

Aggression in Siblings Exposed to Domestic Violence

by

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**Abstract**

Exposure to domestic violence in childhood has serious consequences for children's health and well-being and is an important predictor of domestic abuse. However, as compared to other forms of domestic abuse, the effects of exposure to domestic violence on the quality of sibling interactions have been relatively underexplored. The major objective of the current study was to examine the impact of exposure to domestic violence on the quality of the sibling relationship, and to better understand the influence of age and gender on sibling aggression. Social learning theory and family systems theory were the guiding frameworks for this study. Participants consisted of 47 school-aged sibling dyads with a history of exposure to domestic violence recruited from the community. Aggressive behaviour was measured by standardized questionnaires completed by mothers and children and by observations of naturalistic sibling interactions. As predicted, analyses of observed aggression which controlled for exposure to domestic violence revealed brothers were significantly more aggressive than sisters or mixed gender dyads. Unexpectedly, analyses of observed aggression found that boys were significantly more aggressive with their siblings than their female counterparts when exposure to maternal violence was taken into account. Findings indicate that children exposed to domestic violence, especially boys, may be at greater risk for aggressive behaviour. Results are expected to be useful for practice and future research.

*Keywords:* exposure to domestic violence, aggression, siblings

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## **CHAPTER I**

### **Introduction**

Domestic abuse has existed for several decades but has been a huge concern in our society in recent years due to a growing awareness of its impact throughout the lifespan. Contrary to the belief that the family is typically one of the safest places for individuals to be, the family milieu has also been identified as a place where individuals are likely to experience or witness abuse (Gelles, 1997). Domestic abuse has been attributed to different factors at the micro and macro levels of society. However, at the micro level, a large number of research studies point out the need to examine family processes in order to better our understanding of the causes and consequences of domestic abuse (Flynn, 2000; Gelles & Strauss, 1979).

In relation to familial factors, one of the most common explanations for the occurrence of domestic abuse is exposure to violence within the home. Supporters of this view propose that children are more likely to exhibit abusive tendencies when they have witnessed or experienced abuse within their families of origin (Brody, 1998; Hoffman & Edwards, 2004). Indeed, children exposed to domestic violence may be more likely to experience maladjustment problems including the inability to master good interactive skills (Cummings & O'Reilly, 1997). However, while numerous studies have been conducted to explore the link between exposure to violence and different forms of child maladjustment, very few studies have addressed the link between exposure to violence and the quality of sibling interactions, particularly sibling aggression (Hoffman & Edwards, 2004; Wallace, 2005). In effect, even though today there is an increased

understanding of how important factors at the family level such as exposure to violence in one's family of origin may be predictive of certain types of later domestic abuse, not much is known about how exposure to domestic violence may contribute to sibling aggression and sibling abuse in childhood and adolescence. Sibling abuse is considered to be the most common type of family violence (Gelles, 1997; Hines & Malley-Morrison, 2005); yet, negative sibling interactions such as slapping, hitting or teasing have often been considered to be normal behaviour in our society (Gelles, 1997). These negative interactions have been associated with detrimental outcomes in childhood and adolescence (Aguilar, O'Brien, August, Aoun, & Hektner, 2001; Piotrowski & Siddiqui, 2004). Other research has also shown that the sibling relationship, if handled well, can play a very important positive role in an individual's development (Brody, 1998). Taking into account the tremendous potential impact of the sibling relationship on an individual's development, there is a need to better understand the influence of exposure to domestic violence on sibling relationships.

The major purpose of the present study was to explore the link between exposure to domestic violence and sibling aggression. First, definitions of domestic violence are examined, and the prevalence of exposure to domestic violence is discussed. Second, the effects of exposure to domestic violence on children are reviewed with an emphasis on aggressive behavior, followed by a discussion of theories that explain linkages between exposure to violence and child aggression. Next, the literature on sibling aggression and its relation to sibling abuse is surveyed. Lastly, what is currently known about siblings

exposed to domestic violence is discussed, and the hypotheses of the present study are presented.

