

Assessing Resilience in Preschool Children Exposed to Intimate Partner Violence:  
Utilizing Multiple Informants and Evaluating the Impact of the  
Preschool Kids' Club Intervention

by

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## Dedication

To my family and friends, thank you for all of your love and support. To my advisor, Sandy Graham-Bermann, thank you for your mentorship and guidance.

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## Abstract

This three study dissertation evaluates resilience in preschool children exposed to intimate partner violence (IPV). The first study compared mothers' and child therapists' independent evaluations of resilience in preschoolers exposed to IPV to determine if they were consistent. Resilience was operationalized as strengths in emotion regulation and prosocial skills. Results revealed that group therapists' ratings of resilience were negatively correlated with children's externalizing behavior problems, but not internalizing behavior problems, as reported by their mother. Further, findings indicated poor rater agreement between mothers and group therapists on the measure of emotion regulation, but not the measure of prosocial skills. Mothers' emotion regulation scores were significantly lower than therapists'; however, therapists' scores were consistent with national data on high-risk children. Finally, resilience evaluations differed based on specific demographic factors, with the most variability for the youngest cohort of children. Findings from this study fill a gap in the literature by providing the results of multiple evaluations of resilience in children exposed to IPV to answer the questions of whether and how children display evidence of positive coping at home and in treatment.

The second study assessed whether participation in an intervention program enhanced resilience in preschool-age children exposed to IPV. This study also compared preschool children who did and did not receive intervention services to evaluate change in resilience over time from baseline to approximately five weeks later. Finally, this study identified protective factors that predicted change in resilience scores. Results indicated

that children who had the highest prosocial skills scores before the intervention exhibited a significant increase in their post-intervention scores, if they participated in the intervention program. Such an intervention effect was not found for the emotion regulation outcome variable. Further, a higher pre-intervention score and less severe violence predicted greater change in prosocial skills for children in the intervention program. None of the demographic or family-level variables assessed in this study predicted change in prosocial skills. This study is the first of its kind to evaluate change in resilience following intervention for preschool children exposed to IPV and provides unique information on positive functioning in this population.

The final study examined resilience in preschoolers at a six month follow-up. In addition to evaluating longer-term change in resilience, this study identified protective factors that predicted change in emotion regulation ability and prosocial skills. Hierarchical linear modeling was used to explain the relationship between children's participation in the intervention and changes in resilience from pre-intervention to post-intervention and to follow-up. Results indicated that neither treatment nor time had main effects on prosocial skills or emotion regulation scores, i.e. scores remained static in the experimental and comparison groups over time. Further analyses revealed that follow-up prosocial skills and emotion regulation were predicted by unique and independent protective factors. Higher prosocial skills scores were predicted by less severe violence and greater maternal coping, whereas emotion regulation was predicted by fewer child externalizing problems and the use of less negative parenting strategies. This study offers insight into the longer-lasting changes that may be seen in preschool children who have witnessed IPV.

## Chapter I

### Introduction

Intimate partner violence (IPV) occurs at alarmingly high rates, with conservative estimates placing annual prevalence between 17 and 28 percent of married or cohabitating couples (McDonald, Jouriles, Ramisetty-Mikler, Caetano, & Green, 2006). The adverse consequences of this violence are systemic, with women and children suffering a multitude of negative physical and mental health outcomes (Graham-Bermann, Lynch, Banyard, DeVoe, & Halabu, 2007; Grych, Jouriles, Swank, McDonald, & Norwood, 2000; Levendosky, Hugh-Bocks, Semel, & Shapiro, 2002). Such detrimental costs have led to extensive research on IPV in recent decades. The current definition of IPV encompasses physical, sexual, and emotional abuse between dating or married partners, either in an existing or past relationship, occurring along a continuum from a single episode of violence to ongoing abuse (Center for Disease and Control and Prevention (CDC), 2006). Both men and women can be targets of IPV; however, women are significantly more likely to experience the adverse physical consequences of such violence when compared to men (Tjaden & Thoennes, 2000).

The detrimental impact of IPV extends beyond violence in a partnership, as children are frequently present in these homes. A recent study by McDonald and colleagues (2006) found that IPV is more prevalent among married or cohabitating couples with children than those without children. They estimate that 15.5 million

American children (ages 0-17) live in households with IPV, with 7 million children living in severely violent homes. Living in a household with IPV puts children at risk for being exposed to and witnessing violence. In fact, in a population-based study of children's direct exposure to domestic violence events investigated by police officers, Fantuzzo and Fusco (2007) found that of the children who were present during events involving IPV, 81% had direct exposure to these violent incidents. Graham-Bermann and colleagues (2007) further assessed whether children were direct witnesses to mothers' reports of IPV events and found that 89% were eyewitness to psychological maltreatment and 82% witnessed physical violence in the home when it occurred.

Furthermore, the risk of witnessing violence is especially high for younger children. For example, Fantuzzo and colleagues (1997) reported that children under the age of 5 years old were disproportionately represented among children exposed to incidents of violence in households where IPV occurred. Fantuzzo and Fusco (2007) reported similar findings, showing that children under the age of 6 years old were disproportionately exposed to domestic violence events and were at a greater risk of direct exposure to these events. It is important to point out, however, that children's experience of witnessing violence is frequently much broader than direct exposure, as, in addition to seeing, hearing or being used in direct episodes of IPV, witnessing IPV often involves its aftermath as well, such as seeing a hurt parent, having to move to a shelter, or witnessing police intervention (Edleson, 1999).

### **Effects of IPV on Preschool Children**

The effects of exposure to IPV have not been as extensively studied in a population of preschool-age children as they have been among older children, despite

preschoolers increased vulnerability to being exposed to greater amounts of violence (Fantuzzo et al., 1997; Fantuzzo & Fusco, 2007). Interparental violence is especially distressing for preschool-age children because they spend a significant proportion of time with parents. Preschool children rely on parental figures to protect them from dangers and make their environment safe and predictable, functions that can be severely compromised in families with violence (Margolin & Gordis, 2000). These young children cannot escape the violence through peer or academic outlets; instead they must live with the physical and psychological abuse nearly every day. When compared to older children, preschoolers exposed to IPV evidence significantly lower levels of self-esteem and social skills (Fantuzzo, DePaola, Lambert, Martino, Anderson, & Sutton, 1991; Rossman, Rea, Butterfield, & Graham-Bermann, 2004). Research shows that exposure to family violence during these early years, when the capacity for emotion regulation is growing and children's attachment to parents is strongest, has decidedly severe and enduring negative effects (Levendosky, Huth-Bocks, Semel, & Shapiro, 2002).

#### *Externalizing/Internalizing Behavior Problems*

One significant negative outcome associated with exposure to IPV is an increase in aggression, hyperactivity, and externalizing problems (Paterson, Carter, Gao, Cowley-Malcolm, & Iusitini, 2008). Exposure to violence alters children's ability to regulate emotions, leading to more intense, severe aggression. Children who witness IPV in the home show higher rates of aggression, fighting, and antisocial behavior (Margolin, 2005). The fear and anger children experience in an abusive home may lead to feelings of helplessness, anxiety, and depression. Young children rely on parents for protection and support; therefore when traumatic events occur in the home, children begin to view life as

stressful and lonely, often believing they are not worth respect and comfort. These beliefs contribute to internalizing problems and social withdrawal. Preschool children may exhibit a loss of self-esteem and self-confidence following exposure to family violence (Grych, Jouriles, Swank, McDonald, & Norwood, 2000; Lemmey, McFarlane, Wilson, & Malecha, 2001).

One mega-analysis on family violence found that preschool children who witness interparental violence are at similar risk for internalizing problems as children who are direct victims of abuse. Children who are physically abused in the home did not differ on depression scores from children who solely witnessed family violence (Sternberg, Baradaran, Abbott, Lamb, & Guterman, 2006). This mega-analysis divided children exposed to traumatic violence by age; therefore data on preschooler's aged 4 to 6 could be analyzed separately from older children aged 7 to 14. Sternberg and colleagues (2006) found that type of violence was significantly associated with externalizing and internalizing problems in preschool children. Children who both witnessed and directly experienced abuse in the home were 1.5 times more likely to have externalizing problems and 1.9 times more likely to have internalizing problems than those children who solely witnessed violence or solely personally experienced violence. Compared to grade school children, preschool children had a higher likelihood of externalizing problems, but a lower likelihood of internalizing problems. In this report, developmental level and age had a direct impact on the experience of violence.

#### *Posttraumatic Stress Symptomatology*

Exposure to chronic family violence also impacts children's arousal capabilities, startle response, and dopaminergic system. Such changes are linked to PTSD-like

symptoms in preschoolers (Margolin & Gordis, 2000). Reported rates of PTSD in preschool-age children range from 3 to 56 percent (Graham-Bermann, DeVoe, Mattis, Lynch, & Thomas, 2006; Levendosky, Hugh-Bocks, Semel, & Shapiro, 2002), however, children that do not meet full criteria for a diagnosis of PTSD may still suffer from symptoms of posttraumatic stress (Graham-Bermann & Levendosky, 1998). For example, Graham-Bermann and Levendosky (1998) found that when children were exposed to a traumatic event, 52% had intrusive and unwanted remembering of the traumatic events, 19% displayed traumatic avoidance, and 42% suffered from symptoms of traumatic arousal.

Levendosky, Huth-Bocks, Semel, & Shapiro (2002) analyzed PTSD in preschool children between the ages of 3-5 who were exposed to interparental violence. The sample consisted of 62 preschool children (25 boys and 37 girls) and their mothers living in families with intimate partner violence. The most frequently reported symptoms were talking about the violent event, an upset reaction in response to memory triggers, hypervigilance, and new separation anxiety. Avoidant and numbing symptoms were particularly uncommon in preschool children. Instead of avoiding feelings and places, young children sought out people and familiar settings in response to trauma (Levendosky, Huth-Bocks, Semel, & Shapiro, 2002).

### *Physical Health*

Preschool children exposed to IPV not only suffer psychological and cognitive complications, but also experience physical health problems. Although less researched, evidence exists for the connection between witnessing violence and child's physical health, as noted in a study by Graham-Bermann and Seng (2005). This study evaluated

the functioning of 160 preschool children, with a mean age of 4.62. Mothers were interviewed about their child's health, exposure to violence, and the presence of traumatic stress symptoms. The children's teachers also completed questionnaires regarding the child's health and behavioral adjustment. Results showed that preschool-age children, distressed by violence in the home, were four times more likely to have asthma, allergies, and gastrointestinal complications. When factors predicting to these health problems were parceled out, it was shown that child abuse, domestic violence, mother's substance use, mother's current health, and child traumatic stress all influenced child health outcomes (Graham-Bermann & Seng, 2005). A further study on physical health also drew a connection between parental and child health outcomes. English, Marshall, and Stewart (2003) found that IPV had a significantly negative effect on the general health of caregivers and the quality of their interactions with children, which, in turn, were associated with poor behavioral, as well as, physical health outcomes in children.

In recent decades, researchers have invested significant time in identifying the multitude of problems associated with family violence. Given the above findings, it is clear that preschool-age children's exposure to IPV is associated with decrements in optimal development in the areas of social behavior, cognitive performance, and physical/mental health. In order to understand these effects, various theoretical frameworks have been proposed.

### **Developmental Psychopathology Framework of Intimate Partner Violence's Impact on Preschool Children**

A developmental psychopathology framework is particularly useful when conceptualizing the impact of intimate partner violence on preschool children. This

perspective focuses on the role of developmental processes, the importance of context, and the influence of multiple and interacting events in shaping adaptive and maladaptive development. This theoretical framework evaluates children's ability to complete developmentally appropriate tasks when faced with traumatic events (Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003). Early patterns of adaptation shape a child's success or failure in meeting future developmental goals, therefore evaluating the impact of potentially traumatizing events on young children has the potential to elicit the greatest benefit (Jaffee, Caspi, Moffitt, Polo-Thomas, & Taylor, 2007).

Researchers now know that even infants are negatively impacted by traumatic events (Bogat, DeJonghe, Levendosky, Davidson, & von Eye, 2006). The foundations of early mental health are damaged when a young child cannot rely on a parent's readiness and competence to protect. The severity of damage also depends on the availability and responsiveness of the caregiver. On the mild spectrum of functioning, a lack of caregiver responsiveness shows children that they may not be the center of their parent's world. On the moderate developmental spectrum, a lack of parental availability leads children to resort to self-protective behavior, withdrawal, anger, and aggression. On the severe spectrum of damage to child functioning, the child's trust in the parent is broken and the child's attachment and coping strategies are disrupted (Lieberman & Knorr, 2007). Thus, exposure to IPV during the earliest years, when the concept of self-worth is developing and children are strongly bonded to their parents, can have a significant, negative impact on functioning (Levendosky, Huth-Bocks, Semel & Shapiro, 2002).

The preschool years are a time of increased relationship formation and self-control; therefore primary developmental tasks are described in terms of emotion

regulation and prosocial abilities (Graham-Bermann & Follett, 2001). Young children exposed to family violence often struggle with these developmental tasks because of their chaotic and turbulent home life. IPV can critically jeopardize the emotional developmental progress of preschool children. Young children need structure in their environment because they are developmentally unable to understand and control many of their emotions. Families exposed to IPV may be too overwhelmed or depressed to provide such structure, which can impact the child's experience of emotional expression (Holt, Buckley, & Whelan, 2008). Specific issues related to arousal and regulation in preschoolers exposed to violence include intense separation anxiety and increased aggressiveness. Young children exposed to IPV may also have difficulty recognizing emotions or understanding complex social roles. They may show deficits in the ability to empathize and accurately attend to social cues (Margolin, 2005).

Thus, it is particularly important to focus on the impact of intimate partner violence on this age group because, according to a developmental psychopathology model, their family life may impede completion of major, age-appropriate milestones. Multiple studies have examined trauma's effect on school-age children, however little research exists on the impact of IPV among preschool children (Lieberman & Knorr, 2007). The preschool years are an apt time to assess and attenuate the effects of IPV because young children form much of their world view and emotional/social response to life during these years (Howell & Graham-Bermann, 2011).

### **Defining Resilience in At-Risk Children**

Clearly, when it comes to studies of children exposed to IPV, we know more about psychopathology, or failures in adaptation, than whether and how well children

cope with this stress. Broadly speaking, research in the realm of developmental psychopathology, which is focused on children exposed to a variety of stressful and high-risk family environments, has succeeded in identifying children who appear to have adapted well despite the obvious challenges posed to their adjustment (Masten, 2001). For example, qualities of resilience have been studied for children living in foster care (Schofield & Beek, 2005), children living in poverty (Kim-Cohen, Moffitt, Caspi & Taylor, 2004), children having parents with severe psychopathology (Finkelstein et al, 2005), children of substance-abusing parents (Jaffee, Caspi, Moffitt, Polo-Tomas, & Taylor, 2007), and children with histories of abuse and neglect (Haskett, Nears, Ward, & McPherson, 2006; Lansford, Malone, Stevens, Dodge, Bates, & Pettit, 2006). In these various studies, resilient children have been characterized as those surviving adversity (Luthar, Cicchetti, & Becker, 2000), as successfully achieving developmental tasks and expectations (Masten, Hubbard, Gest, Tellegen, Garmezy & Ramirez, 1999) and as functioning well across domains, e.g., exhibiting both behavioral and emotional competence (Eisenberg et al, 2003).

Generally, individuals who do not develop negative outcomes and/or who adapt successfully when exposed to challenging and stressful circumstances are considered resilient. Resilience is a dynamic process; it encompasses positive adaptation within the context of significant adversity (Rutter, 2007). When applied to children exposed to stressful environments, resilience can be described as the ability to adapt and function successfully in a high-risk setting or following exposure to prolonged trauma (Masten, 2001). Contrary to early research on resilience, which sought to identify “invulnerable” or “invincible” children, current views of this construct emphasize that it can be both

developmental and context-specific. Therefore, when operationalizing this concept, researchers must identify the specific threat to development and the criteria by which adaptation is deemed successful (Masten, Hubbard, Gest, Tellegen, Garmezy, Ramirez, 1999). Adaptational success is typically defined with respect to mastery of salient developmental goals; it is clear that there are desirable developmental outcomes for all children and those who attain such goals under adverse circumstances can be considered resilient (Hughes, Graham-Bermann, & Gruber, 2001). For school age children, major developmental tasks typically include academic achievement, social competence, and appropriate personal and peer conduct, whereas in adolescence, additional tasks include romantic and job competence (Masten, Coatsworth, Neemann, Gest, Tellegen, & Garmezy, 1995). For preschool children, some of the more salient developmental tasks include emotion regulation and prosocial skill development (Howell & Graham-Bermann, 2011; Hughes, Graham-Bermann, & Gruber, 2001).

### **Resilience Conceptualized as Strengths in Emotion Regulation and Prosocial Skills**

Using a developmental framework, one prominent theory of resilience centers on emotion regulation and prosocial skills in children exposed to adversity. During the preschool years, children learn to develop appropriate and successful social relationships, resolve problems, and regulate emotional reactions. Therefore, resilient preschool children can be considered those who are exposed to adversity and able to evidence success in the developmental domains of emotion regulation and prosocial skills (Hughes, Graham-Bermann, & Gruber, 2001).

### *Emotion Regulation*

Emotion regulation involves how individuals influence which emotions they have, when they have them, and how they experience and express them (Gross, 1998). This capacity to manage emotions is based on the development of self-regulatory abilities in the preschool years; however, it is also impacted by situational demands and the influence of others (Rydell, Berlin, & Bohlin, 2003). Secure parental attachments help children develop a capacity to modulate emotions and regulate feelings across different contexts.

Research consistently shows that difficulty in regulating emotions is linked to problems in childhood functioning. In a longitudinal study of 151 five year olds (50% male), it was found that low regulation of emotions, particularly around anger and fear, was correlated with externalizing problem behaviors and low levels of prosocial actions, whereas high regulation was associated with high levels of prosocial behavior and competence. Authors developed an emotion questionnaire focused on positive emotionality, exuberance, and regulation, as well as the Children's Behavior Questionnaire (CBQ) to assess functioning in this sample (Rydell, Berlin, & Bohlin, 2003).

In terms of family violence, children's reaction is shaped by their appraisal and emotional response to experiencing IPV (Grych, Fincham, Jouriles, & McDonald, 2000; Grych, Jouriles, Swank, McDonald, Norwood, 2000). These assessments may act as catalysts in the association between violence exposure and child well-being. Grych, Fincham, Jouriles, and McDonald (2000) used narrative methods to examine 46 three to 7 year old children's maternal, self, and marital representations following exposure to IPV.

They found that the presence of interparental aggression affected all three areas after taking child-parent conflict into account. That is, children exposed to IPV had less positive representations of mothers, less positive images of themselves, and less understanding of emotional situations.

Clearly, children who blame themselves or assume responsibility for the violence usually have negative outcomes; however, if children can evaluate the situation differently by focusing on outside reasons for the traumatic event, then their well-being may be preserved. In addition to strengths in emotion regulation, children with more advanced prosocial skills also often display interpersonal strengths. Research shows that emotion regulation and prosocial skills are inextricably linked; emotion regulation, assessed as young as age 3, contributes to concurrent and future social competence (Denham, Blair, DeMulder, Levitas, Sawyer, Auerbach-Major, & Queen, 2003).

### *Prosocial Skills*

Prosocial skills are defined as the success of a person in meeting societal expectations, the ability to attend to relevant social cues, and solve interpersonal problems (Hines & Saudino, 2002). Prosocial skills can serve as a buffer between early negative experiences, i.e. witnessing violence in the home, and later negative developmental outcomes. Those children who can successfully navigate their social world and generate solutions to social problems are better able to avoid negative outcomes (Lansford, Malone, Stevens, Dodge, Bates, & Pettit, 2006). Prosocial skills can be particularly beneficial as an aid to children in forming trusting and positive relationships with others, an ability that is crucial for children who witness intimate partner violence. Such children are able to garner support and protection from individuals

outside of the family, often leading to better outcomes following exposure to violence (Alvord & Grados, 2005). Although resilience has been conceptualized in a variety of ways, this theory of resilience based on strengths in prosocial skills and emotion regulation seems the most relevant both from a developmental perspective, as it centers on tasks of the preschool years, and a contextual perspective, as it is intricately tied to intimate partner violence.

### **Evidence for Resilience in Children Exposed to IPV**

The impact of intimate partner violence on preschool children has decidedly devastating consequences in multiple domains of functioning; yet as research expands on the effects of witnessing IPV, we are beginning to recognize that outcomes vary from child to child. Despite the great amount of diversity in the functioning of preschool children exposed to challenging situations, there is little research on positive outcomes for children exposed to IPV (Margolin, 2005). While approximately 40-50% of preschool children exposed to IPV are found to be in the clinical range on internalizing and externalizing behavioral problems, such as anxiety, depression, and aggression, many children do not show evidence of psychopathology, at least at the time of assessment (Edleson, 2001). One meta-analytic review of the literature on children exposed to family violence found that 37% of children who witness or personally experience abuse fare as well or better than children who are not exposed to such violence in the home (Kitzmann, Gaylord, Holt, & Kenny, 2003).

More recently, Martinez-Torteya and colleagues (2009) found that in a sample of 190 preschool children, 54% maintained positive adaptation after witnessing violence in the home, as measured by low scores on the Child Behavior Checklist (CBCL). These

children were characterized by an easy temperament and nondepressed mothers. While such findings highlight the variability in outcomes for children exposed to family violence, this study is limited in a number of ways. All of the assessments were based on maternal reports without the corroboration of other informants. Additionally, this study neglected to use any measures of positive adaptation in order to understand variation in child functioning and resilience.

Research clearly indicates that a subset of children exposed to potentially traumatizing situations appear to cope well following this adversity. However, to date only three studies have devised research strategies to investigate specific characteristics of positive functioning in children exposed to IPV. Hughes and Luke (1998) assessed the adjustment profiles of children exposed to IPV using cluster analysis to empirically separate children into subgroups based on functioning. In this study, children ranged in age from 4 to 12 and all families resided in a domestic violence shelter at the time of assessment. Outcome measures included child self-reports of anxiety, depression, and self-esteem, as well as mothers' reports of child behavior problems. Five distinct profiles emerged: high only in internalizing problems but low in other outcome variables (7%), high primarily in externalizing problems (16%), high levels of both internalizing and externalizing problems (16%), moderate levels of externalizing behavior problems, anxiety, and self-esteem (36%), and (26%) low on problem scores and high on self-esteem. The last two groups (62% of the sample) were characterized by low to moderate levels of difficulty and mothers with less depression and anxiety. Though this research offered new insight into the profiles of adjustment for children exposed to violence, it

was limited by a small sample size and reliance on families living in domestic violence shelters.

The second study on the profiles of adjustment of children exposed to IPV followed a similar design and analytic strategy to detect patterns of adjustment for 228 children, ages 8-14 (Grych, Jouriles, Swank, McDonald, & Norwood, 2000). Again, the sample consisted only of families residing in domestic violence shelters. The outcome measures were mother-reported externalizing behavior problems and child-reported anxiety, depression and self-esteem. This study also identified five distinct clusters: No Problems Reported (31%), Externalizing Problems (23%), Multiproblem-Externalizing (19%) with high externalizing problems and somewhat elevated internalizing scores, Multiproblem-Internalizing (11%) with high levels of depressive symptoms and somewhat elevated externalizing problems, and Mild Distress (18%) with slightly elevated internalizing problems and low externalizing. Grych and colleagues reported that the Mild Distress and No Problems groups accounted for 49% of the children. Though this study provided support for various profiles of adjustment, it was again limited by exclusive reliance on families living in shelters for abused women.

The most recent study to evaluate the social and emotional adjustment of children exposed to IPV used an ecological model of risk and protection (Graham-Bermann, Gruber, Girz, & Howell, 2009). Factors that differentiated poor adjustment from resilient coping were evaluated in 219 children living in families with varying levels of intimate partner violence. Families participating in this study primarily resided in the community, with only 4% of the sample living in domestic violence shelters. This allowed study designers to develop a broader picture of children exposed to IPV, as research shows that

most children exposed to family violence do not go to shelters. Using cluster analysis, all cases were described by four profiles of children's adjustment: severe adjustment problems (24%), children who were struggling (45%), children with depression only (11%), and resilient children (20%) with high competence and low adjustment problems. Children in the severe problems cluster witnessed more family violence and had mothers higher in depression and PTSD than other children. Resilient children had less violence exposure, fewer fears and worries, and mothers with better mental health and parenting skills. Parents of children with severe problems were lacking these attributes. The depressed profile children witnessed less violence but had greater fears and worries about their mother's safety (Graham-Bermann, Gruber, Girz, & Howell, 2009). This study expanded the literature on profiles of adjustment by including children living in the community; however, as was true in the previous two studies, it was limited by the lack of a comparison group of children in nonviolent families. Further, it did not include child abuse or other forms of trauma in the analyses. These three studies shed light on various profiles of adjustment and provide supportive evidence that a substantial proportion of children exposed to IPV show signs of resilience.

### **Protective Factors Associated with Resilience**

Specific protective factors can be delineated from past research on children exposed to adverse experiences that help explain why some children exposed to IPV appear to cope well and others do not. Protective factors are qualities of a person or context that predict better outcomes, particularly in situations of high risk (Wright & Masten, 2006). These are variables that modify a person's response to an environmental adversity. Protective factors may be the opposite of risk or vulnerability factors or they

may denote benefits independently. Additionally, these factors need to be viewed in the context of the child's culture and developmental stage. Various models have been developed to better conceptualize these protective elements, including the ecological approach which evaluates variables at the individual level, family systems level, and community level (Bronfenbrenner & Morris, 1998). Elements of developmental psychopathology can also be incorporated into this protection model (Graham-Bermann & Gross, 2008). As previously discussed, under the developmental psychopathology perspective, pathology is conceptualized as an adaptation developed in the context of transactions between the individual and his/her environment. Research using these approaches has succeeded in identifying children who appear to have adapted well despite the obvious challenges posed to their adjustment (Masten, 2001).

#### *Individual Child-level Protective Factors*

Protective factors related to the child and family consistently emerge in research on resilience in high risk populations, with some studies including exposure to IPV (Agaibi & Wilson, 2005). Personal characteristics of the child seem particularly relevant to potential protective factors associated with resilience. Children's resiliency has been linked to their engagement in positive social activities (Dumont & Provost, 1999), fostering of talents and interests (Gilligan, 1999), and educational aspirations (Tiet et al., 1998). Research supports the association between more positive outcomes and children's positive emotionality (Prior, Sanson, Smart & Oberklaid, 2000), empathy and social expressiveness (Luthar, Cicchetti & Becker, 2000), intelligence, internal locus of control (Alvord & Grados, 2005), self-control (Masten & Coatsworth, 1998), self-esteem, and attractiveness to others in appearance and personality (Osofsky, 1999).

In addition to personal characteristics of the child, demographic factors are also relevant to the potential resilience of preschool children. Child gender may be considered a protective factor; however, to date there is no consistent evidence for gender differences in children's exposure or reactions to IPV (Sternberg, Baradaran, Abbott, Lamb, & Guterman, 2006). For example, one study on child gender found that boys from violent families had a higher risk of using abusive tactics in their teenage and young adult relationships (Pelcovitz, Kaplan, Goldenberg, Mandel, Lehane, & Guarrera, 1994). Other researchers have found that girls who witness violence in the home are more likely to exhibit internalized behavior problems, including withdrawal and depression (Cummings, Pepler, & Moore, 1999, Sternberg, Lamb, & Dawud-Noursi, 1998). Thus, both boys and girls are at increased risk for learning that violence is normal and as a result may be more likely to accept violence within their future relationships (Fantuzzo et al, 1991; Grych et al., 2000).

A second potentially protective demographic characteristic of children is their older age. Even though research finds that young children are disproportionately exposed to IPV, studies seem inconclusive as to whether younger or older children are more vulnerable to developing various adjustment problems following exposure to IPV. For example, in their mega-analytic study, Sternberg, Baradaran, Abbott, Lamb, and Guterman (2006) reported that age moderated the effects of witnessing violence on children's internalizing behavior problems, with older children (age 7 to 14) being at greater risk for internalizing problems than younger children (age 4 to 6); however children's age did not moderate the negative effects of IPV on externalizing problems. The authors suggested that older children may have more capacity to reflect on the

meaning of violence and perhaps feel more anger or self-blame, which could account for these differences across age groups. Lehmann (1997), on the other hand, reported that younger children were more vulnerable to developing PTSD-like symptoms compared to older children. Lehmann suggested that this difference is probably due to younger children being more dependent on their caregivers and having less developed coping capabilities than older children. Methodological inconsistencies with regard to measures and sources of information, as well as small sample sizes, may contribute to some of the discrepancies across studies.

With respect to ethnicity, Graham-Bermann, De Voe, Mattis, Lynch, and Thomas, (2006) found that Caucasian children were more likely to have a diagnosis of PTSD than ethnic minority children exposed to IPV. One possible explanation for this difference proposed by Graham-Berman et al. (2006) is that Caucasian children's level of traumatic stress was more dependent on their mothers' well-being compared to ethnic minority children, whose well-being was more closely tied to their exposure to violence. In this study, Caucasian women's depression was the greatest predictor of their child's level of traumatic stress symptoms. Grych and colleagues (2000) found no significant race differences in behavioral adjustment outcomes among African American, Hispanic, and Caucasian children exposed to IPV (Grych, Jouriles, Swank, McDonald, Norwood, 2000). Similarly, O'Keefe (1994) reported no differences in regard to emotional or behavioral problems among Caucasian, Latino, and African American children exposed to IPV; the only reported difference was that African-American children had fewer social competence problems.

#### *Family-level Protective Factors*

Studies also show that positive features of families are associated with positive child adaptation following violence. Familial factors, such as parental social competence, positive family or extra-familial links, at least one warm, loving parent or surrogate caregiver who provides firm limits and boundaries (Masten & Coatsworth, 1998; Skopp, McDonald, Jouriles, & Rosenfield, 2007), socioeconomic advantage (Osofsky, 1999), and more parental involvement in children's lives (Alvord & Grados, 2005), have all been related to greater resiliency in children exposed to challenging circumstances. In terms of variables specific to mothers, research on domestic violence shows that the mother's ability to effectively cope with adverse situations impacts the child's resilience. Mother's capacity to provide her child with effective coping mechanisms and conflict resolution strategies, despite exposure to violence in the home, significantly affects the child's social and emotional competence (Hines & Saudino, 2002). This is especially relevant if mothers employ emotion-focused and problem-focused coping strategies. Emotion-focused strategies are used to help control one's emotional response to stressful events, while problem-focused techniques are characterized by actions centered on changing events. These coping strategies may lessen the impact of violence on children (Folkman & Lazarus, 1991).

Mother's mental health also provides a protective function for children in families with IPV. Research studies have demonstrated that women exposed to IPV have higher rates of depression and PTSD symptoms as compared to nonabused women (Campbell, Kub, Belknap, Templin, Thomas, 1997; Cascardi, O'Leary, Schlee, 1999; Levendosky & Graham-Bermann, 1998). In a sample of preschool-age children, Levendosky, Huth-Brocks, Shapiro, and Semel (2003) found that IPV was significantly related to maternal

psychological health, as determined by symptoms of depression and PTSD, and demonstrated that the women who struggled with more severe symptoms of depression and PTSD were more likely to report lower parenting effectiveness, which, in turn, was negatively related to children's externalizing behaviors. Conversely, those women who garner support and come away from violence with fewer mental health struggles are better able to buffer their children from the negative effects of intimate partner violence. Thus, maternal mental health may act as a mediator of the preschool child's experience with violence in the home (Graham-Bermann & Levendosky, 1998).

Effective parenting is one of the most well studied protective factors for children exposed to adverse situations. Attachment theory postulates that the parent-child relationship, or relationship with the primary caregiver, becomes a template for future relationships (Bowlby, 1958). A child's early attachment style typically predicts later social and emotional functioning. A positive parent-child attachment has been shown to buffer against negative outcomes by providing support to children following exposure to violence at home (Grych, Raynor & Fosco, 2004; Levendosky, Huth-Bocks, Shapiro & Semel, 2003). Research shows that there is great variability in attachment and parenting competence among families with IPV. Studies of parenting stress and parenting skill have compared outcomes for children in violent and nonviolent families (Levendosky & Graham-Bermann, 2000) and have consistently demonstrated that the mother's ability to perform under stressful circumstances mediates the relationship between family violence and child adjustment. Children of mothers who are able to provide a more solid parenting environment typically develop a stronger attachment and fair better over time (Levendosky, Huth-Bocks, Shapiro, & Semel, 2003).

Clearly, parents who are abusive or abused may be less able to offer warmth and support to their children. Levendosky et al (2003) evaluated the protective role of the mother-child relationship on preschool children's functioning in IPV families. They found that mothers often tried to compensate for interparental violence by becoming more effective parents. Abused women made an effort to pay more attention to their child and be more responsive as a way to compensate for the violence at home. Such a parenting style can lead to stronger mother-child relationships. However, this only held for women who were mentally healthy following abuse. The depressed and traumatized mothers were less able to compensate; therefore they displayed poorer parenting practices. This study provides further evidence of the protective role of mother's mental health for preschool children exposed to IPV; however, it was limited by a cross-sectional design that prevented causal prediction and an overreliance on maternal report for each of the measures.

