

Research Question 3: An Analysis of the Moderation Effects of Support

To address the third research question, whether support diminished the association between risk and outcomes, moderation analyses were conducted according to Baron and Kenny's approach (1986). The absence/presence of a supportive relationship was coded as 0/1 and thus did not need transformation for the moderation analyses. In order to avoid multicollinearity, the continuous variables (child age, risk score, and the number of support domains) were centered. For each variable, the mean score was subtracted from each individual's score, resulting in a mean of zero for each variable. Two interaction terms were then created by multiplying the centered risk score by the support presence/absence variable and the centered risk score by the centered support domains. Two stepwise regressions were computed to examine the association between risk score and total SDQ scores using the new centered variables and the interaction terms looking at the presence of support as the moderator in the first regression, and the number of support domains as the moderator in the second regression. In each regression, age (centered) and gender were entered in Step 1 as the control variables, centered risk score and the proposed moderator (support presence/absence or number of support domains) were added in Step 2, and the respective interaction term in Step 3.

Results of the regression using the presence of support as the moderator of the association between total risk and total SDQ score were not significant (see Table 16). In this model, risk was significantly associated with difficulties at step 2, but there was no main effect for support (i.e., support was not associated with the total difficulties score at step 2), and the interaction of Risk x Support was not significant at step 3. Table 17 shows the results when number of support domains was used as the moderator. Similarly, there was no main effect for support domains (i.e., the number of support domains was not associated with the total difficulties score at step 2), and the interaction of Risk x Support domains was not significant at step 3.

Table 16

Results of Regression to Test Moderation Effects of Presence of Support on Association Between Risk and Total Difficulties

	<i>B</i> (SE <i>B</i>)	β	Overall <i>F</i>	<i>R</i> ²	Adj. <i>R</i> ²	ΔR^2
Step 1						
Age	0.04 (0.15)	.03	<i>F</i> (2, 100) = 1.69, <i>p</i> = .19	.03	.01	.03
Gender	-2.21 (1.24)	-.18 ^a				
Step 2						
			<i>F</i> (4, 98) = 1.97, <i>p</i> = .11	.07	.04	.04
Age	0.06 (0.15)	.04				
Gender	-2.00 (1.23)	-.16				
Total Risk Score	0.62 (0.30)	.20*				
Presence of Support	0.87 (1.87)	.05				
Step 3						
			<i>F</i> (5, 97) = 1.57, <i>p</i> = .17	.08	.03	.00
Age	0.06 (0.16)	.04				
Gender	-1.97 (1.25)	-.16				
Total Risk Score	0.79 (0.97)	.26				
Presence of Support	0.98 (1.97)	.06				
Risk x Support Interaction	-0.20 (1.02)	-.06				

Note: *N* = 103

p* < .05, *p* < .01, ^a *p* < .10.

Table 17

Results of Regression to Test Moderation Effects of Number of Support Domains on Association Between Risk and Total Difficulties

	<i>B</i> (SE <i>B</i>)	β	Overall <i>F</i>	R^2	Adj. R^2	ΔR^2
Step 1			$F(2, 100) = 1.69, p = .19$	.03	.01	.03
Age	0.04 (0.15)	.03				
Gender	-2.21 (1.24)	-.18 ^a				
Step 2			$F(4, 98) = 2.24, p = .07$	.08	.05	.05
Age	0.03 (0.15)	.02				
Gender	-2.12 (1.24)	-.18 ^a				
Total Risk Score	0.57 (0.30)	.18 ^a				
Support Domains	-0.86 (0.77)	-.12				
Step 3			$F(5, 97) = 1.93, p = .09$	.09	.04	.01
Age	-0.02 (0.15)	-.01				
Gender	-2.30 (1.23)	-.18 ^a				
Total Risk Score	0.58 (0.31)	.19 ^a				
Support Domains	-0.72 (0.79)	-.10				
Risk x Support Domains Interaction	0.33 (0.40)	.08				

Note: $N = 103$

* $p < .05$, ** $p < .01$, ^a $p < .10$.

SDQ subscales. To fully examine the potential moderating effects, the regressions were repeated for the five subscales of the SDQ. A regression model was calculated for each subscale examining the association between risk and outcomes with presence of support as the proposed moderator (Table 18). A regression model was also calculated for each subscale examining the association between risk and outcomes with the number of support domains as the proposed moderator (Table 19). Although some of these models were significant, consistent with the models presented above, there were no main effects for either indicator of support and the interaction terms were not significant, indicating no moderation effects of either presence of support or the number of support domains.

Table 18

Results of Regression to Test Moderation Effects of Presence of Support on the Relationship Between Risk and SDQ Subscales

	Emotional Symptoms	Conduct Problems	Hyperactivity	Peer Problems	Prosocial
Step 1	<i>B</i> (SE <i>B</i>)	<i>B</i> (SE <i>B</i>)	<i>B</i> (SE <i>B</i>)	<i>B</i> (SE <i>B</i>)	<i>B</i> (SE <i>B</i>)
	<i>β</i>	<i>β</i>	<i>β</i>	<i>β</i>	<i>β</i>
Age	0.08 (0.05) .16 ^a	-0.02 (0.05) -.04	-0.13 (0.06) -.20*	0.09 (0.04) .23*	-0.08 (0.05) -.17 ^a
Gender	-0.13 (0.39) -.03	-0.79 (0.40) -.20*	-1.01 (0.54) -.18 ^a	-0.33 (0.34) -.09	1.05 (0.39) .26**
Step 2					
Age	0.09 (0.05) .19 ^a	-0.02 (0.05) -.03	-0.13 (0.07) -.21*	0.10 (0.04) .24*	-0.08 (0.05) -.16
Gender	-0.08 (0.40) -.02	-0.72 (0.39) -.18 ^a	-0.97 (0.54) -.18 ^a	-0.28 (0.35) -.08	1.02 (0.39) .25**
Total Risk Score	0.06 (0.10) .07	0.25 (0.10) .25**	0.21 (0.13) .15	0.13 (0.09) .14	-0.12 (0.10) -.12
Presence of Support	0.47 (0.60) .08	0.16 (0.59) .03	-0.10 (0.82) -.01	0.28 (0.52) .06	0.05 (0.59) .01
Step 3					
Age	0.09 (0.05) .19 ^a	-0.01 (0.05) -.03	-0.13 (0.07) -.20 ^a	0.10 (0.04) .24*	-0.07 (0.05) -.15
Gender	-0.06 (0.40) -.02	-0.75 (0.40) -.19 ^a	-1.00 (0.55) -.18 ^a	-0.21 (0.35) -.06	0.97 (0.39) .24**
Total Risk Score	0.15 (0.31) .16	0.12 (0.31) .12	0.06 (0.42) .04	0.45 (0.27) .52 ^a	-0.42 (0.30) -.42
Presence of Support	0.53 (0.63) .10	0.16 (0.60) .03	-0.10 (0.82) -.01	0.27 (0.52) .05	0.06 (0.59) .01
Risk x Support Interaction	-0.10 (0.33) -.10	0.14 (0.32) .14	0.17 (0.45) .12	-0.37 (0.28) -.40	0.33 (0.32) .31
Step and model statistics					
Step 1	R ² = .03, F = 1.46	R ² = .04, F = 2.02	R ² = .06, F = 3.30*	R ² = .06, F = 3.30*	R ² = .10, F = 5.54**
Step 2	ΔR ² = .01, ΔF = .53	ΔR ² = .06, ΔF = 3.34*	ΔR ² = .02, ΔF = 1.24	ΔR ² = .02, ΔF = 1.24	ΔR ² = .02, ΔF = .84
Step 3	ΔR ² = .00, ΔF = .09	ΔR ² = .00, ΔF = .20	ΔR ² = .02, ΔF = 1.65	ΔR ² = .05, ΔF = 1.65	ΔR ² = .01, ΔF = 1.05
Model	R ² = .04, F = .80	R ² = .10, F = 2.20 ^a	R ² = .10, F = 2.17 ^a	R ² = .10, F = 2.17 ^a	R ² = .12, F = 2.76*

Note: N = 103

p* < .05, *p* < .01, ^a *p* < .10.

Table 19

Results of Regression to Test Moderation Effects of Number of Support Domains on the Association Between Risk and SDQ Subscales