## CHAPTER II

### Literature Review

#### Effects of Exposure to Domestic Violence

Existing research on children's exposure to violence has been discussed in three main ways in the literature; exposure to community violence, exposure to family violence and exposure to media violence. In other words, children may be exposed to violence within the family environment, within their communities and in the media (Osofky, 1999). Therefore, it is important to clearly define what type of exposure to violence children experience, in order to clarify potential detrimental outcomes across the developmental continuum.

#### Defining Domestic Violence, Exposure to Domestic Violence and Aggression

One of the most widely acknowledged limitations in the literature on domestic violence, also often referred to as family violence and intimate partner violence, is the lack of a formal and agreed upon definition. Definitions of domestic violence have varied among researchers depending on the context within which they have been employed (Fantuzzo & Mohr, 1999). "Clinical definitions are often broader than legal definitions...By contrast a model code on domestic and family violence limits its definitions to acts of physical harm, including involuntary sexual acts or the threat of physical harm" (Fantuzzo & Mohr, 1999, p. 22). In a review report published by the National Clearinghouse on Family Violence (2006), it was described as:

Interpersonal abuse of individuals in relationships of kinship, intimacy, dependency or trust-the parameters specified for the Family Violence Initiative of

the Government of Canada. It can take a number of forms in addition to physical assault, such as intimidation, psychological or emotional abuse, sexualized abuse, neglect, deprivation and financial exploitation. So the term encompasses various forms of abuse within a range of intimate relationships, including those between parent and child; caregiver and client; adult child and parent; siblings; and intimate partners in dating marital or common law relationships (p. 1).

This definition implies that any child who witnesses any form of psychological, physical, sexual or emotional abuse or any form of neglect within the family is a victim of domestic violence. While there is a lack of a clear definition, ‘the term “domestic violence” typically refers to violence between adult intimate partners (Fantuzzo & Mohr, 1999, p. 22). Consistent with this view, Johnson and Ferraro (2000) stated that “In everyday speech and even in most social science discourse, ‘domestic violence’ is about men beating women” (p. 948). Similarly, in research on the prevalence of domestic violence in healthcare settings, Eisenstat and Bancroft (1999) pointed out that, “Domestic abuse, or battering, is a pattern of psychological, economic, and sexual coercion of one partner in a relationship by the other that is punctuated by physical assaults or credible threats of bodily harm” (p. 886). Margolin and Gordis (2004) agreed with this view by indicating that more often than not, exposure to violence takes place in familiar environments such as the home. From the above discussion it may be inferred that much of the research on domestic violence has been focused on violence by a male partner towards a female partner.

Research on exposure to domestic violence has included children at various stages of development (Edleson, 1999; Fantuzzo & Mohr, 1999; Holden, 2003). A variety of terms have been used in the literature to describe children who live in violent households. However, in recent years, terms such as *witnesses* or *observers* have been replaced by the term *exposure*, because this term is more inclusive of children's multiple experiences of violence (Edleson, Shin, & Armendariz, 2008; Fantuzzo & Mohr, 1999). In his research on children exposed to domestic violence and child abuse, Holden (2003) identified ten distinct categories of exposure to violence starting from the pre-natal stage of development and ranging from children's direct and indirect involvement in violent acts to children's unconscious awareness of violent acts. In other words, the term *exposure* does not only refer to children's direct and indirect experiences of violence but also includes the unconscious impact of the aftermath of these violent experiences (Fantuzzo & Mohr, 1999; Holden, 2003). Therefore, children who experience any negative impact of violence within the home, whether physical, emotional or psychological, can be described as victims of exposure to domestic violence.

Previous and recent research on domestic violence has acknowledged an inconsistent use of the terms violence and aggression in the literature. In an earlier review on domestic violence, Gelles (1985) noted that the terms violence and aggression have been used interchangeably in the literature. Strauss (2001) also acknowledged the synonymous usage of physical aggression and violence in the literature, and maintained that acts of physical aggression carried out by a family member against another have

been typically referred to as violence. In an earlier review, Gelles and Straus (1979) similarly described aggression as:

Any malevolent act, i.e, an act carried out with the intention of, or which is perceived as having the intention of hurting another. The injury can be psychological, material deprivation, or physical pain or damage. When the injury is pain or damage, it can be called “physical aggression” and is then synonymous with “violence”.... (p. 554).