Lieberman, Van Horn, and Ozer (2005) also evaluated how maternal stressors, psychological functioning, and the quality of the mother-child relationship contribute to child behavior following exposure to IPV. Eighty five preschoolers and their mothers participated in this study. They were referred to the program because of concerns about the child's development or the relationship between the mother and child after exposure to IPV. In this study, child behavior problems were influenced by multiple family factors, including maternal stress, psychological functioning, and quality of the relationship between mother and child. Additionally, the level and severity of exposure to IPV was a significant factor affecting child outcomes. The data supported a strong link between maternal risk factors and child behavior. Mothers who had more risk factors typically had

children with higher levels of behavioral problems, but this was mediated by the mother's response to stress on an individual level and in her relationship with the child. The mother's chronic stress was more predictive of child psychological functioning than the amount of violence encountered over the past year (Lieberman, Van Horn, & Ozer, 2005). This study made significant contributions to the field by utilizing multiple sources to gather data about parenting; however, its generalizability was limited by only studying a clinical sample of preschoolers.

Finally, it is important to consider the role of violence severity in increasing children's vulnerability for developing more adjustment problems following exposure to IPV. The amount of violence that the child has been exposed to is related to children's maladjustment in a number of studies (Kilpatrick & Williams, 1998; Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003). Grych, Wachsmuth-Schlaefler, & Klockow (2002) found that children's maladjustment, such as internalizing symptomatology, increased with greater exposure to violence, particularly from exposure to violence toward the mother as well as from fathers' aggression toward the children themselves. Similarly, in a study of preschool-age children exposed to family violence, Fantuzzo et al. (1991) found that the greater the violence to which the children were exposed, the more likely they were to experience adjustment problems. More specifically, exposure to verbal conflict was associated with a moderate level of conduct problems while exposure to verbal and physical conflict was associated with clinical levels of conduct problems and a moderate level of emotional problems. Kitzmann et al (2003) note in a meta-analytic review that children who witness less severe forms of IPV evidence less severe symptoms than do children who witness more severe IPV (Kitzmann, Gaylord, Holt, & Kenny, 2003). In

other studies, it is the history of violence exposure and number of violent partners that are related to later negative effects (Bogat, Levendosky, Theran, von Eye, & Davidson, 2003; Graham-Bermann & Perkins, 2010; Litrownik, Newton, Hunter, English & Everson, 2003).

Based on the above literature review, it is clear that current research has successfully identified potential protective factors associated with better outcomes in children exposed to IPV, such as effective parenting and less severe violence. The role that other potential protective factors play is more ambiguous, for example the impact of age and gender is inconsistent across research projects. To date, the only study of resilience in preschool-age children exposed to IPV, taking the above protective factors into consideration, was undertaken by Howell, Graham-Bermann, Czyz, & Lilly (2010). This study examined the parent-child relationship and resilient functioning in preschool-age children exposed to intimate partner violence. Resilient coping, conceptualized as strengths in emotion regulation skills and prosocial skills, was evaluated using the Social Competence Scale developed by the Conduct Problem Prevention Research Group (CPPRG, 2002). The sample consisted of 56 mothers and their 4-6 year old children exposed to IPV within the past two years. After controlling for relevant demographic factors, findings indicated that better parenting performance, fewer maternal mental health problems, and less severe violence exposure predicted better emotion regulation ability and prosocial skills scores, which in turn were negatively correlated with maladaptive child behaviors. Such research findings lend support to the theory that the pathway to positive or negative functioning following exposure to IPV is impacted by multiple factors, both internal and external to the preschool child. Though this study

provided unique information about an often overlooked population, it was limited by a small sample and a cross-sectional research design. Additionally, this study used the mother as the sole reporter of information about her child. She identified the family trauma, discussed her child's problematic behavior, and evaluated her child's competence; using multiple reporters would have provided more in-depth information about the child's competence. The following three studies of this dissertation will attempt to address many of the limitations of previous research on resilience in preschool children.

## References

- Agaibi, C. E., & Wilson, J. P. (2005). Trauma, PTSD, and resilience: A review of the literature. *Trauma, Violence, & Abuse, 6*(3), 195-216.
- Alvord, M. K., & Grados, J. J. (2005). Enhancing resilience in children: A proactive approach. *Professional Psychology: Research and Practice, 36*(3), 238-245.
- Bogat, G. A., DeJonghe, E., Levendosky, A. A., Davison, W. S., & von Eye, A. (2006). Trauma symptoms among infants exposed to intimate partner violence. *Child Abuse & Neglect, 30*(2), 109-125.
- Bogat, G. A., Levendosky, A. A., Theran, S., von Eye, A., & Davidson, W. S. (2003). Predicting the psychosocial effects of interpersonal partner violence (IPV): How much does a woman's history of IPV matter? *Journal of Interpersonal Violence, 18*, 121-141.
- Bowlby, J. (1958). The nature of the child's tie to his mother. *International Journal of Psychoanalysis, 39*, 350-373.
- Bronfenbrenner, U., & Morris, P. A. (1998). The ecology of developmental processes. In W. Damon (Series Ed.) & R. M. Lerner (Vol. Ed.), *Handbook of child psychology: Volume 1: Theoretical models of human development*. New York: Wiley Press.
- Campbell, J. C., Kub, J., Belknap, R. A., & Templin, T. N. (1997). Predictors of depression in battered women. *Violence Against Women, 3*, 271-293.
- Cascardi, M., O'Leary, K. D., Schlee, K. A. (1999). Co-occurrence and correlates of posttraumatic stress disorder and major depression in physically abused women. *Journal of Family Violence, 14*, 227-249.
- Center for Disease Control and Prevention (2006). Understanding intimate partner violence: Fact sheet. Accessed on May 17, 2008 from [http://www.cdc.gov/ncipc/dvp/ipv\\_factsheet.pdf](http://www.cdc.gov/ncipc/dvp/ipv_factsheet.pdf)
- Conduct Problems Prevention Research Group (2002). Psychometric Properties of the Social Competence Scale- Teacher and Parent Ratings. *Fast Track Project Technical Report*. [Available at <http://www.fasttrackproject.org>]
- Cummings, E. M., Pepler, D. J., & Moore, T. E. (1999). Behavior problems in children exposed to wife abuse: Gender differences. *Journal of Family Violence, 14*, 133-156.

- Denham, S.A., Blair, K.A., DeMulder, E., Levitas, J., Sawyer, K., Auerbach-Major, S., & Queenan, P. (2003). Preschool emotional competence: Pathway to social competence? *Child Development, 74*(1), 238-256.
- Dumont, M., & Provost, M. A. (1999). Resilience in adolescents: Protective role of social support, coping strategies, self-esteem, and social activities on experience of stress and depression. *Journal of Youth and Adolescence, 28*(3), 343-363.
- Edleson, J. L. (1999). Children's witnessing of adult domestic violence. *Journal of Interpersonal Violence, 14*, 839-870.
- Edleson, J. L. (2001). Studying the co-occurrence of child maltreatment and domestic violence in families. In S. A. Graham-Bermann & J. L. Edleson (Eds.), *Domestic violence in the lives of children: The future of research, intervention, and social policy*. Washington, DC: American Psychological Association, pp. 91-110.
- Eisenberg, N., Valiente, C., Fabes, R. A., Smith, C. L., Reiser, M., Shepard, S. A., Losoya, S. H., Guthrie, I. K., Murphy, B. C., & Cumberland, A. J. (2003). The relations of effortful control and ego control to children's resiliency and social functioning. *Developmental Psychology, 39*(4), 761-776.
- English, D. J., Marshall, D. B., & Stewart, A. J. (2003). Effects of family violence on child behavior and health during early childhood. *Journal of Family Violence, 18*, 43-57.
- Fantuzzo, J., Boruch, R., Beriama, A., Atkins, M., & Marcus, S. (1997). Domestic violence and children: Prevalence and risk in five major U.S. cities. *Journal of the American Academy of Child & Adolescent Psychiatry, 36*, 116-122.
- Fantuzzo, J. W., DePaola, L. M., Lambert, L., Martino, T., Anderson, G., & Sutton, S. (1991). Effects of interparental violence on the psychological adjustment and competencies of young children. *Journal of Consulting and Clinical Psychology, 59*, 258-265.
- Fantuzzo, J., & Fusco, R. (2007). Children's direct sensory exposure to substantiated domestic violence crimes. *Violence and Victims, 22*, 158-171.
- Finkelstein, N., Rechberger, E., Russell, L. A., VanDeMark, N. R., Noether, C. D., O'Keefe, M., Gould, K., Mockus, S., & Rael, M. (2005). Building resilience in children of mothers who have co-occurring disorders and histories of violence. *Journal of Behavioral Health Services and Research, 32*(2), 141-154.
- Folkman, S. & Lazarus, R.S. (1991). Coping and Emotion. In A., Monat & R.S. Lazarus (Eds.), *Stress and coping: An anthology*. New York, NY: Columbia University Press, pp. 207-227.

- Gilligan, R. (1999). Enhancing the resilience of children and young people in public care by mentoring their talents and interest. *Child and Family Social Work, 4*, 187-196.
- Graham-Berman, S. A., DeVoe, E. R., Mattis, J. S., Lynch, S., & Thomas, S. A. (2006). Ecological predictors of traumatic stress symptoms in Caucasian and ethnic minority children exposed to intimate partner violence. *Violence Against Women, 12*(7), 1-30.
- Graham-Bermann, S. A. & Follett, C. (2001). *Fostering resilience in young children exposed to violence*. Department of Psychology, University of Michigan.
- Graham-Bermann, S. A., & Gross, M. M. (2008). An ecological model of violence. In J. Edleson & C. Renzetti (Eds.). *Encyclopedia of Interpersonal Violence*, Sage, Inc.
- Graham-Bermann, S. A., Gruber, G., Girz, L., & Howell, K. H. (2009). Ecological factors discriminating among profiles of resilient coping and psychopathology in children exposed to domestic violence. *Child Abuse & Neglect, 33*, 648-660.
- Graham-Bermann, S. A., & Levendosky, A. A. (1998). Traumatic stress symptoms of children of battered women. *Journal of Interpersonal Violence, 13*(1), 111-128.
- Graham-Bermann, S. A., Lynch, S., Banyard, V., DeVoe, E., & Halabu, H. (2007). Community-based intervention for children exposed to intimate partner violence. *Journal of Consulting and Clinical Psychology, 75*(2), 199-209.
- Graham-Bermann, S. A., & Perkins, S. C. (2010). Effects of early exposure and lifetime exposure to intimate partner violence (IPV) on child adjustment. *Violence and Victims 25*(4), 427-439.
- Graham-Bermann, S. A., & Seng, J. S. (2005). Violence exposure and traumatic stress symptoms as additional predictors of health problems in high-risk children. *The Journal of Pediatrics, 146*, 349-354.
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology, 2*, 271-299.
- Grych, J. H., Fincham, F. D., Jouriles, E. N., & McDonald, R. (2000). Interparental conflict and child adjustment: Testing the mediational role of appraisals in the cognitive-contextual framework. *Child Development, 71*(6), 1648-1661.
- Grych, J. H., Jouriles, E. N., Swank, P. R., McDonald, R., & Norwood, W. D. (2000). Patterns of adjustment among children of battered women. *Journal of Consulting and Clinical Psychology, 68*, 84-94.

- Grych, J. H., Raynor, S. R., & Fosco, G. M. (2004). Family processes that shape the impact of interparental conflict on adolescents. *Development and Psychopathology, 16*, 649-665.
- Grych, J. H., Wachsmuth-Schlaefler, T., & Klockow, L. L. (2002). Interparental aggression and young children's representations of family relationships. *Journal of Family Violence, 16*(2), 259-272.
- Haskett, M. E., Nears, K., Ward, C. S., & McPherson, A. V. (2006). Diversity in adjustment of maltreated children: Factors associated with resilient functioning. *Clinical Psychology Review, 26*, 796-812.
- Hines, D.A., & Saudino, K. J. (2002). Intergenerational transmission of intimate partner violence: Behavioral genetic perspective. *Trauma, Violence & Abuse, 3*, 210-225.
- Holt, S., Buckley, H., & Whelan, S. (2008). The impact of exposure to domestic violence on children and young people: A review of the literature. *Child Abuse & Neglect, 32*, 797-810.
- Howell, K.H., & Graham-Bermann, S.A. (2011). The multiple impacts of intimate partner violence on preschool children. In S. A. Graham-Bermann & A. A. Levendosky (Eds.), *How Intimate Partner Violence Affects Children: Developmental Research, Case Studies, and Evidence-Based Treatment*. Washington, DC: American Psychological Association Books, pp. 87-107.
- Howell, K.H., Graham-Bermann, S.A., Czyz, E., & Lilly, M. (2010). Assessing resilience in preschool children exposed to intimate partner violence. *Violence and Victims, 25*(2), 150-164.
- Hughes, H. M., Graham-Bermann, S. A., & Gruber, G. (2001). Resilience in children exposed to domestic violence. In S. A. Graham-Bermann (Ed.), *Domestic violence in the lives of children*. Washington, DC: American Psychological Association, pp. 67-90.
- Hughes, H.M., & Luke, D. A. (1998). Heterogeneity in adjustment among children of battered women. In G. W. Holden, R. Geffner, & E. N. Jouriles (Eds.), *Children Exposed to Marital Violence: Theory, Research, and Applied Issues*. Washington, DC: American Psychological Association, 185-221.
- Jaffee, P., Caspi, A., Moffitt, T. E., Polo-Tomas, M., & Taylor, A. (2007). Individual, family, and neighborhood factors distinguish resilient from non-resilient maltreated children: A cumulative stressors model. *Child Abuse and Neglect, 31*, 231-253.

- Kilpatrick, K. L., & Williams, L. M. (1998). Potential mediators of post-traumatic stress disorder in child witnesses to domestic violence. *Child Abuse & Neglect, 22*(4), 319-330.
- Kim-Cohen, J., Moffitt, T. E., Caspi, A., & Taylor, A. (2004). Genetic and environmental processes in young children's resilience and vulnerability to socioeconomic deprivation. *Child Development, 75*(3), 651-668.
- Kitzmann, K. M., Gaylord, N.K., Holt, A.R., & Kenny, E.D. (2003). Child witnesses to domestic violence: A meta-analytic review. *Journal of Consulting and Clinical Psychology, 71*(2), 339-352.
- Lansford, J.E., Malone, P.S., Stevens, K.I., Dodge, K.A., Bates, J.E., & Petit, G.S. (2006). Developmental trajectories of externalizing and internalizing behaviors: Factors underlying resilience in physically abused children. *Development and Psychopathology, 18*, 35-55.
- Lehmann, P. (1997). The development of posttraumatic stress disorder in a sample of child witnesses to mother assault. *Journal of Family Violence, 12*, 241-257.
- Lemmey, D., McFarlane, J., Wilson, P., & Malecha, A. (2001). Intimate partner violence: Mothers' perspectives of effects on their children. *The American Journal of Maternal/Child Nursing, 26*(2), 98-103.
- Levendosky, A. A., & Graham-Bermann, S. A. (1998). The moderating effects of parenting stress on children's adjustment in woman-abusing families. *Journal of Interpersonal Violence, 13*, 383-397.
- Levendosky, A. A., & Graham-Bermann, S. A. (2000). Behavioral observations of parenting in battered women. *Journal of Family Psychology, 14*, 80-94.
- Levendosky, A. A., Huth-Bocks, A. C., Semel, M. A., & Shapiro, D. L. (2002). Trauma symptoms in preschool-age children exposed to domestic violence. *Journal of Interpersonal Violence, 17*, 150-164.
- Levendosky, A. A., Huth-Bocks, A. C., Shapiro, D. L., & Semel, M. A. (2003). The impact of domestic violence on the maternal-child relationship and preschool-age children's functioning. *Journal of Family Psychology, 17*, 275-287.
- Lieberman, A. F. & Knorr, K. (2007). The impact of trauma: A developmental framework for infancy and early childhood. *Psychiatric Annals, 37*(6), 416-422.
- Lieberman, A.F., Van Horn, P., & Ozer, E.J. (2005). Preschooler witnesses of marital violence: Predictors and mediators of child behavior problems. *Development and Psychopathology, 17*, 385-396.

- Litrownik, A. J., Newton, R., Hunter, W. M., English, D., & Everson, M.D. (2003). Exposure to family violence in young children: A longitudinal look at the effects of victimization and witnessed physical and psychological aggression. *Journal of Family Violence, 18*, 59-73.
- Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development, 71*, 543-562.
- Margolin, G. (2005). Children's exposure to violence: Exploring developmental pathways to diverse outcomes. *Journal of Interpersonal Violence, 20*(1), 72-81.
- Margolin, G., & Gordis, E.B. (2000). The effects of family and community violence on children. *Annual Review of Psychology, 51*, 445-479.
- Martinez-Torteya, C., Bogat, G.A., von Eye, A., & Levendosky, A.A. (2009). Resilience among children exposed to domestic violence: The role of risk and protective factors. *Child Development, 80*(2), 562-577.
- Masten, A.S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist, 56*, 227-238.
- Masten, A. S. & Coatsworth, J. D. (1998). The development of competence in favorable and unfavorable environments. *American Psychologist, 53*, 205-220.
- Masten, A. S., Coatsworth, D. A., Neemann, J., Gest, S. D., Tellegen, A., & Garmezy, N. (1995). The structure and coherence of competence from childhood to adolescence. *Child Development, 66*, 1635-1659.
- Masten, A. S., Hubbard, J. J., Gest, S. D., Tellegen, A., Garmezy, N., & Ramirez, M. (1999). Competence in the context of adversity: Pathways to resilience and maladaptation from childhood to late adolescence. *Development and Psychopathology, 11*, 143-169.
- McDonald, R., Jouriles, E. N., Ramisetty-Mikler, S., Caetano, R., & Green, C. E. (2006). Estimating the number of American children living in partner-violent families. *Journal of Family Psychology, 20*(1), 137-142.
- O'Keefe, M. (1994). Racial/ethnic differences among battered women and their children. *Journal of Child and Family Studies, 3*, 283-305.
- Osofsky, J. D. (1999). The impact of violence on children. *Domestic Violence and Children, 9*(3), 33-49.
- Paterson, J., Carter, S., Gao, W., Cowley-Malcolm, E., & Iusitini, L. (2008). Maternal intimate partner violence and behavioral problems among Pacific children living in New Zealand. *Journal of Child Psychology and Psychiatry, 49*(4), 395-404.

- Pelcovitz, D., Kaplan, S., Goldenberg, B., Mandel, F., Lehane, J., & Guarrera, J.V. (1994). Post-traumatic stress disorder in physically abused adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, 33(3), 305-312.
- Prior, M., Sanson, A., Smart, D., & Oberklaid, F. (2000). *Pathways from infancy to adolescence: Australian Temperament Project 1983-2000*. Melbourne: Australian Institute of Family Studies.
- Rossmann, B. B., Rea, J. G., Butterfield P. M., & Graham-Bermann, S. A. (2004). Young children exposed to interparental violence: Incidence assessment and intervention, In P. G. Jaffe, L. L. Baker, & A. Cunningham (Eds.) *Protecting Children from Domestic Violence*. New York: Guilford Press.
- Rutter, M. (2007). Resilience, competence, and coping. *Child Abuse & Neglect*, 31, 205-209.
- Rydell, A., Berlin, L., & Bohlin, G. (2003). Emotionality, emotion regulation, and adaptation among 5- to 8-year-old children. *Emotion*, 3, 30-47.
- Schofield, G., & Beek, M. (2005). Risk and resilience in long-term foster-care. *British Journal of Social Work*, 35, 1283-1301.
- Skopp, N.A., McDonald, R., Jouriles, E.N., & Rosenfield, D. (2007). Partner aggression and children's externalizing problems: Maternal and partner warmth as protective factors. *Journal of Family Psychology*, 21(3), 459-467.
- Sternberg, K. J., Baradaran, L. P., Abbott, C. B., Lamb, M. E., & Guterman, E. (2006). Type of violence, age, and gender differences in the effects of family violence on children's behavior problems: A mega-analysis. *Developmental Review*, 26, 89-112.
- Sternberg, K. J., Lamb, M. E., & Dawud-Noursi, S. (1998). Understanding domestic violence and its effects: Making sense of divergent reports and perspectives. In G. W. Holden, R. Geffner, & E.W. Jouriles (Eds.), *Children exposed to family violence* (pp. 121-156). Washington, DC: American Psychological Association.
- Tiet, Q. Q., Bird, H. R., Davies, M., Hoven, C., Cohen, P., Jense, P. S., & Goodman, S. (1998). Adverse life events and resilience. *Journal of the American Academy of Child and Adolescent Psychiatry*, 37, 1191-1200.
- Tjaden, P., & Thoennes, N. (2000). *Extent, nature, and consequences of intimate partner violence: Findings from the National Violence Against Women Survey*. Washington, D.C.: US Department of Justice.

- Wolfe, D. A., Crooks, C. V., Lee, V., McIntyre-Smith, A., & Jaffe, P. G. (2003). The effects of children's exposure to domestic violence: A meta-analysis and critique. *Clinical Child and Family Psychology Review*, 6(3), 171-187.
- Wright, M. O., & Masten, A. S. (2006). Resilience processes in development: Fostering positive adaptation in the context of adversity. In S. Goldstein & R.B. Brooks (Eds.), *Handbook of Resilience in Children*. New York, NY: Springer Inc., 17-37.

## Chapter II

### Inconsistencies in Mothers' and Group Therapists' Evaluations of Resilience in Preschool Children Exposed to Intimate Partner Violence

There is a dearth of information specifically assessing agreement across raters on measures of positive functioning for preschool children. This is especially true for evaluations of young children exposed to intimate partner violence (IPV). The aim of this first dissertation study is to compare mothers' and therapists' evaluations of resilience across settings in preschool children exposed to IPV. In this study, resilience is operationalized from a developmental psychopathology perspective and is defined as strengths in emotion regulation ability and prosocial skills, despite a context of adversity. Specifically, those children who are able to meet or exceed expectations in these areas, despite exposure to family violence, are considered resilient. Given that only one reporter supplies most of the data used in studies of child functioning, the current study will expand findings by comparing mothers' reports to child therapists' reports across settings.

#### *Interrater Agreement in Studies of Psychopathology*

First-person accounts of functioning are typically considered the richest source of information, yet due to the developmental stage of preschoolers, they often cannot provide valid and reliable evaluations of their positive or negative functioning (Murray et al, 2007). Previous research has contended with this dilemma by interviewing important adults in the child's life who can attest to their behavior. To gather data about a child's

functioning in different settings, researchers often garner information from multiple sources, such as parents and teachers. Obtaining ratings from multiple informants is considered critical for creating the most complete picture of young children's functioning (Winsler & Wallace, 2002).

A major methodological issue when using multiple informants is the consistently low agreement between raters. For informants interacting with children in different situations, such as parents and teachers, the concordance ratings of child behaviors, including externalizing problems, internalizing problems, and competence are uniformly low (Murray et al, 2007). An older, but oft-cited meta-analysis of ratings by different informants of children's behavioral and emotional problems revealed low levels of agreement for type, frequency, and severity of problems. In this meta-analysis, the average correlation between parent and teacher reports was only .27. Among the 41 samples included, only four reported a correlation above .50 (Achenbach, McConaughy, & Howell, 1987; Lee, Elliott, & Barbour, 1994). More recent large-scale studies have found similar results across different samples, with correlations in the range of  $r = 0.13$  to  $r = 0.54$  across externalizing and internalizing behaviors (Kumpulainen et al., 1999; Frigerio et al., 2004).

With respect to age, findings have been somewhat inconclusive. Recently, one study focused on rater-specific effects in a sample of preschool children. Murray and colleagues (2007) evaluated parent and teacher ratings of Attention-deficit/hyperactivity disorder for a sample of 452 children, aged 3 to 5. Authors found that the correlations between parent and teacher ratings were low for both Inattentive ( $r = .24$ ) and Hyperactive-Impulsive ( $r = .26$ ) symptom clusters, with individual symptoms ranging

from .01–.28. Murray et al (2007) concluded that teachers are only moderately likely to agree with parents on the presence or absence of symptoms.

#### *Interrater Agreement in Studies of Healthy Functioning*

Evaluations of inter-rater consistency across measures of positive functioning for preschool children are rare in the literature. One study investigated the psychometric properties of the Preschool and Kindergarten Behavior Scale (PKBS; Merrell, 1994) with a sample of normally-developing preschool children. Authors assessed the agreement between parent and teacher ratings of 47 children on this measure. Overall agreement between parents and teachers was low to modest (-.09 to .38). With respect to positive functioning, the cross-informant correlations were poor ( $r = -.09$  to  $.27$ ) for social skills. In this evaluation, both parents and teachers rated boys as having more externalizing problems than girls. Further analyses indicated that teacher reports, but not the reports of parents, were significantly related to children's independently observed activities (Winsler & Wallace, 2002).

#### *Interrater Agreement in Studies of IPV-Exposed Children*

In terms of factors related to IPV, a recent study evaluated the impact of parental stress on consistency of ratings between parents and teachers. Authors reported that caregivers' depressive symptomatology was the most significant predictor of inter-rater disagreement. They found that more depressed and/or stressed parents reported more externalizing and internalizing behavioral problems for their children, as compared to teachers (Youngstrom, Loeber, & Stouthamer-Loeber, 2000). Stress is clearly a part of families experiencing IPV and may lead to inconsistency across informant accounts.

#### *Aims & Hypotheses*

The current study seeks to expand the above interrater findings of parents and teachers to a new dyad of individuals closely related to children experiencing IPV, specifically mothers and child therapists. This study will compare mothers' and therapists' assessments of resilient functioning in preschool children exposed to IPV. The specific aims are to:

1. Assess the conceptualization of resilience as strengths in emotion regulation ability and prosocial skills for preschool children exposed to IPV.
  - a. It is hypothesized that scores on a therapist measure of prosocial skills and emotion regulation ability will be negatively correlated with a measure of externalizing and internalizing behavior problems in children exposed to IPV.
2. Evaluate whether or not there is consistency in the mothers' and therapists' assessments of resilient functioning in preschool-age children.
  - a. It is hypothesized that inter-rater reports will have low correlations of mean scale scores across mothers and therapists, to be assessed with a total measure of resilience, as well as emotion regulation and prosocial skills subscales.
3. Determine if the assessment of therapists is similar to or different from the ratings found in a national sample of high-risk children.
  - a. It is hypothesized that therapists' evaluations of resilient functioning in this sample will not be significantly different than the national sample of high-risk children, who were also assessed in a group setting using the same resilience measure.

4. Assess if mothers' and therapists' evaluations of resilience differ by relevant demographic factors, such as gender, age, and ethnicity. Given the inconsistency in the literature, hypotheses regarding demographic variables do not clearly emerge.

## Methods

### *Participants*

The sample consisted of 52 mothers and their preschool-age children from two counties in southeast Michigan and Windsor, Ontario. All families were exposed to severe IPV in the past two years. Children ranged in age from 4 to 6 years ( $M=5.0$ ,  $SD=.92$ ) and mothers ranged in age from 21 to 54 years ( $M=32.6$ ,  $SD=7.9$ ). Forty six percent of the children in this sample were girls. European American children made up the largest ethnic group (45%), with 26% African-American, 8% Latino/a, 20% Biracial, and 1% other ethnicities. For mothers, 57% were European American, 28% African-American, 8% Latino/a, 4% Biracial, and 3% other ethnicities. Most of the mothers completed high school (84%), with 24% graduating college. Many of the women were single (42%), but 20% were married or living with a partner. Thirty two percent were separated and 6% were divorced, while another 6% were living with a violent partner at the time of evaluation.

### *Procedure*

Following Institutional Review Board (IRB) approval, the study was advertised through community and shelter outreach in the form of flyers, postings, and presentations. Women interested in participating in the study contacted the research team by phone and a screening was used to determine if the caller qualified for the project. Specifically, each

woman was asked if she had experienced intimate partner violence in the past two years and if she had a child of either gender between the ages of 4 and 6. All women who contacted the study, regardless of qualification for participation in the project, were provided with information about affordable services available for families exposed to IPV.

Study interviews occurred in a variety of settings, including community centers and in or near the participant's homes, if it was deemed safe to do so, i.e., the mother was no longer living with a violent partner. Interviewers were advanced undergraduate and graduate student research assistants who received training in research ethics and training in working with survivors of IPV conducted by a local domestic violence shelter. In addition, all interviewers received six hours of training in clinical interviewing techniques and completed the University of Michigan online Program for Education and Evaluation in Responsible Research and Scholarship (PEERS) certification. Mothers gave informed consent and children gave their assent to participate. Every attempt to protect the rights of both mothers and children was taken. That is, study participants were told that they can stop at any time, can "pass" or not answer any question, and were assured that their identities and responses would remain confidential. Mothers were compensated \$25 for their time and children were given a small gift worth approximately four dollars in exchange for participating.

#### *Preschool Kids' Club Program*

The Preschool Kids' Club intervention is a ten-session program that meets for five weeks (Graham-Bermann & Follett, 2001). The intervention is typically conducted in community settings, such as education centers or shelter outreach programs. The Preschool Kids' Club focuses on helping children who have witnessed violence based on

the theoretical assumptions that children may have learned harmful patterns of behavior, attitudes, and beliefs as a result of observing IPV and may also be distressed or traumatized by these experiences (Graham-Bermann, 2011). Each session focuses on different topics related to IPV, including feelings children have about fighting, safety plans, and conflict resolution. Group therapists were advanced clinical psychology graduate students who were leading groups as part of a clinical practicum training course. Therapists received four weeks of clinical and didactic training before beginning groups. They received four hours of weekly supervision from a licensed clinical psychologist throughout the practicum period.

### *Measures*

*Demographics:* A demographics questionnaire was administered to each mother to establish basic background information, such as child age, family income, ethnicity, maternal education, housing history and current relationship status.

*Resilient Functioning:* Two versions of the Social Competence Scale (SCS), developed by the Conduct Problems Prevention Research Group (Conduct Problems Prevention Research Group, 2002) were used in this study. One version was designed for parents and a second version was designed for use by teachers, but in this study was used by child therapists.

Mothers completed the Parent Social Competence Scale (PSCS; CPPRG, 2002). This measure was designed for typically-developing children; however it has also been used with high-risk children exhibiting clinical level externalizing and internalizing behavior problems, including aggressive, disruptive, and oppositional behaviors (CPPRG, 2002). The instrument consists of twelve items that measure a child's Prosocial skills ( $\alpha =$

.80) and Emotion Regulation skills ( $\alpha = .80$ ) as perceived by the parent. A Total Competence score is derived from the combination of these two subscales. The parent is asked to assess certain behaviors her child may exhibit in a social setting, using a 1-“not at all” to a 5-“very well” Likert scale. Examples of these behaviors include: “my child can accept things not going his/her way”, “my child thinks before acting”, and “my child does what he/she is told to do”. For the current sample,  $\alpha = .86$  for the Prosocial skills subscale,  $\alpha = .78$  for the Emotion Regulation subscale, and  $\alpha = .90$  for Total Competence.

The teacher version of this scale, used by child therapists in the current study, is referred to as the Group Therapist Social Competence Scale (GTSCS; CPPRG, 2002). This term was coined by authors of the present study. Therapists were asked to evaluate the emotion regulation ability and prosocial skills of children in their therapy groups. The measure includes eighteen items that evaluate a child’s Prosocial skills ( $\alpha = .96$ ) and Emotion Regulation skills ( $\alpha = .96$ ). The therapists assessed certain behaviors each child may have displayed during a group therapy session using a 0-“not at all” to a 4-“very well” Likert scale. A Total Competence score is derived from the combination of these two subscales. For the current sample,  $\alpha = .87$  on the Prosocial subscale,  $\alpha = .92$  on the Emotion Regulation subscale, and  $\alpha = .94$  on Total Competence. For the present study, group therapists completed the Group Therapist Social Competence Scale for each child in their group following the first session in order to assess their resilient functioning prior to receiving any intervention.

*Child Internalizing & Externalizing Behavior:* The Child Behavior Checklist (CBCL, Achenbach, 1991) has proven to be both valid and reliable in research with

clinical populations (Achenbach & Edelbrock, 1993). In the present study, mothers completed this 113-item inventory using a three-point rating scale from 0 (“not true”), to 1 (“somewhat or sometimes true), to 2 (“very true or often true”). Two scales represent broad areas of child adjustment: the Internalizing scale consists of anxiety/depression, withdrawal and somatic complaints syndrome subscales, whereas the Externalizing scale consists of aggression and delinquency syndrome subscales. The Total scale includes these as well as social problems, thought problems, attention problems and additional items not assigned to other syndrome scales. Reported internal consistency for the Internalizing, Externalizing and Total scales was = .89, .93, and .96, respectively (Achenbach, 1991). Reliabilities for the current sample are:  $\alpha = .92$  for the Externalizing subscale,  $\alpha = .92$  for the Internalizing subscale,  $\alpha = .95$  for the Total scale.

## Results

Descriptive statistics for the study variables and reliability coefficients are given in Table 2.1. The data met conditions for normality, staying within acceptable limits of skewness and kurtosis. None of the data were missing for the mother’s assessment using the PSCS. An analysis of the missing data for the GTSCS revealed that greater than 15% was missing for 6 of the 18 items. Items with high missingness were distributed across subscales, such that no subscale was impacted more strongly by missingness than any other. For study analyses, missing values were replaced using regression imputation techniques.

Correlational analyses were used to test the first hypothesis regarding the conceptualization of resilience as strengths in emotion regulation skills and prosocial skills. It was expected that the more a child exhibited emotion regulation skills and

prosocial skills the less likely it was that the child showed internalizing and externalizing behavior problems. As seen in Table 2.2, there were no significant correlations between the GTSCS total and the CBCL total scores; however, significant correlations were found between some subscales. Such correlations were moderate, but in the expected direction, between the CBCL Externalizing subscale and the GTSCS Total score, as well as the GTSCS Emotion Regulation subscale. In these cases, the more the child exhibited overall competence and emotion regulation skill, the less likely it was that the child showed externalizing behavior problems. Such findings provide partial support for the first hypothesis.