	Emotional Symptoms	Conduct Problems	Hyperactivity	Peer Problems	Prosocial
Step 1	<i>B</i> (SE <i>B</i>) <i>B</i>	<i>B</i> (SE <i>B</i>) <i>β</i>	<i>B</i> (SE <i>B</i>) <i>β</i>	<i>B</i> (SE <i>B</i>) <i>B</i>	<i>B</i> (SE <i>B</i>) <i>β</i>
Age	0.08 (0.05) .16 ^a	-0.01 (0.05) -.04	-0.13 (0.06) -.20*	0.09 (0.04) .23*	-0.08 (0.05) -.17 ^a
Gender	-0.13 (0.39) -.03	-0.13 (0.39) -.03	-1.01 (0.54) -.18 ^a	-0.33 (0.34) -.09	1.05 (0.39) .26**
Step 2					
Age	0.08 (0.05) .17 ^a	-0.04 (0.05) -.08	-0.17 (0.07) -.26**	0.07 (0.04) .18 ^a	-0.08 (0.05) -.17 ^a
Gender	-0.09 (0.40) -.02	-0.79 (0.39) -.20*	-1.09 (0.53) -.20*	-0.36 (0.35) -.10	1.00 (0.39) .25**
Total Risk Score	0.07 (0.10) .07	0.23 (0.10) .23*	0.18 (0.13) .13	0.11 (0.09) .13	-0.13 (0.10) -.13
Number of Domains	0.12 (0.25) .05	-0.21 (0.25) -.09	-0.55 (0.34) -.17	-0.26 (0.22) -.12	-0.06 (0.25) -.03
Step 3					
Age	0.08 (0.05) .18 ^a	-0.03 (0.05) -.07	-0.16 (0.07) -.26*	0.07 (0.04) .18 ^a	-0.08 (0.05) -.19 ^a
Gender	-0.09 (0.40) -.02	-0.79 (0.39) -.20*	-1.11 (0.53) -.20*	-0.36 (0.35) -.10	1.01 (0.39) .25**
Total Risk Score	0.07 (0.10) .07	0.24 (0.10) .24*	0.19 (0.13) .14	0.11 (0.09) .13	-0.13 (0.10) -.13
Number of Domains	0.13 (0.26) .06	-0.19 (0.25) -.08	-0.44 (0.34) -.14	-0.25 (0.22) -.12	-0.04 (0.25) -.02
Risk x Domains Interaction	0.01 (0.13) .01	0.05 (0.13) .04	0.25 (0.17) .14	0.02 (0.11) .02	0.03 (0.13) .03
Step and model statistics					
Step 1	R ² = .03, F = 1.46	R ² = .04, F = 2.02	R ² = .07, F = 3.60*	R ² = .06, F = 3.30*	R ² = .10, F = 5.54**
Step 2	ΔR ² = .01, ΔF = .34	ΔR ² = .07, ΔF = 3.69*	ΔR ² = .05, ΔF = 2.62 ^a	ΔR ² = .03, ΔF = 1.80	ΔR ² = .02, ΔF = 0.87
Step 3	ΔR ² = .00, ΔF = .01	ΔR ² = .00, ΔF = .17	ΔR ² = .02, ΔF = 2.10	ΔR ² = .00, ΔF = .04	ΔR ² = .00, ΔF = 0.07
Model	R ² = .04, F = .71	R ² = .11, F = 2.34*	R ² = .13, F = 2.98*	R ² = .10, F = 2.05 ^a	R ² = .12, F = 2.56*

Note: N = 103

p* < .05, *p* < .01, ^a *p* < .10.

Although none of these analyses were significant, consistent with the previous findings, there did seem to be some effects based on age and gender. An additional set of moderation regressions were computed to further examine these effects. First, the sample was split by gender and the regressions were repeated, controlling for age, using the presence of support as the moderator in the first regression and the number of support domains in the second regression. Next, the data was split by age and the regressions were run controlling for gender, using the presence of support as the moderator in the first regression and the number of support domains as the moderator in the second regression. Because this is a large amount of data, only the significant findings are reported here (see Tables 21, 22 and 23; Figures 1, 2 and 3).

One of the regression models conducted within gender was significant. The number of support domains moderated the association between risk and the hyperactivity subscale for girls (indicated by the significant interaction term in Table 20). As shown in Figure 1, girls with low risk scores had the same level of hyperactivity scores, regardless of the number of support domains. Contrary to expectation, at high levels of risk, hyperactivity scores were higher (indicating more reported hyperactivity) among girls with a larger number of support domains. Simple slope analysis (Aiken & West, 1991) of the association between cumulative risk and hyperactivity were tested for low (-1 SD below the mean) and high (+1 SD above the mean) number of support domains. Neither of the simple slope tests were significant, indicating that although the interaction term was significant the slopes did not differ from zero (i.e., there was no association between risk level and hyperactivity depending on number of support domains).

Table 20

Results of Regression to Test Moderation Effects of Number of Support Domains on the Association Between Risk and Hyperactivity for Females

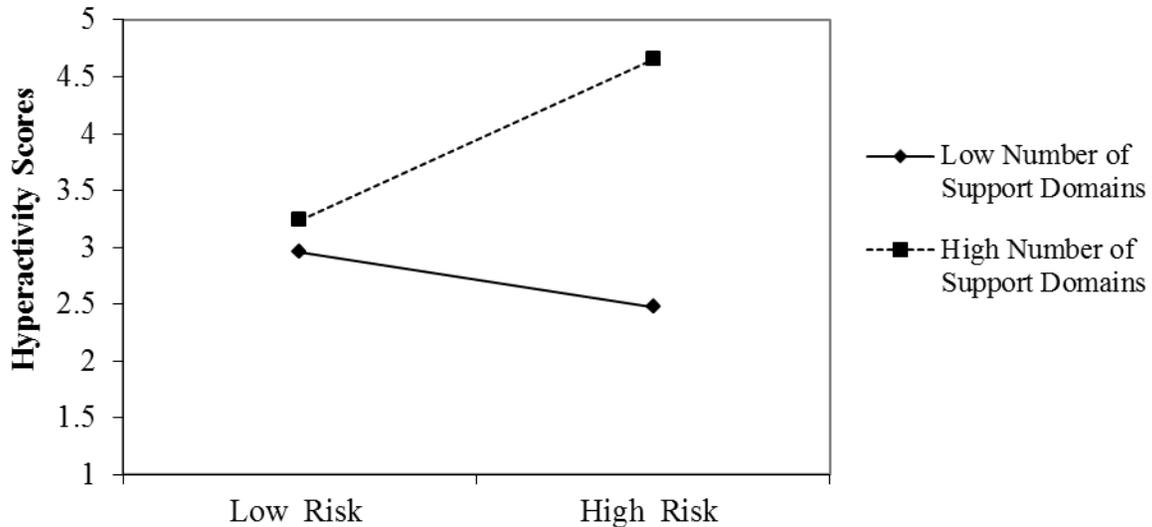
	<i>B (SE B) β</i>	Overall F	R ²	Adj. R ²	ΔR ²
Step 1		<i>F</i> (1, 49) = 0.11, <i>p</i> = .74	.02	-.02	.00
Age	-0.26 (0.77) -.05				
Step 2		<i>F</i> (3, 47) = 0.80, <i>p</i> = .50	.05	-.01	.05
Age	-0.26 (0.84) -.05				
Total Risk Score	0.24 (0.17) .20				
Number of Domains	0.30 (0.46) .10				
Step 3		<i>F</i> (4, 46) = 2.03, <i>p</i> = .11	.16	.08	.10
Age	0.03 (0.81) .01				
Total Risk Score	0.23 (0.16) .20				
Number of Domains	0.62 (0.46) .21				
Risk x Domains Interaction	0.47 (0.20) .33*				

Note: *n* = 51.

p* < .05, *p* < .01, ^a *p* < .10.

Figure 1

Moderation Effects of Support Domains on Association between Risk Score and Hyperactivity Scores for Girls



Two of the regression models conducted within age group were significant. In the younger age group, the Risk x Presence of Support interaction term was significant in the model for peer problems (Table 21). In general, peer problem scores increased as risk scores increased, but that association was moderated by the presence of support. The interaction is displayed in Figure 2. Under conditions of low risk, there were no differences in peer problem scores attributable to the presence or absence of a support person. However, under conditions of high risk, youth with support had significantly lower peer problems scores than those without support, indicating that support buffers some of the negative effects of risk for younger children. A simple slope analysis was conducted (Aiken & West, 1991) to examine the regression lines for 0/1 levels of the moderator (no relationships versus presence of a relationship). The line representing no relationship ($b = 0.93, t = 2.68, p < .01$) was significantly different from zero. The line representing the presence of a relationship ($b = 0.16, t = 2.28, p < .05$) was also significantly different from zero, although the slope was less pronounced. This indicates that higher levels of risk are associated with increased peer problems regardless of the presence of support; however, as can be seen in Figure 2, the association is more pronounced among children who have no supportive relationships (i.e., the slope is steeper).

Table 21

Results of Regression to Test Moderation Effects of Presence of Support on the Association Between Risk and Peer Problems for Younger Age Group

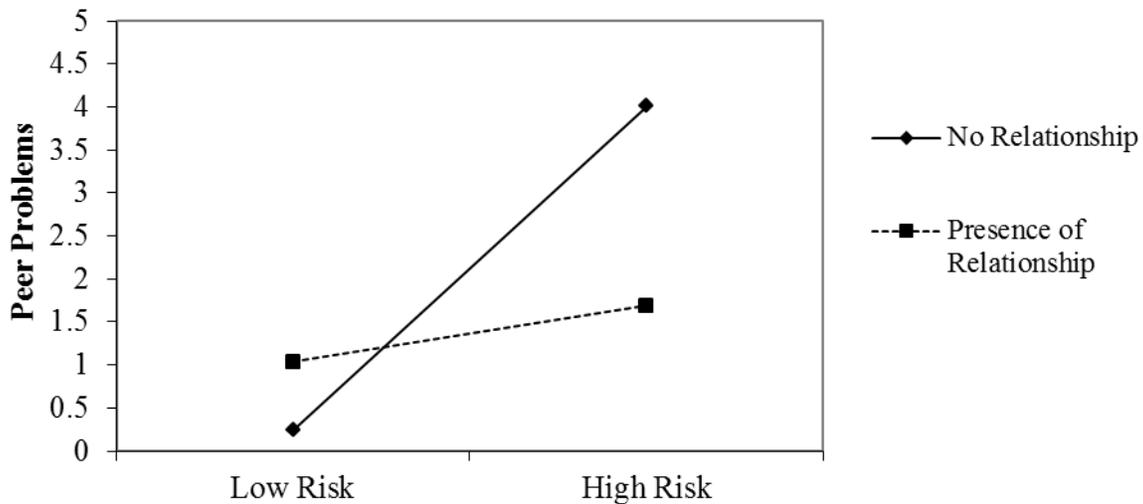
	<i>B (SE B) β</i>	Overall F	R ²	Adj. R ²	ΔR ²
Step 1		<i>F</i> (1, 70) = 2.24, <i>p</i> = .14	.03	.02	.03
Gender	-.49 (.33) -.18				
Step 2		<i>F</i> (3, 68) = 2.99, <i>p</i> = .04	.12	.08	.09
Gender	-.38 (.32) -.14				
Total Risk Score	.19 (.08) .29*				
Presence of Support	-.32 (.62) -.06				
Step 3		<i>F</i> (4, 67) = 3.54, <i>p</i> = .01	.17	.13	.06
Gender	-.26 (.32) -.09				
Total Risk Score	.93 (.35) 1.41**				
Presence of Support	-.77 (.64) -.14				
Risk x Support Interaction	-.77 (.35) -1.14*				

Note: *n* = 72

p* < .05, *p* < .01, ^a *p* < .10.