In sum, aggression may be also termed as violence depending on the intention and aftermath of the aggressive act.

For the purposes of the current study, exposure to domestic violence refers to children and adolescents who have directly or indirectly, consciously or unconsciously experienced or witnessed any form of verbal or physical aggression between their mother and an intimate partner. Although sexual violence is acknowledged as important, it is not included within the scope of the present study. The term *intimate partner* refers to a co-parent, dating partner, boyfriend, spouse, or co-habiting partner.

### **Prevalence of Children Exposed to Domestic Violence**

Reports on children’s exposure to violence were not systematically documented until the 1980s (Fantuzzo & Mohr, 1999). Edleson (1999) noted that “Children who witness violence between adults in their homes are only the most recent victims to become visible” (p. 839). For example, in Canada there is no comprehensive nationwide data on abuse and neglect against children and youth within the family (Family Violence Initiative, 2005; Trocme, Tourigny, McLaurin & Fallon, 2003). Despite concerns about

the availability of systematic data, exposure to domestic violence has been shown to be a common experience among children and adolescents (Fantuzzo, Boruch, Beriama, Atkins, & Marcus, 1997; Osofsky, 1999).

Data from two national surveys conducted by Statistics Canada provide information on estimates of rates of children exposed to domestic violence in Canada: the 1999 General Social Survey on Victimization (GSS) and the National Longitudinal Survey of Children and Youth (NLSCY) (Statistics Canada, 2001). Based on data from the 1999 GSS, it was estimated that children heard or saw a parent assaulting another parent in approximately 37% of all households that had experienced spousal violence within the five-year period before the survey was conducted (Statistics Canada, 2001). Within the one-year period ending March 31<sup>st</sup> 2001, it was reported that about 57,200 women with 39,200 children were admitted to 448 shelters in Canada, with most of them escaping violence in their home. About three-quarters of these children were reported to be less than 10 years of age (Statistics Canada, 2001). Based on parental reports in the 1998/99 NLSCY, it was estimated that about 8% of children between the ages of 4-7 years had witnessed some form of physical violence in the home (Statistics Canada, 2008). In cases of child witnesses of spousal violence, children were more likely to witness violence against mothers (70%) than fathers (30%). In a more recent report published by Statistics Canada (2008), it was confirmed that in 2006 there were more than 38,000 police reported cases of spousal violence in Canada (Statistics Canada, 2008). Consistent with these figures, Thompson, Saltzman and Johnson (2003) found that 33.2% of Canadian battered women and 40.2% of American battered women reported



that their children had been exposed to violence directed at them. In a recent study Edleson et al. (2008) investigated children's experience of exposure to violence among a shelter sample of 65 children between the ages of 10 and 16 years. Children in this study reported having been involved in a substantial level of violent acts at home between mothers and their partners with an estimated 41.5% confirming their attempt to stop fights and 47.7% calling for help at some point.

While the above figures clearly suggest that children and adolescents are indeed exposed to violence within their homes, the literature on the prevalence of children exposed to domestic violence has been confronted with certain methodological limitations. In their review of controversies surrounding this documentation, Jouriles, McDonald, Norwood and Ezell (2001) stated that "Documenting prevalence of exposure to violence is different from and is arguably much more complicated than documenting the prevalence of the violence itself" (p. 14). There has been extensive documentation on the definitional and methodological issues in the literature on prevalence of children's exposure to violence (for example in Edleson et al., 2007, 2008; Jouriles et al., 2001; Margolin & Gordis, 2000, 2004; Osofsky, 2003; Prinz & Feerick, 2003). Variations in definitions of terminologies and measurement techniques have contributed to a lack of full understanding of the true extent of the problem of children's exposure to domestic violence (Holden, 2003) consequently making it difficult to compare data across studies (Edleson et al. 2007; Fantuzzo & Mohr, 1999). For example, research based on crime reports has leaned more towards legal definitions, while population-based surveys have relied on clear definitions but have also been heavily dependent on self reports from

participants, potentially compromising the validity of study findings (Osofsky, 2003).