The second hypothesis sought to determine whether or not there was consistency in the mothers' and therapists' assessments of resilience in preschool-age children. Mothers' mean PSCS scores were compared to therapists' mean GTSCS scores. It was hypothesized that inter-rater reports would be highly discrepant, with low correlations across mothers and therapists. As seen in Table 2.3, significant positive correlations were found between the PSCS total score and the GTSCS Total, Emotion Regulation subscale, and Prosocial Skills subscale scores. In addition, a similar relationship was also identified between the PSCS Prosocial Skills subscale scores and the GTSCS Total, Emotion Regulation subscale, and Prosocial Skills subscale scores. There were no statistically significant correlations between the PSCS Emotion Regulation subscale scores and any of the group therapist scores. In this situation, the more the child exhibited total competence and prosocial skills, according to the parent, the more likely it was that the group therapist would identify total competence, as well as emotion regulation and prosocial skills. All correlations were significant and moderate in strength.

Further, paired t-tests were used to determine if there was a consistent difference in reporting between mothers and therapists. Mothers and group therapists reported no significant difference on the Prosocial Skills subscale (mother  $M= 3.30$ ,  $SD= .98$ ; group therapist  $M= 3.42$ ,  $SD= .81$ ). Significant variations were found for the Emotion Regulation subscale and the Total scale scores. In both cases, mothers' mean scores were significantly lower than group therapists' mean scores ( $t = -4.1$ ,  $p<.01$  for Emotion Regulation subscale;  $t = -2.7$ ,  $p<.01$  for Total score). For the Emotion Regulation subscale, the mothers' mean score was 2.7 ( $SD=.83$ ) whereas the group therapists' mean score was 3.4 ( $SD=.87$ ). For Total Competence, the mothers' mean score was 3.0 with a SD of .85 while the group therapists' mean was 3.4 with a SD of .79.

Hypothesis three tested whether the assessment of therapists is similar to or different from ratings found in a national sample of high-risk children. Comparisons were made between ratings completed by teachers in a national sample and ratings completed by group therapists in the present study. These independent sample t-tests were computed manually because access was only available to the national sample summary statistics, not the actual observations. It was hypothesized that children in the current study would have mean scores on the GTSCS measure consistent with children in the original CPPRG high-risk group. Based on this analysis, children in the current study had mean scores on the GTSCS ( $M = 2.38$ ,  $SD = .77$ ) that were not significantly different from children in the original CPPRG high-risk group. Children in the high-risk group had a mean score on the GTSCS of 2.42 with a standard deviation of .95. The confidence interval (95%) for the current sample was 2.17-2.59 and the confidence interval for the national data was 2.36-2.54. Such overlap in confidence intervals further confirms similar scores between this

study's therapists and teachers in the national sample. This result supports hypothesis three and offers evidence for using the GTSCS with high-risk children, including those exposed to IPV.

The final objective of the present study was to assess if mothers' and therapists' evaluations of resilience differed by relevant demographic factors. The data were split based on gender and paired t-tests were run to assess for mother and therapist variations. Mothers' and group therapists' evaluations on the SCS Total score and Prosocial Skills subscale did not vary significantly by child gender. Group therapists, however, rated male and female children significantly higher than did mothers on the Emotion Regulation subscale, (male children ( $t(26) = -2.73, p < .05$ ), female children ( $t(22) = -3.02, p < .01$ )).

Paired t-tests were also used to compare mean differences in SCS scores between mothers and group therapists based on ethnicity. These comparisons were made across European Americans and all other ethnic groups due to the relatively even split between European American children and children from other ethnic backgrounds. Mothers' and group therapists' reports significantly varied for minority children on the Emotion Regulation subscale ( $t(26) = -2.45, p < .05$ ), with group therapists' ratings of minority children significantly higher than mothers' ratings. For children in the non-minority group, mothers' and group therapists' ratings were significantly different on both the Emotion Regulation subscale ( $t(22) = -3.34, p < .01$ ) and the Total Social Competence Scale scores ( $t(22) = -2.84, p < .01$ ). Again, group therapists rated non-minority children significantly higher than did mothers.

The final demographic variable evaluated with paired t-tests was age. For this variable, the data were split into groups of 4, 5, and 6 year old children. When assessing

the youngest age group, mothers' and therapists' ratings were significantly different on all outcome variables (Prosocial Skills subscale ( $t(18) = -2.39, p < .05$ ); Emotion Regulation subscale ( $t(18) = -2.94, p < .01$ ); Total Social Competence score ( $t(18) = -2.94, p < .01$ )). For all outcomes, group therapists' mean scores were significantly higher than mothers' mean scores. There were no significant differences in mothers' and group therapists' scores for children in the middle age group. Significant variations in resilience scores were seen, however, in the oldest age group, specifically on the Emotion Regulation subscale ( $t(18) = -2.44, p < .05$ ). For this variable, mothers' reports were significantly lower than therapists' reports.

### Discussion

The present study sought to evaluate inter-rater reliability on a measure of resilience conceptualized as strengths in emotion regulation and prosocial skills. This study aimed to provide information on the consistency of quantitative measurements made by different observers measuring the same qualities in a child. In this study, the two observers are mothers and therapists assessing resilience in the same child in two different settings, one in the home and the other in a small group therapy context.

Prior to evaluating inter-rater reliability, the first hypothesis assessed the construct validity of the Group Therapist Social Competence Scale (GTSCS). Such a validity check was conducted in previous work for the Parent Social Competence Scale (PSCS; see Howell, Graham-Bermann, Czyz, & Lilly, 2010). Howell et al found that the conceptualization was validated by the negative correlation between the PSCS and the CBCL, which has been used in previous studies to detect poor functioning in children exposed to IPV (Graham-Bermann, Gruber, Howell, & Girz, 2009; Levendosky et al.,

2002). In the present study, analyses showed significant, negative correlations between the CBCL Externalizing subscale and the GTSCS Total score, as well as the GTSCS Emotion Regulation subscale. The significant correlations were weak to moderate in strength, but consistent with past studies of inter-rater reliability (Murray et al, 2007). These findings offer tentative support for the construct validity of the Group Therapist Social Competence Scale given that preschool children who were high on total competence, and particularly well regulated emotionally, showed fewer total behavior problems, more specifically fewer externalizing behavior problems.

The lack of significance between other subscales of the GTSCS and CBCL was contradictory to hypothesis one. One reason for such a finding may be related to different individuals completing the measures. A stronger relationship might have emerged had group therapists completed both a measure of child problematic behavior and resilient functioning. Further, group therapists completed their assessments of resilient functioning after the first therapy session with the child. During this session, the child was in a new setting with unfamiliar individuals and was likely to be on his or her best behavior; therefore ratings of competence were likely inflated due to the nature of the interaction and setting.

In addition, it may be that children who are high on internalizing symptoms do not exhibit them in a group therapy setting, which might result in low GTSCS scores. It could be that children rated high on internalizing symptoms were still able to behave in a way consistent with expectations during the group therapy session and therefore received a high rating on the GTSCS. For example, a child who is high on the Internalizing subscale of the CBCL might show symptoms including feeling worthless, feeling guilty,

or being suspicious. Similarly, the Internalizing scale describes children who are withdrawn. These symptoms may not be readily apparent in a group setting that might include playing by the rules of a game, controlling one's temper during a disagreement, or thinking before acting – all elements of the resilience construct.

Hypothesis two centered more directly on inter-rater agreement between mothers' and group therapists' assessments of resilience in this sample of preschool children exposed to IPV. Given the low and often non-significant findings in other studies assessing consistency across different evaluators (Frigerio et al., 2004; Winsler & Wallace, 2002), it was expected that mothers' and therapists' ratings of emotion regulation and prosocial skills would be discrepant. Results provided partial support for this hypothesis in the lack of a significant relationship between the PSCS Emotion Regulation subscale and the GTSCS total score or any of the GTSCS subscales. The present study correlations, which ranged from .20 to .35, are in keeping with the research of Frigerio et al., 2004 who noted correlations in the range of  $r = 0.13$  to  $r = 0.54$  across informants for externalizing and internalizing behaviors, as well as Winsler and Wallace (2002) who found cross-informant correlations of  $r = -.09$  to  $.27$  for social skills.

The finding that the GTSCS Total and Prosocial skills scores were significantly positively correlated with the PSCS Total and Prosocial Skills subscale might be explained by the types of behavior that are elicited in this group therapy setting. During the first session of the intervention, children are often more compliant and socially engaged as they get to know group therapists and fellow group members. Behaviors evaluated on the Prosocial Skills subscale such as acting friendly toward others, being helpful to others, and sharing materials might be more readily displayed in the Preschool

Kids' Club group setting. Further, such prosocial behaviors are easily identifiable to the group therapists, e.g., they can clearly see when a child shares a toy, but it might be more difficult for them to witness behaviors associated with the Emotion Regulation subscale, such as the child's awareness of the effect his behavior has on others.

Consistent with the third hypothesis, therapists' mean ratings in the current study were not significantly different from ratings made by teachers of high-risk children in the original CPPRG project. Again, children considered high-risk by the CPPRG exhibited chronic problems related to aggressive, disruptive, and oppositional behaviors (CPPRG, 2002). Chronic externalizing problems of aggression and disruptive behavior are also seen in children exposed to severe IPV (Sternberg, Baradaran, Abbott, Lamb, & Guterman, 2006). Given that mean scores on the GTSCS were consistent among therapists in the present study and teachers in the original CPPRG project, despite the differing amounts of contact that each evaluator had with the child, this finding offers preliminary evidence for using the GTSCS with high-risk children, such as those exposed to violence in the home.

In this study, demographic variables were assessed to determine if mothers' and therapists' evaluations of resilience differed by relevant factors, such as gender, ethnicity, and age. Differences were consistently seen on the Emotion Regulation subscale scores, with children rated by group therapists as significantly better emotionally regulated. These differences, however, were found regardless of gender or ethnicity, such that both males and females, as well as both minority and non-minority children, were rated by group therapists as significantly better regulated. Given that the significant differences

were in the same direction for all children, it appears that these factors do not distinguish resilient outcome scores.

More widespread differences in mothers' and therapists' outcome ratings were noted when children were separated by age. This was particularly evident for the youngest group of 4 year old children in which therapists' and mothers' ratings were significantly different on all outcome measures of resilience. It seems that there is an especially significant difference between mothers' and therapists' ratings of the youngest preschool child's resilient abilities, indicating that the assessment setting is especially relevant for this age group. It may be that younger children behave quite differently in these two environments and such differences are reflected in measure scores, whereas older children show more consistent behavior patterns.

#### *Limitations*

Although this study provides preliminary information on inter-rater consistency on a measure of resilience in young children, there are specific limitations that should be acknowledged. The results cannot be widely generalized, as this was a study of low-income families in the Midwest. The findings of the present study are limited to this sample of children and families who were interested in joining the evaluation project. Further, there is a lack of ethnic diversity among the sample; therefore it is challenging to apply these findings to less represented ethnicities, such as Asian American or Latino/a families.

Another limitation pertains to the cross-sectional nature of this project. There is evidence that children can exhibit varying levels of resilience over time (Freitas & Downey, 1998). We cannot determine whether the children deemed resilient at the time

of this study remained so, or alternately, whether children showing lower competence became more resilient with the passing of time. Further, children can be resilient under one set of circumstances and not another (Kaufmann, Cook, Arny, Jones, & Pittinsky, 1994). Therefore, it is not clear whether children who are exposed to IPV and show generally resilient functioning would be resilient in the face of other forms of adversity.

Finally, one goal of this study was to evaluate preschool children before they received any intervention services. Thus, to avoid effects of the intervention, the group therapist assessment of resilience was done immediately upon meeting the child after having spent only one therapy session together. Such a short period of interaction makes it difficult for therapists to provide a complete account of the child's functioning and is a clear limitation of the project. It may have been more fruitful to employ a different informant, beyond the mother, who knew the child for a longer period of time, such as a teacher or coach.

### *Clinical Implications*

Despite these limitations, this study provides novel information on aspects of prosocial skills and emotion regulation in preschool children, as assessed by multiple reporters. First, this study demonstrates that it is possible to assess the prosocial behavior of children during group therapy and that their resilient behavior shows some consistency across settings. Such findings can be influential in clinical work with families exposed to IPV. Therapists could use this measure to assess young children's abilities and behaviors in treatment, thereby providing evidence for progress in therapy. Clinicians might also elect to work with their young clients on aspects of prosocial skills and emotion regulation to promote and to enhance their positive functioning. It could be important for

group therapists to emphasize these skills for some children in their therapy sessions as a way to cultivate resilient functioning.

### *Future Studies*

Given the methodological limitations of the current study, future work in this area would do well to include a larger sample with more ethnic diversity and variability in income. Such research could employ a longitudinal study design that is more suitable for evaluating pathways to resilience in this population as opposed to providing a snapshot of current functioning. In addition, future work might collect data from multiple informants in order to provide a more complete understanding of the child, i.e. obtaining assessments from coaches, extended family, or children's individual counselors. The results presented here suggest additional questions and directions for studying resilience in preschoolers' lives. Future studies could evaluate children pre- and post-intervention on both of the measures of resilience to determine if inter-rater reliability changes as the intervention progresses.

### *Summary*

This study addresses inter-rater reliability on a measure of resilience for preschool children exposed to IPV. Given the lack of research on this topic, study findings provide unique information that should be explored further in future work. The current study found tentative support for the use of the Group Therapist Social Competence Scale with children exposed to severe violence in the home and gives preliminary evidence to suggest that some demographic factors are associated with resilience in this population. Developing a clear conceptualization of resilience and gathering a variety of informants

to assess this conceptualization builds our understanding of the processes by which children cope with adversity.

Table 2.1

*Results Showing Means, Standard Deviations, Minimum and Maximum Values for Measures of Resilience and Behavioral Adjustment*

Measure	Mean	SD	Min.	Max.	Cronbach's Alpha ( $\alpha$ )
<b>PSCS</b>					
Total	3.00	.85	1.4	4.75	.90
Emotion Reg.	2.70	.83	1.3	4.67	.78
Prosocial Skills	3.30	.98	1.5	5.00	.86
<b>GTSCS</b>					
Total	3.38	.79	1	4.83	.94
Emotion Reg.	3.35	.87	1	5.00	.92
Prosocial skills	3.42	.81	1	5.00	.87
<b>National Sample- teacher</b>					
Total	2.45	.95	0	4.00	.98
Emotion Reg.	2.38	.99	0	4.00	.96
Prosocial Skills	2.53	.96	0	4.00	.96
<b>CBCL</b>					
Total	27.79	19.63	0	92	.95
Internalizing	11.11	9.86	0	50	.92
Externalizing	16.69	11.47	0	50	.92

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Notes: N = 52; PSCS = Parent Social Competence Scale; GTSCS = Group Therapist Social Competence Scale; CBCL = Child Behavior Checklist

Table 2.2

*Intercorrelations of Group Therapist Social Competence Scale (GTSCS) and Child Behavior Checklist (CBCL) Scale Mean Scores*

	1 GTSCS Total	2 GTSCS Prosocial Skills	3 GTSCS Emotion regulation skills	4 CBCL Total	5 CBCL Int.	6 CBCL Ext.
1 GTSCS Total	–					
2 GTSCS Prosoc.	.93**	–				
3 GTSCS Emo. Reg.	.96**	.79**	–			
4 CBCL Total	-.23	-.18	-.25	–		
5 CBCL Internalizing	-.11	-.08	-.12	.91**	–	
6 CBCL Externalizing	-.31*	-.24	-.33*	.93**	.69**	–

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Note: N = 52; \* $p < 0.05$ . \*\* $p < 0.01$

Table 2.3

*Intercorrelations of Parent Social Competence Scale (PSCS) and Group  
Therapist Social Competence Scale (GTSCS) Mean Scores*

		1	2	3	4	5	6
		PSCS Total	PSCS PS	PSCS ER	GTSCS Total	GTSCS PS	GTSCS ER
1	PSCS Total	–					
2	PSCS Prosocial	.95**	–				
3	PSCS Emotion Reg.	.93**	.76**	–			
4	GTSCS Total	.32*	.35*	.24	–		
5	GTSCS PS	.32*	.33*	.27	.93**	–	
6	GTSCS ER	.29*	.33*	.20	.96**	.79**	–

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Note: N = 52

\* $p < 0.05$  \*\* $p < 0.01$

## References

- Achenbach, T. M. (1991). *Manual for the Child Behavior Checklist: 4-18 and 1991 profile*. Burlington: Department of Psychiatry, University of Vermont.
- Achenbach, T., & Edelbrock, C. (1993). *Manual for the Child Behavior Checklist and Revised Child Behavior Profile*. Burlington: University of Vermont, Department of Psychiatry.
- Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implication of cross-informant correlations for situational specificity. *Psychological Bulletin*, *101*, 213–232.
- Conduct Problems Prevention Research Group (CPPRG; 2002). Psychometric Properties of the Social Competence Scale- Teacher and Parent Ratings. *Fast Track Project Technical Report*. [Available at <http://www.fasttrackproject.org>]
- Cummings, E. M., Pepler, D. J., & Moore, T. E. (1999). Behavior problems in children exposed to wife abuse: Gender differences. *Journal of Family Violence*, *14*, 133-156.
- Fantuzzo, J., & Fusco, R. (2007). Children's direct sensory exposure to substantiated domestic violence crimes. *Violence and Victims*, *22*, 158-171.
- Freitas, A. L., & Downey, G. (1998). Resilience: A dynamic perspective. *International Journal of Behavioral Development*, *22*(2), 263-285.
- Frigerio, A., Cattaneo, C., Cataldo, M., Achiatti, A., Molteni, M., Battaglia, M. (2004). Behavioral and emotional problems among Italian children and adolescents aged 4 to 18 years as reported by parents and teachers. *European Journal of Psychological Assessment*, *20*, 124–133.
- Graham-Bermann, S. A. (2011). Evidence-based practices for school-age children exposed to IPV and an evaluation of The Kids\* Club Program. In S. A. Graham-Bermann, & A. A. Levendosky, (Eds.) *How Intimate Partner Violence Affects Children: Developmental Research, Case Studies, and Evidence-Based Treatment*. Washington, DC: American Psychological Association Books, pp. 179-205.
- Graham-Bermann, S. A. & Follett, C. (2001). *Fostering resilience in young children exposed to violence*. Department of Psychology, University of Michigan.
- Graham-Bermann, S.A., Gruber, G., Howell, K.H., & Girz, L. (2009). Factors discriminating among profiles of resilience and psychopathology in children exposed to intimate partner violence. *Child Abuse & Neglect*, *33*, 648-660.

- Graham-Bermann, S. A., & Perkins, S. C. (2010). Effects of early exposure and lifetime exposure to intimate partner violence (IPV) on child adjustment. *Violence and Victims* 25(4), 427-439.
- Holden, G. W., Stein, J., Ritchie, K. L., Harris, S. D., & Jouriles, E. N. (1998). Parenting behaviors and beliefs of battered women. In G. W. Holden, R. Geffner, & E. N. Jouriles (Eds.), *Children exposed to marital violence: Theory, research and applied issues* (pp. 289-336). Washington, DC: American Psychological Association Books.
- Howell, K.H., Graham-Bermann, S.A., Czyz, E., & Lilly, M. (2010). Assessing resilience in preschool children exposed to intimate partner violence. *Violence and Victims*, 25(2), 150-164.
- Kaufman, J., Cook, A., Arny, L., Jones, B., & Pittinsky, T. (1994). Problems defining resilience: Illustrations from the study of maltreated children. *Development and Psychopathology*, 6, 215–247.
- Kumpulainen, K., Rasanen, E., Henttonen, I., Moilanen, I., Piha, J., Puura, K., Tamminen, T., Almqvist, F. (1999). Children's behavioural/emotional problems: A comparison of parents' and teachers' reports for elementary school-aged children. *European Child & Adolescent Psychiatry*, 8(4), 41-47.
- Lee, S. W., Elliott, J., & Barbour, J. D. (1994). A comparison of cross-informant behavior ratings in school-based diagnosis. *Behavioral Disorders*, 19, 87–97.
- Levendosky, A. A., Huth-Bocks, A. C., Semel, M. A., & Shapiro, D. L. (2002). Trauma symptoms in preschool-age children exposed to domestic violence. *Journal of Interpersonal Violence*, 17, 150-164.
- Merrell, K. W. (1994). *Preschool and Kindergarten Behavior Rating Scales*. Austin, TX: PRO-ED.
- Murray, D. W., Kollins, S. H., Hardy, K. K., Swanson, J. M., Vitiello, B., Davies, M., McCracken, J. T., Posner, K., Wigal, T., Chuang, S. Z., Ghuman, J. K., Wigal, S. B., Skrobala, A. M., McGough, J. J., Greenhill, L. L., Riddle, M. A., Cunningham, C., Abikoff, H. B. (2007). Parent versus teacher ratings of attention-deficit/hyperactivity disorder symptoms in the preschoolers with attention-deficit/hyperactivity disorder treatment study (PATs). *Journal of Child and Adolescent Psychopharmacology*, 17(5), 605-619.
- Sternberg, K. J., Baradaran, L. P., Abbott, C. B., Lamb, M. E., & Guterman, E. (2006). Type of violence, age, and gender differences in the effects of family violence on children's behavior problems: A mega-analysis. *Developmental Review*, 26, 89-112.

Winsler, A., & Wallace, G.L. (2002). Behavior problems and social skills in preschool children: Parent-teacher agreement and relations with classroom observations. *Early Education and Development, 13*(1), 41-58.

Youngstrom, E., Loeber, R., & Stouthamer-Loeber, M. (2000). Patterns and correlates of agreement between parent, teacher, and male adolescent ratings of externalizing and internalizing problems. *Journal of Consulting and Clinical Psychology, 68*, 438-450.

### Chapter III

#### Fostering Resilience in Preschool Children Exposed to Intimate Partner Violence: An Evaluation of the Preschool Kids' Club Intervention Program

Exposure to intimate partner violence (IPV) can place children on a trajectory toward increased aggression, struggles with depressed mood, and poor peer relations (Levendosky, Huth-Bocks, Semel, & Shapiro, 2002; Paterson, Carter, Gao, Cowley-Malcolm, & Iusitini, 2008; Sternberg, Baradaran, Abbott, Lamb, & Guterman, 2006). There are some children, however, who continue along a path of positive mood and behavior despite exposure to intense family violence (Kitzmann, Gaylord, Holt, & Kenny, 2003; Martinez-Torteya, Bogat, von Eye, & Levendosky, 2009). These children show evidence of resilient functioning (Freitas & Downey, 1998). Given the variability in outcome, researchers are beginning to address how child positive and negative functioning may be altered by participation in treatment services following exposure to traumatic events, including IPV (Graham-Bermann, Lynch, Banyard, DeVoe, & Halabu, 2007; Jouriles, McDonald, Rosenfield, Stephens, Corbitt-Shindler, & Miller, 2009). Most of these interventions focus on identifying and treating forms of psychopathology exhibited by children who have witnessed family violence, while very few recognize and promote aspects of resilient functioning.

The second study of this dissertation assesses resilience both before and after participation in an IPV intervention program designed to enhance preschool children's

overall coping. This study also compares the resilient functioning of two groups of preschool-age children exposed to IPV over time – those who do and do not participate in the intervention program. Factors that may predict to positive functioning are evaluated to determine for whom the intervention is effective and why. Such a study has not been undertaken to date, as previous intervention outcome evaluations consider success as lack of psychopathology, whereas this study utilizes a theoretically-driven measure of resilience. Some researchers have shown that approximately half of children exposed to IPV do not exhibit clinical levels of psychopathology at the time of assessment and a number of children show signs of positive functioning (Graham-Bermann, Gruber, Howell, & Girz, 2009). Given these findings, it is essential to understand why some children cope well and how to promote positive outcomes following exposure to violence in the home.

#### *Interventions for Children Exposed to IPV*

Most communities do not have empirically-supported programs for young children exposed to IPV (Graham-Bermann, Lynch, Banyard, DeVoe, & Halabu, 2007). Despite the lack of available resources, Taylor and Sorenson (2007) found that over 75% of individuals contacted in a random-digit-dial survey supported intervention on behalf of the child in homes with severe IPV. In recent years, clinicians have made significant progress in developing interventions for children exposed to violence in the home. These treatments range greatly in content and form and usually focus on children during the school-age years. Many of these interventions are informed by clinical theory and attempt to take environmental concerns into account; however, few undergo rigorous evaluation for empirical significance (Graham-Bermann, 2011). For example, Kozłowska and

Hanney (2001) developed an art therapy day program for children ages 4-8 who were exposed to parental violence and separation. The therapy group was created to develop a different modality to activate memories in a way that was not overwhelming and to provide a contrary experience to that associated with the trauma. The groups consisted of five children, were run by a therapist and co-therapist, and lasted over a period of seven weeks. Unfortunately, this program could not be empirically evaluated because it was in conjunction with intense family-based treatment and no questionnaires were administered before or after the groups (Kozlowska & Hanney, 2001).

Tutty and Wagar (1994) also created an early intervention program for children ages 5 to 7 who witnessed IPV. Their program, known as the Storybook Club, addresses conflict resolution and safety skills, as well as nonviolent means of problem resolution. Children meet for ten weekly sessions and help create or act out stories associated with feelings and concerns around family violence. While group leaders and parents offered anecdotal evidence that children responded positively to the groups, no empirical evaluations were conducted on the Storybook Club (Tutty & Wagar, 1994). Clearly, in order to provide adequate data, pre- and post-treatment evaluations using standardized measures need to be given to provide quantitative evidence of a program's impact. Further, comparison groups must also be used to ascertain whether the changes found are due to the treatment or to some other variable, event, or condition.

More recently, McWhirter (2010) completed an outcome evaluation of two community-based group therapy programs for women (n = 46) and their children (n = 48) exposed to IPV. Participating families were assigned to an emotion focused therapy group or a goal oriented therapy group; there was no comparison group included in this

study. The overarching goal of the groups was to reduce family violence and increase psychosocial well-being for women and children by addressing posttraumatic coping strategies. Results revealed that children in both therapy groups endorsed decreases in peer and family conflict, as well as increases in emotional well-being and self-esteem. Women in both groups reported decreases in depression and family conflict, as well as increases in family bonding and social support, with higher rates of family conflict reduction in the goal oriented group and higher rates of social support improvement in the emotion focused group. Such findings offer nuanced information about the types of treatment for families exposed to IPV, but the study is limited by the lack of a standard control group, the small sample size, and the minimal amount of data collected from the child (McWhirter, 2010). This study improves upon past research by evaluating multiple forms of treatment, but the issue of change over time remains a prominent concern. Other studies have shown that a portion of participants change as time passes, regardless of intervention participation (Graham-Bermann et al, 2007). This represents a significant confound for studies that lack a no treatment or delayed treatment group.

Research using a randomized controlled trial design has attempted to correct some of the flaws of less rigorous intervention analyses. Such research incorporates more stringent evaluation strategies and theoretically-driven aims (Graham-Bermann, 2011). Intervention developers now recognize that successful programs typically take a holistic approach, emphasizing the involvement of parents or primary caregivers (McFarlane, Groff, O'Brien, & Watson, 2005). Through intervention, parents address their mental health difficulties and develop more effective coping strategies, which in turn enhance parenting (Graham-Bermann, Lynch, Banyard, DeVoe, & Halabu, 2007). There are

currently three prominent programs with evidence of effectiveness that are designed to reduce adjustment problems for children exposed to intimate partner violence by working with both parents and children. While rigorous evaluations are just beginning to be reported, some of these studies show promising results in improving the social, cognitive, and emotional functioning of children who witness violence.

The interventions outlined below are evidenced-based treatments for children exposed to IPV. That is, they have been identified as treatments shown to be efficacious in controlled research with this particular population (Chambless & Hollon, 1998). These treatments used random assignment and control groups as a source of comparison to create a sound experimental procedure. Further, the interventions are manualized and implemented by specialists in the field of child psychology, and allow for replication and follow-up. Such research strategies provide the most accurate information about the unique contributions of an intervention or treatment to a specific population, in this case children exposed to IPV (Weisz, Weersing, & Henggeler, 2005).

Jouriles and colleagues (2001) implemented a home-based program designed for abused women who were departing shelters and their young children with high levels of externalizing problems. Prescreening was used to identify children with clinical levels of aggression. In total, 36 families were included in which one child (aged 4-9) displayed clinical levels of conduct problems. The majority of children (26) in this sample were male and their mean age was 5.67 years. The manualized intervention, known as Project SUPPORT, consisted of two main components, providing instrumental and emotional support to families following violence in the home and teaching child management skills to mothers. Children also received mentoring services during the intervention. Families

were randomly assigned to either the intervention or the comparison group; each condition included 18 families. Families in the intervention group received a one-hour long, weekly in-home session based on the SUPPORT principles. On average, families completed 23 intervention sessions. Following a mixed methods analysis, experimental evaluation of the intervention found that children in the intervention group showed significant decreases in behavior problems, at a faster rate than children in the control group. Mothers also displayed significantly greater child management skills and coping following the intervention. Such findings offer clear, empirical support for this intervention; however, it was limited in a number of ways. The small sample size of 36 families is a substantial limitation, as is the use of only one measure of behavior problems (Jouriles, McDonald, Spiller, Norwood, Swank, Stephens, Ware, & Buzy, 2001).

Project SUPPORT was further evaluated with regard to clinical level conduct problems in a sample of 66 families with children between the ages of 4 and 9. Each of the 66 families was randomly assigned to either the Project Support (n = 32) group or the comparison (n = 34) group (Jouriles et al, 2009). This study was conducted to replicate and expand upon the results of the original project SUPPORT evaluation (Jouriles, et al, 2001). In the 2009 study, there were slightly more males enrolled in the project SUPPORT condition (58%) and ethnicity was split relatively evenly between White (41%) and Black, not of Hispanic origin (38%). Throughout the intervention, treatment therapists worked primarily with the mothers, with children included only to assess the mothers' use of learned skills and the child's responses to these skills. In sum, families received an average of 20 home-based treatment sessions during the 8-month period following shelter departure. Results indicated that during the intervention period, child

conduct problems and mother's harsh and inconsistent parenting decreased in both the experimental and comparison groups, but the decrease occurred at a faster rate for children and mothers in the project SUPPORT experimental group. Maternal psychiatric symptoms decreased at a comparable rate for women in the experimental and comparison groups. Changes in mothers' inconsistent and harsh parenting, as well as psychiatric symptoms, accounted for over 50% of Project Support's effects on child conduct problems. Such findings highlight the importance of replication and a rigorous experimental method, but the study is limited by the use of a costly in-home service delivery design and the inclusion of only families connected to a shelter (Jouriles, McDonald, Rosenfield, Stephens, Corbitt-Shindler, & Miller, 2009).

Lieberman, Van Horn, & Ippen (2005) also designed and tested an intervention for abused women and their preschool-age children. The sample in this study consisted of 39 girls and 36 boys, aged 3-5 with a mean of 4.06 and their mothers. The 50-week Child-Parent Psychotherapy (CPP) program focused on improving the quality of the mother-child relationship and sought to engage the mother as the child's ally in coping with the trauma. Weekly joint child-parent sessions were held, as well as individual appointments with the mother. The specific aims of this program were to reduce traumatic stress and improve behavior for children participating in CPP. Lieberman and colleagues conducted a randomized clinical trial to assess the efficacy of CPP as compared to the control condition of case management plus individual treatment. Children were assessed at intake, six months after treatment began, and at the conclusion of treatment. Children attended, on average, 32 CPP sessions. A general linear model (GLM) repeated-measures procedure was used with group (CPP vs. control) as the

between-subject variable and time (baseline vs. post-treatment) as the within-subject variable. Those children who were randomly assigned to the CPP group showed significantly more behavior improvement as compared to children receiving case management plus treatment as usual in the community. The mothers that received treatment also showed significantly fewer PTSD avoidance symptoms at the end of the program than did comparison mothers. Limitations of this study include its small sample size and sole reliance on maternal report for major outcome variables. Additional observation-based data would enrich the findings, as well as the use of a larger sample to replicate results (Lieberman, Van Horn, & Ippen, 2005).

With a sample size of 221 families, The Kids' Club program is the largest intervention evaluation study to date for children exposed to IPV (Graham-Bermann, 2011; Graham-Bermann, Lynch, Banyard, DeVoe, & Halabu, 2007). Pre- and post-intervention assessments were made with regard to a variety of areas related to child functioning. The evaluation study was designed to assess the efficacy of a group intervention for children and their mothers exposed to IPV. Children exposed to high levels of intimate partner violence were randomly assigned to participate in a child-only intervention, a child-plus-mother intervention, or a comparison group that received "treatment as usual" services for ten weeks (Graham-Bermann, Lynch, Banyard, DeVoe, & Halabu, 2007). The intervention, known as the Kids' Club Program, serves 6- to 12-year-old children. They are given the opportunity to discuss and express their knowledge about family violence, their attitudes and beliefs about families, their emotional adjustment, and their social behavior in a small group setting. A parenting program was created to empower mothers to discuss the impact of violence on various areas of their

child's development, build parenting competence, provide a safe place to discuss fears and worries, and enhance self-esteem for the mother in the context of a supportive group (Graham-Bermann, 2011).