Figure 2

Moderation Effects of Presence of Support on Association between Risk Score and Peer Problems Scores for the Younger Age Group



Also for the younger age group, the presence of support served as a moderator between risk and the prosocial subscale (see Table 22). As shown in Figure 3, there were no differences in prosocial behaviors for children with low risk scores based on the presence or absence of relationships. As expected, younger children whose mothers indicated that they did not have a relationship with a supportive adult had significantly lower prosocial scores, indicating fewer

reported prosocial behaviors. A simple slope analysis was again conducted (Aiken & West, 1991) to examine the regression lines for 0/1 levels of the moderator (no relationships versus presence of a relationship). The line representing no relationship ($b = -1.30, t = -2.71, p < .01$) was significantly different from zero. The line representing the presence of a relationships ($b = -0.09, t = -0.89, ns$) was not significantly different from zero. This indicates that there is a significant negative association between cumulative risk and prosocial behavior, but only when there is no support person identified.

Table 22

Results of Regression to Test Moderation Effects of Presence of Support on the Association Between Risk and Prosocial Behavior for Younger Age Group

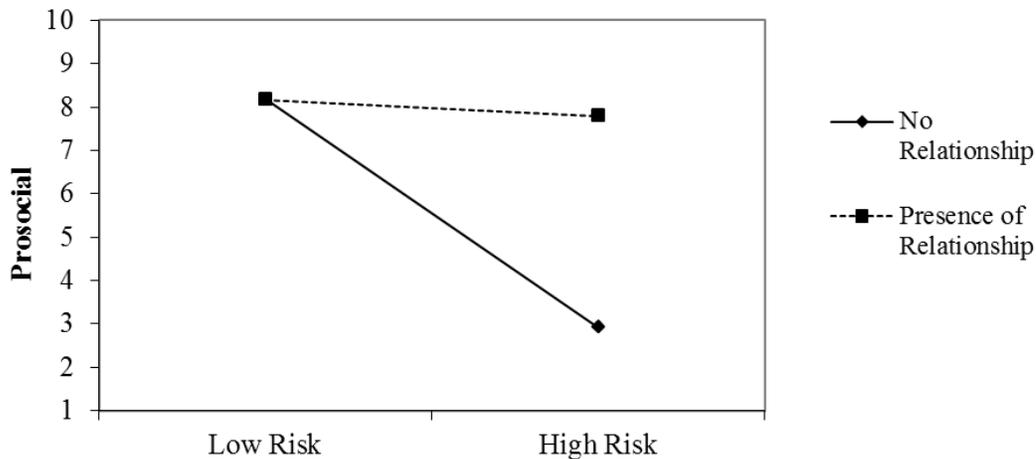
	<i>B (SE B) β</i>	Overall F	R ²	Adj. R ²	ΔR ²
Step 1		$F(1, 70) = 8.36, p = .00$	.11	.09	.11
Gender	1.30 (0.45) .33**				
Step 2		$F(3, 68) = 4.76, p = .01$	.17	.14	.07
Gender	1.27 (0.44) .32**				
Total Risk Score	-0.14 (0.11) -.15				
Presence of Support	1.73 (0.87) .22*				
Step 3		$F(4, 67) = 5.36, p = .00$	.24	.20	.07
Gender	1.06 (0.44) .27*				
Total Risk Score	-1.30 (0.48) -1.37**				
Presence of Support	2.43 (0.88) .31**				
Risk x Support Interaction	1.20 (0.49) 1.24**				

Note: $n = 72$

* $p < .05$, ** $p < .01$, ^a $p < .10$.

Figure 3

Moderation Effects of Presence of Support on Association between Risk Score and Prosocial Scores for the Younger Age Group



Research Question 3: Summary

These analyses examined whether presence of support and the number of support domains diminished the association between risk and outcomes. Although none of these moderation analyses were significant in analyses involving the whole sample, there were some effects based on analyses conducted within groups defined by gender and age. Regarding gender, there were no significant findings among boys. Surprisingly, for girls under conditions of high risk, those with a larger number of support domains had more reported hyperactivity than girls with a lower number of support domains. Possible explanations for this counter-intuitive finding are discussed in the next chapter. There were also differential effects based on age. Among children in the younger age (ages 3-10), those without support exhibited elevated peer problems and fewer prosocial behaviors under conditions of high risk than children whose mothers indicated they did have support.

Chapter Five: Discussion

This study explored the emotional and behavioral characteristics of children facing multiple risk factors and examined the possibility that having one or more supportive relationships in their lives buffered the negative effects of these risks. The study was unique in that it focused on current risk factors facing children in the midst of or immediately following their parents' divorce. Respondents were mothers recruited within weeks of their divorce filing; these mothers reported on risk factors their children were experiencing in their current lives or had experienced in the recent past. Another important contribution was the use of a community sample. Participants were not targeted for inclusion based on symptoms or diagnoses (e.g., depression) related to divorce (as is the case in some studies of divorce; Emery, 1999), were not referred through attorneys for acrimonious divorces, and were not recruited from a domestic violence shelter (as is the case with many studies that examine children's exposure to parental violence; Onyskiw, 2003). Thus, the findings are not limited to a select population, but generalizable to a wider sample experiencing parental divorce and multiple stressors. The findings, then, should be interpreted with this in mind.

This chapter will address each of the research questions in the study, highlighting key findings in relation to prior work, and providing a discussion of the study's limitations with implications for future research and practice.

Effects of Risk on Child Outcomes

The first research question examined family-level risks and child outcomes. The average composite risk scores in this study was 2.83 ($SD = 2.03$) out of a possible 9; 65% of the sample had a cumulative risk score of 3 or below. This is fairly consistent with Fergusson and Horwood's (2003) study of multiple risk; approximately 77% of their sample had an adversity score (i.e., cumulative risk score) of 3 or below. Similarly, Deater-Deckard et al. (1998) summed 20 risk categories into a cumulative score; their sample had an average of 3.81 ($SD = 2.5$).

Consistent with prior findings (e.g., Amato, 2001; Fergusson & Horwood, 2003; Masten & Powell, 2003), this study found a significant association between risk and general difficulties in the overall sample, indicating that as the children's level of risk increased, their overall difficulties increased. Prior research (Rutter, 1979; Sameroff, 2000; Sameroff et al., 2003) supports the use of the composite risk score used in this study, noting that multiple stressors are

common in children's lives and should be taken into consideration when examining child outcomes. Analyses also indicated a significant association between risk and conduct problems, indicating that as level of risk increased, reported conduct problems (e.g., temper tantrums, fighting with or bullying others) also increased. This is also consistent with prior research. In their study of externalizing behavior among children exposed to multiple risks, Deater-Deckard and colleagues (1998) noted, what they called, *sociocultural risks* that had been previously linked to conduct problems including poverty, living with a single mother, young maternal age, stressful life events, and parental stress. The current study included many of these risk factors as well.

Associations between risk exposure and child outcomes were also examined by gender and age. There were no significant differences based on gender. The research regarding the effects of various risk factors on boys versus girls is mixed. There are some previous findings regarding gender effects among children of divorce that boys tend toward more externalizing behaviors while girls internalize their emotions (Emery, 1982; Kelly, 2000; Lansford, 2009). Heatherington and Elmore (2003), however, point out that although there have been some gender differences reported, the findings vary and that both males and females "from divorced families exhibit higher levels of both externalizing and internalizing behaviors compared to adolescents in nondivorced families" (p. 190). However, all children in this study were from divorced families and other risk factors were taken into consideration. Deater-Deckard and colleagues (1998), in their study on multiple risks, note that the raw scores of teacher and peer reports of externalizing or aggressive behavior were higher for boys than girls, but that there were no gender differences based on mother-report of externalizing behaviors. They also point out, however, that "although boys were reported by their teachers and peers as being more aggressive and higher in externalizing behavior problems than girls, higher risk similarly predicted higher problem scores for both genders" (Deater-Deckard et al., 1998, p. 489). Given the mixed findings in prior research, the lack of findings related to gender in this sample are not surprising.

There were, however, findings related to age regarding the association between risk and child outcomes. When the sample was divided by age (children aged 3 to 10 years in one group, and children aged 11 to 17 years in another group), younger children at elevated levels of risk had higher reported total difficulties, as well as higher levels of conduct problems, hyperactivity, and peer problems, than those at lower levels of risk. The conduct problems and hyperactivity

scales included what is typically defined as externalizing behaviors. They cover problems such as temper tantrums, not thinking before acting, and fighting with or bullying other children. The significant findings here are consistent with prior research in that younger children are more likely than older children to “act out” (i.e., externalize), as they often do not have the cognitive capacity to understand the situation or to verbally express their emotions (Brody & Neubaum, 1996; Wallerstein & Kelly, 1980). Prior research has also indicated, however, that adolescent males and females react differently to stress (Nolen-Hoeksema & Girgus, 1994; Wichstrom, 1999). Thus, there could also be some Age X Gender interactions at play here which were not examined in this study due to sample size limitations, but could be a focus of future research.