Prinz and Feerick (2003) recommended that consistency in definitional and measurement approaches will not only help create more credible scientific evidence but would also be beneficial for all levels of society.

Most researchers continue to use the Conflict Tactics Scale (CTS) to estimate the extent of domestic violence, but it has been criticized for a number of reasons. The author of the CTS has enumerated a number of weaknesses of the instrument, and has also described how they might be addressed (Strauss, 1990). First, this instrument has focused on violence occurring within conflicts and disagreements very much at the expense of ignoring other malevolent acts. The CTS also relies on a fixed set of violent acts limiting its application to other potential violent situations thereby raising issues of subjectivity. Due to recall problems, the CTS has also been criticized for depending on self reports from participants. The CTS does not provide pertinent and specific information such as context of abuse and initiator of abusive act. The lack of gender differences in severity of violent acts constitutes another concern with the use of the CTS. Considering the general belief that men are physically stronger than women, there is the need to account for gender differences in determining the level of severity of violent acts (Strauss, 1979).

Researchers have also relied on other sources in estimating effects of children exposed to domestic violence. Prevalence rates have been dependent on broad-based surveys and program data. These sources have been criticized for not providing other relevant information such as the nature of children's exposure as a victim or witness (Osofsky, 2003). A good number of studies have also adopted a cross sectional approach

(Carlson, 2000) which may limit a better understanding of the long term effects of exposure to domestic violence over different time periods. Such weaknesses may without doubt have strong implications on the validity of findings on domestic violence research. Despite these methodological and definitional concerns regarding prevalence estimates of children exposed to domestic abuse, there is evidence in the literature that demonstrates exposure to violence is a serious and widespread concern among children and adolescents.

### **Outcomes of Exposure to Domestic Violence**

Exposure to domestic violence constitutes a major public health problem in our society because it has been associated with multiple short term and long term negative effects. Even though exposure to specific forms of violence may be associated with different outcomes, researchers underscore the fact that exposure to any type of violence has often been linked with negative effects, thereby compromising the developmental course throughout the lifespan (Margolin & Gordis, 2000, 2004). Although it is true that some children exposed to domestic violence may not demonstrate symptoms (Carlson, 2000), it is often the case that they are at increased risk for maladjustment problems in the longer term as compared to children from non-violent homes.

Common short term effects of exposure to domestic violence that have been consistently identified across various studies include behavioral, emotional, social, cognitive and academic problems and posttraumatic stress disorder (PTSD) (Carlson, 2000; Eisenstat & Bancroft, 1999; Kitzmann, Gaylord, Holt & Kenny, 2003; Margolin & Gordis, 2000, 2004; Osofky, 2003; Wolfe, Crooks, Lee, McIntyre-Smith & Jaffe, 2003).

Researchers also acknowledge that negative effects of an abusive family milieu may persist through adolescence into adulthood (Duncan & Miller, 2002; Guille, 2004, Margolin & Gordis, 2000) because when children repeatedly experience violence, it may become an accepted behaviour and may be predictive of violence in adolescent and adult life (Osofky, 1995). Findings based on retrospective studies suggest there is an important link between childhood experiences of domestic violence and later adjustment in adulthood (Carlson, 2000).

Disruptions in the developmental course may be manifested in overt and/or covert maladjustment symptoms, and have been grouped under two main categories in the literature: externalizing and internalizing behaviours (Zahn-Waxler, Klimes-Dougan & Slattery, 2000). Externalizing behaviour problems include temper tantrums, bullying, hyperactivity, conflict with siblings and peers, animal cruelty and aggression (Pepler, Catallo, & Moore, 2000) and refer to behaviours that may be harmful to others (Zahn-Waxler et al., 2000). Internalizing symptoms include sleep disturbances, somatic symptoms, anxiety, social withdrawal and depression (Pepler, Catallo, & Moore, 2000) and refer to disruptions in moods and emotions (Zahn-Waxler et al., 2000). Children living in violent homes may consider the world to be unsafe and this may have serious repercussions on their self esteem and consequently lead to depression, mood disorders and other internalizing symptoms (Margolin & Gordis, 2004).