Outcome data were analyzed using hierarchical linear modeling (HLM). Various models were used to compare the three conditions and develop patterns associated with intervention participation. For children participating in the study, significant change from baseline was found in knowledge about violence, safety planning, social skills, emotion regulation, and emotional/behavioral domains (internalizing and externalizing behaviors). When mothers and children both received the intervention, effects in all areas were greater than when only the children were the focus of the intervention. For example, it was effective in reducing children's internalizing and externalizing symptoms, as well as their attitudes concerning violence (Graham-Bermann, Lynch, Banyard, DeVoe, & Halabu, 2007). This study utilized advanced statistical techniques and a large sample to analyze minute variations seen across participants; however, the generalizability of findings was limited as this was a sample of Midwestern families interested in receiving intervention services. Further, issues of social desirability, the utilization of mother's self-report for main constructs, and the use of participant assignment procedures are limitations of this work (Graham-Bermann, Lynch, Banyard, DeVoe, & Halabu, 2007).

While the above interventions focused primarily on addressing psychopathology in children exposed to IPV, Sullivan and colleagues (2002) utilized a strengths-based community intervention approach to promote self-esteem and self-competence in women and school-aged children exposed to IPV. Researchers found that children attending a ten week support and education group showed significant improvements in global self-worth,

as compared to children receiving treatment as usual. The results were modest, but promising, and illustrate the potential improvements in positive functioning fostered by intervention participation. Such research could be expanded to include a younger population and a more comprehensive measure of positive functioning (Sullivan, Bybee, & Allen, 2002).

### *Aims & Hypotheses*

The present dissertation study builds on past intervention research and seeks to address some of the shortcomings of previous treatment outcome assessments. As opposed to focusing on changes in child psychopathology, this study evaluates change in resilience from baseline to immediately following an empirically-based intervention, using a measure of resilience known as the Social Competence Scale (SCS). Preschool children who receive the intervention are compared to a same-age set of children in a no treatment comparison group to assess for change. Further, the study aims to identify factors that appear to predict change in resilience scores for children in the intervention program. The specific aims of this study are to:

1. Determine if the Preschool Kids' Club intervention is effective in promoting resilience in a sample of young children exposed to IPV.
  - a. Given the empirical-support for the school-age version of this program and its success in reducing behavioral problems for school-age children exposed to IPV, it is hypothesized that children in the experimental group will have post-intervention scores on the Prosocial Skills subscale, Emotion Regulation subscale, and Total Social Competence Scale, that are significantly higher than children not receiving services.

2. Evaluate for whom the intervention is effective, focusing on demographic variables identified in the literature as potentially relevant to resilience.  
Specifically, is the intervention program better able to promote prosocial skills and emotion regulation skills in boys or girls, or for a particular ethnic group?
  - a. Based on the inconsistencies in the literature with regard to demographic variables, a hypothesis regarding such factors does not clearly emerge, but will be evaluated in this study.
3. Assess what predicts to change in resilience on the total SCS measure, as well as its two subscales, for preschool children exposed to IPV who participate in the intervention. Given the research review, it is expected that potential risk and protective factors can be used to understand some of the change in resilience among this population.
  - a. It is hypothesized that preschool-aged children exposed to more severe and chronic violence will score significantly lower on the prosocial skills and emotion regulation abilities measure of resilience as compared to children exposed to less severe IPV, and that children exposed to more severe violence will make less substantial gains following the intervention.
4. Understand the role of family-level protective factors in predicting change in resilience for children receiving intervention services.
  - a. It is hypothesized that factors predicting to resilience will include more effective parenting, better maternal mental health, and maternal coping strategies.

## Methods

### *Participants*

In this study, 113 mothers and their preschool-aged children were interviewed at baseline. There were 46 families in the experimental condition and 67 families in the no treatment comparison condition. Child participants ranged in age from 4-6 years ( $M = 4.95$ ,  $SD = .86$ ). There were 60 boys and 53 girls. Child ethnicity was diverse, with 41% European American, 35% African American, 20% Biracial, and 4% from other groups. Mothers' mean age was 32 years ( $SD = 7.33$  years), with 50% European American, 43% African American or Biracial, and 7% from other ethnic groups. Monthly income varied ( $M = \$1391.68$ ,  $SD = \$1572.96$ ) and most mothers in this study completed high school (85%). Forty four percent of the women were single at the time of assessment, while 24% were separated, 17% were married, and 8% were divorced. Seven percent of mothers were currently living with an abusive partner at the time of evaluation. Half of the families were either in a domestic violence shelter currently or had stayed at one in the past. For the Preschool Kids' Club intervention, child attendance ranged from 3 to 10 sessions ( $M = 5.7$ ,  $SD = 3.1$ ).

### *Procedure*

Following Institutional Review Board (IRB) approval, the study was advertised through community and shelter outreach in the form of flyers, postings, and presentations. Women interested in participating in the study contacted the research team by phone and a screening was used to determine if the caller qualified for the project. Specifically, each woman was asked if she had experienced intimate partner violence in the past two years and if she had a child of either gender between the ages of 4 and 6. All

women who contacted the study, regardless of qualification for participation in the intervention program, were provided with information about affordable services available for families exposed to IPV.

Women who qualified for the project were told about the study and, if interested, were systematically assigned in groups to either the experimental group or to the no treatment comparison group. Mothers and children in the experimental group were interviewed pre- and post- intervention (approximately five weeks apart). Families in the comparison condition were interviewed at baseline, and then interviewed again five weeks later, having not participated in the intervention program during the interim period. Families in the comparison condition were then invited to participate in the intervention following their second interview.

A sequential assignment procedure was employed whereby the first five families who qualified for the study were assigned to the experimental condition by the project coordinator, and then the next five families were assigned to the comparison condition. At no point did the coordinator provide any intervention or assessment. This system of assigning families to the two conditions was used throughout the study; such a modified random assignment procedure matches that used in the school-age children's intervention efficacy study (Graham-Bermann, Lynch, Banyard, DeVoe, & Halabu, 2007).

Study interviews occurred in a variety of settings, including where the intervention took place and in or near the participants' homes, if it was deemed safe to do so, i.e., the mother was no longer living with a violent partner. Interviewers were advanced undergraduate and graduate student research assistants who underwent training in research ethics and training in working with survivors of IPV conducted by a local

domestic violence shelter. In addition, all interviewers received six hours of training in clinical interviewing techniques and completed the University of Michigan online Program for Education and Evaluation in Responsible Research and Scholarship (PEERS) certification. Interviewers were blind to group assignment and separate from those who provided the intervention services. Mothers gave informed consent and children gave their assent to participate. Every attempt to protect the rights of both mothers and children was taken. That is, study participants were told that they could stop at any time, could “pass” or not answer any question, and were given referrals for appropriate and affordable mental health services when indicated or needed. In addition, they were assured that their identities and responses remained confidential. Mothers were compensated \$25 for their time and children were given a small gift worth approximately four dollars in exchange for participating.

#### *Preschool Kids’ Club Program*

The Preschool Kids’ Club intervention is a ten-session program that meets for five weeks (Graham-Bermann & Follett, 2001). The intervention is typically conducted in community settings, such as education centers or shelter outreach programs. It includes two components: the Preschool Kids’ Club for children exposed to violence and The Moms’ Empowerment Program (Graham-Bermann, 2011). The Preschool Kids’ Club focuses on helping children who have witnessed violence based on the theoretical assumptions that children may have learned harmful patterns of behavior, attitudes, and beliefs as a result of observing intimate partner violence and may also be distressed or traumatized by these experiences. Each session focuses on different topics related to IPV, including feelings children have about fighting, safety plans, and conflict resolution.

The Moms' Empowerment Program was designed to enhance the social and emotional adjustment of mothers who experienced IPV in the past two years, leading to fewer mental health difficulties. By extension, children are thought to benefit when their mothers' coping is enhanced and her mental health problems reduced. The empowerment group also focuses on strengthening protective aspects in the mothers' lives including social support, community resources, and parenting skills. During the intervention, mothers discuss how family violence has impacted their child's development and functioning. In addition, women's symptoms of Posttraumatic Stress Disorder (PTSD) and issues of safety are addressed. The psychoeducational element of the intervention program is designed to normalize and reduce women's stress and to provide support and problem solving around parenting challenges (Graham-Bermann & Levendosky, 1994).

#### *Measures*

*Demographics:* A demographics questionnaire was administered to each mother to establish basic background information, such as child age, household income, child gender, maternal education, and current relationship status.

*Resilient Functioning:* The *Social Competence Scale (SCS)*, developed by the Conduct Problems Prevention Research Group (Conduct Problems Prevention Research Group (CPPRG), 2002) was used in this study to assess resilient functioning. Mothers completed the parent version of the SCS. The measure consists of twelve items used to evaluate a child's prosocial skills ( $\alpha = .80$ ) and emotion regulation skills ( $\alpha = .80$ ) as perceived by the mother, using a 1-“not at all” to a 5-“very well” Likert scale. Examples of these behaviors include: “my child can accept things not going his/her way”, “my child thinks before acting”, “my child listens to others' point of view”, and “my child does

what he/she is told to do”. The measure includes two subscales defined as Prosocial Skills and Emotion Regulation Skills. A Total Competence score is derived from the combination of these two subscales. For the current sample,  $\alpha = .83$  for the Prosocial Skills subscale,  $\alpha = .74$  for the Emotion Regulation subscale, and  $\alpha = .87$  for Total Competence.

*Severity of Intimate Partner Violence* was examined using the *Revised Conflict Tactics Scales* (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996; Straus, 1979). The CTS2 is a 39-item instrument measuring the severity of psychological, physical, and sexual violence in a dating, cohabitating, or marital relationship as well as the extent to which negotiation has been used to deal with conflict. Each of the 39 items is designed to be answered by the participant about both the participant and the partner, for a total of 78 questions. The 39 partner items were used in the current study. Mothers estimate the frequency with which their partners used different conflict tactics toward them over the past two years utilizing a seven-point Likert scale (from never occurred to occurred more than 20 times). The measure contains five subscales: Physical Assault (e.g., “My partner twisted my arm or hair”), Psychological Aggression (e.g., “My partner insulted or swore at me”), Negotiation (e.g., “My partner explained his or her side of a disagreement to me”), Injury (e.g., “You had a broken bone from a fight with your partner”), and Sexual Coercion (e.g., “My partner used threats to make me have sex”). The CTS2 has good internal consistency, with alpha coefficients ranging from .79 to .95, as well as adequate construct and discriminant validity (Straus, Hamby, Boney-McCoy, & Sugarman, 1996). The  $\alpha$  for the current sample is .81.

*Mothers' depressed mood* was measured with the *Center for Epidemiologic Studies Depression Scale* (CES-D; Radloff, 1977), a 20 item self-report scale designed to assess levels of depressed mood in adults in the general population. Items evaluate various symptoms of depressed mood, including depressed affect, positive affect, somatic complaints, and interpersonal attributes. Examples of CES-D items include: "I felt sad," "I had crying spells," and "I felt hopeful about the future." Participants were asked to indicate how frequently they experienced each item within the past week using a 4-point scale ranging from 1 (None of the time) to 4 (Most of the time). The CES-D's reliability and validity have been established in numerous samples, with an internal reliability of ( $\alpha$ ) .85 and test-retest reliability of .54 (Radloff, 1977; Roberts, Andrews, Lewinsohn, & Hops, 1990). It is also highly correlated with other self-report measures of depression and with clinical ratings of depression (Radloff, 1977; Weissman, Prusoff, & Newberry, 1975). Total CES-D reliability for the present study was  $\alpha = .79$ .

*Mothers' level of posttraumatic symptoms* was assessed using the *Posttraumatic Stress Diagnostic Scale* (PDS; Foa, 1995). The PDS is a 49-item measure designed to assist with the detection and diagnosis of Posttraumatic Stress Disorder (PTSD). Items on the PDS measure correspond to DSM-IV diagnostic criteria for a diagnosis of PTSD. Participants were first asked whether they have experienced a variety of traumatic events (e.g., serious accident, natural disaster, non-sexual assault by a stranger) and then asked to respond to questions related to a partner-specific traumatic event. They were asked to focus on the "worst" traumatic event associated with physical and/or sexual assault from a partner. Respondents answered a series of questions that tap into symptoms of PTSD: traumatic reexperiencing (e.g. "having upsetting thoughts or images about the traumatic

event that come into your head when you didn't want them to"), avoidance (e.g., "trying to avoid activities, people, or places that remind you of the traumatic event"), numbing (e.g., "feeling emotionally numb such as being unable to cry or unable to have loving feelings"), and physiological reactivity (e.g., "being jumpy or easily startled"). Study participants indicated how frequently they experienced each symptom within the last month on a four-point scale ranging from 0 (not at all or only one time) to 3 (5 or more times a week/almost always). The extent to which these symptoms have caused distress or interfered with various areas of the respondent's life during the past month as well as the duration of the disturbance were also assessed. The PDS has been shown to have high internal consistency and test-retest reliability for diagnosis and for symptom severity, good sensitivity and specificity, and it has been shown to correlate highly with other measures of PTSD. Cronbach's alpha for the measure was originally reported at .92 (Foa, 1995) and is .87 for the current sample.

*Parenting practices* were measured using the *Alabama Parenting Questionnaire* (APQ; Frick, 1991; Frick, Christian, & Wootton, 1999; Shelton, Frick, & Wootton, 1996). The APQ is a 42-item measure assessing positive and negative parenting practices within six domains: involvement (e.g., "You have a friendly talk with your child"), positive parenting (e.g., "You let your child know when he/she is doing a good job with something"), poor monitoring/supervision (e.g., "Your child is at home without adult supervision"), inconsistent discipline (e.g., "You threaten to punish your child and then do not actually punish him/her"), use of corporal punishment (e.g., "You spank your child with your hand when she/she has done something wrong"), and use of discipline practices other than corporal punishment (e.g., "You take away privileges or money from

your child as a punishment”). Participants were asked to rate on a five-point scale, ranging from 1 (Never) to 5 (Always), the frequency with which the parenting practices typically occurred in their home. The APQ has been shown to have sound psychometric properties in studies evaluating the association between parenting practices and child behavioral outcomes (Dadds, Maujean, & Fraser, 2003; Frick, Christian, & Wootton, 1999; Shelton, Frick, & Wootton, 1996). In a previous study of 4 to 9 year-old children, Dadds et al. (2003) reported that the APQ scales have moderate to high internal consistency, with alpha coefficients ranging from .55 to .77. The  $\alpha$  for the current sample is .76 for positive parenting practices and .70 for negative parenting practices.

*Mother's Coping Strategies* were evaluated with the revised *Ways of Coping Questionnaire*, which is designed to assess a range of cognitive and behavioral coping strategies employed to deal with a stressful life encounter (WOCQ; Folkman & Lazarus, 1985; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986). The WOCQ measures the strategies used by each respondent to cope with her index trauma. Each item is rated on a scale from 0 (not used) to 3 (used a great deal). Sample items from the WOCQ include: “Talked to someone to find out more about the situation,” “Accepted sympathy and understanding from someone,” and “Talked to someone about how I was feeling.” Previous evidence suggests that the WOCQ has good internal consistency (typically in the .70 range), convergent validity with other coping and trauma measures (ranging from .68 to .97), discriminant validities (ranging in absolute value from .01 to .44), and has shown predictive validity with measures of life satisfaction (.51), increased positive affect (.52), and decreased negative affect (-.57) (Clark, Bormann, Cropanzano, & James, 1995). The  $\alpha$  for the current sample is .88.

## Results

Descriptive statistics for the study variables and reliability coefficients are given in Tables 3.1 and 3.2. At pre-intervention, the Prosocial Skills subscale mean was 19.7 ( $SD=5.4$ ), the Emotion Regulation subscale mean was 16.3 ( $SD=4.7$ ), and the SCS Total score mean for all study participants was 36.0 ( $SD=9.3$ ). Intercorrelations among the study dependent variables and continuous predictor variables are shown in Table 3.3 and ranged from  $r = .00$  to  $.31$ .

Prior to evaluating the effect of the Preschool Kids' Club program, pre-intervention differences between experimental and no treatment comparison groups were assessed on all key study variables (demographics, resilience, violence severity, maternal mental health, parenting, and maternal coping). These analyses were conducted for both mothers and preschool-aged children participating in the study, thereby identifying bias in experimental and comparison outcome evaluations. There were no statistically significant differences between the experimental and no treatment comparison groups at baseline on any of the study variables. Further, an attrition analysis of study participants was done by comparing those who stayed in the study from baseline to the second interview with those who did not. There were twenty one participants in the drop group who were assessed at baseline and did not complete a post-intervention interview; of these, seven were in the experimental group and fourteen were in the no treatment comparison group. Comparative analyses of participants who dropped out of the study with those who did not drop out of the study revealed no differences between groups on any relevant variables, except positive parenting ( $t = 2.5, p < .05$ ). That is, mothers who remained in the study from the baseline interview to the follow-up interview reported that

they used significantly more positive parenting practices, regardless of study group assignment.

As can be seen in Table 3.4, standard linear regression models were used to test the first hypothesis of this study, which evaluated change in resilience, conceptualized as strengths in prosocial skills and emotion regulation skills, from baseline to immediately following the Preschool Kids' Club intervention. Children who received the intervention were compared to a same-age set of children in a comparison group. The dependent variables measuring post-intervention resilience for this study are the Prosocial Skills subscale of the SCS, the Emotion Regulation subscale of the SCS, and the Total SCS score, which is the combination of these two subscales. A regression model was fitted to each dependent variable.

The regression model for post-intervention Prosocial Skills score was significant overall ( $F(3,87) = 32.89, p < .01, R^2 = .53, 95\% \text{ CI } [0.40, 0.66]$ ). In this regression, the pre-intervention Prosocial Skills score, assignment to experimental or comparison group, and the interaction between pre-intervention score and group were included to determine if there was a significant effect of the intervention. The interaction term was included as there was a trend ( $p < .10$ ) for the main effect of group assignment. To further explore this trend, an interaction term was added to the final model after initially exploring the main effects of pre-intervention score and group assignment. When the Prosocial Skills score was analyzed as the dependent variable, the intervention made a unique contribution, providing support for hypothesis one. Both the pre-intervention score ( $\beta = .56; p < .01$ ), as well as the interaction between the pre-intervention score and group assignment ( $\beta = .31; p < .05$ ), were significant predictors of the post-intervention Prosocial Skills score.

A significant model was also found for the Emotion Regulation score. For this outcome variable, however, only the pre-intervention score ( $\beta = .60$ ;  $p < .01$ ) predicted the post-intervention score when pre-intervention, group assignment, and the interaction of pre-intervention score and group were included in the regression ( $F(3,88) = 24.93$ ,  $p < .01$ ,  $R^2 = .68$ , 95% CI [0.58, 0.78]). In this model, there was no main effect of group assignment ( $\beta = 3.81$ ;  $p = .18$ ) or interaction of group and pre-intervention score ( $\beta = .19$ ;  $p = .24$ ) with Emotion Regulation at post-intervention. It appears that, for the Emotion Regulation outcome variable, post-intervention score was predicted by pre-intervention score, regardless of inclusion in the experimental group.

Finally, the Prosocial Skills and Emotion Regulation Skills subscales were combined to generate the SCS Total Competence score. A regression model was fitted using this Total SCS score as the dependent variable. Again, this model included pre-intervention Total Competence score, assignment to experimental or comparison group, and the interaction between pre-intervention score and group assignment, given the trend for the main effect of group assignment. This regression accounted for a significant proportion of variance in the post-intervention SCS Total score ( $F(3,88) = 38.96$ ,  $p < .01$ ;  $R^2 = .57$ , 95% CI [0.46, 0.68]); however, the only predictor that reached significance was the pre-intervention score ( $\beta = .60$ ;  $p < .01$ ). Assignment to experimental or comparison group ( $\beta = 9.93$ ;  $p = .061$ ), as well as the interaction between group and pre-intervention score ( $\beta = .27$ ;  $p = .054$ ), did not reach statistical significance as predictors of the Total score at post-intervention. All three of these regression models had a sample size of 92 participants and three covariates, which contributed to 99% power for each model when the test of significance was set at .05. In sum, support for hypothesis one was found when

Prosocial Skills score was the targeted outcome, but not when Emotion Regulation or Total Score were the focus of analysis. For the Prosocial Skills score, group assignment interacted with pre-intervention score to produce a unique and significant effect.

Given that there was a unique interaction between the pre-intervention Prosocial Skills score and group assignment when predicting post-intervention score, post-hoc analyses were conducted to understand this interaction. First, the pre and post-intervention data, separated by experimental and no treatment comparison group, were graphed to create a visual representation of the interaction. As can be seen in Figure 3.1, this graph indicates that as a child's pre-intervention score increases, the impact of intervention participation strengthens. It appears that children with higher baseline Prosocial Skills scores experience a greater benefit from group attendance.

Next, to further evaluate this interaction between pre-intervention score and group assignment, the data were split into quartiles based on Prosocial Skills scores, creating four equal groups. Using t-tests, it was found that for children in the highest quartile for Prosocial Skills at pre-intervention, there was a significant difference between those in the experimental and no treatment comparison groups on their post-intervention Prosocial Skills scores ( $t(22) = 2.38, p < .05, d = 0.97, 95\% \text{ CI } [0.81, 1.13]$ ). The experimental group's mean score was 26.92 ( $SD=3.5$ ) whereas the comparison group's mean score was 23.58 ( $SD=3.4$ ). There were no significant differences between experimental and comparison groups in any other quartiles. Such a finding indicates that those children who had the highest Prosocial Skills scores before the intervention exhibited a significant increase in their post-intervention scores, if they participated in the intervention program.

Finally, comparisons were made between children in the experimental group with the top 25% of post-intervention Prosocial Skills scores with children in the bottom 25% of post-intervention scores to understand differences in who benefitted from intervention participation. Based on t-tests, there was a significant difference in child age ( $t(22) = 3.3$ ,  $p < .01$ ,  $d = 1.40$ , 95% CI [1.11, 1.69]), negative parenting ( $t(22) = -2.7$ ,  $p < .05$ ,  $d = 1.07$ , 95% CI [0.72, 1.42]), and mother's pre-intervention depression ( $t(22) = -2.2$ ,  $p < .05$ ,  $d = .92$ , 95% CI [0.72, 1.12]) between the highest and lowest quartiles of the experimental group. Children with the highest Prosocial Skills scores were older, received less negative parenting, and had mothers with fewer symptoms of depression at pre-intervention. An analysis of the subscales that contribute to negative parenting were further assessed to determine which type of negative parenting had the greatest impact on Prosocial Skills scores. None of the individual subscales reached significance, therefore it seems that negative parenting practices taken as a whole, as opposed to one specific type, contribute to significant differences between experimental and no treatment comparison groups.

After completing posthoc analyses for hypothesis one, the remaining study hypotheses were addressed. Given that the interaction between group assignment and pre-intervention score was significant only for Prosocial Skills, hypotheses two through four, which centered on assessing the intervention effect, considered only the Prosocial Skills outcome. These hypotheses sought to identify protective factors that may predict to change in resilience scores from baseline to post-intervention for children in the experimental group, and were tested using stepwise hierarchical regression analyses. Demographic variables of child age, child sex, child ethnicity, and household income were entered in Step 1 to test the second hypothesis. The mean of family violence

severity and frequency (hypothesis three), were entered in Step 2 and change in positive parenting performance, change in negative parenting performance, change in maternal depression, change in maternal posttraumatic symptoms, and change in maternal coping (hypothesis four) were entered into Step 3. Change scores were used for hypothesis four to take into consideration modifications made on these factors from pre- to post-intervention. In sum, variables that were associated with the individual, such as demographic information, were entered first and those associated with the family relationship were entered last. In addition to examining whether each successive step improved the prediction of the Prosocial Skills outcome, individual processes were evaluated for their independent relationship to the outcome.

Demographic variables entered in Step 1 did not account for a significant proportion of variance in the Prosocial Skills change score, above that already accounted for by the pre-intervention score. Once violence severity was entered in Step 2, there was an increase in the amount of variance explained ( $R^2 = .43$ ) and the model reached significance ( $F(1,28) = 5.50, p < .05, 95\% \text{ CI } [0.29, 0.57]$ ). Further, violence severity was a significant predictor of post-intervention change score ( $\beta = -.05; p < .05$ ) in Step 2. For this step of the regression model, which already included five covariates, a sample size of 46 had 73% power to detect at  $\alpha = .05$  the increase in variance due to the additional covariate. When changes in parenting performance, maternal mental health, and maternal coping were entered in the final step; however, there was not a significant change in the variance accounted for and this model did not reach statistical significance. Such findings support hypothesis three, but do not support hypotheses two and four, indicating that

exposure to more severe violence contributed to less substantial change for preschool children on the prosocial skills measure of resilience.

After running the full model, which included all theoretical predictor variables, a backwards selection procedure was used to remove the most non-significant predictors and create the final, most parsimonious model that explained change in Prosocial Skills scores. This model, seen in Table 3.5, included pre-intervention Prosocial Skills score, violence severity, and whether or not the family was currently living with a violent partner. This model was significant and accounted for 40% of the variance in post-intervention score ( $F(3,34) = 10.77, p < .01, 95\% \text{ CI } [0.25, 0.55]$ ). Further, two predictors reached significance for the outcome variable. In this model, pre-intervention score ( $\beta = .55; p < .01$ ) and violence severity ( $\beta = -.04; p < .05$ ) each made significant contributions to variance in children's Prosocial Skills change scores. With a sample size of 46 participants and the test of significance level set at .05, the power was 97% with three covariates. In sum, a higher pre-intervention score and less severe violence predicted greater change in the Prosocial Skills score for children in the experimental group. This model appears to best fit the data and provide the clearest understanding of the improvements in children's social skills.

## Discussion

The current study assessed whether participation in an intervention program enhanced resilience in children exposed to IPV by comparing preschoolers who received the Preschool Kids' Club intervention with children in a comparison group who did not receive treatment services. Resilience was operationalized as strengths in prosocial skills and emotion regulation skills. In partial support of the first hypothesis, at post-

intervention, preschool children who participated in the program had significantly higher Prosocial Skills scores than children who did not receive treatment services. Other intervention evaluation studies have denoted participation success as a reduction in pathology (Lieberman, Van Horn, & Ippen, 2005; Jouriles et al, 2009). For example, Jouriles and colleagues (2009) assessed child progress as a decrease in conduct problems, without any specific measure of positive functioning or resilience as an indicator of change. Some previous research has attempted to assess change in positive functioning as opposed to psychopathology, but these evaluations are grounded in movement from maladaptive to adaptive behavior, as opposed to a focus on resilience. One such study was conducted by Graham-Bermann et al (2007) in which the authors evaluated change from maladaptive attitudes and beliefs to more adaptive attitudes and beliefs about violence following intervention participation. The current dissertation study's findings improve upon such past research by using a theoretically-driven measure of resilience to denote positive changes through intervention participation. Such a finding indicates that intervention programs, even for very young children, can improve and enhance functioning, in this case prosocial skills. At this time, there is no other program or treatment evaluation that has found such results with young children exposed to IPV.

The first hypothesis of this intervention evaluation study also assessed emotion regulation skills, which constitute another facet of resilient functioning in preschool children. Contrary to study hypothesis one, there were no significant findings connecting intervention participation with an increase in emotion regulation skills. Given the nature of emotion regulation abilities, which are inherently more internally driven (Gross, 1998; Rydell, Berlin, & Bohlin, 2003), the intervention may not tap into this construct enough

to evince change over a short timeframe. For example, emotion regulation is operationalized as an ability to calm oneself down when agitated, cope well with failure, and control one's temper. Over a five week period children may not have ample opportunity to practice these behaviors in a group intervention setting. In contrast, prosocial skills are more amenable to a group setting and this type of intervention where children are encouraged to speak openly about feelings, share with others, and elicit support from group leaders or peers (Graham-Bermann, 2011). Finally, since the Total Competence Score is solely a combination of the Prosocial Skills and Emotion Regulation subscales, it is understandable that the intervention trended towards, but did not reach statistical significance, as one subscale was significantly impacted by the intervention and one was not. In this case, it seems more appropriate to focus on the individual subscales rather than the Total Competence scale as a whole.

Each of the remaining study hypotheses centered on identifying various factors related to the child, the environment, and the mother that may predict change in Prosocial Skills scores for children participating in the Preschool Kids' Club intervention. None of the demographic factors identified in hypothesis two emerged as predictors of change in prosocial skills from pre-intervention to post-intervention. These findings suggest that child demographic factors do not impact one's ability to make meaningful change in an intervention. Such a finding may illustrate the utility of the intervention with preschool children of both genders and different ethnicities, indicating that its benefit does not wax or wane based solely on demographic variables. Further, these results signify that differences in prosocial skills may be better accounted for by factors beyond individual characteristics of the child. While we may need to investigate whether children with

particular problems need more targeted interventions, the demographic variables identified in this study do not appear to be of concern with regard to prosocial skills. The finding that child-centered variables may not be the most reliable predictor of intervention success corresponds to previous research findings that have also shown inconsistency in the influence of age, gender, ethnicity, and income (Graham-Bermann, Howell, Lilly, DeVoe, 2011; Graham-Bermann, Lynch, Banyard, DeVoe, & Halabu, 2007).

Violence severity was a significant predictor of change in prosocial skills for children participating in the intervention program, providing support for the third hypothesis. In this study, children exposed to less severe violence were able to show more change in prosocial skills during the intervention program. The significant impact that violence severity has on child functioning has been consistently identified in past research. For example, Kitzmann and colleagues (2003) noted that children who witness less severe forms of IPV show less impaired functioning than children who witness more severe IPV. Further, Graham-Bermann and Perkins (2010) found that the majority of children in their study witnessed violence for the first time during infancy, but it was the impact of cumulative violence exposure that accounted for the most variance in child externalizing behavior problems. Finally, Howell et al (2010) found that preschool children exposed to more frequent and severe violence exhibited fewer prosocial skills than children exposed to less violence in the home (Howell, Graham-Bermann, Czyz, & Lilly, 2010). Such consistent research about the cumulative and enduring effects of exposure to severe IPV underscores the need for families to have readily available

support services when there is violence in the home to prevent ongoing and escalating fighting that may result in poorer functioning for young children.

The final study hypothesis evaluated the impact of various factors related to the mother in predicting Prosocial Skills change scores for preschool-aged children in the intervention program. In the analysis, change in positive and negative parenting, change in maternal mental health, and change in maternal coping scores were evaluated as opposed to pre-intervention or post-intervention scores. Change scores were included in the analysis to account for alterations made on these variables as a result of the mother's participation in the Moms' Empowerment Program. Contrary to hypothesis four, none of the family-level variables were predictors of change in Prosocial Skills scores. This is inconsistent with past research which has repeatedly noted that change in maternal functioning impacts change in child functioning (Graham-Bermann et al, 2007; Jouriles et al, 2009; McWhirter, 2010). Such a contradictory finding may be due to the lack of large changes noted on the maternal variables (such as highly positive self-reports of parenting skills at baseline); therefore it is challenging to detect an effect from a variable that did not change dramatically. Further, even if mothers did make a meaningful change in their parenting, mental health, or coping abilities, it may take more than five weeks to notice the impact of this improvement on the child's resilient functioning. A significant impact of the maternal variables might be more apparent if a similar analysis was conducted after a longer stretch of time elapsed post-intervention. Children may make more substantial gains in prosocial skills if they are assessed after the mother has had time to implement some of the positive changes fostered in the Moms' Empowerment Group.

Posthoc analyses were conducted to further assess the interaction between pre-intervention Prosocial Skills scores and assignment to either the experimental or no treatment comparison groups. Preschool children who displayed higher levels of prosocial behavior at the start of the intervention were able to garner the largest benefit from participating in treatment services. Such a finding indicates that while the intervention does not appear to create Prosocial Skills, it does enhance these skills. Given that the intervention is only five weeks long, it seems that children who benefit are those who are most amenable to the intervention format. This is a relatively short intervention that is not intensely focused on any one child; therefore it might not provide the concentration of services necessary to assist children with low levels of prosocial skills, but it is able to enhance the skills of those children who already display some resilient functioning. It is likely that children who show some prosocial skills at treatment onset are more aware of social dynamics and capable of internalizing information conveyed in a group setting. Such children who are already higher on aspects of prosocial skills, including an awareness of others' feelings, a willingness to be helpful to others, and an ability to listen to others' viewpoints, may respond quickly to services offered in a group setting and thus make significant changes over a short, five week period. Despite the lack of research assessing resilient functioning in treatment outcome studies, this outcome is in line with Southam-Gerow, Kendall, & Weersing's (2001) finding that less withdrawn/more sociable behavior pre-treatment was significantly associated with reduced anxiety symptoms post-treatment. Such research highlights the ability of social performance to predict treatment outcomes in studies of psychopathology, particularly in a group therapy treatment setting.