It should be noted that the mean total difficulties score in this sample was 9.21 ($SD = 6.50$). This may seem like a relatively low score (a total of 40 is possible). However, it is somewhat higher than the average total score of a nationally-representative community sample established by Meltzer and colleagues’ study in Great Britain (see Table 23; Meltzer, Gatward, Goodman, & Ford, 2000). Additionally, all of the mean scores on the subscales were in the normal range, indicating that, on average, the children were not exhibiting significant psychological or behavioral problems. There was variability in the data, however, with some children in the borderline or abnormal ranges (see Table 23 for a comparison to norms from Meltzer et al., 2000). Overall, the children seem to be doing well with scores in the normal ranges, despite exposure to risk.

Table 23

Comparison of Study SDQ Scores with Community Sample Norms

SDQ Scales	This Study		Community Sample Norms		% Normal		% Borderline		% Abnormal	
	Mean	SD	Mean	SD	This Study	Norms	This Study	Norms	This Study	Norms
Emotional symptoms	2.15	1.98	1.90	2.00	74.8	80.8	13.6	7.8	11.7	11.4
Conduct problems	1.70	2.03	1.60	1.70	74.8	76.4	10.7	10.9	14.6	12.7
Hyperactivity	3.65	1.78	3.50	2.60	77.7	77.9	2.9	7.4	19.4	14.7
Peer problems	1.56	1.78	1.50	1.70	76.7	78.0	8.7	10.2	14.6	11.7
Prosocial	8.21	2.03	8.60	1.60	90.3	95.0	4.9	2.7	4.9	2.3
Total difficulties	9.21	6.50	8.40	5.80	82.5	82.1	2.9	8.2	11.7	9.8

Note: $N = 103$ for this study. Community sample norms are taken from Meltzer et al. (2000) a study using a nationally representative sample in Britain of over 10,000 children aged 5 – 15.

When the tenets of resilience theory are applied to these findings, a possible explanation for the relatively average SDQ scores emerges. Resilience theory asserts that both external (e.g., social support) and personal (e.g., intelligence) characteristics serve as protective factors and play a role in resilience (Masten & Garmezy, 1985; Werner & Smith, 1982, 1992). Internal protective factors, such as competence and IQ, were not assessed in this study; thus, there are likely protective factors at play here that were not assessed.

All of the risk factors in this study were at the family level; thus, the composite risk score was not confounded by the combination of family-level and individual-level risks. This mixing of the two levels of risk is a common problem in the cumulative risk literature (Buehler & Gerard, 2012), and was avoided in this study. It has also been noted that the multiple risk literature has not given enough attention to the risks solely within the family domain; thus, this study fills an important gap (Bueher & Gerard, 2012). However, individual-level risks, assessed separately, could have provided more information on the child's functioning and potential risk and/or protective factors. Information on the child's personality, temperament, intelligence, etc. was not available in this secondary data, but future studies could examine both family and individual-level risks, being conscious not to combine them and potentially confound the composite risk score.

Further exploration of multiple risks and child outcomes should also be examined in a sample large enough to allow for the exploration of age and gender interactions. In addition, race/ethnic differences should be further explored, as there have been limited studies on the outcomes among different racial groups (Deater-Deckard et al., 1998). Due to the homogeneity of the sample (nearly 80% of the mothers in this study were coded as White), this exploration was not possible.

These analyses established an association between risks and difficulties. The next analyses examined the relationships of the children, as a prelude to considering whether they functioned as protective factors (reducing the negative impact of risk exposure).

Social Support of the Children

The second research question asked whether these children had social support, identified in this study by the reported presence of a relationship with a trusted adult with whom they regularly spent time. This is an important question, as research on resiliency has documented the importance of relationships for vulnerable children and adolescents (Garmezy, 1991; Luthar &

Zigler, 1991; Werner & Smith, 1982) and social support theory acknowledges the important contributions of relationships to individual wellbeing (Cohen & Wills, 1985). Beam and colleagues (2002) noted that there have been several studies on adolescents' relationships with parents and peers, but relatively few assessing connections to non-parental adults. They note that adolescents' relationships with non-parental adults "appear to be unique and often have both parent-like and peer-like qualities" (Beam et al., 2002, p. 319) and are thus, an important area for exploration.

The majority of mothers reported that their children had at least one relationship with a trusted non-parental adult, and approximately 40% of the mothers reported their child had more than one such relationship. Younger children in this dissertation study were more likely than older children to have a reported relationship and were also more likely to have multiple relationships. This finding has a few potential explanations. One such explanation is that younger children are indeed more likely to have a relationship with a supportive adult. For example, Tinsley and Parke (1984) noted that grandparents and teachers typically serve as secondary supports for younger children, in addition to parents. Another explanation of this finding, however, is that mothers are not as familiar with their older children's support networks. Parents may be more involved in their younger children's social lives than those of their older children; thus, parents may not be reliable reporters of older children's supports. Also, as children get older, peers become much more important (Erikson, 1968). Thus another possible explanation for these findings is that older children do not have as many non-parental adults as supports (which was examined in this study), but instead have a wide peer network that provides support. As children age, grandparents and teachers – key support persons for younger children – become less frequent sources of support (Furman & Buhrmester, 1992). Peer relationships, not examined in this study, warrant further exploration and could provide insight into other protective processes.

In this study, relatives were the most common relationship domain identified, with over half of the mothers identifying a grandparent and over one-third identifying another relative (e.g., aunt, cousin) as a support person for their children. This is not surprising given that extended family, particularly grandparents, often play an important role in the lives of children; this is even more likely when parents separate or divorce for maternal grandparents (Bridges, Roe, Dunn, & O'Connor, 2007; Wolchik, Ruchiman, Braver, & Sandler, 1989). In their study of

social support of children of divorce, Wolchik and colleagues (1989) noted that, consistent with family systems theory, support from extended family may help with the restructuring of the family after a divorce. Children's relationships with extended family members are often important contributors to their adjustment and wellbeing (Bridges et al., 2007).

In some families, however, grandparents (especially paternal grandparents) lose or have reduced contact with their grandchildren after a divorce (Kruk & Hall, 1995). Although this was not specifically examined in this study, it is noteworthy that over half of the mothers reported their children had a close relationship with a grandparent. Thus, it does not appear that this was a problem for the children in this study. It should be noted, however, that these data were gathered relatively soon after the parents separated (8 months on average), so it is possible that contact with grandparents may decrease over time. It is also important to note that it is not known whether the grandparent relationships reported were maternal, paternal, or both. This would be an important aspect to examine in future research. Other researchers (e.g., Flouri, 2010) have noted that grandparent relationships and, more specifically, children's perceptions of them (Bridges et al., 2007), are important areas for future research. Examining grandparent-grandchild relationships from the child's perspective, including whether these relationships continue over time, would be an important contribution to the literature.

As Werner and Smith (1992) reported, one of most important protective factors in their study of resilient children was the presence of at least one caring adult in the child's life. This adult was most commonly a parent for their sample, but also included many nonfamily members as mentors. Although the most common type of relationship identified in this dissertation study was with a family member, many nonfamily relationships were also identified. For example, 15% of the mothers indicated that their child had a trusting relationship with their babysitter or daycare provider, nearly 12% identified family friends that provided support to their children, and several other types of relationships were identified (e.g., coach, youth pastor, step-sibling or step-parent). Several researchers (Fergusson & Horwood, 2003; Werner & Smith, 2001; Wolchik et al., 1989) have noted the importance of relationships outside of the family that may help provide children "an outside perspective or a distraction" (Wolchik et al., 1989, p. 487) from stress. In addition, several studies have reported that vulnerable children who "form attachments with a confiding adult outside their immediate family may be more resilient to the

effects of family adversity” (Fergusson & Horwood, 2003, p. 133). Type of relationship and the benefits received was not examined in this study, but is an important area for future research.

Another important aspect of social support to consider is the type of relationship and how and when the relationship was formed. This issue was not able to be assessed in the current study, but it is worth noting that at least two mothers noted that their child had a “Big Brother” from the Big Brothers Big Sisters program (where an at-risk child is paired with an older mentor for support and guidance; see <http://www.bbbs.org>). This is an inherently different type of relationship than a “natural mentor,” one with a grandparent, for example, which typically develops over time due to proximity or regular contact, or other types of relationships that arise spontaneously in children’s lives (including coaches, teachers, or other types of natural mentoring relationships). The Generations of Hope Community model, for example, encourages and helps to facilitate the natural development of intergenerational relationships (see Eheart, Hopping, Power, Mitchell, & Racine, 2009). The intentional intergenerational community of Hope Meadows (www.generationsofhope.org) employs this model. Older adults (age 55 and older) serve as volunteers in the neighborhood and the relationships between these adults and the at-risk children in this community (many adopted from foster care) develop naturally over time as the volunteers serve in roles such as tutors and mentors, but also due to the fact that they live near one another in a small neighborhood. Formal relationships such as mentor-mentee may exist, but many other types of relationships (neighbor, friend, “grandparent”) also exist. Researchers in the *Handbook of Youth Mentoring* noted that “prospective studies that examine the long-term benefits of natural mentoring initiated during childhood would be a valuable contribution” (Cavell & Smith, 2005, 169) to the literature. Future research should also compare the benefits of relationships formed naturally with those that are paired or matched mentoring relationships. The timing of relationships may also be an important factor. Children who have long-term stable relationships with adults may have more positive outcomes than those with brief interactions or times of support (such as a support person who helps to facilitate the divorce transition). Examining the length and formation of these relationships may lend insight into social support as a protective factor and provide numerous implications for intervention.