Different researchers have investigated the link between children's experiences in abusive homes and subsequent behavioural problems. Two different meta-analyses conducted by Wolfe et al. (2003) and Kitzmann et al. (2003) revealed that exposure to

domestic violence was associated with externalizing behavioral problems. Several other studies have also confirmed that children exposed to domestic violence exhibit significantly more externalizing behavior as compared to their non-exposed counterparts (Grych, Jouriles, Swank, McDonald & Norwood, 2000; McFarlene, Groff, O'Brien & Watson, 2003). One of the most common externalizing symptoms is aggression (Cyr, Fortin, & Lachance, 2006; Evans, Davies & DiLillo, 2008; Fantuzzo & Mohr, 1999; Margolin & Gordis 2000, 2004). For example, recent work by Ireland and Smith (2009) established a link between exposure to domestic violence and subsequent aggressive and antisocial behaviours in children. Kernic and colleagues (2003) also found that children exposed to domestic violence were more likely to display aggressive and delinquent behaviours. Numerous other researchers have also linked exposure to domestic violence with the increased likelihood of aggressive behaviour by children (For example, Allen, Wolf, Bybee, & Sullivan, 2003; Baldry, 2003; Moretti, Obsuth, Odgers, & Reebye, 2006). Given these compelling findings, the focus of the present study was on children's aggressive behaviours.

### **Aggressive Behaviour**

There are two major types of aggression that may emerge in the course of child development; a) instrumental aggression, which includes physical acts such as pushing or shouting used in pursuit of a particular item or privilege, and b) hostile aggression, which refers to acts that are carried out with the intent to hurt (Berk & Shanker, 2006). Hostile aggression is of greater concern because in certain cases it is less likely to decline in frequency as children grow older (Tremblay et al., 2004). Hostile aggression can be

expressed as physical, verbal, and/or relational aggression (Berk & Shanker, 2006). Examples of physical aggression include kicking, pushing and destroying another's property. Verbal aggression can include behaviours such as name calling and hostile teasing, while relational aggression involves any deliberate direct or indirect acts of social exclusion directed towards another with the intent of damaging relationships (Berk & Shanker, 2006). While other forms of aggression are important and can be equally damaging, the scope of the present study will be limited to hostile physical and verbal aggression only.

### **Theoretical Perspectives**

While research has established clear linkages between exposure to domestic violence and children's aggressive behaviour, there are several different theoretical perspectives that offer explanations for this association. Different theories at the micro and macro levels, such as the emotional security hypothesis (Davies & Cummings, 1994, 1998), the developmental psychopathology framework (Cowan & Cowan, 2006), the developmental risk and resiliency framework (Gewirtz & Edleson, 2007), the cognitive-contextual framework (Grych & Fincham, 1990) and conflict theory (Hoffman & Edwards, 2004) have all been used to explain the relationship between children's aggressive behaviour and exposure to domestic violence. Among all these, social learning theory and family systems theory are among the most relevant and useful in explaining the association between exposure to domestic violence and children's aggression, because they describe specific mechanisms between family members that

account for aggressive behaviour. These two theoretical frameworks are described in more detail in the next section.

### **Social Learning Theory**

Bandura's (1969, 1977) social learning theory is one of the most frequently cited theoretical perspectives that has been used to explain the emergence of violent and aggressive behavior in children exposed to domestic violence. Social learning theory posits that behavior is a learned phenomenon. An important process that enhances our understanding of the underlying principle of this theory is modeling. Social learning theory proposes that children learn aggression by modeling, which is also referred to as imitation or observation (Berk & Shanker, 2006). Bandura (1969) explained that during the process of observation there is a complex interaction between verbal representations and symbolic images. This is manifested in modeled behaviours which in turn become established patterns of imitation (Bandura, 1969). Specific to aggressive behaviour, Bandura (1978) stated that "People are not born with performed repertoires of aggressive behavior; they must learn them" (p.14). Bandura (1978) indicated that nearly all aggression is reinforced by observation and claimed that the family environment is one important environment where aggression may be reinforced in children. For example, children's observation of aggressive behaviour between parents may be manifested in aggressive strategies in their interactions with others (Bandura, 1978). In their review on domestic violence, Gelles and Strauss (1979) likewise acknowledged that "the family serves as a training ground for violence..." (p. 560) and these childhood experiences are

likely to be even carried on into adult life and may be manifested in parental and conjugal roles (Gelles & Strauss, 1979).