Posthoc analyses also indicated significant differences between experimental children in the top and bottom 25% of Prosocial Skills scores. Preschool children with scores in the highest quartile, and thus most likely to benefit from the intervention, were older, received less negative parenting, and had mothers with fewer depressive symptoms. All of these characteristics of the child and family are consistent with past research on children exposed to intimate partner violence (Lehmann, 1997; Levendosky, Huth-Bocks, Shapiro, & Semel, 2003; Martinez-Torteya, Bogat, von Eye, & Levendosky, 2009). It may be that older preschool-aged children, who are beginning to spend time away from home and garner support from peers and adults outside of the family, have more developed coping strategies and cognitive capabilities, which could contribute to an increase in resilient functioning (Lehmann, 1997). Further, mothers who use fewer negative parenting strategies, which include inconsistent discipline, poor monitoring or supervision, and corporal punishment, create a more nurturing, safe environment that may foster prosocial abilities in young children (Levendosky, Huth-Bocks, Shapiro, & Semel, 2003). Finally, the finding that children had higher Prosocial Skills scores when their mothers had fewer depressive symptoms is directly in line with Martinez-Torteya and colleagues 2009 study indicating that preschoolers who maintained positive adaptation after witnessing IPV were characterized by nondepressed mothers (Martinez-Torteya, Bogat, von Eye, & Levendosky, 2009). Clearly, mother's mental health and mood stability act as protective factors for children who are exposed to violence in the home.

### *Limitations*

Despite this study's unique and meaningful contributions to the field of treatment research, there are a number of limitations that should be acknowledged when interpreting results. First, mothers completed all measures of parent and child functioning at pre and post-intervention, so there could be some bias in the reports of resilience and psychopathology. Next, the generalizability of these results is limited as the sample was comprised solely of families willing to join an evaluation study and seek treatment for their children. These participants were also mainly from small cities in the Midwest and were nationally unrepresentative with regard to income and ethnic minority status. Further, this study focuses specifically on intimate partner violence and does not include other potentially traumatic events that may impact a child's pathway to positive or negative functioning over time.

Additionally, the relatively short time between evaluation periods could limit the study's ability to detect change in some predictive and outcome variables. For example, some maternal variables may eventually impact resilient functioning, but not enough time had elapsed from baseline to post-intervention to fully notice these effects. Further, the conceptualization of resilience in this study is quite specific and a different way of constructing and measuring this concept may lead to new findings. Finally, there are some statistical limitations placed on the results due to issues of power. Significant results in the full model predicting to Prosocial Skills scores might have been difficult to detect because of the large number of variables in the model. For the full model including all child and family variables, the observed power did not exceed .31. Given this power, conclusions regarding the full model are speculative. If the sample size was larger and the power was stronger, some of the more nuanced questions related to change in resilience

may have been answerable. Such a low power led to the creation of a more parsimonious regression model that included pre-intervention scores and violence severity, which still accounted for 40% of the variance in the model. Such methodological and statistical limitations signify the need for additional research.

### *Clinical Implications*

This study provides preliminary evidence that aspects of prosocial skills can be promoted through intervention in a sample of preschool children exposed to intimate partner violence. Such findings can be highly influential in clinical work with families exposed to IPV. Treatment services that are aimed directly at the major developmental tasks of the preschool years, in addition to addressing challenges faced by families experiencing violence in the home, could be beneficial in assisting young children through difficulties in development and functioning. Intervention efforts that directly target the effect of exposure to IPV, while simultaneously promoting young children's competence, could lead to the greatest overall impact. Further, clinical assessments could be developed that focus on resilient variables and record change as an intervention progresses to create a more nuanced understanding of competence.

### *Future Studies*

This treatment evaluation has given rise to an additional series of hypotheses that can guide future research. First, while the current study takes a longitudinal perspective by assessing preschool children at multiple points, these evaluation periods are quite close together. Future projects could incorporate additional evaluation points that more accurately evaluate pathways to resilient functioning in this population. These follow-up

evaluations could be used to determine if resilience changes after families have had time to incorporate new skills and behaviors into their home environments.

Future research could also evaluate a range of traumatic experiences beyond exposure to IPV. By assessing other potentially traumatic experiences, such as serious illness, witnessing traumatic natural events, or experiencing significant interpersonal loss, researchers may be able to develop an understanding of key factors related to resilience in young children. Future studies may consider using a slightly different conceptualization of resilience, as this study only uses one view of the complicated construct. For example, assessment tools could be refined to include some internally driven factors related to self-esteem or self-concept. All of these future research projects would contribute greatly to the burgeoning field of positive functioning in young children exposed to potentially traumatic events, such as exposure to IPV.

### *Summary*

This study attempts to address some of the complicated factors related to interventions for young children exposed to violence in the home. Despite the relatively short intervention period, changes were noted on key aspects of resilient functioning. Such changes should not be underestimated, as prosocial skills may serve to help children function well despite exposure to potentially traumatic events. Such positive changes may place children on a trajectory for better future relationships and functioning. If the findings of the present study can be replicated, and if such an intervention can enhance positive factors in a young child's life, then future funding and research support should be offered to help disseminate services on a broader scale.

Table 3.1

*Results Showing Means, Standard Deviations, Minimum and Maximum Values at Pre-intervention for All Study Measures*

Measure	Mean	SD	Min.	Max.	Cronbach's Alpha ( $\alpha$ )
<b>SCS</b>					
Total Competence	36.00	9.30	17.00	57.00	.87
Emotion Regulation	16.30	4.68	8.00	28.00	.74
Prosocial Skills	19.70	5.35	7.00	30.00	.83
<b>APQ</b>					
Positive Parenting	78.81	9.31	48.00	99.00	.76
Negative Parenting	31.97	6.32	19.00	50.00	.70
CES-D	21.89	9.71	5.00	54.00	.79
PDS	21.89	11.42	0	47.00	.87
WOCQ	20.74	3.34	11.66	27.34	.88
CTS-2	207.05	25.89	153.39	273.00	.81

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Notes: N = 113; SCS = Social Competence Scale; CBCL = Child Behavior Checklist; APQ = Alabama Parenting Questionnaire; CES-D = Center for Epidemiologic Studies Depression Scale; PDS = Posttraumatic Stress Diagnostic Scale; WOCQ = Ways of Coping; CTS2 = Conflict Tactics Scales-Revised.

Table 3.2

*Results Showing Means, Standard Deviations, Minimum and Maximum Values for All Study Measures at Post-intervention Separated by Experimental and No Treatment Comparison Groups*

Measure	Total Sample				Experimental		Comparison	
	Mean	SD	Min-Max	Cronbach's Alpha ( $\alpha$ )	Mean	SD	Mean	SD
Total Competence score	37.55	9.26	15-58	.88	38.46	10.78	36.88	7.99
Emotion Regulation subscale	16.95	4.87	7-29	.80	16.90	5.50	16.98	4.38
Prosocial Skills subscale	20.61	5.36	6-30	.85	21.56	6.17	19.90	4.61
APQ Positive Parenting	78.74	8.31	56-93	.70	79.47	7.11	78.21	9.12
APQ Negative Parenting	31.30	6.39	20-57	.74	30.92	6.16	31.59	6.60
CES-D	22.61	9.38	21-49	.91	22.80	9.91	22.43	8.97
PDS	17.48	11.27	0-41	.89	18.58	11.81	16.67	10.89
WOCQ	20.50	3.63	12-31	.91	21.27	3.74	19.93	3.47

Notes: N = 92; SCS = Social Competence Scale; APQ = Alabama Parenting Questionnaire; CES-D = Center for Epidemiologic Studies Depression Scale; PDS = Posttraumatic Stress Diagnostic Scale; WOCQ = Ways of Coping; CTS2 = Conflict Tactics Scales-Revised.

Table 3.3

*Correlation Matrix of Continuous Variables in Regression Analyses*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Child age	1	-	-	-	-	-	-	-	-	-	-	-	-
2. Income	-.09	1	-	-	-	-	-	-	-	-	-	-	-
3. Level of Violence	.03	.13	1	-	-	-	-	-	-	-	-	-	-
4. Change in positive parenting	.15	-.04	.06	1	-	-	-	-	-	-	-	-	-
5. Change in negative parenting	.03	.02	-.15	-.04	1	-	-	-	-	-	-	-	-
6. Change in mom depression	.03	-.10	-.00	-.04	.31**	1	-	-	-	-	-	-	-
7. Change in mom trauma symptoms	-.02	.12	-.12	.02	.24*	.28**	1	-	-	-	-	-	-
8. T1 Emotion Regulation	.25**	-.04	-.00	.16	-.01	.12	.11	1	-	-	-	-	-
9. T1 Prosocial Skills	.28**	.02	.02	.22*	.02	.11	.21*	.72**	1	-	-	-	-
10. T1 Total Competence	.29**	-.00	.01	.21*	-.04	.13	.18 <sup>†</sup>	.91**	.94**	1	-	-	-
11. T2 Emotion Regulation	.11	-.09	.02	.25*	-.09	-.04	.10	.67**	.56**	.66**	1	-	-
12. T2 Prosocial Skills	.19 <sup>†</sup>	.00	-.20 <sup>†</sup>	.20 <sup>†</sup>	.02	.03	.16	.57**	.71**	.69**	.64**	1	-
13. T2 Total Competence	.17	-.05	-.10	.25*	-.04	-.00	.14	.68**	.71**	.74**	.90**	.91**	1

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<sup>†</sup>  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$

Table 3.4

*Coefficients in the Model Predicting to Children's Post-intervention Prosocial Skills, Emotion Regulation, and Total Competence Score Using Pre-intervention Score, Experimental or Comparison Group Assignment, and the Interaction of Pre-intervention Score and Group Assignment*

Variable	Prosocial Skills		Emotion Regulation		Total Competence	
	$\beta$	SE $\beta$	$\beta$	SE $\beta$	$\beta$	SE $\beta$
Pre-intervention Score	.56**	.10	.60**	.11	.60**	.09
Group Assignment	5.66 <sup>†</sup>	3.07	3.81	2.79	9.93 <sup>†</sup>	5.22
Prosocial Skills*Group	.31*	.15	.19	.16	.27 <sup>†</sup>	.14

<sup>†</sup>  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$

Table 3.5

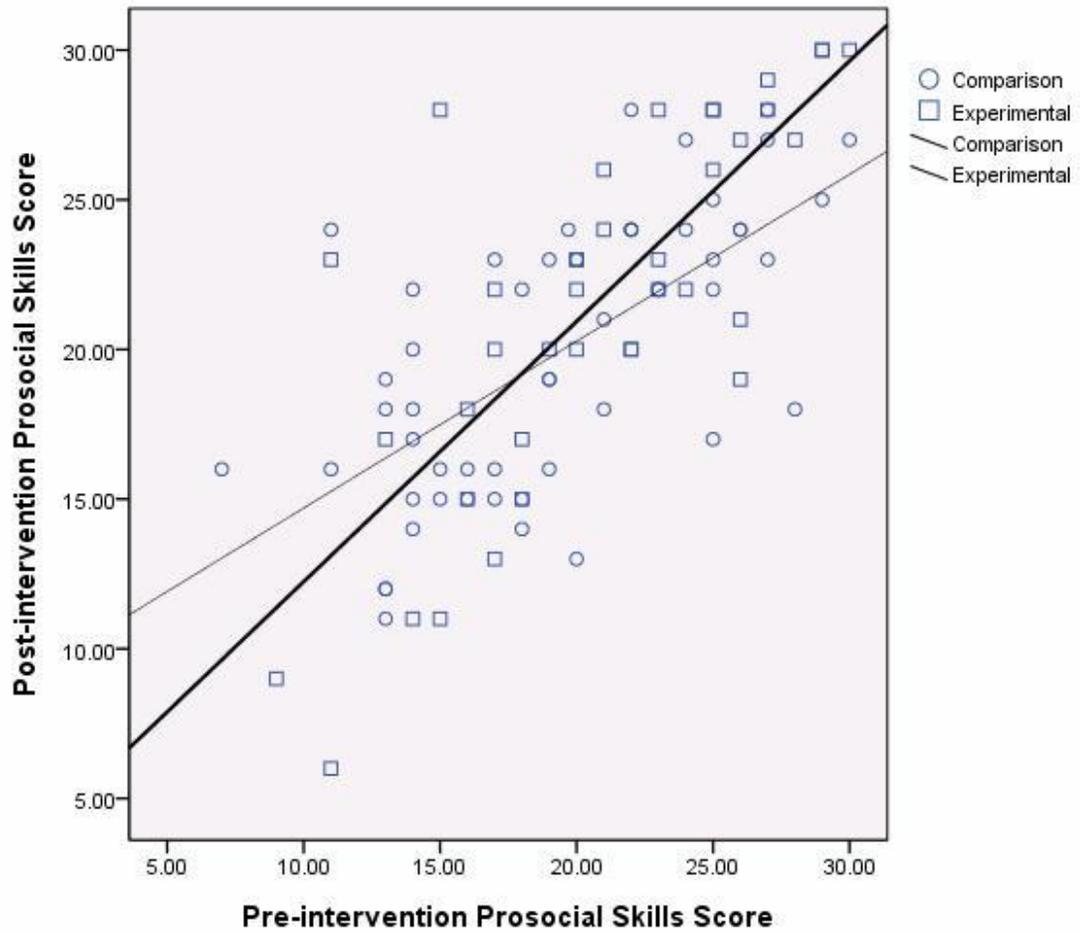
*Coefficients in the Model Predicting to Change in Prosocial Skills Score for Children in the Experimental Group Using Pre-intervention Score and Violence Reports*

Variable	Prosocial Change Score	
	$\beta$	SE $\beta$
Pre-intervention Score	.55**	.09
Violence Severity	-.04*	.02
Currently living with a violent partner	2.24	1.59

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

Figure 3.1

*Graph of Pre-intervention Prosocial Skills Score and Post-intervention Prosocial Skills Score Separated by Experimental and No Treatment Comparison Groups*



## References

- Chambless, D.L., & Hollon, S.D. (1998). Defining empirically supported therapies. *Journal of Consulting and Clinical Psychology, 66*, 7-18.
- Clark, K.K., Bormann, C.A., Cropanzano, R.S., & James, K. (1995). Validation evidence for three coping measures. *Journal of Personality Assessment, 65*, 434-455.
- Conduct Problems Prevention Research Group (CPPRG; 2002). Psychometric Properties of the Social Competence Scale- Teacher and Parent Ratings. *Fast Track Project Technical Report*. [Available at <http://www.fasttrackproject.org>]
- Dadds, M. R., Maujean, A., & Fraser, J. A. (2003). Parenting and conduct problems in children: Australian data and psychometric properties of the Alabama Parenting Questionnaire. *Australian Psychologist, 38*, 238-241.
- Foa E. B. (1995). *Posttraumatic Stress Diagnostic Scale Manual*. Minneapolis, MN: National Computer Systems.
- Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology, 48*, 150-170.
- Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. (1986). The dynamics of stressful encounter: Cognitive appraisal, coping and encounter outcomes. *Journal of Personality and Social Psychology, 50*, 992-1002.
- Freitas, A. L., & Downey, G. (1998). Resilience: A dynamic perspective. *International Journal of Behavioral Development, 22*(2), 263-285.
- Frick, P. J. (1991). *The Alabama Parenting Questionnaire*. Unpublished rating scale, University of Alabama.
- Frick, P. J., Christian, R. E., & Wootton, J. M. (1999). Age trends in the association between parenting and conduct problems. *Behavior Modification, 23*, 106-128.
- Graham-Bermann, S. A. (2011). Evidence-based practices for school-age children exposed to IPV and an evaluation of The Kids' Club Program. In S. A. Graham-Bermann, & A. A. Levendosky, (Eds.) *How Intimate Partner Violence Affects Children: Developmental Research, Case Studies, and Evidence-Based Treatment*. Washington, DC: American Psychological Association Books, pp. 179-205.
- Graham-Bermann, S. A. & Follett, C. (2001). *Fostering resilience in young children exposed to violence*. Department of Psychology, University of Michigan.

- Graham-Bermann, S.A., Gruber, G., Howell, K.H., & Girz, L. (2009). Factors discriminating among profiles of resilience and psychopathology in children exposed to intimate partner violence. *Child Abuse & Neglect, 33*, 648-660.
- Graham-Bermann, S.A., Howell, K.H., Lilly, M.M., & DeVoe, E. (2011). Mediators and moderators of change in adjustment following intervention for children exposed to intimate partner violence. *Journal of Interpersonal Violence, 26*(9).
- Graham-Bermann, S. A., & Levendosky, A. A. (1994). *The Moms' Group: A parenting support and intervention program for battered women who are mothers*. Unpublished manuscript, University of Michigan.
- Graham-Bermann, S. A., Lynch, S., Banyard, V., DeVoe, E., & Halabu, H. (2007). Community-based intervention for children exposed to intimate partner violence. *Journal of Consulting and Clinical Psychology, 75*(2), 199-209.
- Graham-Bermann, S. A., & Perkins, S. C. (2010). Effects of early exposure and lifetime exposure to intimate partner violence (IPV) on child adjustment. *Violence and Victims 25*(4), 427-439.
- Howell, K.H., Graham-Bermann, S.A., Czyz, E., & Lilly, M. (2010). Assessing resilience in preschool children exposed to intimate partner violence. *Violence and Victims, 25*(2), 150-164.
- Jouriles, E.N., McDonald, R., Rosenfield, D., Stephens, N., Corbitt-Shindler, D., & Miller, P.C. (2009). Reducing conduct problems among children exposed to intimate partner violence: A randomized clinical trial examining effects of Project Support. *Journal of Consulting and Clinical Psychology, 77*(4), 705-717.
- Jouriles, E.N., McDonald, R., Spiller, L., Norwood, W.D., Swank, P.R., Stephens, N., Ware, H., & Buzy, W.M. (2001). Reducing conduct problems among children of battered women. *Journal of Consulting and Clinical Psychology, 69*(5), 774-785.
- Kitzmann, K. M., Gaylord, N.K., Holt, A.R., & Kenny, E.D. (2003). Child witnesses to domestic violence: A meta-analytic review. *Journal of Consulting and Clinical Psychology, 71*(2), 339-352.
- Kozlowska, K., & Hanney, L. (2001). An art therapy group for children traumatized by parental violence and separation. *Clinical Child Psychology and Psychiatry, 6*(1), 49-78.
- Lehmann, P. (1997). The development of posttraumatic stress disorder in a sample of child witnesses to mother assault. *Journal of Family Violence, 12*, 241-257.

- Levendosky, A. A., Huth-Bocks, A. C., Semel, M. A., & Shapiro, D. L. (2002). Trauma symptoms in preschool-age children exposed to domestic violence. *Journal of Interpersonal Violence, 17*, 150-164.
- Levendosky, A. A., Huth-Bocks, A. C., Shapiro, D. L., & Semel, M. A. (2003). The impact of domestic violence on the maternal-child relationship and preschool-age children's functioning. *Journal of Family Psychology, 17*, 275-287.
- Lieberman, A. F., Van Horn, P., & Ippen, C. G. (2005). Toward evidence-based treatment: Child-parent psychotherapy with preschoolers exposed to marital violence. *Journal of the American Academy of Child and Adolescent Psychiatry, 44*, 1241-1248.
- Martinez-Torteya, C., Bogat, G.A., von Eye, A., & Levendosky, A.A. (2009). Resilience among children exposed to domestic violence: The role of risk and protective factors. *Child Development, 80*(2), 562-577.
- McFarlane, J.M., Groff, J. Y., O'Brien, J. A., & Watson, K. (2005). Behaviors of children exposed to intimate partner violence before and 1 year after a treatment program for their mothers. *Applied Nursing Research, 18*, 7-12.
- McWhirter, P.T. (2010). Differential therapeutic outcomes of community-based group interventions for women and children exposed to intimate partner violence. *Journal of Interpersonal Violence.*
- Paterson, J., Carter, S., Gao, W., Cowley-Malcolm, E., & Iusitini, L. (2008). Maternal intimate partner violence and behavioral problems among Pacific children living in New Zealand. *Journal of Child Psychology and Psychiatry, 49*(4), 395-404.
- Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurements, 1*(3), 385-401.
- Roberts, R. E., Andrews, J. A., Lewinsohn, P. M., & Hops, H. (1990). Assessment of depression in adolescents using the Center for Epidemiologic Studies Depression Scale. *Psychological Assessment, 2*(2), 122-128.
- Shelton, K. K., Frick, P. J., & Wootton, J. M. (1996). Assessment of parenting practices in families of elementary school-age children. *Journal of Clinical Child Psychology, 25*, 317-329.
- Southam-Gerow, M. A., Kendall, P. C., & Weersing, V. R. (2001). Examining outcome variability: Correlates of treatment response in a child and adolescent anxiety clinic. *Journal of Clinical Child Psychology, 30*, 422-436.

- Sternberg, K. J., Baradaran, L. P., Abbott, C. B., Lamb, M. E., & Guterman, E. (2006). Type of violence, age, and gender differences in the effects of family violence on children's behavior problems: A mega-analysis. *Developmental Review, 26*, 89-112.
- Straus, M. A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics (CT) Scales. *Journal of Marriage and Family, 41*, 75-88.
- Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The revised Conflict Tactics Scales (CTS2): Development and preliminary psychometric data. *Journal of Family Issues, 17*, 283-316.
- Sullivan, C. M., Bybee, D. I., Allen, N. E. (2002). Findings from a community-based program for battered women and their children. *Journal of Interpersonal Violence, 17*(9), 915-936.
- Taylor, C.A., & Sorenson, S.B. (2007). Intervention on behalf of children exposed to intimate partner violence: Assessment of support in a diverse community-based sample. *Child Abuse & Neglect, 31*, 1155-1168.
- Tutty, L.M., & Wagar, J. (1994). The evolution of a group for young children who have witnessed family violence. *Social Work with Groups, 17*(1-2), 89-104.
- Weissman, M. M., Prusoff, B., & Newberry, P. (1975). Comparison of the CES-D with standardized depression rating scales at three points in time. *New Haven, CT: Yale University and the National Institute of Mental Health.*
- Weisz, J.R., Weersing, V.R., & Henggeler, S.W. (2005). Jousting with straw men: Comment on Westen, Novotny, and Thompson-Brenner (2004). *Psychological Bulletin, 131*(3), 418- 426.

## Chapter IV

### Variations in Emotion Regulation and Prosocial Skills over time for Preschool Children Exposed to Intimate Partner Violence

Exposure to the potentially traumatic event of intimate partner violence (IPV) can lead to significant and chronic impairment in young children (Graham-Bermann, Howell, Miller, Kwek, & Lilly, 2010; Paterson, Carter, Gao, Cowley-Malcolm, & Iusitini, 2008; Sternberg, Baradaran, Abbott, Lamb, & Guterman, 2006). Researchers continue to recognize and evaluate the long-term consequences of witnessing violence in the home (Bevan & Higgins, 2002; Ehrensaft, Cohen, Brown, Smailes, Chen, & Johnson, 2003). However, only a handful of studies have assessed the implications of participating in intervention services for children exposed to IPV (Graham-Bermann, Lynch, Banyard, DeVoe, & Halabu, 2007; Jouriles, McDonald, Rosenfield, Stephens, Corbitt-Shindler, & Miller, 2009). Beyond studies that evaluate the immediate impact of such interventions, little is known about how participation in programs for children exposed to violence impacts the trajectory of their positive or negative functioning over time.

Without empirical data evaluating resilience and pathology over time, we cannot say with confidence that some children are actually doing well and will not develop problems at a later date. Conversely, if interventions mainly focus on children suffering immediately following IPV, then many individuals who might develop pathology at a later date may be neglected (Edleson, 2001). This third and final dissertation study, therefore, centers on assessing resilient functioning in preschoolers at six to eight months

following their participation in the Preschool Kids' Club intervention to determine if factors associated with resilience have changed from baseline and immediately after this program for young children exposed to severe IPV. As such, this study may provide insight into how children develop and progress long-term following exposure to violence.

*Research Assessing the Effects of Intervention Programs over time*

Graham-Bermann and colleagues (2007) included in their efficacy evaluation of the Kids' Club program an assessment of the longer-term functioning of school-age children exposed to IPV. An eight-month follow-up interview was completed for 116 mothers and children who participated in the Kids' Club intervention program. Using hierarchical linear modeling, it was found that children in the child-plus-mother condition maintained improvement on externalizing problems compared to the child-only group. Children in the child-plus-mother condition showed a 77% reduction in clinical level internalizing problems and a 79% reduction in externalizing problems from post-treatment to follow-up, relative to children in the child-only condition. Researchers concluded that parenting was an essential part of the intervention's success, as the child-plus-mother group was most improved overall (Graham-Bermann, Lynch, Banyard, DeVoe, & Halabu, 2007).

Longer-term findings from the Kid's Club efficacy trial are consistent with those of McDonald, Jouriles, and Skopp (2006) who evaluated the long-term success of Project SUPPORT. An assessment of intervention effects was conducted at 24 months following termination of services for thirty families who participated in the original randomized control trial evaluating Project SUPPORT (Jouriles et al, 2001). The sample included 21 boys and 9 girls with a mean age of 5.5 years. Thirteen of these children were in the intervention condition and 17 were part of the control group. Follow-up assessments were

conducted in the families' homes by trained staff affiliated with the project. These researchers assessed treatment effects on child conduct problems, internalizing problems, and social relationships. Binary logistic regression analyses, with reported odds ratios, were used to assess the long-term impact of Project SUPPORT. McDonald and colleagues found evidence of the efficacy of this intervention at 24-month follow-up. As compared to children in the intervention condition, 3.5 times as many children in the comparison condition displayed clinical levels of conduct problems. Additionally, none of the children in Project SUPPORT exhibited internalizing symptoms, as compared to 35% of the children in the control group. Further, mothers of children in the intervention condition gave their children significantly higher scores on a measure of happiness and relationship functioning (McDonald, Jouriles, & Skopp, 2006). Though these findings make a significant contribution to the field's understanding of long-term intervention effects, this project was negatively impacted by attrition and a small sample size that limited statistical inquiry.

Given the small sample size, Jouriles and colleagues (2009) re-examined the long-term impact of Project SUPPORT with 66 participating families. Project SUPPORT families, as well as comparison families, completed an average of 5 (out of 6) assessments at various follow-up points, which were done at 4, 8, 12, 16, and 20 months post-baseline. For the follow-up period, conduct problems continued to decrease in the Project SUPPORT group, but not in the comparison group. Further, oppositional child behavior continued to decrease more rapidly in the Project SUPPORT group than the comparison group during both the intervention and follow-up periods. At follow-up, the proportion of children in the normal range of CBCL scores was greater for the Project

SUPPORT group than the comparison group, despite a lack of statistical differences at post-intervention. Such findings highlight the continued benefits garnered from participation in treatment services, but the project had a somewhat narrow scope, as it focused primarily on conduct and oppositional problems, which are only experienced by some children (mostly boys) who have been exposed to IPV (Jouriles, McDonald, Rosenfield, Stephens, Corbitt-Shindler, & Miller, 2009).

Lieberman, Ippen, and Van Horn (2006) also evaluated the long-term impact of their empirically-supported intervention. An additional six month post-treatment assessment was conducted to examine the long-term efficacy of the Child-Parent Psychotherapy (CPP) program. Lieberman and colleagues (2006) hypothesized that the gains associated with treatment would be maintained for both the child and the mother and lead to a continuation of the significant treatment effects found at service termination. The follow-up study consisted of 39 girls and 36 boys aged 3-5 with a mean age of 4.06. Outcome findings showed that improvements in children's behavior problems and maternal symptoms, as the result of treatment with child-parent psychotherapy, continued to be evident at six months after the termination compared to the control group. The preschoolers continued to show significantly fewer behavior problems than children in the control condition. Further, the mothers in the treatment group had significantly lower scores on the global severity measure of their symptoms, as evaluated by their therapists, when compared to the control group. Though important and in line with findings from other follow-up services, the small sample size and reliance on mothers' reports of outcome variables limits the impact of these findings (Lieberman, Ippen, & Van Horn, 2006).

### *Aims & Hypotheses*

The third and final study of this dissertation will build on the work of previous intervention assessment trials, by evaluating longer-term change in positive functioning for children exposed to IPV. Specifically, this study aims to:

1. Assess the longer-term change in prosocial skills and emotion regulation at a six-month follow-up, comparing preschool children who received the Preschool Kids' Club intervention to a no treatment comparison group of similar aged children who did not receive services.
  - a. It is hypothesized that there will be a significant difference in the mean Prosocial Skills and Emotion Regulation subscale scores for children in the experimental group as compared to children in the no treatment comparison group at six-month follow-up. Preschool children in the experimental group will have significantly higher scores on these subscales than children in the no treatment comparison group.
2. Identify protective factors that predict to higher prosocial skills and emotion regulation scores for preschool children at the six month follow-up assessment point.
  - a. Given the literature on protective factors, it is hypothesized that preschool children exposed to less severe violence, children who receive more effective parenting, children of mothers with better mental health, and children of mothers who use a greater number and variety of coping skills will score higher on the measures of prosocial skills and emotion regulation at six month follow-up.

## Methods

### *Participants*

The sample consisted of 120 mother-child pairs from two counties in Southeast Michigan and Windsor, Ontario, Canada. All families were exposed to significant IPV in the past two years. 53 percent were boys (47% girls) ranging in age from 4 to 6 years ( $M = 4.93$ ,  $SD = .86$ ). Child ethnicity was diverse (38% Caucasian, 37% African American, 20% Biracial, 5% Latino/a), as was the mother's ethnicity (48% Caucasian, 37% African American, 8% Biracial, 6% Latino/a, 1% from other ethnic groups). The mothers' mean age was 31.9 years ( $SD = 7.19$ ), and the families' average monthly income was low, but varied ( $M = \$1,414$ ;  $SD = \$1,549$ ).

Of the women participating in this study, 11 percent had some high school education, 28% graduated from high school, 39% had a college degree, and 2% obtained a graduate degree. Relationship status indicated 43% single, 7% living with a partner, 16% married, and 9% separated or divorced. Seven percent of the women were living with a violent partner at the time of assessment and fifty two percent of the sample had previously lived in, or were currently living in, a shelter for families exposed to violence.

### *Procedure*

This study was evaluated and approved by the University of Michigan Institutional Review Board (IRB). Following this approval, study participants were recruited through community and shelter outreach using brochures, mailings, and presentations. Women interested in joining the study contacted the project coordinator by telephone. A phone screening was used to assess if the caller and her children qualified for the study. Specifically, she was asked if she experienced violence with a partner in the past two

years and if she had children of either gender between the ages of 4 and 6. All women who contacted the study, regardless of qualification for participation, were provided with resources for affordable services available in the area for families exposed to IPV.

Women who qualified for the project were told about the study and, if interested, were systematically assigned in groups to either the experimental group or to the no treatment comparison group. Mothers and children in the experimental group were interviewed pre- and post- intervention (approximately five weeks apart). Families in the experimental condition were also interviewed six to eight months after the conclusion of the intervention. Mothers and children in the comparison condition were interviewed at baseline, and then interviewed again five weeks later, having not participated in the intervention program during the interim period. These families were also interviewed six to eight months after their second study interview.

A sequential assignment procedure was employed whereby the first five families who qualified for the study were assigned to the experimental condition by the project coordinator, and then the next five families were assigned to the no treatment comparison condition. At no point did the coordinator provide any intervention or assessment. This system of assigning families to the two conditions was used throughout the study; such a modified random assignment procedure matches that used in the school-age children's intervention efficacy study (Graham-Bermann, Lynch, Banyard, DeVoe, & Halabu, 2007).

Study interviews took place in a variety of locations, including a local domestic violence shelter, the University of Michigan research laboratory, and in or near the participant's home, if it was deemed safe to do so, i.e., the mother was not living with a violent partner. Interviewers were advanced undergraduate and graduate student research

assistants who went through training in research ethics and training in working with survivors of IPV. Interviewers were blind to group assignment and separate from those who provided the intervention services. Mothers gave informed consent and children gave their verbal assent to participate in the project. Every attempt was made to protect the rights of mothers and children in this study. Participants were told that they could stop the interview at any time, could skip any question, and were given referrals for appropriate and affordable services when indicated or needed. In addition, they are assured that their identities and responses remained confidential. Mothers were compensated \$25 for each study interview and children were given a small gift worth approximately four dollars in exchange for participating.

#### *Preschool Kids' Club Intervention*

The Preschool Kids' Club intervention is a ten-session program that meets for five weeks (Graham-Bermann & Follett, 2001). The intervention is typically conducted in community settings, such as education centers or shelter outreach programs. It includes two components: the Preschool Kids' Club for children exposed to violence and The Moms' Empowerment Program (Graham-Bermann, 2011). The Preschool Kids' Club aims to help children who have witnessed violence based on the theoretical assumptions that children may have learned harmful patterns of behavior, attitudes, and beliefs as a result of observing IPV and may be distressed or traumatized by these experiences. Each session focuses on different topics related to IPV, including attitudes and beliefs children have about violence, safety planning strategies, and conflict resolution tactics.

The Moms' Empowerment Program was designed to enhance the social and emotional adjustment of mothers who experienced IPV in the past two years, leading to

fewer mental health difficulties. By extension, children are thought to benefit when their mothers' coping is enhanced and her mental health problems reduced. The empowerment group also focuses on strengthening protective aspects in the mother's lives including social support, community resources, and parenting skills. During the intervention, mothers discuss how IPV has impacted their child's development and functioning. In addition, women's mental health symptoms and issues of safety are addressed. The psychoeducational element of the intervention program is designed to normalize and reduce women's stress and to provide support and problem solving around parenting challenges (Graham-Bermann & Levendosky, 1994).

### *Measures*

*Demographics:* A demographics questionnaire was administered to each mother to ascertain basic background information and family history, such as child age, household income, residency, child ethnicity, maternal education, and current relationship status.