Effects of Support on the Association between Risk and Outcomes

The final research question examined whether the presence of a relationship and/or the number of relationship domains buffered the negative effects of risk exposure, therefore

minimizing negative outcomes. The moderation analyses were not significant for the sample as a whole, indicating that social support did not buffer the negative effects of risk on child outcomes. However, there were some buffering effects when analyses were conducted within groups defined by gender and age.

One finding was in the opposite direction than would be predicted from the notion that support serves as a protective factor. Among girls experiencing high levels of risk, those with a larger number of support domains had more reported hyperactivity than girls with a lower number of support domains. This was an unexpected finding that was difficult to explain. One potential explanation is that the child is receiving support because of mother-indicated problems with the child. For example, if the newly single mother feels her daughter is exhibiting problematic behavior (i.e., hyperactivity), she may reach out to family members and friends for support (e.g., send her to spend time with grandma after school), both in an effort to help her child, but also to give herself a break from her daughter's behavior. Because the mother reported on both the child's behavior and the child's relationships, the direction of the association between the two is unknown.

There were also differential effects of the buffering role of social support based on age. For children in the younger age group, under conditions of high risk, those without support exhibited elevated peer problems and fewer prosocial behaviors than those youth whose mothers indicated they did have support. Thus, consistent with prior research, there is evidence of a buffering effect for social support (Cohen & Wills, 1985). Similarly, in their study of children's relationships, Bridges and colleagues (2007) found that "closeness to grandparents following parental separation was associated with fewer adjustment problems" (p. 550) immediately following separation.

These findings on age stress the importance of social support for younger children, specifically in the context of their interactions with others. Further exploration of children's relationships (e.g., their contributions, importance) is warranted to determine if relationship type – family, nonfamily, or some finer distinction – may offer different buffering effects (e.g. Beam et al., 2002). Additionally, based on these findings, exploration of these differing effects for children of different ages is an important area to further examine. Citing Sandler's (2001) work on risk and protective factors, Cavell and Smith (2005) noted that relationships can serve as protective factors in three ways: 1) preventing children from taking a negative path; 2) protecting

those that are already at risk; and 3) promoting competencies and capacities in order to build resilience. Future research could examine these three potential processes in children's relationships and potential buffering effects on the association between risk and child outcomes.

Study Limitations and Implications for Future Research and Practice

Although this study makes several contributions to the literature on children exposed to multiple risk factors, there are limitations that should be recognized. In addition to the suggestions made in the paragraphs above, this section provides further implications for future research. It should be noted that because the current study used secondary data, exploration was limited to available data from the larger study. One limitation is the sole reliance on mother-report data. Previous studies have found that maternal reports of child problems are valid and consistent with other informants/sources of information (e.g., teacher reports, medical records; Goodman, 1997). Other research however, indicates that using maternal reports may be problematic. For example, Wallerstein and Kelly (1980) hypothesized that parents may not be aware of their children's emotions during the divorce transition or may not recognize negative emotions in their children if they differ from their own (i.e., if the parent is happy about the divorce). It should be noted that the mothers in this study were under stress and therefore, may not have been reliable reporters. For example, they may have tended to over-exaggerate child's problems, underreport their children's problems, or simply be unaware of their child's struggles due to their own stress and life changes. Emery (1999) noted that when mothers in studies of divorce report on child behavior, they are not "blind" to the relationship problems or other issues present in the family, and that this bias may distort their ratings. He also noted, however, that the best informants of child behavior are likely to also have knowledge of the family; thus, bias cannot be completely eliminated. Because of this, Emery (1999) recommended obtaining data from multiple informants or collecting observational data to confirm reported behaviors. Future researchers could also follow up with children directly to learn about their supports, and levels of risk and difficulty. For example, children could report on their own social relationships, including the quality of those relationships, and risk and adjustment could be assessed through self-report, observational methods, or by reviewing the medical/clinical records of children to examine problematic symptoms or diagnoses. One strength of utilizing the SDQ in mother-report studies, however, is that the SDQ focuses on observable behavior (e.g., crying) as opposed

to emotions (e.g., feeling sad); thus, mothers may be better reporters on these behavioral (as opposed to emotional) characteristics.

Another limitation is how support was assessed in this study. Children's support systems were assessed with a limited set of questions (i.e., presence/absence and number of domains). To fully examine support and its potential contributions, a more comprehensive measure is needed, preferably one that has been previously validated. For example, in addition to knowing whether children have a support person in their life, it would be beneficial to know what type of support that person provides (e.g., emotional, tangible, instrumental), how often the child and support person spend time together, and so on. According to the Model of Social Provisions (Weiss, 1979), for example, different relationships may provide different types of support. More research is needed to examine support networks and the provisions they provide. For example, Beam and colleagues (2002) found that adolescents equally identified relatives (52%) and non-relatives (48%) as important relationships. However, their participants reported that relationships with family members provided more broad and varied support as compared to non-relatives. For example, non-relatives mainly provided emotional support while relatives provided financial and material support in addition to emotional support (Beam et al., 2002). It could be hypothesized that different types of support are be linked to unique outcomes. One way to learn more about children's relationships is through social network analysis. This is a relatively new method which views an individual's network of relationships as consisting of nodes (people) and ties (types of relationships; Krackhardt, 2010). The five-field map (Samuelsson, Thernlund, Ringstrom, 1996) is another tool available to examine the social networks of children. Mapping children's social networks would provide much more information than was available in this study and allow researchers to more fully examine children's connections and support. Future studies should take these suggestions into consideration to expand the concept of social support and its potential as a moderator.

Other limitations were related to the study sample. The inclusion criteria for the larger study stated that mothers had to have at least one child under the age of 18 with their former partner at the time of the divorce, and the relevant outcome measures were administered if children were aged 3 or above. As a result, the child sample included children aged 3 to 17. Although the wide age range was acceptable for an exploratory study, it did not allow for age-specific developmental tasks to be examined. For example, future studies could further restrict

the sample to children of certain ages in order to include the completion of age-specific developmental tasks as an assessment of functioning. An assessment of resilience typically includes an assessment of developmental tasks (Masten & Powell, 2003), thus, this would be an important contribution to the literature on the resilience of children. This study did examine associations of interest in two age groups, younger children aged 3 to 10 and older children/adolescents aged 11 to 17. However, an overrepresentation of younger children in the sample resulted in a much smaller older age group, limiting the power of such analyses. Future research should ensure that the sample size and composition permit investigation of outcomes among children of a similar age (i.e., early childhood, school age, adolescence). This may involve over-sampling mothers with older children.

In addition to age, the sample included a limited number of ethnic minority families. Nearly 75% of the parents were White, Non-Hispanic. This is largely consistent with the demographics of Champaign County, where the study was conducted. According to the U.S. Census Bureau, approximately 70% of Champaign County residents in 2011 were White, Non-Hispanic (<http://quickfacts.census.gov/qfd/states/17/17019.html>). To obtain a more diverse sample, either targeted recruitment or a new recruitment location would be needed. Although some prior research has suggested that African American youth are less likely to exhibit externalizing behaviors in response to multiple risks (e.g., Deater-Deckard et al. 1998; Gerard & Buehler, 2004), race/ethnicity could not be examined in this study due to the homogeneous sample. Buehler and Gerard (2012) also note the importance of exploring these patterns in diverse samples and suggest that Hispanic families in particular should be a focus of future research, as they represent a rapidly-growing segment of the U.S. population.

Other limitations were related to the cross-sectional nature of the study. For example, support was conceptualized as a moderator but it is possible that outcomes influence the degree and/or nature of support for children. In a similar study, Wolchik and colleagues report that although they suggest a “causal direction from support to adjustment, alternative causal directions are equally plausible... [and perhaps] level of adjustment determines the degree of support or that a bidirectional relation best describes the associations between support and children's adjustment” (1989, 498). They suggest a longitudinal examination of the association between social support and child outcomes. As noted, this data is taken from a larger, ongoing longitudinal study. Once data collection for the Make It! Project is complete, this type of

analysis will be possible. It is also important to note that the cross-sectional design made it impossible to examine whether the child's difficulties (i.e., scores on the SDQ) predated the divorce or exposure to other risk factors. Thus, it is possible that some of the child outcomes are not related to their composite risk scores, but were pre-existing conditions (Amato & Booth, 1996; Elliott & Richards, 1991).

In applying a family systems lens, it is also important that future research incorporate the whole family (i.e., the child's father, siblings, and any step-parents or siblings). Consistent with family systems theory, family members are interdependent and what affects one, affects all (Minuchin, 1985); the whole cannot be understood by looking at its parts in isolation. Data on siblings is available (the study asked mothers about all children in the family; only one was selected for this initial analysis). Now that this exploratory study is complete, looking at the various outcomes of children from the same family is a potential next step. Data on fathers, father involvement, and continuing contact, as well as fathers' perspectives on their children's behavior is missing from this analysis. Therefore, including fathers in future studies is also important, as is the ability to distinguish between maternal and paternal grandparents (as opposed to just "grandparent" relationships). A focus on family resilience (see Walsh, 2006) may offer insight into the family's adaptation amid the divorce transition and various other risks and stressors.