Advocates of social learning theory agree that children who live in violent households are likely to model the aggressive behaviours they experience and that these experiences may be apparent in their interactions with others (Barlett & O'Mara, 2006; Carlson, 2000; Edleson, 1999; Margolin & Gordis, 2004). Consistent with this school of thought, Berk and Shanker (2006) commented that through repeated observations, children eventually form an internal device through which moral conduct and values are established over time. Others have also confirmed a link between children's exposure to violence and their inability to master good interactive skills (Cummings & O'Reilley, 1997).

In effect, social learning theory clearly identifies a crucial link between family dynamics and the occurrence of aggression and violence in children exposed to domestic violence (Hofmann & Edwards, 2004). However, this theoretical approach fails to explain children's varied responses to exposure to domestic violence such as low self-esteem, depression and post-traumatic stress symptoms (Carlson, 2000). Social learning theory has also been criticized for solely limiting explanations of behavioural trends to environmental influences (Berk & Shanker, 2006). It fails to account for how other factors, such as individual or family characteristics, may also contribute to children's development of aggression (Berk & Shanker, 2006). Obviously, not all children exposed to domestic violence are impacted in the same manner. Therefore, one important limitation of social learning theory is that it does not adequately explain the role of other



important variables in the development of aggression in children exposed to domestic violence. To address these shortcomings, family systems theory can provide a complementary theoretical framework which addresses how other aspects of the familial context may account for aggression in children exposed to domestic violence.

### **Family Systems Theory**

Family systems theory (FST) is premised on the notion that there is a reciprocal connection between elements that make up a whole (Barker, 2003). Within the family system, family members and their relationships with each other constitute these elements (Cowan & Cowan, 2006). This theory holds that family systems consist of subsystems and adds that the family unit is characterized by two important elements: wholeness and order (Cox & Paley, 2003). In other words, there is an interconnecting relationship between different members within the family unit. Thus, the experiences of one family member may have significant implications for the entire family unit (Cox & Paley, 2003). Based on the assumption of an interconnection between all individuals and subsystems within the family unit, FST suggests that to have a full understanding of an individual it would be important to understand the nature of the differing relationships that exist between members of the family (Becvar & Becvar, 1999). Therefore, it would be limiting to assess an individual's behavior in isolation without taking family context into account (Cowan & Cowan, 2006).

With regard to families that have experienced domestic violence, links have been established between individual well-being and family relationships (Cowan & Cowan 2006; Cox & Paley, 2003; Walsh & Harrigan, 2003). For example, Yahav (2002)

investigated the relationship between family functioning and behavioural symptomatology in children. This study indicated that internalizing and externalizing problems in children were associated with disengaged family cohesion. In a review on linkages between marital conflict and children's adjustment, Davies and Cummings (1994) demonstrated that destructive marital conflict was related to children's dysregulation of emotional responses. Earlier research carried out by Grych and Fincham (1990) also confirmed that hostile marital conflict was related to adjustment problems in children.

While FST proposes linkages between individual well-being and family of origin relationships, critics have challenged proponents of FST to identify specific relationship processes that impact individual well-being. In a recent commentary on controversies surrounding domestic violence research and treatment utilizing FST, Murray (2006) commented that formal regulations have made it rather challenging for family professionals to empirically test the full validity of FST. In effect, "to date, there is no conclusive evidence that family systems theory approaches to treating family violence issues either are or are not effective" (p. 235). Another limitation of FST is that it emphasizes the impact of family dynamics in explaining individual responses to the violent family context; therefore, it is unclear how other moderating factors, such as individual attributes like age or gender, or external influences such as extra-familial relationships and community factors (Hasket, Nears, Ward, & McPherson, 2006) may moderate or exacerbate the effects of exposure to domestic violence.