*Resilient Functioning:* The *Social Competence Scale* (SCS), developed by the Conduct Problems Prevention Research Group (Conduct Problems Prevention Research Group, 2002) was used in this study to assess resilient functioning, conceptualized as prosocial skills and emotion regulation abilities. Mothers completed the parent version of the SCS. This measure is designed for typical children; however it has been used with children exhibiting externalizing and internalizing behavior problems. The instrument consists of six items that measure a child's prosocial skills ( $\alpha = .80$ ) and six items that measure emotion regulation skills ( $\alpha = .80$ ) as perceived by the parent. The parent assessed these skills using a 1-“not at all” to a 5-“very well” Likert scale. Item examples include: “my child can accept things not going his/her way”, “my child thinks before

acting”, “my child listens to others’ point of view”, and “my child does what he/she is told to do”. For the current sample,  $\alpha = .83$  for the Prosocial Skills subscale and  $\alpha = .74$  for the Emotion Regulation subscale.

*Child Internalizing & Externalizing Behavior: The Child Behavior Checklist* (CBCL, Achenbach, 1991) has proven to be both valid and reliable in research with clinical populations (Achenbach & Edelbrock, 1993). In the present study, mothers completed this 113-item inventory using three-point rating scales from 0 (“not true”), to 1 (“somewhat or sometimes true), to 2 (“very true or often true”). Two scales represent broad areas of child adjustment: The Internalizing scale consists of anxiety/depression, withdrawal and somatic complaints syndrome subscales, whereas the Externalizing scale consists of aggression and delinquency syndrome subscales. Reported internal consistency for the Internalizing and Externalizing scales was  $= .89$  and  $.93$ , respectively (Achenbach, 1991). Reliabilities for the current sample were  $\alpha = .91$  for the Externalizing subscale and  $\alpha = .90$  for the Internalizing subscale.

*Severity of Intimate Partner Violence* was examined using the *Revised Conflict Tactics Scales* (CTS2; Straus, 1979; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). The CTS2 is a 39-item instrument measuring the severity of psychological, physical, and sexual violence in a dating, cohabitating, or marital relationship as well as the extent to which negotiation has been used to contend with conflict. Mothers estimated the frequency with which their partners used various violence tactics toward them over the past two years utilizing a seven-point Likert scale (from never occurred to occurred more than 20 times). The measure contains five subscales: Physical Assault (e.g., “My partner twisted my arm or hair”), Psychological Aggression (e.g., “My partner insulted or swore at

me”), Negotiation (e.g., “My partner explained his or her side of a disagreement to me”), Injury (e.g., “You had a broken bone from a fight with your partner”), and Sexual Coercion (e.g., “My partner used threats to make me have sex”). The CTS2 has good internal consistency, with alpha coefficients ranging from .79 to .95, as well as adequate construct and discriminant validity (Straus, Hamby, Boney-McCoy, & Sugarman, 1996). The  $\alpha$  for the current sample is .81.

*Mothers’ depressed mood* was measured with the *Center for Epidemiologic Studies Depression Scale* (CES-D; Radloff, 1977), a 20 item self-report scale designed to assess levels of depressed mood in adults in the general population. Items assess various symptoms of depressed mood, including depressed affect, positive affect, somatic complaints, and interpersonal attributes. Examples of CES-D items include: “I felt sad,” “I had crying spells,” and “I felt hopeful about the future.” Participants were asked to indicate how frequently they experienced each item within the past week using a 4-point scale ranging from 1 (None of the time) to 4 (Most of the time). The CES-D’s reliability and validity have been established in numerous samples, with an internal reliability of  $\alpha=.85$  and test-retest reliability of .54 (Radloff, 1977; Roberts, Andrews, Lewinsohn, & Hops, 1990). It is also highly correlated with other self-report measures of depressed mood and with clinical ratings of depression (Radloff, 1977; Weissman Prusoff, & Newberry, 1975). Total CES-D reliability for the present study was ( $\alpha$ ) .79.

*Mothers’ level of posttraumatic stress* was assessed using the *Posttraumatic Stress Diagnostic Scale* (PDS; Foa, 1995). The PDS is a 49-item measure designed to assist with the detection and diagnosis of Posttraumatic Stress Disorder (PTSD). Items on the PDS measure correspond to DSM-IV diagnostic criteria for a diagnosis of PTSD.

Participants were first asked whether they experienced a variety of traumatic events (e.g., serious accident, natural disaster, non-sexual assault by a stranger) and then asked to respond to questions related to a partner-specific traumatic event. They were asked to focus on the “worst” traumatic event associated with physical and/or sexual assault from a partner. Respondents answered a series of questions that tap into symptoms of PTSD including traumatic reexperiencing (“having upsetting thoughts or images about the traumatic event that come into your head when you didn’t want them to”), avoidance (“trying to avoid activities, people, or places that remind you of the traumatic event”), numbing (“feeling emotionally numb such as being unable to cry or unable to have loving feelings”), and physiological reactivity (“being jumpy or easily startled”). Participants indicated how frequently they experienced each symptom within the last month on a four-point scale ranging from 0 (not at all or only one time) to 3 (5 or more times a week/almost always). The extent to which these symptoms caused distress or interfered with various areas of the respondent’s life during the past month, as well as the duration of the disturbance, were also assessed. The PDS has high internal consistency and test-retest reliability for diagnosis and for symptom severity, good sensitivity and specificity, and it correlates highly with other measures of PTSD. Cronbach’s alpha for the measure was originally reported at .92 (Foa, 1995) and is .88 for the current sample.

*Parenting practices* were measured with the *Alabama Parenting Questionnaire* (APQ; Frick, 1991; Frick, Christian, & Wootton, 1999; Shelton, Frick, & Wootton, 1996). The APQ includes 42 items measuring positive and negative parenting practices within six domains: involvement (e.g., “You have a friendly talk with your child”), positive parenting (e.g., “You let your child know when he/she is doing a good job with

something”), poor monitoring/supervision (e.g., Your child is at home without adult supervision”), inconsistent discipline (e.g., “You threaten to punish your child and then do not actually punish him/her”), use of corporal punishment (e.g., “You spank your child with your hand when she/she has done something wrong”), and use of discipline practices other than corporal punishment (e.g. “You take away privileges or money from your child as a punishment”). Participants were asked to rate on a five-point scale, ranging from 1 (Never) to 5 (Always), the frequency with which the parenting practices typically occurred in their home. The APQ has sound psychometric properties in studies evaluating the association between parenting practices and child behavioral outcomes (Dadds, Maujean, & Fraser, 2003; Frick, Christian, & Wootton, 1999; Shelton, Frick, & Wootton, 1996). The  $\alpha$  for the current sample is .70 for the positive parenting subscale and .73 for the negative parenting subscale.

*Mother’s coping strategies* were evaluated with the revised *Ways of Coping Questionnaire*, which was designed to assess a range of cognitive and behavioral coping strategies employed to deal with a stressful life encounter (WOCQ; Folkman & Lazarus, 1985; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986). The WOCQ measures the strategies used by each participant to cope with her index trauma. Each item is rated on a scale from 0 (not used) to 3 (used a great deal). Sample items from the WOCQ include: “Talked to someone to find out more about the situation,” “Accepted sympathy and understanding from someone,” and “Talked to someone about how I was feeling.” Previous evidence suggests that the WOCQ has good internal consistency (typically in the .70 range) and convergent validity (ranging from .68 to .97). Further, the measure’s discriminant validities range in absolute value from .01 to .44 and it has shown

predictive validity with measures of life satisfaction (.51), increased positive affect (.52), and decreased negative affect (-.57) (Clark, Bormann, Cropanzano, & James, 1995). The  $\alpha$  for the current sample is .88.

### *Design and Analysis*

This dissertation paper presents the results of a longitudinal study examining resilience growth trajectories across three time points using Hierarchical Linear Models (HLM, Raudenbush & Bryk, 2002). HLM (also known as multilevel modeling) was necessary with this longitudinal data in order to correctly estimate statistical significance in light of the correlated observations across participants. More specifically, such modeling was used to get the statistical significance right with repeated data. Further, HLMs can clarify trends even when observations are missing for some participants across the points of data collection. Additionally, such models can contend with situations in which the time of data collection varies across participants (O'Connell & McCoach, 2004). Given that such issues were relevant in the current dataset, HLM was an appropriate technique.

For this analysis, there were three time points to consider (pre-intervention, post-intervention, and follow-up). With up to three discrete assessment waves per participant, only linear trends across participants could be examined. Prior to analysis, the prosocial skills and emotion regulation outcome variables for each child were plotted to create graphs of individual changes across the three assessment points. As can be seen in Figures 4.1 and 4.2, these spaghetti plots did not reveal evidence of substantial linear patterns for individual study participants and little evidence of similar growth trajectories between participants. Given these nonlinear trends, a categorical approach

was taken to model time effects. Dummy variables were created to represent post-intervention (Time 2) and follow-up (Time 3) in the dataset. As a consequence, with only one measurement of the outcome variable for each individual at each time point, there was no way to model random individual effects of Time 2 and Time 3 dummy variables, i.e., there was no residual variance left over when taking this approach. Thus, only the variation in intercepts could be modeled. This modeling approach is somewhat consistent with the spaghetti plots, as some individuals are high on the outcome measures and some are low across time periods.

HLMs describe data at two levels: occasion level and person level. The occasion level, specified in the level-1 model, summarizes an observed pattern of an outcome variable across measurement occasions; whereas the person level is specified in the level-2 model (Raudenbush & Bryk, 2002). The trajectories are specified in Figure 4.3, which details the level 1, level 2, and mixed models specified for this study. The HLM software (version 6.08) was used to fit all models specified for the study.

## Results

Descriptive statistics for the study variables and reliability coefficients are given in Tables 4.1, 4.2, and 4.3. At pre-intervention, the Prosocial Skills subscale mean was 19.80 ( $SD=5.36$ ) and the Emotion Regulation subscale mean was 16.41 ( $SD=4.65$ ). Of the 120 families in the present study sample, 53 participated in the intervention program and 67 were assigned to the no treatment comparison group. Experimental families attended an average of 6 ( $SD=3$ ) sessions. Of the 53 participating families in the experimental group, 21 completed all three assessments and 32 completed only pre- and post-intervention assessments. Attrition from baseline to post-intervention was 23%, with

both comparison and experimental groups having similar rates of attrition (20% and 26%, respectively). Attrition from baseline to follow-up was 54%, with both comparison and experimental groups having similar rates of attrition (50% and 60%, respectively). Outcome variables did not differ at the start of the study for those who did and did not receive the intervention. There were no statistically significant differences between the experimental and no treatment comparison groups at baseline on any of the key study variables, including demographics, resilience, violence severity, maternal mental health, parenting, and maternal coping.

An attrition analysis was completed by comparing those who stayed in the study from baseline to the second and third interviews with those who did not. Comparative analyses of participants who dropped out of the study with those who did not drop out of the study indicated that there were no differences between groups from baseline to the second interview on any relevant variables, except externalizing problems as measured by the Child Behavior Checklist ( $t = -2.10, p < .05$ ). Mothers who stayed in the study from the baseline interview to the post-intervention interview reported that their children had more externalizing problems, regardless of assignment to the treatment or comparison group. There were no significant differences between individuals who remained and those who dropped out of the study from baseline to the six month follow-up interview. Changes over time, therefore, would not be linked to variance in the participant pool arising from attrition.

Using HLM, a full model was fit and analyzed to explain the relationship between children's participation in the Preschool Kids' Club intervention and changes in resilience, conceptualized as prosocial skills and emotion regulation, from pre-

intervention to post-intervention and to six month follow-up. This full model was used to examine the first study aim, which evaluated the rate of change in resilience scores between preschool children who participated and did not participate in the intervention. For the Prosocial Skills subscale, the null hypothesis was that treatment does not moderate trends in Prosocial Skills scores over time ( $H_0 = \beta_{11} = \beta_{21} = 0$ ; See Figure 4.3). The alternative hypothesis was that at least one of the betas is not equal to zero, indicating that treatment moderates the relationship between time and prosocial skills. Based on these parameters, a full model was fit using maximum likelihood estimation. After creating the full model, a reduced model was built without the interaction of treatment and time (dropping  $\beta_{11}$  and  $\beta_{21}$ ; see Figure 4.3). Using the deviance and parameter counts from the full and reduced models, a likelihood ratio test was conducted. Based on this test, it was determined that including treatment as a moderator did not explain a significant amount of variance in prosocial skills over time ( $\chi^2(2) = 1.744, p > .50$ ). In addition, neither treatment nor time had main effects on prosocial skills, suggesting that, on average, Prosocial Skills scores remained the same in both the experimental group and no treatment comparison group over time.

A similar analysis was conducted for the Emotion Regulation subscale. Again, full and reduced models were fit to assess whether or not treatment moderated trends in Emotion Regulation scores over time. Using the deviance and parameter counts from the full and reduced models, a likelihood ratio test was conducted. Consistent with the findings for Prosocial Skills scores, it was determined that including treatment as a moderator did not explain a significant amount of variance in emotion regulation over time ( $\chi^2(2) = .941, p > .50$ ). Further, neither treatment nor time had main effects on

emotion regulation, indicating that, on average, Emotion Regulation scores remained consistent for both groups over time. These findings are contradictory to the first study hypothesis, as there was no significant difference in Prosocial Skills or Emotion Regulation scores for children in the experimental group as compared to children in the no treatment comparison group across the three assessment points. Such an unpredicted finding may be due to the amount of measure variance noted in Figures 4.1 and 4.2.

Standard linear regression models were used to address the second study hypothesis, which sought to determine factors predicting to higher prosocial skills and emotion regulation scores for preschool children at the six month follow-up assessment point. Standard linear regression models were appropriate for this analysis because only one time point was used for the outcome measure (scores at follow-up). Only one time point was evaluated because there was no intervention effect or time effect found through the hierarchical linear modeling used to address the first study hypothesis. A regression model was fit to examine factors impacting the follow-up scores for prosocial skills and emotion regulation. The participants were not separated by experimental and no treatment comparison conditions, as there was not a significant difference between these two groups. The models presented in Tables 4.4 and 4.5, therefore, reflect predictive variables for all children participating in this study.

After running the full model, which included all theoretical predictor variables, a backwards selection procedure was used to remove the non-significant predictors and create the final, most parsimonious model that explained variance in Prosocial Skills scores at the six month follow-up. This model included baseline and post-intervention Prosocial Skills scores, violence severity at follow-up, maternal coping at follow-up, and

maternal posttraumatic stress symptoms at baseline. The model was significant and accounted for 58% of the variance in follow-up score ( $F(5,45) = 12.22, p < .01$ ). Further, after controlling for baseline and post-intervention Prosocial Skills scores, violence severity ( $\beta = -.03; p < .05$ ) made a significant contribution to variance in children's follow-up Prosocial Skills scores and there was a trend, in the expected direction, for maternal coping ( $\beta = .32; p = .089$ ). In sum, after controlling for earlier assessments of prosocial skills, less severe violence at follow-up and a trend for greater maternal coping predicted higher follow-up Prosocial Skills scores. This model appears to best fit the data and provide the clearest understanding of Prosocial Skills follow-up scores for preschool children in this study.

A similar data analysis strategy was used to assess factors that predicted variance in six month follow-up scores on the Emotion Regulation measure. A backwards selection procedure was again employed to remove non-significant predictors from the full model and create the final, most parsimonious model. This model included baseline and post-intervention Emotion Regulation scores, child externalizing problems at follow-up, negative parenting practices at baseline and at follow-up. The model was significant and accounted for 70% of the variance in Emotion Regulation follow-up score ( $F(5,45) = 20.71, p < .01$ ). After controlling for baseline and post-intervention Emotion Regulation scores, externalizing problems ( $\beta = -.17; p < .05$ ) made a significant contribution to variance in children's follow-up Emotion Regulation score and there was a trend, in the expected direction, for negative parenting at follow-up ( $\beta = -.20; p = .05$ ). In sum, after controlling for earlier assessments of emotion regulation abilities, fewer externalizing problems at follow-up and a trend for the use of less negative parenting strategies by

mothers at follow-up predicted higher follow-up Emotion Regulation scores. These findings provide partial support for the second hypothesis, as variables related to both the mother and child predicted scores on the measures of resilience at six month follow-up.

#### *Posthoc Analysis*

Posthoc analyses were conducted to further evaluate the relationships identified in the regression models. Such analyses were undertaken to understand the impact of various measure subscales on the Prosocial Skills and Emotion Regulation follow-up scores. Given that there was a trend for the impact of maternal coping (as measured by the Ways of Coping Questionnaire (WOCQ)) on follow-up Prosocial Skills scores, the WOCQ was separated into its individual subscales and the impact of each subscale was evaluated. Each subscale represents different forms of coping that adults may use when faced with traumatic or stressful situations. The posthoc analysis indicated that follow-up Prosocial Skills scores were uniquely, and significantly, impacted by the Planful Problem Solving subscale of the WOCQ ( $\beta = 2.56; p < .01$ ). This subscale describes deliberate problem-focused efforts to alter a situation, coupled with an analytic approach to solving a problem (Folkman & Lazarus, 1985). It consists of six items and has a reliability for the current sample of  $\alpha = .82$ . None of the other subscales were significant. Such a finding indicated that children of mothers who used more planful problem solving strategies had higher Prosocial Skills scores at follow-up.

A similar assessment of subscales was completed to evaluate the trend for the Alabama Parenting Questionnaire's (APQ) Negative Parenting Scale. Posthoc analysis of the impact of specific negative parenting subscales indicated that the inconsistent discipline subscale was a unique predictor of Emotion Regulation scores at follow-up ( $\beta$

= -.33;  $p < .01$ ). This subscale consists of seven items and has a reliability for the current sample of  $\alpha = .69$ . Again, none of the other subscales were significant. In this scenario, decreased use of inconsistent discipline techniques by mothers at follow-up predicted higher Emotion Regulation scores for preschool children at the follow-up assessment.

### Discussion

This study evaluated the longer-term change in resilience at a six to eight month follow-up, comparing preschool children who participated in the Preschool Kids' Club intervention to a comparison group of children who did not receive services. Taking a developmental perspective, resilience was conceptualized as strengths in prosocial skills and emotion regulation. Given that much of the newly developing literature on long-term change following interventions for children exposed to IPV has focused on psychopathology (see McDonald, Jouriles, & Minze, 2011 for a review), this study sought to make a unique contribution to the field by assessing change in positive functioning. Contrary to the first study hypothesis, there was no significant difference in Prosocial Skills or Emotion Regulation scores for children in the experimental group as compared to children in the comparison group across the three assessment points (baseline, post-intervention, and follow-up). Scores on the resilience measure appeared to remain static, with no meaningful change based on time or intervention participation.

Such unexpected findings are inconsistent with the results of other long-term intervention evaluations (Graham-Bermann, Lynch, Banyard, DeVoe, & Halabu, 2007; Lieberman, Ippen, & Van Horn, 2006). For example, Jouriles and colleagues (2009) noted continued improvements in conduct and oppositional behavior problems at follow-up for children who participated in the Project SUPPORT intervention program (Jouriles,

McDonald, Rosenfield, Stephens, Corbitt-Shindler, & Miller, 2009). Further, Graham-Bermann et al (2007) found that children participating in the Kids' Club program maintained and continued improvements in externalizing and internalizing behavior problems at eight month follow-up (Graham-Bermann, Lynch, Banyard, DeVoe, & Halabu, 2007). While such studies acknowledge that the improvements in behavior problems seem to taper off and become less dramatic at follow-up, as compared to immediately following the intervention, the differences between children who do and do not participate in treatment services remain significant. Therefore, the non-significant findings with regard to resilient functioning in the current study require further exploration.

A lack of significant differences in prosocial skills and emotion regulation between experimental and no treatment comparison preschool children in the present study may be due to unforeseen issues with the participant pool. Given the chaos and instability that frequently surround families who experience IPV, it was often extremely difficult to remain in contact with participants and to locate them for the follow-up interview. At times, the follow-up interview did not occur exactly within the six to eight month parameter or, despite the research team's best efforts, the family was not found for their final assessment. Such difficulties contributed to a relatively small sample of experimental follow-up families (N=21). Additionally, experimental families attended an average of 6 sessions; meaning that they received only approximately half of the treatment services. While this attendance rate is in line with other IPV intervention evaluations of older, school-age children (Graham-Bermann, Lynch, Banyard, DeVoe, & Halabu, 2007), it may highlight developmental differences in the retention of

information. Preschool children may need more consistent repetition and practice of knowledge and skills offered through intervention to show a meaningful and lasting improvement in functioning. Developmental research indicates that young children require multiple repetitions to retain information (Petros & Hoving, 1980), therefore; the relatively small amount of treatment may contribute to a lack of significant results.

The non-significant findings may also be related to the nature of the resilience measure. The conceptualization of resilience as strengths in prosocial skills and emotion regulation is in keeping with a developmental psychopathology model of functioning, but it is not the only way to operationalize this construct. It may be more fitting to view resilience from a biological angle with a focus on physical health or heartiness (Robbins & Katz, 2011). Though controversial, a biological approach to resilience that measures variables such as heart rate may provide unique information on a child's ability to return to homeostasis following a stressful trigger. A preschooler's capacity to quickly regain physiological stability may indicate greater emotion regulation. Other facets of resilience could also be targeted, potentially assessing social intelligence (the ability to garner support from others) or one's personal sense of positive functioning through measures of self-esteem and self-competence. Resilience can clearly be conceptualized from a variety of standpoints and the current study, while grounded in a solid theoretical foundation, only addressed one sliver of this broad construct. Such a narrow focus may have prevented a full and complete evaluation of resilience.

Further, the lack of findings could be related to the type of analysis used to evaluate resilience in this study. Hierarchical linear modeling was the statistical technique selected because it can provide information on patterns of change over time and factors

that affect those patterns, in addition to accounting for missing observations and variations in the timing of data collection (Raudenbush & Bryk, 2002). Further, given the relatively small sample size, the available statistical strategies were somewhat limited. With a larger sample, it may be more fitting to run a trajectory analysis or latent growth curve modeling to identify unobserved clusters of children in terms of their trajectories. If more families participated in the study, it would also be helpful to stratify the sample based on specific demographic or observable variables and re-run the analyses. This more comprehensive approach to the evaluation of key study variables might have resulted in valuable information and additional findings.

The second aim of this study was to identify protective factors that predict to higher Prosocial Skills and Emotion Regulation scores for preschool children at the follow-up assessment point. These analyses were based on the total sample, as there were no significant differences between the experimental and comparison groups. By combining the groups into one sample and thus creating a larger dataset, a more complex regression model with additional protective factors could be tested. When follow-up prosocial skills were assessed, higher scores were predicted by less severe violence and greater maternal coping, both at follow-up. The significant impact of violence severity on child functioning consistently emerges in the literature (Graham-Bermann & Perkins, 2010; Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003). For example, Grych and colleagues (2002) found that children's internalizing symptomatology increased as exposure to violence increased, particularly from exposure to violence toward the mother (Grych, Wachsmuth-Schlafer, & Klockow, 2002). When specifically assessing child positive functioning and violence severity, Howell et al (2010) noted that preschoolers

exposed to more frequent and severe violence showed fewer prosocial skills than children exposed to less violence in the home (Howell, Graham-Bermann, Czyz, & Lilly, 2010). Such findings highlight the lasting negative effects of witnessing violence and the need for a safe and stable home environment to foster more positive growth.

In addition to less violence severity, higher Prosocial Skills scores were also influenced by greater maternal coping. The protective and buffering role of maternal coping has been identified in previous research by Hines and Saudino (2002), who found that mother's capacity to show her child effective coping mechanisms, despite exposure to violence in the home, positively affected child social and emotional competence. Folkman and Lazarus (1991) evaluated specific styles of maternal coping and found that women who used problem-focused strategies, those that are characterized by actions focused on changing events, had children who appeared less negatively impacted by violence.

Findings from the current study are closely in line with such past research, as it was specifically the use of more planful problem solving strategies by mothers that contributed to higher Prosocial Skills scores in children at follow-up. It may be that women who seek out support and knowledge to change their predicament are instilling a sense of empowerment and self-control in their children. By problem solving and attempting to develop plans to change negative situations, mothers might create a sense of hope for the future, despite the currently negative family atmosphere. This more hopeful and empowered attitude likely contributes to the child's increased resilient functioning. Finally, mothers who indicated more planful problem solving skills may

have made specific changes in their lives, such that the child was safer, exposed to less violence, and/or had obtained more resources and support.

Emotion regulation was predicted by a very different set of variables. These follow-up scores were significantly impacted by fewer child externalizing problems at follow-up and the use of less negative parenting strategies by mothers at follow-up. There is a substantial literature documenting the effects of preschool children's exposure to IPV and their externalizing behavior problems, specifically more aggression, hyperactivity, and oppositional behavior (Paterson, Carter, Gao, Cowley-Malcolm, & Iusitini, 2008). Exposure to violence may alter children's physiological reactivity and regulation, leading to more intense and severe externalizing behavior. These children struggle to regulate their emotional reactions and may respond with intensity at the slightest perceived provocation. This reactive response can materialize physiologically as increases in heart rate or blood flow, or emotionally as intense and unmediated responses (Margolin, 2005). Children who show greater emotion regulation, and are therefore able to manage their reactivity when exposed to threatening conditions, may be less likely to show high levels of aggression and externalizing behavior, as seen in the present study. Future research might explore emotion regulation from a physiological perspective and thereby introduce more biologically-based measures to the assessment of resilience.

Beyond factors related to the individual child, emotion regulation skills at follow-up were also influenced by familial variables, specifically the decreased use of inconsistent discipline parenting strategies by mothers. Parenting techniques are one of the most thoroughly studied factors for children exposed to adverse situations, particularly IPV (Levendosky, Huth-Bocks, Shapiro & Semel, 2003). Johnson &

Lieberman (2007) evaluated parenting with more of an emphasis on child reactions to violence and found that the quality of the relationship between mother and child, and the attunement of the mother to the child's feelings, helped prevent some behavior problems. Clearly, mother's attunement and consistent parenting contributes to decreased behavior problems and better child adjustment. Findings from the present dissertation study are consistent with this past research, as a reduction in the use of inconsistent discipline strategies helped foster better emotion regulation. Inconsistent and unpredictable parenting may contribute to a home environment of chaos and confusion for young children, especially if there is co-occurring IPV. Such an erratic environment likely creates dysregulation in the child and may lead to more emotional unpredictability. Once parenting practices become more consistent, the child may become more emotionally balanced. Such improvements in parenting have the potential to facilitate the development of strengths in children's emotion regulation abilities.

### *Limitations*

Although these findings are significant and offer novel, though preliminary, information on children's positive functioning over time, several limitations should be noted. As already discussed, there were a number of issues with the participant pool regarding sample retention and group attendance that may impact the interpretation of study results. Further, the generalizability of findings is questionable, as this is a sample primarily consisting of low income, Midwestern families who sought out services and resources following exposure to IPV. Intimate partner violence affects families across all income brackets and geographic locations, therefore findings from this study may not be representative of the experiences of many families exposed to violence. Additionally,

there are potential issues of bias and social desirability as mothers completed all measures used in this study. All information about the child and family's functioning is from the mother's perspective and reflects her opinion and interpretation of the child's resilience and psychopathology.

Finally, given that this study focused on families exposed to intimate partner violence, a full assessment of additional potentially traumatic events was not undertaken. Children exposed to IPV likely experience other adverse events, possibly including community violence, sibling abuse, or maltreatment. The cumulative impact of these stressors may significantly impact resilient functioning and should be evaluated in future research. Despite these precautions, it is important to note the exploratory nature of this study and the lack of currently available research on longer-term positive functioning following intervention participation. Such research is extremely difficult to conduct and many of the above limitations reflect the challenges posed by this type of evaluation.

#### *Clinical Implications*

Findings from this study offer unique insight into the positive functioning of preschool children who have witnessed violence in the home. A variety of clinical implications emerge in connection with this research, including the need for clinicians to include both parents and children in treatment services, as a number of variables associated with the mother impacted the child's resilience. For example, clinicians could work with mothers to provide stable and consistent parenting, particularly with preschoolers, as it seems that the child's ability to regulate emotions and behavior are inextricably tied to parenting techniques. It could also be beneficial for clinicians to

educate families and help foster more purposeful, goal-oriented coping strategies, as this seems to empower not only the mother, but also the child.

When working specifically with young children, clinicians might focus on precise, behavioral techniques that could be used in times of stress to help regulate emotions. For example, preschool children could be taught breathing strategies to help calm their system. With regard to prosocial skills, group therapy programs might incorporate opportunities to role play socially appropriate behavior. For example, young children could practice sharing or taking turns as a way to foster social competence. These techniques could be incorporated into already existing interventions for preschool children who have witnessed IPV, thereby continuing to offer support around violence exposure while also promoting more resilient functioning.

#### *Future Studies*

A number of future research directions emerge given the exploratory nature of this study. Future studies could benefit from additional conceptualizations of resilient functioning, taking into account potential biological correlates, self-evaluations by the child, or objective evaluations completed by informants other than the mother. These future projects should also gather additional information about the family's functioning and environmental stressors, as well as additional protective features that may occur in the interim period between the post-intervention and follow-up assessment. Relevant factors to assess might include significant changes to the family's income, the addition of a new sibling, moving to a new home, or whether the child has begun school. Such factors might have a meaningful impact on the expression of resilience and should be gathered to provide a more complete depiction of the child's functioning at follow-up.

## *Summary*

This study is the first of its kind to offer insight into resilient functioning over time for preschool children who have witnessed intimate partner violence. Further, this research explores the longer-term impact of participation in treatment services following violence exposure. Given the lack of research into this underserved population, such a study provides critical information about the trajectory of development following exposure to a potentially traumatic event. By highlighting aspects of positive functioning, this type of research disseminates much needed information on the strengths of families who experience significant adversity.

Table 4.1

*Results Showing Means, Standard Deviations, Minimum and Maximum Values at Pre-intervention for All Study Measures Collapsed across Treatment Groups, as there were no Significant Differences at Baseline*

Measure	Total Sample			Cronbach's Alpha ( $\alpha$ )
	Mean	SD	Min-Max	
SCS				
Emotion Regulation skills	16.41	4.65	8-28	.74
Prosocial Skills	19.80	5.36	7-30	.83
CBCL				
Internalizing	9.73	8.63	0-50	.90
Externalizing	17.22	10.98	0-50	.91
APQ				
Positive Parenting	79.18	9.57	48-99	.70
Negative Parenting	32.28	6.39	19-50	.73
Maternal mental health				
CES-D	21.88	9.75	5-54	.79
PDS	22.11	11.72	0-47	.88
WOCQ	20.85	3.41	12-27	.88
CTS2	180.29	136.39	0-637	.81

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Notes: N = 120; SCS = Social Competence Scale; CBCL = Child Behavior Checklist; APQ = Alabama Parenting Questionnaire; CES-D = Center for Epidemiologic Studies Depression Scale; PDS = Posttraumatic Stress Diagnostic Scale; WOCQ = Ways of Coping Checklist; CTS2 = Conflict Tactics Scales-Revised.

Table 4.2

*Results Showing Means, Standard Deviations, Minimum and Maximum Values for All Study Measures at Post-intervention Separated by Experimental and No Treatment Comparison Groups*

Measure	Total Sample				Experimental		Comparison	
	Mean	SD	Min-Max	Cronbach's Alpha ( $\alpha$ )	Mean	SD	Mean	SD
<b>SCS</b>								
Emotion Regulation Skills	16.95	4.87	7-29	.80	16.90	5.51	16.98	4.39
Prosocial Skills	20.60	5.36	6-30	.85	21.56	6.17	19.91	4.61
<b>CBCL</b>								
Internalizing	8.59	7.95	0-34	.90	10.27	9.34	7.27	6.53
Externalizing	15.42	9.91	0-46	.91	15.41	9.90	15.42	10.01
<b>APQ</b>								
Positive Parenting	78.84	8.31	56-93	.70	79.50	7.26	78.35	9.05
Negative Parenting	31.33	6.39	20-57	.74	30.95	6.17	31.62	6.59

Maternal mental health

CES-D	22.60	9.31	21-49	.79	22.82	9.90	22.45	8.95
PDS	17.48	11.27	0-41	.89	18.57	11.82	16.87	10.89
WOCQ	20.50	3.63	12-31	.91	21.27	3.74	19.93	3.47

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Notes: Total N = 92, Experimental N=39, Comparison N=53; SCS = Social Competence Scale; CBCL = Child Behavior Checklist; APQ = Alabama Parenting Questionnaire; CES-D = Center for Epidemiologic Studies Depression Scale; PDS = Posttraumatic Stress Diagnostic Scale; WOCQ = Ways of Coping Checklist; CTS2 = Conflict Tactics Scales-Revised.

Table 4.3

*Results Showing Means, Standard Deviations, Minimum and Maximum Values for All Study Measures at 6 Month Follow-up Separated by Experimental and No Treatment Comparison Groups*

Measure	Total Sample				Experimental		Comparison	
	Mean	SD	Min-Max	Cronbach's Alpha ( $\alpha$ )	Mean	SD	Mean	SD
<b>SCS</b>								
Emotion Regulation Skills	16.79	5.48	7-27	.85	16.52	6.30	16.96	5.00
Prosocial Skills	20.36	5.54	6-30	.88	20.45	6.31	20.56	5.10
<b>CBCL</b>								
Internalizing	9.40	7.70	0-27	.87	11.59	8.57	8.05	6.90
Externalizing	15.29	10.70	0-41	.93	16.14	10.94	14.77	10.67
<b>APQ</b>								
Positive Parenting	79.21	8.63	56-100	.78	79.09	7.63	79.29	9.31
Negative Parenting	30.71	6.25	20-53	.73	31.19	4.68	30.41	7.10

Maternal mental health

CES-D	21.43	8.45	5-45	.78	23.23	9.74	19.70	7.17
PDS	13.95	10.31	0-40	.89	15.14	11.11	13.22	9.88
WOCQ	19.95	3.13	15-28	.88	21.15	3.16	19.20	2.91
CTS2	46.48	57.43	0-305	.91	40.54	53.49	50.16	60.22

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Notes: Total N = 55, Experimental N=21, Comparison N=34; SCS = Social Competence Scale; CBCL = Child Behavior Checklist; APQ = Alabama Parenting Questionnaire; CES-D = Center for Epidemiologic Studies Depression Scale; PDS = Posttraumatic Stress Diagnostic Scale; WOCQ = Ways of Coping Checklist; CTS2 = Conflict Tactics Scales-Revised.