To address these study limitations, future research examining risk and resilience with an ecological perspective should include a longitudinal study with multiple time points using multiple informants (such as teachers and daycare providers, in addition to parents) or the children themselves (when old enough). For young children especially, who "have simply not had a long enough life to play out the contingent processes basic to some manifestations of resilience" (Seifer, 2003, p. 31), a longitudinal study would be best. Seifer also noted that longitudinal research is also beneficial when examining social support, as developing a relationship with a trusted adult may take place over the course of several months or even years. Masten and Wright (1998) also noted that "some of the damaging effects [of risk exposure] may not occur until a later developmental stage. Thus outcomes need to be assessed longitudinally, with multiple assessment periods" (p. 13). Utilizing a longitudinal design and multiple informants provides a much richer picture of the child and family's life and their developmental risks and successes.

Further qualitative research is also needed in this area. In-depth interviews with at-risk youth would provide rich information on the challenges these youth face, as well as their coping skills or potential protective factors. Asking the youth themselves to describe their formal and informal social supports and what they get from those relationships would provide a wealth of information and provide insight into the provisions and protective qualities of social relationships (e.g., Greeson & Bowen, 2008; Kurtz, Lindsey, Jarvis, & Nackerud 2000).

Implications for Practice

This study drew from an ecological and resilience perspective to examine child emotional and behavioral characteristics in the context of multiple risk factors. This perspective has been incorporated into social work practice through a focus on strengths of individuals, families, and communities, rather than weaknesses or risks (Fergusson & Horwood, 2003; Walsh, 2006; Werner & Smith, 1992). There are now many programs and interventions that are “strength-based” or designed to build upon family strengths and these should continue to expand. Sameroff et al. (2003) noted that because children experience stressors in multiple dimensions of their lives, “interventions in single domains have not produced major reductions in problem behavior” (p. 264). Consistent with family systems theory, what affects one member of the family ultimately affects other members. Thus, given the various family-level risk factors assessed in this study, it seems that comprehensive interventions that target the family as a whole would be most appropriate (Appleyard et al., 2005). The resilience perspective involves both reducing risk and promoting protective factors. Thus, a program designed to enhance resilience must also do the same (Cicchetti & Lynch, 1993; Luthar & Cicchetti, 2000). For example, in addition to promoting social support for children, interventions may also include improving the co-parenting relationship, as research has demonstrated that children with divorced parents with low levels of conflict are better off than children of highly conflicted couples (Amato & Keith, 2001; Emery, 1982). Divorce education courses have become fairly common now, and many states have laws requiring divorcing parents to undergo some type of co-parenting education before finalizing their divorce (Braver, Salem, Pearson, & DeLuse, 1996). These programs already address some of the risk factors assessed in this study (e.g., conflicted/hostile separation). Perhaps these programs should also include a component on the multiple risks and transitions that often accompany divorce and provide parents with tools to manage or reduce

these risks. One such tool, as suggested in this study, is the presence of a support person in the lives of children.

Because having support moderated the association between risk and outcomes for younger children, cultivating support for younger children seems important for practitioners. For younger children, the most natural supports seem to be extended family members. Thus, consistent with findings from Wolchik et al. (1989), the study findings suggest that “in designing prevention programs for children of divorce, researchers should consider how to mobilize the effective use of support from the extended family” (p. 498). However, it is important to note that younger children in the study were more likely than older children to have a reported relationship and also more likely to have multiple relationships. This may indicate that parents make more of an effort to connect their younger children with adult supports than their older children, or that younger children’s contexts provide a larger number of potential support providers. Older children and adolescents, as part of typical development, are often encouraged (and typically expected) to meet people and form relationships on their own, independent of their parents. This study suggests that perhaps parents should take a more active role in knowing their older children’s supports, and if necessary, ensuring that their older children and adolescents have positive and supportive relationships with adults. As noted, although adolescents tend to form more peer relationships, a relationship with a caring adult is important and should be encouraged.

When extended family members are not nearby or available as mentors, others can provide support. For example, in her review of the qualitative literature on upwardly mobile African American adolescents, Jarrett noted the importance of a supportive adult network structure (Jarrett, 1995) and provided several examples of the importance of kin-like relationships or friendships in the lives of low-income African American youth. In another study, Jarrett noted that “kinship networks of grandparents, older siblings, god-parents, and other biological and fictive kin can provide broader opportunities for youths.” (Jarrett, 1999, p. 47). This relates to Rutter’s (1979) concept of opening opportunities as a protective mechanism. Thus, developing those kinship networks of support should be a goal for youth programs aimed as positive development. Programs like the aforementioned Big Brothers Big Sisters (www.bbbs.org) do just that. Other youth programs should consider the importance of adult support for youth and incorporate a mentorship component of their program.

Conclusion

In summary, this study supports the multiple risk perspective and the association between increased risk and negative outcomes for children. It expands the literature on children experiencing parental divorce and facing multiple family-level risks. It also highlights the importance of social support for children and the role that important non-parental adults can play in the lives of developing youth. As many of the children in the U.S. face the divorce of their parents and multiple risk factors, the well-being of these children, and what can be done to promote positive outcomes, should be a focus of future research.

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Appendix A Selected Measures

Scales from the MAKE IT! Project used in the current study.

Demographic Variables

DB2. How would you classify your race or ethnicity?	1 _____ Black or African American 2 _____ American Indian 3 _____ Asian or Asian American 4 _____ Latino or Hispanic 5 _____ Middle Eastern 6 _____ White, Non-Hispanic 7 _____ Other: _____																																																
DB11. What is your former partner's race/ethnicity?	1 _____ Black or African American 2 _____ American Indian 3 _____ Asian or Asian American 4 _____ Latino or Hispanic 5 _____ Middle Eastern 6 _____ White, Non-Hispanic 7 _____ Other: _____																																																
DB20. What month and year did you <u>marry</u> ?	_____ / _____ month year																																																
DB22. What month and year did you <u>physically separate</u> ?	_____ / _____ month year																																																
<p>DB19. Beginning with your oldest child, what is the sex, date of birth, age, and highest grade of school completed for each of the children you have with your former partner? [<i>enter responses below</i>]</p> <p><i>Note: Record demographic information on <u>all</u> children here. However, from this point on, only include children who are under age 18 in the questions. If a child is 18 or older, check the box to the left of their name and do not include them on the child card.</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center; vertical-align: top;"><input type="checkbox"/></td> <td style="width: 20%; text-align: center;">_____</td> <td style="width: 5%; text-align: center;">_____</td> <td style="width: 10%; text-align: center;">_____ / _____ / _____</td> <td style="width: 5%; text-align: center;">_____</td> <td style="width: 15%; text-align: center;">_____</td> </tr> <tr> <td></td> <td style="text-align: center;">name</td> <td style="text-align: center;">sex</td> <td style="text-align: center;">month day year</td> <td style="text-align: center;">age</td> <td style="text-align: center;">highest grade completed</td> </tr> <tr> <td style="text-align: center; vertical-align: top;"><input type="checkbox"/></td> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____ / _____ / _____</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____</td> </tr> <tr> <td></td> <td style="text-align: center;">name</td> <td style="text-align: center;">sex</td> <td style="text-align: center;">month day year</td> <td style="text-align: center;">age</td> <td style="text-align: center;">highest grade completed</td> </tr> <tr> <td style="text-align: center; vertical-align: top;"><input type="checkbox"/></td> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____ / _____ / _____</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____</td> </tr> <tr> <td></td> <td style="text-align: center;">name</td> <td style="text-align: center;">sex</td> <td style="text-align: center;">month day year</td> <td style="text-align: center;">age</td> <td style="text-align: center;">highest grade completed</td> </tr> <tr> <td style="text-align: center; vertical-align: top;"><input type="checkbox"/></td> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____ / _____ / _____</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____</td> </tr> <tr> <td></td> <td style="text-align: center;">name</td> <td style="text-align: center;">sex</td> <td style="text-align: center;">month day year</td> <td style="text-align: center;">age</td> <td style="text-align: center;">highest grade completed</td> </tr> </table>		<input type="checkbox"/>	_____	_____	_____ / _____ / _____	_____	_____		name	sex	month day year	age	highest grade completed	<input type="checkbox"/>	_____	_____	_____ / _____ / _____	_____	_____		name	sex	month day year	age	highest grade completed	<input type="checkbox"/>	_____	_____	_____ / _____ / _____	_____	_____		name	sex	month day year	age	highest grade completed	<input type="checkbox"/>	_____	_____	_____ / _____ / _____	_____	_____		name	sex	month day year	age	highest grade completed
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	name	sex	month day year	age	highest grade completed																																												

Risk Variables:**Mother's Age**

DB1. What is your date of birth?	_____ / _____ / _____ month day year
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Parental Education

DB5. What is your highest level of education?	1 ____ Less than high school diploma 2 ____ High school diploma or GED 3 ____ Technical school 4 ____ Some college 5 ____ Associate's degree 6 ____ Bachelor's degree 7 ____ Some graduate school 8 ____ Master's degree 9 ____ Doctoral degree (e.g., PhD, JD, MD) 10 ____ Other: _____
DB14. What is your former partner's highest level of education?	1 ____ Less than high school diploma 2 ____ High school diploma or GED 3 ____ Technical school 4 ____ Some college 5 ____ Associate's degree 6 ____ Bachelor's degree 7 ____ Some graduate school 8 ____ Master's degree 9 ____ Doctoral degree (e.g., PhD, JD, MD) 10 ____ Other: _____

Income Level

DB8. Which of the following best describes <u>your</u> total income in the last month, including all sources of income?	1 ____ \$499 or below 2 ____ \$500 - \$749 3 ____ \$750 - \$999 4 ____ \$1,000 - \$1,499 5 ____ \$1,500 - \$1,999 6 ____ \$2,000 - \$2,499 7 ____ \$2,500 - \$2,999 8 ____ \$3,000 - \$3,499 9 ____ \$3,500 - \$3,999 10 ____ \$4,000 - \$4,499 11 ____ \$4,500 - \$4,999 12 ____ \$5,000 or more
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Receiving Public Assistance

DB9. Do you receive any of the following public assistance services?	1 ____ Cash assistance (e.g., TANF) 2 ____ Food assistance (e.g., food stamps, WIC) 3 ____ Health care assistance (e.g., All Kids ins.,) 4 ____ Child care assistance (such as CCAP) 5 ____ Housing assistance (e.g., Section 8 vouchers) 6 ____ Other: _____
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Presence of Marital Violence, Presence of Severe Violence, Child Witnessed Violence

Section CTS: For this section, I will read a list of items and ask you whether you have ever experienced each one with your former partner. If you respond yes, I will then ask you how many times during your marriage, whether it happened during the year before you separated, and whether it has happened since you physically separated. I will also ask if any of your children ever witnessed it.