Table 4.4

*Coefficients in the Model Predicting to Six Month Follow-up Prosocial Skills Scores Using Baseline and Post-intervention Prosocial Skills Scores, Follow-up Violence Severity Scores, Baseline Posttraumatic Stress Symptom Scores, and Follow-up Maternal Coping Scores*

Variable	Follow-up Prosocial Skills Score	
	$\beta$	SE $\beta$
Baseline Prosocial Skills score	.22	.14
Post-intervention Prosocial Skills score	.36*	.14
Follow-up CTS2 total score	-.03*	.01
Baseline PDS total score	-.06	.06
Follow-up WOCQ total score	.32 <sup>†</sup>	.18

Notes: Total N = 55;  $R^2 = .58$ ; CTS2 = Conflict Tactics Scales-Revised; PDS = Posttraumatic Stress Diagnostic Scale; WOCQ = Ways of Coping Checklist; <sup>†</sup>  $p < .10$ , \*  $p < .05$ .

Table 4.5

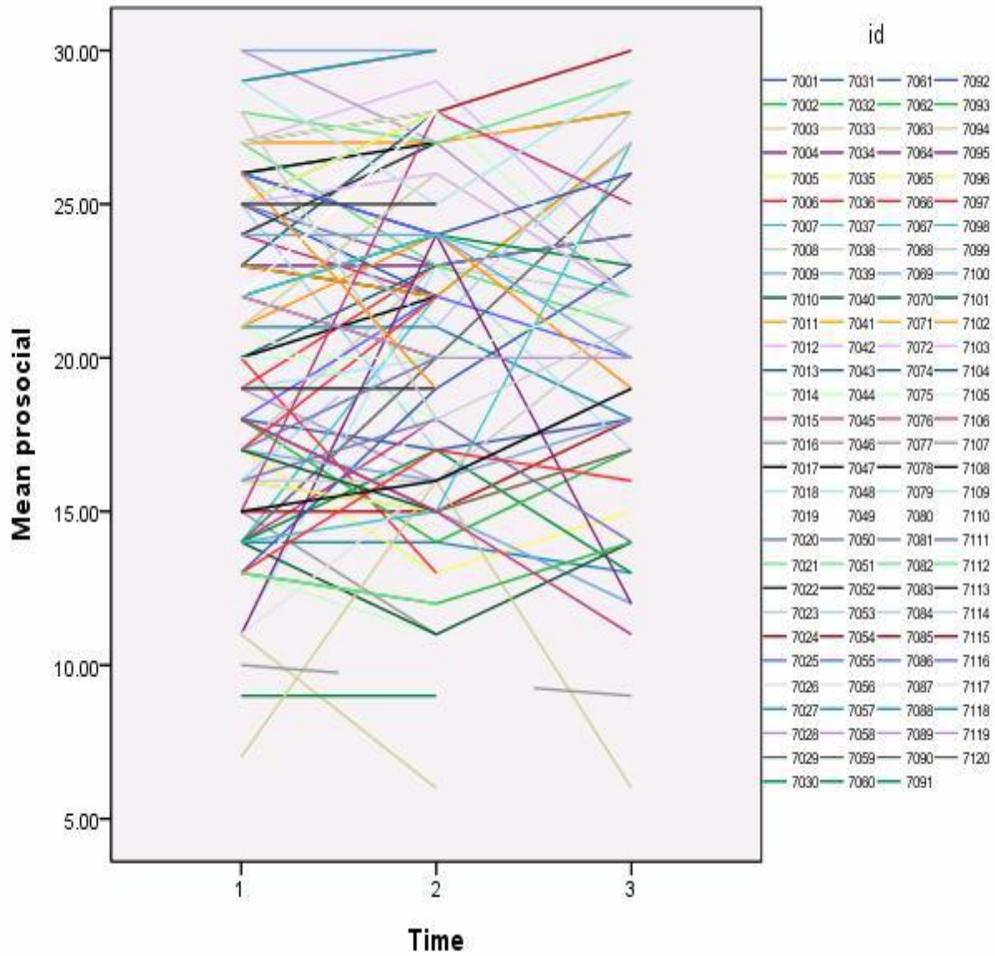
*Coefficients in the Model Predicting to Six Month Follow-up Emotion Regulation Scores Using Baseline and Post-intervention Emotion Regulation Scores, Baseline and Follow-up Negative Parenting Scores, and Follow-Up Externalizing Problems Scores*

Variable	Follow-up Emotion Regulation Score	
	$\beta$	SE $\beta$
Baseline Emotion Regulation score	.54**	.13
Post-intervention Emotion Regulation score	.13	.14
Baseline APQ Negative Parenting	.13	.08
Follow-up APQ Negative Parenting	-.20 <sup>†</sup>	.10
Follow-up CBCL Externalizing	-.17*	.06

Notes: Total N = 55;  $R^2 = .70$ ; APQ = Alabama Parenting Questionnaire; CBCL = Child Behavior Checklist; <sup>†</sup>  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$

Figure 4.1

*Spaghetti Plot of Prosocial Skills across the Three Time Points Separated by Each Individual Child's Score*



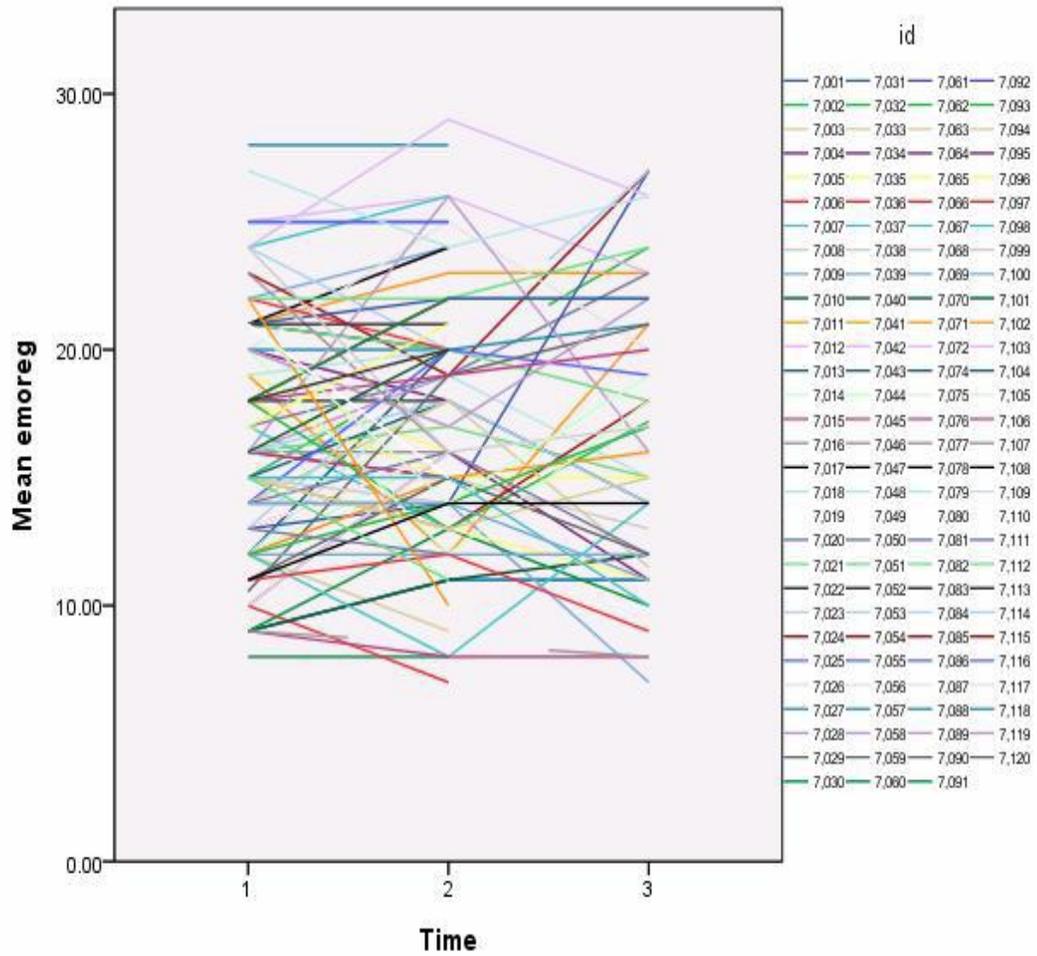
Time 1 - Baseline

Time 2 - Post-intervention

Time 3 - Six Month Follow-up

Figure 4.2

*Spaghetti Plot of Emotion Regulation Skills across the Three Time Points Separated by Each Individual Child's Score*



Time 1 - Baseline

Time 2 - Post-intervention

Time 3 - Six Month Follow-up

Figure 4.3

*Hierarchical Linear Models Describing Occasion Level (Level 1 Model), Person Level (Level 2 Model), and the Mixed Model Specification Combining Levels 1 and 2*

**Level 1 Model:**

$$Y_{ti} = \pi_{0i} + \pi_{1i}(\text{Time2}_i) + \pi_{2i}(\text{Time3}_i) + \epsilon_{ti}$$

$Y_{ti}$  = the outcome score on the prosocial skills or emotion regulation subscale for the  $i$ th case at time  $t$

$\pi_{0i}$  = the expected baseline score for the  $i$ th case

$\pi_{1i}$  = the expected change in score from baseline to post-intervention for the  $i$ th case

$\text{Time2}_i$  = indicator of measurement at post-intervention for the  $i$ th case

$\pi_{2i}$  = the expected change in score from baseline to follow-up for the  $i$ th case

$\text{Time3}_i$  = indicator of measurement at follow-up for the  $i$ th case

$\epsilon_{ti}$  = the error term for the level 1 equation

**Level 2 Model:**

$$\pi_{0i} = \beta_{00} + \beta_{01}(\text{Treatment}_i) + \Gamma_{0i}$$

$$\pi_{1i} = \beta_{10} + \beta_{11}(\text{Treatment}_i)$$

$$\pi_{2i} = \beta_{20} + \beta_{21}(\text{Treatment}_i)$$

$\beta_{00}$  = the expected mean prosocial skills or emotion regulation for a participant in the no treatment comparison group at baseline

$\beta_{01}$  = the expected change in prosocial skills or emotion regulation at baseline if a child is in the experimental group (main effect of intervention participation, assuming that the intervention does not interact with time)

$\text{Treatment}_i$  = indicator of participation in the experimental group for the  $i$ th case

$\Gamma_{0i}$  = the random individual effect on the intercept

$\beta_{10}$  = the expected change from baseline to post-intervention for a participant in the no treatment comparison group

$\beta_{11}$  = the baseline to post-intervention difference of prosocial skills or emotion regulation for experimental participants relative to control participants

$\beta_{20}$  = the expected change from baseline to follow-up for a participant in the no treatment comparison group

$\beta_{21}$  = the baseline to follow-up difference of prosocial skills or emotion regulation for experimental participants relative to control participants

**Mixed Model Specification combining levels 1 and 2:**

$$Y_{it} = \beta_{00} + \beta_{01} * \text{Treatment}_i + \beta_{10} * \text{Time2}_i + \beta_{11} * \text{Treatment}_i * \text{Time2}_i + \beta_{20} * \text{Time3}_i + \beta_{21} * \text{Treatment}_i * \text{Time3}_i + \tau_{0i} + \epsilon_{it}$$

## References

- Achenbach, T. M. (1991). *Manual for the Child Behavior Checklist: 4-18 and 1991 profile*. Burlington: Department of Psychiatry, University of Vermont.
- Achenbach, T., & Edelbrock, C. (1993). *Manual for the Child Behavior Checklist and Revised Child Behavior Profile*. Burlington: University of Vermont, Department of Psychiatry.
- Bevan, E. & Higgins, D. J. (2002). Is domestic violence learned? The contribution of five forms of child maltreatment to men's violence and adjustment. *Journal of Family Violence, 17*, 223-245.
- Clark, K.K., Bormann, C.A., Cropanzano, R.S., & James, K. (1995). Validation evidence for three coping measures. *Journal of Personality Assessment, 65*, 434-455.
- Conduct Problems Prevention Research Group (CPPRG; 2002). Psychometric Properties of the Social Competence Scale- Teacher and Parent Ratings. *Fast Track Project Technical Report*. [Available at <http://www.fasttrackproject.org>]
- Dadds, M. R., Maujean, A., & Fraser, J. A. (2003). Parenting and conduct problems in children: Australian data and psychometric properties of the Alabama Parenting Questionnaire. *Australian Psychologist, 38*, 238-241.
- Edleson, J. L. (2001). Studying the co-occurrence of child maltreatment and domestic violence in families. In S. A. Graham-Bermann & J. L. Edleson (Eds.), *Domestic violence in the lives of children: The future of research, intervention, and social policy*. Washington, DC: American Psychological Association, 91-110.
- Ehrensaft, M. K., Cohen, P., Brown, J., Smailes, E. M., Chen, H., & Johnson, J. G. (2003). Intergenerational transmission of partner violence: A 20-year prospective study. *Journal of Consulting and Clinical Psychology, 71*, 741-753.
- Foa E. B. (1995). *Posttraumatic Stress Diagnostic Scale Manual*. Minneapolis, MN: National Computer Systems.
- Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology, 48*, 150-170.
- Folkman, S. & Lazarus, R. S. (1991). Coping and Emotion. In A., Monat & R.S. Lazarus (Eds.), *Stress and coping: An anthology*. New York, NY: Columbia University Press, pp. 207-227.

- Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. (1986). The dynamics of stressful encounter: Cognitive appraisal, coping and encounter outcomes. *Journal of Personality and Social Psychology*, *50*, 992-1002.
- Frick, P. J. (1991). *The Alabama Parenting Questionnaire*. Unpublished rating scale, University of Alabama.
- Frick, P. J., Christian, R. E., & Wootton, J. M. (1999). Age trends in the association between parenting and conduct problems. *Behavior Modification*, *23*, 106-128.
- Graham-Bermann, S. A. (2011). Evidence-based practices for school-age children exposed to IPV and an evaluation of The Kids' Club Program. In S. A. Graham-Bermann, & A. A. Levendosky, (Eds.) *How Intimate Partner Violence Affects Children: Developmental Research, Case Studies, and Evidence-Based Treatment*. Washington, DC: American Psychological Association Books, pp. 179-205.
- Graham-Bermann, S. A., & Follett, C. (2001). *Fostering resilience in young children exposed to violence*. Department of Psychology, University of Michigan.
- Graham-Bermann, S.A., Howell, K.H., Miller, L.E., Kwek, J., & Lilly, M. (2010). Traumatic events and maternal education as predictors of verbal ability for preschool children exposed to intimate partner violence. *Journal of Family Violence*, *25*(4), 383-392.
- Graham-Bermann, S. A., & Levendosky, A. A. (1994). *The Moms' Group: A parenting support and intervention program for battered women who are mothers*. Unpublished manuscript, University of Michigan.
- Graham-Bermann, S. A., Lynch, S., Banyard, V., DeVoe, E., & Halabu, H. (2007). Community-based intervention for children exposed to intimate partner violence. *Journal of Consulting and Clinical Psychology*, *75*(2), 199-209.
- Graham-Bermann, S. A., & Perkins, S. C. (2010). Effects of early exposure and lifetime exposure to intimate partner violence (IPV) on child adjustment. *Violence and Victims*, *25*(4), 427-439.
- Grych, J. H., Wachsmuth-Schlaefler, T., & Klockow, L. L. (2002). Interparental aggression and young children's representations of family relationships. *Journal of Family Violence*, *16*(2), 259-272.
- Hines, D.A., & Saudino, K. J. (2002). Intergenerational transmission of intimate partner violence: Behavioral genetic perspective. *Trauma, Violence & Abuse*, *3*, 210-225.
- Howell, K.H., Graham-Bermann, S.A., Cxyz, E., & Lilly, M. (2010). Assessing resilience in preschool children exposed to intimate partner violence. *Violence and Victims*, *25*(2), 150-164.

- Johnson, V.K. & Lieberman, A.F. (2007). Variations in behavior problems of preschoolers exposed to domestic violence: The role of mothers' attunement to children's emotional experiences. *Journal of Family Violence, 22*, 297-308.
- Jouriles, E.N., McDonald, R., Rosenfield, D., Stephens, N., Corbitt-Shindler, D., & Miller, P.C. (2009). Reducing conduct problems among children exposed to intimate partner violence: A randomized clinical trial examining effects of Project Support. *Journal of Consulting and Clinical Psychology, 77*(4), 705-717.
- Jouriles, E.N., McDonald, R., Spiller, L., Norwood, W.D., Swank, P.R., Stephens, N., Ware, H., & Buzy, W.M. (2001). Reducing conduct problems among children of battered women. *Journal of Consulting and Clinical Psychology, 69*(5), 774-785.
- Levendosky, A. A., Huth-Bocks, A. C., Shapiro, D. L., & Semel, M. A. (2003). The impact of domestic violence on the maternal-child relationship and preschool-age children's functioning. *Journal of Family Psychology, 17*, 275-287.
- Lieberman, A.F., Ippen, C.G., & Van Horn, P. (2006). Child-parent psychotherapy: 6-month follow-up of a randomized controlled trial. *Journal of the American Academy of Child and Adolescent Psychiatry, 45*(8), 913-918.
- Margolin, G. (2005). Children's exposure to violence: Exploring developmental pathways to diverse outcomes. *Journal of Interpersonal Violence, 20*(1), 72-81.
- McDonald, R., Jouriles, E.N., & Minze, L.C. (2011). Interventions for young children exposed to IPV. In S. A. Graham-Bermann, & A. A. Levendosky, (Eds.) *How Intimate Partner Violence Affects Children: Developmental Research, Case Studies, and Evidence-Based Treatment*. Washington, DC: American Psychological Association Books.
- McDonald, R., Jouriles, E.N., & Skopp, N.A. (2006). Reducing conduct problems among children brought to women's shelters: Intervention effects 24 months following termination of services. *Journal of Family Psychology, 20*(1), 127-136.
- O'Connell, A.A. & McCoach, D.B. (2004). Applications of hierarchical linear models for evaluations of health interventions: Demystifying the methods and interpretations of multilevel models. *Evaluation & The Health Professions, 27*(2), 119-151.
- Paterson, J., Carter, S., Gao, W., Cowley-Malcolm, E., & Iusitini, L. (2008). Maternal intimate partner violence and behavioral problems among Pacific children living in New Zealand. *Journal of Child Psychology and Psychiatry, 49*(4), 395-404.
- Petros, T. & Hoving, K. (1980). The effects of review on young children's memory for prose. *Journal of Experimental Child Psychology, 30*(1), 33-43.

- Robbins, H., & Katz, L.F. (2011). Domestic violence and post-traumatic growth in children: Relations between physiological functioning and children's emotional competence. *Presented at the Society for Research in Child Development Biennial Meeting*, April 2, 2011.
- Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurements*, 1(3), 385-401.
- Raudenbush, S.W., & Bryk, A.S. (2002). Hierarchical linear models: Applications and data analysis methods. 2<sup>nd</sup> edition. Newbury Park, CA: Sage Publications.
- Roberts, R. E., Andrews, J. A., Lewinsohn, P. M., & Hops, H. (1990). Assessment of depression in adolescents using the Center for Epidemiologic Studies Depression Scale. *Psychological Assessment*, 2(2), 122–128.
- Shelton, K. K., Frick, P. J., & Wootton, J. M. (1996). Assessment of parenting practices in families of elementary school-age children. *Journal of Clinical Child Psychology*, 25, 317-329.
- Sternberg, K. J., Baradaran, L. P., Abbott, C. B., Lamb, M. E., & Guterman, E. (2006). Type of violence, age, and gender differences in the effects of family violence on children's behavior problems: A mega-analysis. *Developmental Review*, 26, 89-112.
- Straus, M. A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics (CT) Scales. *Journal of Marriage and Family*, 41, 75-88.
- Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The revised Conflict Tactics Scales (CTS2): Development and preliminary psychometric data. *Journal of Family Issues*, 17, 283-316.
- Weissman, M. M., Prusoff, B., & Newberry, P. (1975). Comparison of the CES-D with standardized depression rating scales at three points in time. *New Haven, CT: Yale University and the National Institute of Mental Health*.
- Wolfe, D. A., Crooks, C. V., Lee, V., McIntyre-Smith, A., & Jaffe, P. G. (2003). The effects of children's exposure to domestic violence: A meta-analysis and critique. *Clinical Child and Family Psychology Review*, 6(3), 171-187.

## Chapter V

### Conclusion

In the past decade, significant strides have been made in delineating the impact of intimate partner violence (IPV) on preschool children. Such research reveals that the preschool years are an apt time to evaluate the scope, and attenuate the effects, of IPV exposure as children develop templates for future relationships and form much of their worldview during these early years. Given that such foundational aspects of a child's outlook are developed during this period, it seems like a critical time to intervene and potentially promote more positive functioning. If resilient functioning can be enhanced, then some of the negative effects connected with witnessing IPV may be reduced. Thus, to best minimize problems and promote resilience, intervention programs should provide affordable services to address some of the relevant variables identified in this dissertation, including parenting practices, coping strategies, and the child's reaction to violence exposure.

Findings from this dissertation underscore the importance of evaluating the impact of IPV from a developmental perspective. By using a developmental framework, this dissertation illustrates the vast differences in prevalence, exposure rates, and negative outcomes across the preschool population. Such deleterious outcomes for preschoolers include a unique presentation of trauma symptoms and cognitive impairments, as well as

altered physiological reactions. Preschool children exposed to IPV also exhibit more internalizing and externalizing behavior problems, as well as physical health complications, as compared to children not exposed to violence. Despite such intense and harmful outcomes, this dissertation focused on a unique set of children who evidence resilient functioning in spite of exposure to violence in the home. Resilience was operationalized using a developmental perspective, focusing on age-appropriate milestones for the preschool population. It is critical to consider resilience from this perspective because of the central role that emotion regulation and prosocial skills play in preschool children's development. The three studies included in this dissertation highlight a substantial subset of preschool children who do not show evidence of psychopathology and seem to fare as well or better than children who are not exposed to IPV.

The primary aim of the first study was to evaluate the association between mother-reported child adjustment problems and group therapists' ratings of resilience in preschool children exposed to intimate partner violence. Next, multiple reporters' evaluations of resilience were assessed to answer the questions of whether and how young children display evidence of resilience at home and in treatment. Results from this first study revealed that group therapists' ratings of resilience were negatively correlated with children's externalizing behavior problems. Further, findings indicated poor rater agreement between mothers and group therapists on some, but not all, aspects of resilience. Evaluations differed based on specific demographic factors, with the most variability for the youngest cohort of children. Given the lack of research on this topic,

study findings provide unique information and a new perspective on child functioning across settings.

Such research adds critical information to the field of intimate partner violence, as most studies rely on the assessment of one informant (typically the mother) to make universal judgments about a child's functioning. By relying solely on the mother's perspective, such research is potentially subject to bias, misrepresentation, and unsubstantiated generalizations about the child. The first dissertation study included a child therapist who underwent thorough training in variations in child development and working with children exposed to IPV, thereby offering unique insight into how violence exposed children behave in a peer group therapy setting, how such children are perceived by professionals, and how resilience is expressed in novel situations. This information adds substantially to the field of child psychology, as there are currently no studies that evaluate how preschool children's resilient functioning is perceived by group therapists or how therapists and mothers assess positive behavior across settings.

The second dissertation study evaluated whether participation in an intervention program enhanced resilience in preschool-age children exposed to intimate partner violence. This study also compared preschool children who did and did not receive intervention services to evaluate change in resilience over time from baseline to approximately five weeks later. Finally, this study identified protective factors that predicted change in resilience scores. Results indicated that children who had the highest Prosocial Skills scores before the intervention exhibited a significant increase in their post-intervention scores, if they participated in the intervention program, but there was no gain in prosocial skills for children in the comparison group. Further, a higher pre-

intervention score and less severe violence predicted greater change in Prosocial Skills for children in the experimental group.

This original study takes initial steps to evaluate change in resilience following intervention for preschool-age children exposed to intimate partner violence and provides unique information on positive functioning in this population. Despite the relatively short treatment period (five weeks), significant changes were seen on central aspects of resilient functioning. This second study makes substantial contributions to the field of treatment research, as the majority of interventions for children exposed to violence focus on psychopathology and reducing negative behavior, whereas this study centered on resilience and promoting positive growth through treatment. Such research can influence the way in which resilience is conceptualized in this population, as well as the way in which clinicians intervene with families who experience IPV. By taking a more holistic, strength-based approach to treatment, clinicians and researchers alike may better serve these families who have the potential to overcome the multitude of difficulties they encounter.

The third and final dissertation study examined resilience in preschool children at a follow-up period, typically six to eight months post-intervention. In addition to assessing longer-term change in resilient functioning, this study also identified protective factors that predict change in emotion regulation ability and prosocial skills. This distinct study offers insight into the longer-lasting positive changes that may be seen in preschool children who witness IPV. Results indicated that the quality of the mother-child relationship, including parenting techniques and coping strategies, substantially contributed to the preschool child's functioning following exposure to IPV, regardless of

intervention participation. To my knowledge, this study is the first of its kind to offer insight into resilient functioning over time for preschool children exposed to family violence. Given the dearth of available research on this unique population, such a study provides new and significant information about one possible pathway of development following exposure to violence in the home.

Taken together, these three studies delve into an area of research that has not been previously examined. This absence of investigation into resilient functioning following exposure to the potentially traumatic event of witnessing intimate partner violence has been addressed through this dissertation by evaluating the impact of an intervention at multiple time points and including an assessment from multiple reporters. This is a critical topic for exploration, as there are many strengths in both the mother and the child that can be cultivated and enhanced through treatment, thus placing the entire family on a more positive trajectory.

### *Limitations*

While the above studies make important contributions to the field of child psychology, there are relevant limitations that need to be acknowledged. First, the conceptualization and measurement of resilience in these studies may have a limited scope. This dissertation used one narrow view of resilience, but the concept could be defined with regard to genetic variables, internal factors, or learned behaviors that are taught and reinforced within a family system. While the Social Competence Scale is a solid foundational measure for evaluating resilient functioning, future assessment tools could be honed and refined to assess other aspects of resilience not captured by the broad prosocial skills and emotion regulation factors. For example, it could be beneficial to

assess specific behaviors associated with resilience (i.e. what did the child actually do) as opposed to qualities or propensities that are more abstract and difficult to objectively define. There might be more consistency across informants and time periods if specific and tangible actions associated with resilience were examined.

Further, while this dissertation made a meaningful contribution to the literature by including more than one informant, it would be beneficial to involve other individuals who have a close relationship with the child. For example, including grandparents, godparents, or other extended family members, as well as coaches or activity group leaders, could provide a more complete and thorough understanding of the child's behavior. The need to include other relevant individuals in the child's life warrants a discussion of the role of fathers in this research. Oftentimes fathers remain actively involved in their child's life, despite conflict in the home. These individuals could likely offer an important and unique perspective on their child; however, there are significant concerns about security and creating a safe environment for treatment that often outweigh the addition of fathers in such research. Further, legal issues and custody agreements can make the inclusion of both parents challenging. This particular set of research questions and intervention program goals centered on the mother and child, but future research projects might consider adding in an element related to the father-child relationship.

### *Clinical Implications*

Given the unique findings of this dissertation, a variety of clinical implications are relevant as we focus on factors that lead some preschool children to show deleterious outcomes and others to appear more resilient. Such findings can be highly influential in clinical work with families exposed to IPV. As opposed to focusing solely on reducing

pathology associated with family violence, clinicians could conceptualize treatment from a more positive, empowering perspective and build on the strengths of these families.

Clinicians can benefit from knowing that when working with children exposed to family violence, it is important to take a holistic and systemic approach to treatment, focusing on both the parent and the child. This integrated approach will bolster the mother's strengths and help her provide a supportive foundation for her child. In treatment, preschool children, in addition to receiving individual care to better cope with the traumatic event of witnessing family violence, can also benefit from their caregiver receiving parent guidance and mental health services. As the mother's health and ability to parent improves, her child's functioning may also grow. While many communities may provide services for women and children exposed to IPV, this dissertation underscores the importance of employing evidence-based practices proven to be successful with children during this developmental period.

#### *Future Research Directions*

Using this dissertation as a template, various opportunities for future directions in research become apparent. Areas of resilience should be broadened to look beyond prosocial skills and emotion regulation. Clearly, strengths in social functioning and the ability to relate to others help preschool children endure during episodes of violence, but more of a focus could be placed on individual competencies and biologically-based variables. Such conceptualizations of resilience could include an evaluation of social or emotional intelligence, physical reactivity, or self-esteem. These future studies should take a multi-method approach, incorporating self-reports (i.e. Rosenberg's self-esteem scale or Harter's self-perception profile) for those children who are able to provide such

information, semi-structured interviews with parents and close relatives, surveys with individuals in the child's extended social network, and physiological assessments. Relevant physiological measures could include heart rate variability as a proxy for emotional regulation and functioning, as it may indicate how quickly children can return to a stable state after arousal. Further, from a biological perspective, researchers could assess cortisol samples to evaluate and understand stress reactions and coping responses biologically. All of these measures should be used in conjunction to develop a comprehensive conceptualization of child functioning following adversity. Such an extensive battery of assessment tools would provide the most accurate understanding of positive functioning across different contexts and from varied perspectives.

Additionally, resilient functioning should be studied in cultural terms. A young child's cultural background has a significant impact on the way he or she understands violence and is impacted by violence exposure. There are a plethora of cultural beliefs and traditions that might meaningfully impact the conceptualization of resilience, including unique spiritual beliefs and the value placed on extended family. Given that this dissertation primarily focused on European American children, future studies should include a larger cohort of underrepresented minority groups. It might be most appropriate to next study Latino/a children, as this ethnic group is the fastest growing in the United States. Moving forward, such research could also include a cultural comparison of children from families who have recently immigrated to the United States. This type of research might provide distinct information on the unique features of children who are entering a completely new cultural setting. To carry out a more culturally sensitive assessment of resilience, it would be important to incorporate both quantitative and

qualitative research strategies. For example, focus groups could be used to offer a semi-structured opportunity for families to share about their perspective on the meaning and expression of resilient functioning. Researchers who look to evaluate outcomes in developmentally and culturally appropriate ways can then carry their findings into more sensitive treatment initiatives.

The research on the effects of chronic and early exposure to violence suggests that assessments and interventions begin early in the child's life. While the impact of exposure to IPV has severe and significant consequences, there are a number of other potentially traumatic events that children may experience during their early years. Future research studies could incorporate an evaluation of a range of traumatic experiences such as serious and chronic illness, accidents, community violence, witnessing traumatic natural disasters, the death of a parent, or significant interpersonal loss. By assessing events beyond exposure to IPV, researchers could develop a more complete understanding of the cumulative impact of multiple traumas. Further, an evaluation of the broader range of adverse childhood experiences could offer insight into the enduring impact of overlapping exposure to potentially traumatic events.

While the studies included in this dissertation assess preschool children at different points, these evaluation periods are quite close together. Future studies should expand the time between evaluations and possibly cross into new developmental periods as preschoolers move into the school-age years or beyond. By including children from a broad range of ages, research scientists may be able to capture the central or common elements of positive coping following exposure to potentially traumatic events. Further, by expanding the time between evaluations, future studies will be able to assess whether

some children have continued their resilient functioning over time, whether others have lost ground in terms of adjustment (i.e. sleeper effects), or whether some have become more resilient over time and what contributes to such long term changes. This type of developmental research could be approached in a variety of ways. For example, age groups could be broken down into more finite clusters and evaluated categorically on a range of variables or one cohort of children could be assessed longitudinally in a multiyear design.

One of the most significant directions for future research relates to the kind of intervention used to promote resilience. The Preschool Kids' Club program does not specifically address prosocial skills or emotion regulation. While these aspects of positive functioning are touched upon during the intervention, for example through conflict resolution training, they are not the primary focus of treatment. Future research, therefore, would benefit from the development and evaluation of an intervention that centers on factors directly associated with resilience; whether that is prosocial skills and emotion regulation, or other forms of resilience not identified in this dissertation. Such an intervention could include opportunities for children to practice controlling emotions under stressful conditions, e.g., including exposure to upsetting situations both within and outside of the family. This resilience-focused intervention design should include opportunities for both parents and children to learn about and practice facets of positive functioning. This might include building self-esteem, addressing breaches in the parent-child attachment, or fostering individual talents and aspirations. If such an intervention could be created and shown to successfully impact aspects of resilience, then it could be disseminated more widely.

In addition to developing an intervention that promotes facets of resilience, it may also be beneficial to extend the length of the treatment program. Ten sessions might be too short to make lasting change in preschool children. Given that children in this developmental period require more repetition and consistency than older children, they may need to meet more regularly or for longer periods of time. Families may need more regular and ongoing support in the form of contact with group therapists, booster sessions to reinforce concepts from the intervention, or access to updated and wide-ranging community resources after the intervention has ended. Given the challenges posed in terms of remaining connected with families exposed to IPV, future studies should incorporate more regular contact with women and children between assessments. Project coordinators could offer updated referral services, in addition to obtaining changes to contact information, in a monthly or bi-monthly telephone call to the family. Finally, it may be fruitful to add in additional follow-up periods, possibly at 3 months, 6 months, and one year to garner a more complete picture of child functioning over time. If resources are available, these follow-up assessments could extend past the one year mark to gather valuable longitudinal data. All of these research process variables could be addressed in future studies.

### *Summary*

Each study of this dissertation offered unique information about resilient functioning in preschool children by gathering data from multiple reporters and assessing the impact of an intervention for children exposed to violence in the home. This set of studies provides novel findings to help expand the fledgling body of work on resilience in young children. Despite the gaps in current research on this topic, it is important to keep

in mind that great strides have been made in the field. Until quite recently, many researchers did not recognize the hardships preschool children experienced when exposed to intimate partner violence. A broader understanding of IPV, that incorporates both risk and protective factors, may allow children of all ages to receive the assistance they need to experience healthy and productive lives, in spite of exposure to family violence.

## Appendices

### Appendix 1: Social Competence Scale- parent version

I have some questions about things that your child may/may not do well. For the following questions, let me know if your child does these things (1) NOT AT ALL, (2) A LITTLE, (3) MODERATELY WELL, (4) WELL, or (5) VERY WELL:

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. My child can accept things not going his/her way:                       | 1 | 2 | 3 | 4 | 5 |
| 2. My child copes well with failure:                                       | 1 | 2 | 3 | 4 | 5 |
| 3. My child thinks before acting:  | 1 | 2 | 3 | 4 | 5 |
| 4. My child works out problems with friends or sibling on his/her own:     | 1 | 2 | 3 | 4 | 5 |
| 5. My child can calm down by himself/herself when excited or all wound up: | 1 | 2 | 3 | 4 | 5 |
| 6. My child does what he/she is told to do:                                | 1 | 2 | 3 | 4 | 5 |
| 7. My child is very good at understanding other people's feelings:         | 1 | 2 | 3 | 4 | 5 |
| 8. My child controls his/her temper when there is a disagreement:          | 1 | 2 | 3 | 4 | 5 |
| 9. My child shares things with others:                                     | 1 | 2 | 3 | 4 | 5 |
| 10. My child is helpful to others:   | 1 | 2 | 3 | 4 | 5 |
| 11. My child listens to others' point of view:                             | 1 | 2 | 3 | 4 | 5 |
| 12. My child can give suggestions and opinions without being bossy         | 1 | 2 | 3 | 4 | 5 |

## Appendix 2: Social Competence Scale- therapist version

Not at All 0	A Little 1	Moderately Well 2	Well 3	Very Well 4
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- \_\_\_\_\_ 1. Functions well even with distractions
- \_\_\_\_\_ 2. Can accept things not going his/her way
- \_\_\_\_\_ 3. Copes well with failure
- \_\_\_\_\_ 4. It a self-starter
- \_\_\_\_\_ 5. Works/plays well without adult supervision
- \_\_\_\_\_ 6. Accepts legitimate imposed limits
- \_\_\_\_\_ 7. Expresses needs and feelings appropriately
- \_\_\_\_\_ 8. Thinks before acting
- \_\_\_\_\_ 9. Resolves peer problems on his/her own
- \_\_\_\_\_ 10. Stays on task
- \_\_\_\_\_ 11. Can calm down when excited or when all wound up
- \_\_\_\_\_ 12. Can wait in line patiently when necessary
- \_\_\_\_\_ 13. Very good at understanding other people's feelings
- \_\_\_\_\_ 14. Is aware of the effect of his/her behavior on others
- \_\_\_\_\_ 15. Works well in a group
- \_\_\_\_\_ 16. Plays by the rules of the game
- \_\_\_\_\_ 17. Pays attention
- \_\_\_\_\_ 18. Controls temper when there is a disagreement
- \_\_\_\_\_ 19. Shares materials with others
- \_\_\_\_\_ 20. Cooperates with peers without prompting
- \_\_\_\_\_ 21. Follows group therapists's verbal directions
- \_\_\_\_\_ 22. Is helpful to others
- \_\_\_\_\_ 23. Listens to others' points of view
- \_\_\_\_\_ 24. Can give suggestions and opinions without being bossy
- \_\_\_\_\_ 25. Acts friendly toward others

### Appendix 3: Child Behavior Checklist (CBCL)

Below is a list of questions that have been used in studies of more than 10,000 children across the country - not all of them will apply to your child. I'm going to go through a list of things that may be true of your child. If one is true of your child in the last six months, please let me know. I will then ask you if it happens often or only sometimes.

0=Not True	1=Somewhat or Sometimes True	2=Very or Often True
0 1 2	1. Acts too young for his/her age	
0 1 2	2. Allergy (describe):	
0 1 2	3. Argues a lot	
0 1 2	4. Asthma	
0 1 2	5. Behaves like opposite sex	
0 1 2	6. Bowel movements outside toilet	
0 1 2	7. Bragging, boasting	
0 1 2	8. Can't concentrate, can't pay attention for long	
0 1 2	9. Can't get his/her mind off certain thoughts or obsessions	
0 1 2	10. Can't sit still, restless, or hyperactive	
0 1 2	11. Clings to adults or too dependent	
0 1 2	12. Complains of loneliness	
0 1 2	13. Confused or seems to be in a fog	
0 1 2	14. Cries a lot	
0 1 2	15. Cruel to animals	
0 1 2	16. Cruelty, bullying, or meanness to others	
0 1 2	17. Day-dreams or gets lost in his/her thoughts	
0 1 2	18. Deliberately harms self or attempts suicide	
0 1 2	19. Demands a lot of attention	
0 1 2	20. Destroys his/her own things	
0 1 2	21. Destroys things belonging to family or other children	
0 1 2	22. Disobedient at home	
0 1 2	23. Disobedient at school	
0 1 2	24. Doesn't eat well	
0 1 2	25. Doesn't get along with other children	
0 1 2	26. Doesn't seem to feel guilty after misbehaving	
0 1 2	27. Easily jealous	
0 1 2	28. Eats or drinks things that are not food	
0 1 2	29. Fears certain animals, situations, or places, not in school	
0 1 2	30. Fears going to school	
0 1 2	31. Fears he/she might think or do something bad	
0 1 2	32. Fears he/she has to be perfect	
0 1 2	33. Fears or complains that no one loves him/her	
0 1 2	34. Fears others are out to get him/her	
0 1 2	35. Feels worthless or inferior	
0 1 2	36. Gets hurt a lot, accident-prone	
0 1 2	37. Gets in many fights	
0 1 2	38. Gets teased a lot	
0 1 2	39. Hangs around with children who get in trouble	
0 1 2	40. Hears things that aren't there	
0 1 2	41. Impulsive or acts without thinking	
0 1 2	42. Likes to be alone	
0 1 2	43. Lying or cheating	
0 1 2	44. Bites fingernails	
0 1 2	45. Nervous, high-strung, or tense	
0 1 2	46. Nervous movements or twitching	

### Appendix 3: Child Behavior Checklist (CBCL) (continued)

0	1	2	47. Nightmares
0	1	2	48. Not liked by other children
0	1	2	49. Constipated, doesn't move bowels
0	1	2	50. Too fearful or anxious
0	1	2	51. Feels dizzy
0	1	2	52. Feels too guilty
0	1	2	53. Overeating
0	1	2	54. Overtired
0	1	2	55. Overweight
			56. Physical problems
0	1	2	a. Aches or pains
0	1	2	b. Headaches
0	1	2	c. Nausea, feels sick
0	1	2	d. Problems with eyes
0	1	2	e. Rashes or other skin problems
0	1	2	f. Stomachaches or cramps
0	1	2	g. Vomiting, throwing up
0	1	2	h. Other (describe):
0	1	2	57. Physically attacks people
0	1	2	58. Picks nose, skin, or other parts of body (describe):
0	1	2	59. Plays with own sex parts in public
0	1	2	60. Plays with own sex parts too much
0	1	2	61. Poor school work
0	1	2	62. Poorly coordinated or clumsy
0	1	2	63. Prefers playing with older children
0	1	2	64. Prefers playing with younger children
0	1	2	65. Refuses to talk
0	1	2	66. Repeats certain acts over and over, compulsions (describe):
0	1	2	67. Runs away from home
0	1	2	68. Screams a lot
0	1	2	69. Secretive, keeps things to self
0	1	2	70. Sees things that aren't there without known medical cause
0	1	2	71. Self-conscious or easily embarrassed
0	1	2	72. Sets fires
0	1	2	73. Sexual problems (describe):
0	1	2	74. Showing off or clowning
0	1	2	75. Shy or timid
0	1	2	76. Sleeps less than most children
0	1	2	77. Sleeps more than most children during day and/or night
0	1	2	78. Smears or plays with bowel movements
0	1	2	79. Speech problems
0	1	2	80. Stares blankly
0	1	2	81. Steals at home
0	1	2	82. Steals outside the home
0	1	2	83. Stores up things he/she doesn't need
0	1	2	84. Strange behavior
0	1	2	85. Strange ideas
0	1	2	86. Stubborn, sullen, or irritable
0	1	2	87. Sudden changes in mood or feelings
0	1	2	88. Sulks a lot
0	1	2	89. Suspicious
0	1	2	90. Swearing or obscene language

### Appendix 3: Child Behavior Checklist (CBCL) (continued)

0	1	2	91. Talks about killing self
0	1	2	92. Talks or walks in sleep
0	1	2	93. Talks too much
0	1	2	94. Teases a lot
0	1	2	95. Temper tantrums or hot temper
0	1	2	96. Thinks about sex too much
0	1	2	97. Threatens people
0	1	2	98. Thumb-sucking
0	1	2	99. Too concerned with neatness or cleanliness
0	1	2	100. Trouble sleeping (describe)
0	1	2	101. Truancy, skips school
0	1	2	102. Underactive, slow moving, or lacks energy
0	1	2	103. Unhappy, sad, or depressed
0	1	2	104. Unusually loud
0	1	2	105. Uses alcohol or drugs
0	1	2	106. Vandalism
0	1	2	107. Wets self during the day
0	1	2	108. Wets the bed
0	1	2	109. Whining
0	1	2	110. Wishes to be of opposite sex
0	1	2	111. Withdrawn, doesn't get involved with others
0	1	2	112. Worrying
0	1	2	113. Are there any other problems you child has?

## Appendix 4: Revised Conflict Tactics Scales (CTS2)

	1x	2x	3-5x	6-10x	11-20x	>20x	Never
1. <i>My partner</i> showed care for me even though we disagreed.	1	2	3	4	5	6	7
2. <i>My partner</i> explained his or her side of a disagreement to me.	1	2	3	4	5	6	7
3. <i>My partner</i> insulted or swore at me.	1	2	3	4	5	6	7
4. <i>My partner</i> threw something at me that could hurt.	1	2	3	4	5	6	7
5. <i>My partner</i> twisted my arm or hair.	1	2	3	4	5	6	7
6. <i>You</i> had a sprain, bruise or small cut because of a fight with me.	1	2	3	4	5	6	7
7. <i>My partner</i> showed respect for my feelings about an issue.	1	2	3	4	5	6	7
8. <i>My partner</i> made me have sex without a condom.	1	2	3	4	5	6	7
9. <i>My partner</i> pushed or shoved me.	1	2	3	4	5	6	7
10. <i>My partner</i> used force to make me have oral or anal sex.	1	2	3	4	5	6	7
11. <i>My partner</i> used a knife or gun on me.	1	2	3	4	5	6	7
12. <i>You</i> passed out from being hit on the head by your partner in a fight.	1	2	3	4	5	6	7
13. <i>My partner</i> called me fat or ugly.	1	2	3	4	5	6	7
14. <i>My partner</i> punched or hit me with something that could hurt.	1	2	3	4	5	6	7
15. <i>My partner</i> destroyed something that belonged to me.	1	2	3	4	5	6	7
16. <i>You</i> went to a doctor because of a fight with your partner.	1	2	3	4	5	6	7
17. <i>My partner</i> choked me.	1	2	3	4	5	6	7
18. <i>My partner</i> shouted or yelled at me.	1	2	3	4	5	6	7
19. <i>My partner</i> slammed me against a wall.	1	2	3	4	5	6	7
20. <i>My partner</i> was sure we could work it out.	1	2	3	4	5	6	7
21. <i>You</i> needed to see a doctor because of a fight with your partner, but didn't.	1	2	3	4	5	6	7
22. <i>My partner</i> beat me up.	1	2	3	4	5	6	7
23. <i>My partner</i> grabbed me.	1	2	3	4	5	6	7
24. <i>My partner</i> used force to make me have sex.	1	2	3	4	5	6	7
25. <i>My partner</i> stomped out of the room or house or yard during a disagreement.	1	2	3	4	5	6	7
26. <i>My partner</i> insisted that I have sex when I didn't want to (but did not use physical force).	1	2	3	4	5	6	7
27. <i>My partner</i> slapped me.	1	2	3	4	5	6	7
28. <i>You</i> had a broken bone from a fight with your partner.	1	2	3	4	5	6	7
29. <i>My partner</i> used threats to make me have oral or anal sex.	1	2	3	4	5	6	7
30. <i>My partner</i> suggested a compromise to a disagreement.	1	2	3	4	5	6	7
31. <i>My partner</i> burned or scalded me on purpose.	1	2	3	4	5	6	7
32. <i>My partner</i> insisted that I have oral or anal sex (but did not use physical force)	1	2	3	4	5	6	7
33. <i>My partner</i> accused me of being a lousy lover.	1	2	3	4	5	6	7
34. <i>My partner</i> did something to spite me.	1	2	3	4	5	6	7
35. <i>My partner</i> threatened to hit or throw something at me.	1	2	3	4	5	6	7
36. <i>You</i> still felt physical pain the next day because of a fight you had with your partner.	1	2	3	4	5	6	7
37. <i>My partner</i> kicked me.	1	2	3	4	5	6	7
38. <i>My partner</i> used threats to make me have sex.	1	2	3	4	5	6	7
39. <i>My partner</i> agreed to try a solution I suggested.	1	2	3	4	5	6	7

40. Are you currently living with a violent partner? Yes No

a. If yes, how long have you lived with this partner? \_\_\_\_\_

b. If no, when was the last time that you lived with a violent partner, if ever? \_\_\_\_\_

41. How many violent partners have you had in your life? \_\_\_\_\_

## Appendix 5: Center for Epidemiologic Studies Depression Scale (CES-D)

These questions are about how you, the parent, have been feeling within **the past week**.

Please tell me how much of the time you have felt a certain way: 1= None of the time, 2= Some of the time, 3 = Occasionally or a moderate amount of the time, and 4 = Most or all of the time.

1= None of the time      2= Some of the time      3 = Occasionally      4 =Most or all of the time

- \_\_\_\_\_ 1. I was bothered by things that don't usually bother me.
- \_\_\_\_\_ 2. I did not feel like eating.
- \_\_\_\_\_ 3. I felt that I could not shake off the blues, even with help from family or friends.
- \_\_\_\_\_ 4. I felt that I was just as good as other people.
- \_\_\_\_\_ 5. I had trouble keeping my mind on what I was doing.
- \_\_\_\_\_ 6. I felt depressed.
- \_\_\_\_\_ 7. I felt that everything I did was an effort.
- \_\_\_\_\_ 8. I felt hopeful about the future.
- \_\_\_\_\_ 9. I thought my life had been a failure.
- \_\_\_\_\_ 10. I felt fearful.
- \_\_\_\_\_ 11. My sleep had been restless.
- \_\_\_\_\_ 12. I was happy.
- \_\_\_\_\_ 13. I talked less than usual.
- \_\_\_\_\_ 14. People were unfriendly.
- \_\_\_\_\_ 15. I felt lonely.
- \_\_\_\_\_ 16. I enjoyed life.
- \_\_\_\_\_ 17. I had crying spells.
- \_\_\_\_\_ 18. I felt sad.
- \_\_\_\_\_ 19. I felt that people disliked me.
- \_\_\_\_\_ 20. I could not "get going".
- \_\_\_\_\_ 21. Is the last week typical of how you have been feeling?

## Appendix 6: Posttraumatic Stress Diagnostic Scale (PDS)

1. Serious accident, fire, or explosion (for example, an industrial, farm, car, plane, or boating accident)  
Yes    No

2. Natural disaster (for example, tornado, hurricane, flood, or major earthquake)  
Yes    No

3. Non-sexual assault by a family member or someone you know (for example, being mugged, physically attacked, shot, stabbed, or held at gunpoint)  
Yes    No

4. Non-sexual assault by a stranger (for example, being mugged, physically attacked, shot, stabbed, or held at gunpoint)  
Yes    No

5. Sexual assault by a family member or someone you know (for example, rape or attempted rape)  
Yes    No

6. Sexual assault by a stranger (for example, rape or attempted rape)  
Yes    No

7. Military combat or a war zone  
Yes    No

8. Sexual contact when you were younger than 18 with someone who was 5 or more years older than you (for example, contact with genitals, breasts)  
Yes    No

8. Imprisonment (for example, prison inmate, prisoner of war, hostage)  
Yes    No

10. Torture  
Yes    No

11. Life-threatening illness  
Yes    No

12. Other traumatic event (Read examples below)  
Yes    No

e.g., Attacked by an animal, Man-made disasters (crashes, fires, war), Witnessed another person being beaten, raped, threatened with serious harm, shot at seriously wounded, or killed, Accidental burning, Near drowning, Hospitalization, emergency room visit, and/or invasive medical procedures, Kidnapped or Other event.

13. Explain if 'yes' to item 12: \_\_\_\_\_

Though you may have experienced a variety of traumatic events, we would like for you to respond to the following questions only in relation to physical and/or sexual assault that you've experienced from a partner.

14. Though you may have had many traumatic events occur with your partner, can you tell me which one you remember as the worst, or the one that has maybe stuck with you the most?

\_\_\_\_\_  
\_\_\_\_\_

Appendix 6: Posttraumatic Stress Diagnostic Scale (PDS) (continued)

15. How long ago did that traumatic event happen? Or, when was the last time it happened? (mark ONE)

1. Less than 1 month
2. 1 to 3 months
3. 3 to 6 months
4. 6 months to 3 years
5. 3 to 5 years
6. More than 5 years

16. During this traumatic event, were you physically injured? \_\_\_\_\_ Yes \_\_\_\_\_ No
17. During this traumatic event, was someone else physically injured? \_\_\_\_\_ Yes \_\_\_\_\_ No
18. Did you think that your life was in danger? \_\_\_\_\_ Yes \_\_\_\_\_ No
19. Did you think that someone else's life was in danger? \_\_\_\_\_ Yes \_\_\_\_\_ No
20. Did you feel helpless? \_\_\_\_\_ Yes \_\_\_\_\_ No
21. Did you feel terrified? \_\_\_\_\_ Yes \_\_\_\_\_ No

Below is a list of problems that people sometimes have after experiencing a traumatic event. Please choose an answer that best describes how often that problem has bothered you **IN THE LAST MONTH**:

- 0: not at all or only one time                      2: 2-4 times a week/half the time  
1: once a week or less/once in awhile            3: 5 or more times a week/almost always

22. Having upsetting thoughts or images about the traumatic event that came into your head when you didn't want them to: \_\_\_\_\_
23. Having bad dreams or nightmares about the traumatic event: \_\_\_\_\_
24. Reliving the traumatic event, acting or feeling as if it was happening again: \_\_\_\_\_
25. Feeling emotionally upset when you were reminded of the traumatic event (for example, feeling scared, angry, sad, guilty, etc.): \_\_\_\_\_
26. Experiencing physical reactions when you were reminded of the traumatic event (for example, breaking out in a sweat, heart beating fast): \_\_\_\_\_
27. Trying not to think about, talk about, or have feelings about the traumatic event: \_\_\_\_\_
28. Trying to avoid activities, people, or places that remind you of the traumatic event: \_\_\_\_\_
29. Not being able to remember an important part of the traumatic event: \_\_\_\_\_
30. Having much less interest or participating much less often in important activities: \_\_\_\_\_
31. Feeling distant or cut off from people around you: \_\_\_\_\_
32. Feeling emotionally numb (for example, being unable to cry or unable to have loving feelings): \_\_\_\_\_
33. Feeling as if your future plans or hopes will not come true (for example, you will not have a career, marriage, children, or a long life): \_\_\_\_\_
34. Having trouble falling or staying asleep: \_\_\_\_\_
35. Feeling irritable or having fits of anger: \_\_\_\_\_
36. Having trouble concentrating (for example, drifting in and out of conversations, losing track of a story on television, forgetting what you read): \_\_\_\_\_
37. Being overly alert (for example, checking to see who is around you, being uncomfortable with your back to a door, etc.): \_\_\_\_\_
38. Being jumpy or easily startled (for example, when someone walks up behind you): \_\_\_\_\_



## Appendix 7: Alabama Parenting Questionnaire (APQ)

The following are a number of statements about your family. Please tell me how often these events TYPICALLY occur in your home. The possible answers are NEVER (1), ALMOST NEVER (2), SOMETIMES (3), OFTEN (4), ALWAYS (5).

	Never	Almost Never	Sometimes	Often	Always
1. You have a friendly talk with your child.	1	2	3	4	5
2. You let your child know when he/she is doing a good job with something.	1	2	3	4	5
3. You threaten to punish your child and then do not actually him/her.	1	2	3	4	5
4. You volunteer to help with special activities that your child is involved in (such as sports, boy/girl scouts, church groups).	1	2	3	4	5
5. You reward or give something extra to your child for obeying you or behaving well.	1	2	3	4	5
6. Your child fails to leave a note or to let you know where he/she is going.	1	2	3	4	5
7. You play games or do other fun things with your child.	1	2	3	4	5
8. Your child talks you out of being punished after he/she has done something wrong.	1	2	3	4	5
9. You ask your child about his/her day in school.	1	2	3	4	5
10. Your child stays out in the evening past the time he/she is supposed to be home.	1	2	3	4	5
11. You help your child with his/her homework.	1	2	3	4	5

Appendix 7: Alabama Parenting Questionnaire (APQ) (continued)

	Never	Almost Never	Sometimes	Often	Always
12. You feel that getting your child to obey you is more trouble than it's worth.	1	2	3	4	5
13. You compliment your child when he/does something well.	1	2	3	4	5
14. You ask your child what his/her plans are for the coming day.	1	2	3	4	5
15. You drive your child to a special activity.	1	2	3	4	5
16. You praise your child if he/she behaves well.	1	2	3	4	5
17. Your child is out with friends you don't know.	1	2	3	4	5
18. You hug or kiss your child when he/she has done something well.	1	2	3	4	5
19. Your child goes out without a set time to be home.	1	2	3	4	5
20. You talk to your child about his/her friends.	1	2	3	4	5
21. Your child is out after dark without an adult with him/her.	1	2	3	4	5
22. You let your child out of a punishment early (like lift restrictions earlier than you originally said).	1	2	3	4	5
23. Your child helps plan family activities.	1	2	3	4	5
24. You get so busy that you forget where your child is and what he/she is doing.	1	2	3	4	5
25. Your child is not punished when he/she has done something wrong.	1	2	3	4	5

Appendix 7: Alabama Parenting Questionnaire (APQ) (continued)

	Never	Almost Never	Sometimes	Often	Always
26. You attend PTA meetings, parent/teacher conferences, or other meetings at your child's school.	1	2	3	4	5
27. You tell your child that you like it when he/she helps out around the house.	1	2	3	4	5
28. You don't check that your child comes home at the time he/she was supposed to.	1	2	3	4	5
29. You don't tell your child where you are going.	1	2	3	4	5
30. Your child comes home from school more than an hour past the time you expect him/her.	1	2	3	4	5
31. The punishment you give your child depends on your mood.	1	2	3	4	5
32. Your child is at home without adult supervision.	1	2	3	4	5
33. You spank your child with your hand when he/she has done something wrong.	1	2	3	4	5
34. You ignore your child when he/she is misbehaving.	1	2	3	4	5
35. You slap your child when he/she has done something wrong.	1	2	3	4	5
36. You take away privileges or money from your child as a punishment.	1	2	3	4	5
37. You send your child to his/her room as a punishment.	1	2	3	4	5
38. You hit your child with a belt, switch, or other object when he/she has done something wrong.	1	2	3	4	5

Appendix 7: Alabama Parenting Questionnaire (APQ) (continued)

	Never	Almost Never	Sometimes	Often	Always
39. You yell or scream at your child when he/she has done something wrong.	1	2	3	4	5
40. You calmly explain to your child why his/her behavior was wrong when he/she misbehaves.	1	2	3	4	5
41. You use time out (make him/her sit or stand in a corner) as a punishment.	1	2	3	4	5
42. You give your child extra	1	2	3	4	5

## Appendix 8: Ways of Coping Questionnaire (WOCQ)

We would like to understand better how you deal with stressful situations. By stressful we mean a situation that is difficult or troubling for you, either because you feel distressed about what is happening, or because you have to use considerable effort to deal with the situation. The stressful situation may involve you family, your job, your friends, or anything else important to you.

Please let me know if you (1) never use, (2) sometimes use, (3) use quite a lot, or (4) use a great deal each of these ways of dealing with stressful situations.

- (1) Just concentrated on what I had to do next – the next step \_\_\_\_\_
- (2) Went over the problem again and again in my mind to try to understand it \_\_\_\_\_
- (3) Turned to work or substitute activity to take my mind off of things \_\_\_\_\_
- (4) I felt that time would make a difference—the only thing to was wait \_\_\_\_\_
- (5) Concentrated on something good that could come out of the whole thing \_\_\_\_\_
- (6) Talked to someone to find out more about the situation \_\_\_\_\_
- (7) Criticized or lectured myself \_\_\_\_\_
- (8) Tried not to burn bridges behind me \_\_\_\_\_
- (9) Hoped a miracle would happen \_\_\_\_\_
- (10) Went along with fate; sometimes I just have bad luck \_\_\_\_\_
- (11) Went on as if nothing had happened \_\_\_\_\_
- (12) I wished that I could change the way I felt \_\_\_\_\_
- (13) Didn't let it get to me; refused to think about it \_\_\_\_\_
- (14) I blamed myself \_\_\_\_\_
- (15) Accepted sympathy and understanding from someone \_\_\_\_\_
- (16) I told myself things that helped me to feel better \_\_\_\_\_
- (17) Tried to forget the whole thing \_\_\_\_\_
- (18) I got professional help \_\_\_\_\_
- (19) I waited to see what would happen before doing anything \_\_\_\_\_
- (20) Tried to make up to someone for the bad thing that happened \_\_\_\_\_
- (21) I made a plan of action and followed it \_\_\_\_\_
- (22) I accepted the next best thing to what I wanted \_\_\_\_\_
- (23) I let my feelings out somehow \_\_\_\_\_
- (24) I felt bad that I couldn't avoid the problem \_\_\_\_\_
- (25) Talked to someone who could do something concrete about the problem \_\_\_\_\_
- (26) Tried to make myself feel better by eating, drinking, smoking, using drugs or medication \_\_\_\_\_
- (27) I tried not to act too hastily or follow my first hunch \_\_\_\_\_
- (28) I thought about fantastic or unreal things that made me feel better \_\_\_\_\_
- (29) Rediscovered what is important in life \_\_\_\_\_
- (30) Changed something so things would turn out alright \_\_\_\_\_
- (31) I asked someone I respected for advice and followed it \_\_\_\_\_
- (32) Made light of the situation; didn't get too serious about it \_\_\_\_\_
- (33) Talked to someone about how I was feeling \_\_\_\_\_
- (34) Stood my ground and fought for what I wanted \_\_\_\_\_
- (35) Took it out on other people \_\_\_\_\_
- (36) I knew what had to be done, so I doubled my efforts and tried harder to make things work \_\_\_\_\_
- (37) I wished that I could change what had happened \_\_\_\_\_
- (38) I made a promise to myself that things would be different next time \_\_\_\_\_
- (39) Came up with a couple of different solutions to the problem \_\_\_\_\_
- (40) I just took things one step at a time \_\_\_\_\_
- (41) Wished that I was a stronger person—more optimistic and forceful \_\_\_\_\_
- (42) I daydreamed or imagined a better time or place \_\_\_\_\_
- (43) Wished that the situation would go away or somehow be over with \_\_\_\_\_
- (44) Had fantasies or wishes about how things might turn out \_\_\_\_\_

# The Kids\* Club Program

- Have you had violence with a partner in the last 2 years?
- Do you have a child between the ages of 4 and 6?
- Are you interested in free support groups for you and your child?
- Do you want to receive \$25 for participating in a survey that takes 1-1.5 hours to complete?

**Free** & confidential Support Group for mothers who have experienced violence with a partner and The Preschool Kid's Club for their children ages 4-6

**THE MOM'S GROUP**  
focuses on support,  
parenting concerns, and  
children's needs

**THE KID'S CLUB**  
Fun activities for children aimed  
to build self-esteem,  
reduce self-blame, and teach  
coping and social skills

Meets for 5 weeks

**Call to register 1-877-647-0789 (toll free)**

\*Child care available \* Snacks \* Transportation can be arranged\*

\* Participation includes 2 hours a week for five weeks and three 90 minute interviews

University of Michigan IRB Number: HUM00004153 Approved on: 11/14/2006

## Appendix 10: Mother's Informed Consent Form

### **The Early Child Intervention Program**

Many children are exposed to violence every year and young children can have problems as a result. We know that older children do better when their mothers get support after violence. But we don't know very much about the best ways to help younger children. Psychologists and social workers at the University of Michigan are trying to learn more about the best way to help young children exposed to domestic violence. In this study we want to do three things. First, we want to find out whether mothers and their young children who take part in group support programs do better than mothers and children who do not take part in group support programs. Second, we want to find out which mothers and which children are helped the most. The intervention programs were created for children ages 4 to 6 and their mothers who have been exposed to violence. Third, we want to learn more about the ways mothers cope with the violence and stress in their lives.

In order to do this we plan to interview 120 mothers and their children in two groups. The first group is interviewed before and after they participate in a five-week support program. The second group of mothers and children is interviewed first then again five weeks later and after that invited to the same five-week support program. The programs for mothers and children take place over five weeks at either the community education center at SafeHouse Center in Ann Arbor, Michigan, at the University of Michigan, or at the Windsor- Essex Children's Aid Society. The support program for the children is the Preschool Kids Club, a ten session activity program aimed at helping young children to name feelings and worries, to build their coping skills and to learn positive things about families and ways to solve conflicts. The Mothers' Empowerment Program is also ten sessions and meets twice a week at the same time as the children's program. The mothers' program offers group support for women exposed to domestic violence. Group leaders are clinical psychologists and graduate students in clinical psychology and social work at the University of Michigan. Transportation and childcare for younger or older siblings are provided, if needed. I \_(initials)\_\_\_ understand that by agreeing to participate in this study I may have to wait five weeks to join the support program for myself and for my child. If I am assigned to this second group, I \_(initials)\_\_\_ know that I also have the option of choosing whether to participate or not in the programs after the five weeks' time. I \_\_\_(initials) understand that I can still participate in the programs even if I decide to drop out of the study (not do the interviews). I \_\_\_(initials) understand that I am free to drop out of the study or out of the intervention program at any time and that there will be no negative consequences to me or to my child. I \_\_\_(initials) understand that there are three interviews that mothers are invited to do. The first interview takes place before the program, at the start of the study for those in the second group. The second interview takes place five weeks later. A third interview takes place six months later for those in the first group. Psychologists and graduate students in clinical psychology and social work at the University of Michigan conduct the interviews. The first interview takes about two hours and mothers will be paid \$25 for their time. The questions ask about the stressful experiences you may have had, including the violence in your life, how you and your child are coping now, how your child is doing, and your thoughts on parenting. Any question may be skipped and you will still be paid \$25 even if you withdraw early from the interview. We want to learn how mothers and children are doing following violence and how mothers manage the stress in their lives. The second interview takes about one hour and mothers are paid \$25 for their time. The third interview takes approximately one hour and mothers are paid \$25 for their time. Any question may be skipped and you will still be paid \$25 even if you withdraw early from the interview. There are benefits and drawbacks to participating in this study. One of the immediate benefits is that you and your child will take part in the support programs, and that they will be free of charge. Similar programs have helped older children and their mothers to have fewer problems after violence. You and your child may cope better after participating in this program. Another benefit is that you will be helping us to improve services and to develop better programs for children and families in the future. You will be helping by agreeing to be interviewed and by giving us permission to obtain information regarding your child and your family. There is little risk associated with completing the interviews. Still, we will ask you about both the strengths and problems in your family. If you feel uncomfortable or distressed during any part of the interview we will be glad to stop at any time. The interviewers are trained in interviewing women exposed to domestic violence and will be sensitive to your needs. A list of affordable



Appendix 11: Child Assent Form

CHILD ASSENT TO BE INTERVIEWED

Hello \_\_\_\_\_. My name is \_\_\_\_\_ (interviewer's first name)\_\_\_\_\_.

I am talking to kids about what they think and about what words they know. I also show pictures of faces and ask kids to press a button. Is it OK with you if I ask you some questions and show you some pictures? It is OK to say no if you don't want to answer questions right now. (IF Yes) You can skip any questions that you don't want to answer and stop any time you like. (IF No) It's OK if you don't want to answer questions right now. (Either way) I have a small gift for you to thank you for your time.

Child gives assent (agrees) to participate.

Child would rather not participate.

Child's Name: \_\_\_\_\_

Interviewer's Name: \_\_\_\_\_

Date: \_\_\_\_\_