CTS1. He threw something at me that could hurt.	Ever? 0 ___ No 1 ___ Yes	How many times? 1 ___ Once 2 ___ Twice 3 ___ 3-5 times 4 ___ 6-10 times 5 ___ 10 or more	Last year b/f separation? 0 ___ No 1 ___ Yes	Since you separated? 0 ___ No 1 ___ Yes
a. Did any of your children witness this? <i>If yes, mark appropriate blank for child <u>and</u> time period.</i>	CHILD 1: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation	CHILD 2: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation	CHILD 3: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation	CHILD 4: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation
CTS2. He twisted my arm or hair.	Ever? 0 ___ No 1 ___ Yes	How many times? 1 ___ Once 2 ___ Twice 3 ___ 3-5 times 4 ___ 6-10 times 5 ___ 10 or more	Last year b/f separation? 0 ___ No 1 ___ Yes	Since you separated? 0 ___ No 1 ___ Yes
a. Did any of your children witness this? <i>If yes, mark appropriate blank for child <u>and</u> time period.</i>	CHILD 1: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation	CHILD 2: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation	CHILD 3: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation	CHILD 4: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation

<p>CTS3. I had a sprain, bruise, or small cut because of a fight with him.</p>	<p>Ever? 0 ___ No 1 ___ Yes</p>	<p>How many times? 1 ___ Once 2 ___ Twice 3 ___ 3-5 times 4 ___ 6-10 times 5 ___ 10 or more</p>	<p>Last year b/f separation? 0 ___ No 1 ___ Yes</p>	<p>Since you separated? 0 ___ No 1 ___ Yes</p>
<p>a. Did any of your children witness this? <i>If yes, mark appropriate blank for child <u>and</u> time period.</i></p>	<p>CHILD 1: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 2: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 3: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 4: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>
<p>CTS4. He pushed or shoved me.</p>	<p>Ever? 0 ___ No 1 ___ Yes</p>	<p>How many times? 1 ___ Once 2 ___ Twice 3 ___ 3-5 times 4 ___ 6-10 times 5 ___ 10 or more</p>	<p>Last year b/f separation? 0 ___ No 1 ___ Yes</p>	<p>Since you separated? 0 ___ No 1 ___ Yes</p>
<p>a. Did any of your children witness this? <i>If yes, mark appropriate blank for child <u>and</u> time period.</i></p>	<p>CHILD 1: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 2: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 3: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 4: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>
<p>CTS5. He used a knife or gun on me.</p>	<p>Ever? 0 ___ No 1 ___ Yes</p>	<p>How many times? 1 ___ Once 2 ___ Twice 3 ___ 3-5 times 4 ___ 6-10 times 5 ___ 10 or more</p>	<p>Last year b/f separation? 0 ___ No 1 ___ Yes</p>	<p>Since you separated? 0 ___ No 1 ___ Yes</p>

<p>a. Did any of your children witness this? <i>If yes, mark appropriate blank for child <u>and</u> time period.</i></p>	<p>CHILD 1: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 2: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 3: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 4: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>
<p>CTS6. I passed out from being hit on the head by my partner in a fight.</p>	<p>Ever? 0 ___ No 1 ___ Yes</p>	<p>How many times? 1 ___ Once 2 ___ Twice 3 ___ 3-5 times 4 ___ 6-10 times 5 ___ 10 or more</p>	<p>Last year b/f separation? 0 ___ No 1 ___ Yes</p>	<p>Since you separated? 0 ___ No 1 ___ Yes</p>
<p>a. Did any of your children witness this? <i>If yes, mark appropriate blank for child <u>and</u> time period.</i></p>	<p>CHILD 1: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 2: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 3: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 4: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>
<p>CTS7. He punched or hit me with something that could hurt.</p>	<p>Ever? 0 ___ No 1 ___ Yes</p>	<p>How many times? 1 ___ Once 2 ___ Twice 3 ___ 3-5 times 4 ___ 6-10 times 5 ___ 10 or more</p>	<p>Last year b/f separation? 0 ___ No 1 ___ Yes</p>	<p>Since you separated? 0 ___ No 1 ___ Yes</p>
<p>a. Did any of your children witness this? <i>If yes, mark appropriate blank for child <u>and</u> time period.</i></p>	<p>CHILD 1: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 2: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 3: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 4: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>

CTS8. I went to a doctor because of a fight with my partner.	Ever? 0 ___ No 1 ___ Yes	How many times? 1 ___ Once 2 ___ Twice 3 ___ 3-5 times 4 ___ 6-10 times 5 ___ 10 or more	Last year b/f separation? 0 ___ No 1 ___ Yes	Since you separated? 0 ___ No 1 ___ Yes
a. Did any of your children witness this? <i>If yes, mark appropriate blank for child and time period.</i>	CHILD 1: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation	CHILD 2: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation	CHILD 3: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation	CHILD 4: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation
CTS9. He choked me.	Ever? 0 ___ No 1 ___ Yes	How many times? 1 ___ Once 2 ___ Twice 3 ___ 3-5 times 4 ___ 6-10 times 5 ___ 10 or more	Last year b/f separation? 0 ___ No 1 ___ Yes	Since you separated? 0 ___ No 1 ___ Yes
a. Did any of your children witness this? <i>If yes, mark appropriate blank for child and time period.</i>	CHILD 1: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation	CHILD 2: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation	CHILD 3: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation	CHILD 4: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation
CTS10. He slammed me against a wall.	Ever? 0 ___ No 1 ___ Yes	How many times? 1 ___ Once 2 ___ Twice 3 ___ 3-5 times 4 ___ 6-10 times 5 ___ 10 or more	Last year b/f separation? 0 ___ No 1 ___ Yes	Since you separated? 0 ___ No 1 ___ Yes

<p>a. Did any of your children witness this? <i>If yes, mark appropriate blank for child <u>and</u> time period.</i></p>	<p>CHILD 1: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 2: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 3: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 4: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>
<p>CTS11. I needed to see a doctor because of a fight with him, but I didn't.</p>	<p>Ever? 0 ___ No 1 ___ Yes</p>	<p>How many times? 1 ___ Once 2 ___ Twice 3 ___ 3-5 times 4 ___ 6-10 times 5 ___ 10 or more</p>	<p>Last year b/f separation? 0 ___ No 1 ___ Yes</p>	<p>Since you separated? 0 ___ No 1 ___ Yes</p>
<p>a. Did any of your children witness this? <i>If yes, mark appropriate blank for child <u>and</u> time period.</i></p>	<p>CHILD 1: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 2: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 3: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 4: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>
<p>CTS12. He beat me up.</p>	<p>Ever? 0 ___ No 1 ___ Yes</p>	<p>How many times? 1 ___ Once 2 ___ Twice 3 ___ 3-5 times 4 ___ 6-10 times 5 ___ 10 or more</p>	<p>Last year b/f separation? 0 ___ No 1 ___ Yes</p>	<p>Since you separated? 0 ___ No 1 ___ Yes</p>
<p>a. Did any of your children witness this? <i>If yes, mark appropriate blank for child <u>and</u> time period.</i></p>	<p>CHILD 1: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 2: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 3: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 4: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>

CTS13. He grabbed me.	Ever? 0 ___ No 1 ___ Yes	How many times? 1 ___ Once 2 ___ Twice 3 ___ 3-5 times 4 ___ 6-10 times 5 ___ 10 or more	Last year b/f separation? 0 ___ No 1 ___ Yes	Since you separated? 0 ___ No 1 ___ Yes
a. Did any of your children witness this? <i>If yes, mark appropriate blank for child <u>and</u> time period.</i>	CHILD 1: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation	CHILD 2: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation	CHILD 3: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation	CHILD 4: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation
CTS14. He slapped me.	Ever? 0 ___ No 1 ___ Yes	How many times? 1 ___ Once 2 ___ Twice 3 ___ 3-5 times 4 ___ 6-10 times 5 ___ 10 or more	Last year b/f separation? 0 ___ No 1 ___ Yes	Since you separated? 0 ___ No 1 ___ Yes
a. Did any of your children witness this? <i>If yes, mark appropriate blank for child <u>and</u> time period.</i>	CHILD 1: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation	CHILD 2: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation	CHILD 3: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation	CHILD 4: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation

<p>CTS15. I had a broken bone from a fight with him.</p>	<p>Ever? 0 ___ No 1 ___ Yes</p>	<p>How many times? 1 ___ Once 2 ___ Twice 3 ___ 3-5 times 4 ___ 6-10 times 5 ___ 10 or more</p>	<p>Last year b/f separation? 0 ___ No 1 ___ Yes</p>	<p>Since you separated? 0 ___ No 1 ___ Yes</p>
<p>a. Did any of your children witness this? <i>If yes, mark appropriate blank for child <u>and</u> time period.</i></p>	<p>CHILD 1: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 2: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 3: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 4: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>
<p>CTS16. He burned or scalded me.</p>	<p>Ever? 0 ___ No 1 ___ Yes</p>	<p>How many times? 1 ___ Once 2 ___ Twice 3 ___ 3-5 times 4 ___ 6-10 times 5 ___ 10 or more</p>	<p>Last year b/f separation? 0 ___ No 1 ___ Yes</p>	<p>Since you separated? 0 ___ No 1 ___ Yes</p>
<p>a. Did any of your children witness this? <i>If yes, mark appropriate blank for child <u>and</u> time period.</i></p>	<p>CHILD 1: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 2: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 3: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 4: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>
<p>CTS17. I felt physical pain that still hurt the next day because of a fight with him.</p>	<p>Ever? 0 ___ No 1 ___ Yes</p>	<p>How many times? 1 ___ Once 2 ___ Twice 3 ___ 3-5 times 4 ___ 6-10 times 5 ___ 10 or more</p>	<p>Last year b/f separation? 0 ___ No 1 ___ Yes</p>	<p>Since you separated? 0 ___ No 1 ___ Yes</p>

<p>a. Did any of your children witness this? <i>If yes, mark appropriate blank for child <u>and</u> time period.</i></p>	<p>CHILD 1: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 2: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 3: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 4: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>
<p>CTS18. He kicked me.</p>	<p>Ever? 0 ___ No 1 ___ Yes</p>	<p>How many times? 1 ___ Once 2 ___ Twice 3 ___ 3-5 times 4 ___ 6-10 times 5 ___ 10 or more</p>	<p>Last year b/f separation? 0 ___ No 1 ___ Yes</p>	<p>Since you separated? 0 ___ No 1 ___ Yes</p>
<p>a. Did any of your children witness this? <i>If yes, mark appropriate blank for child <u>and</u> time period.</i></p>	<p>CHILD 1: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 2: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 3: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>	<p>CHILD 4: 0 ___ No 1 ___ Yes, during marriage only 2 ___ Yes, after separation only 3 ___ Yes, both in marriage and after separation</p>

Conflicted/Hostile Separation

Section ICH: Now I want you to think about <u>the point in time at which you physically separated</u> from your former partner.	
ICH1. On a scale of 1 to 5 with 1 being not at all hostile and 5 being extremely hostile, how would you describe your initial separation?	1 _____ Not at all hostile 2 _____ 3 _____ Moderately hostile 4 _____ 5 _____ Extremely hostile
ICH2. (SEE CARD B) How much did you and your former partner agree about <u>child custody</u> when you initially separated?	1 _____ No agreement 2 _____ 3 _____ Moderate agreement 4 _____ 5 _____ Complete agreement
ICH3. How much did you and your former partner agree about <u>child support</u> when you initially separated?	1 _____ No agreement 2 _____ 3 _____ Moderate agreement 4 _____ 5 _____ Complete agreement

Mother's Mental Health: Depressive Symptoms

Section CESD: Next is a list of ways you might have felt or behaved during the <u>past 7 days</u>.	
How many days in the past 7 days did you:	
CESD1. Feel that you could not shake off the blues, even with help from your family or friends?	# of days _____
CESD2: Have trouble keeping your mind on what you were doing?	# of days _____
CESD3. Feel that everything you did was an effort?	# of days _____
CESD4. Sleep restlessly?	# of days _____
CESD5. Feel lonely?	# of days _____
CESD6. Feel sad?	# of days _____
CESD7. Feel you could not get going?	# of days _____
CESD8. Feel irritable, or likely to fight or argue?	# of days _____
CESD9. Feel like telling someone off?	# of days _____
CESD10. Feel angry or hostile for several hours at a time?	# of days _____
CESD11. During the <u>last year</u> , have you had 2 weeks or more in which you felt sad, blue, or depressed or when you lost all interest or pleasure in things that you usually cared about or enjoyed?	0 _____ No 1 _____ Yes
CESD12. Have you felt depressed or sad much of the time <u>in the last year</u> ?	0 _____ No 1 _____ Yes

Mother's Mental Health: Post-Traumatic Symptoms

Section PCL: (SEE CARD F) Now I will read a list of problems or complaints that people sometimes have in response to stressful experiences. Please indicate how much you have been bothered by each problem in the <u>last month</u>.					
	Not at all	A little bit	Moderately	Quite a bit	Extremely
PCL1. Repeated, disturbing memories, thoughts, or images of a stressful experience?	1	2	3	4	5
PCL2. Feeling very upset when something reminded you of a stressful experience?	1	2	3	4	5
PCL3. Avoiding activities or situations because they reminded you of a stressful experience?	1	2	3	4	5
PCL4. Feeling distant or cut off from other people?	1	2	3	4	5
PCL5. Feeling irritable or having angry outbursts?	1	2	3	4	5
PCL6. Having difficulty concentrating?	1	2	3	4	5

Outcomes (Strengths and Difficulties Questionnaire)

Section SDQ: (SEE CARD D) In this set of questions, indicate if each item is Not True, Somewhat True, or Certainly True for your child/children. Answer as best you can even if you are not absolutely certain. Please answer on the basis of your child's behavior <u>right now</u> .				
	CHILD 1	CHILD 2	CHILD 3	CHILD 4
	Age: _____	Age: _____	Age: _____	Age: _____
SDQ1. Considerate of other people's feelings	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ2. Restless, overactive, cannot stay still for long	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ3. Often complains of headaches, stomach-aches, or sickness	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ4. Shares readily with other children, e.g., toys, treats, pencils	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ5. Often loses temper	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ6. Rather solitary, prefers to play or be alone	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ7. Generally well behaved, usually does what adults request	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ8. Many worries or often seems worried	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true

	2 ___ Certainly true	2 ___ Certainly true	2 ___ Certainly true	2 ___ Certainly True.
SDQ9. Helpful if someone is hurt, upset, or feeling ill	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ10. Constantly fidgeting or squirming	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ11. Has a least one good friend	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ12. Often fights with other children or bullies them	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ13. Often unhappy, depressed, or tearful	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ14. Generally liked by other children	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ15. Easily distracted, concentration wanders	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ16. Nervous or clingy in new situations, easily loses confidence	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ17. Kind to younger children	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ18. Often lies or cheats (4+)	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ19. Picked on or bullied by other children	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ20. Often offers to help others (parents, teachers, other children)	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true

SDQ21. Thinks things out before acting	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ22. Steals from home, school, or elsewhere (4+)	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ23. Gets along better with adults than with children	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ24. Many fears, easily scared	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ25: Often argumentative with others (3 & 4 only)	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ26: Can be spiteful to others (3 & 4 only)	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true
SDQ27. Good attention span, sees work through to the end	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true	0 ___ Not true 1 ___ Somewhat true 2 ___ Certainly true

Support Questions

	CHILD 1	CHILD 2	CHILD 3	CHILD 4
	Age: _____	Age: _____	Age: _____	Age: _____
<p>CSS: Do your children have an adult (other than you or their father) that they trust and regularly spend time with? <i>(can be different person for each child)</i></p>	0 ___ No 1 ___ Yes	0 ___ No 1 ___ Yes	0 ___ No 1 ___ Yes	<p>0 ___ No 1 ___ Yes</p>
<p>that all a. If YES, who is person? (mark that apply)</p>	<p>1 ___ A grandparent 2 ___ A neighbor 3 ___ A mentor (teacher, Big Brothers/Big Sisters, etc) 4 ___ Another relative _____ 5 ___ Other: _____</p>	<p>1 ___ A grandparent 2 ___ A neighbor 3 ___ A mentor (teacher, Big Brothers/Big Sisters, etc) 4 ___ Another relative _____ 5 ___ Other: _____</p>	<p>1 ___ A grandparent 2 ___ A neighbor 3 ___ A mentor (teacher, Big Brothers/Big Sisters, etc) 4 ___ Another relative _____ 5 ___ Other: _____</p>	<p>1 ___ A grandparent 2 ___ A neighbor 3 ___ A mentor (teacher, Big Brothers/Big Sisters, etc) 4 ___ Another relative _____ 5 ___ Other: _____</p>

Appendix B

Poverty Threshold Table

Poverty Thresholds for 2011 by Size of Family and Number of Related Children Under 18 Years									
Size of family unit	Related children under 18 years								
	None	One	Two	Three	Four	Five	Six	Seven	Eight or more
One person (unrelated individual).....									
Under 65 years.....	11,702								
65 years and over.....	10,788								
Two people.....									
Householder under 65 years.....	15,063	15,504							
Householder 65 years and over.....	13,596	15,446							
Three people.....	17,595	18,106	18,123						
Four people.....	23,201	23,581	22,811	22,891					
Five people.....	27,979	28,386	27,517	26,844	26,434				
Six people.....	32,181	32,309	31,643	31,005	30,056	29,494			
Seven people.....	37,029	37,260	36,463	35,907	34,872	33,665	32,340		
Eight people.....	41,414	41,779	41,027	40,368	39,433	38,247	37,011	36,697	
Nine people or more.....	49,818	50,059	49,393	48,835	47,917	46,654	45,512	45,229	43,487
Source: U.S. Census Bureau.									