In spite of these limitations, when taken together social learning theory and family systems theory provide distinct yet complementary theoretical frameworks that help to explain the linkages between exposure to domestic violence and children's aggressive behaviours. Social learning theory posits that exposure to inter-adult violence would increase the likelihood of children modeling violent behaviour in their interactions with others, such as peers or siblings; however, it does not fully account for individual variability in children's aggression. Family systems theory proposes that inter-adult violence in the home would exert a significant influence on the dynamics in other family relationships, including sibling aggression and hostility, but does not take into account individual characteristics that may moderate this influence. Building on these theoretical perspectives, it is also important to address how certain individual characteristics such as age and gender (Evans et al., 2008) can act as influential moderators between exposure to domestic violence and children's aggression. These are discussed in more detail below.

### **Gender**

A number of studies have suggested that gender accounts for some of the variability in adjustment among children and adolescents exposed to domestic violence, and that differences between boys and girls are particularly strong with regard to aggression (Evans et al., 2008; Martin, 2002). Several studies have demonstrated that boys exposed to domestic violence are more likely to engage in physical aggression, while girls are more likely to engage in verbal and other indirect forms of aggression (Gelles, 1997; Gewirtz & Edleson, 2007; Tremblay et al., 2004; Valois, MacDonald, Bretous, Megan & Drane, 2002, Kerig, 1999). Based on Bandura's (1969) social learning

theory, it is believed that particularly in the case of mothers who are abused by their male partners, boys who identify themselves with the perpetrator may consider aggression as normative and may be more likely to be aggressive. Conversely, girls who have witnessed mothers being abused may consider victimization a normal response to abuse (Baldry, 2001; Carlson, 2000).

Other investigators have conceptualized that gender differences may emerge as a result of differences in how violent acts are processed by boys and girls (Kerig, 1999; Kerig, Fedorowicz, Brown, Patenaude & Warren, 1999). In a review of the empirical literature, Kerig (1999) explained that children's appraisal of violent situations in the home was found to be an important predictor of varying levels in symptoms of maladjustment in boys and girls. While perceived threat was found to be an important mediator for adjustment in boys, self-blame was found to be an important mediator for adjustment in girls (Kerig, 1999). However, there have been conflicting results in the literature concerning the role of gender in predicting outcomes of exposure to domestic violence (Fantuzzo & Mohr, 1999). For example, in her review of the empirical literature on appraisal and gender differences in maladjustment in children, Kerig (1999) found that boys were more likely to demonstrate both internalizing and externalizing behaviours as compared to girls were more likely to demonstrate internalizing problems. In addition, a recent meta-analysis conducted by Evans et al., (2008) revealed that boys with a history of domestic violence exhibited more externalizing symptoms as compared to their female counterparts. Contrary to this, Kitzman et al. (2003) found no significant

link between gender and children's reaction to exposure to domestic violence in their meta-analysis.

Recent work has distinguished between exposure to domestic violence perpetrated by fathers against mothers, and by mothers against fathers (Moretti et al., 2006). In this study, adolescent females who were exposed to both fathers' and mothers' physical violence towards partners were more likely to be aggressive with their friends and romantic partners, while adolescent boys who were exposed to father's physical violence towards partners were more likely to be aggressive with friends. These results suggest that girls exposed to maternal violent behaviour may be at greater risk for aggression than boys. Unfortunately, this study did not address sibling aggression.

These discrepancies in gender differences may be a function of methodological limitations across studies. In their review on gender and aggression in children, Underwood, Galen and Paquette (2001) suggested that a better understanding of the role of gender requires the integration of a variety of conceptual frameworks and a multi-method approach in this domain of research. Edleson (1999) noted that there has been an over reliance on maternal report. Reports from battered mothers may be biased by a lack of objectivity which may distort research findings (Carlson, 2000). Inconsistencies between parent and child reports have also raised some concerns regarding reliability of research findings (Osofsky, 2003). Therefore, while gender differences may account for some variability in responses to domestic violence, alone they are not sufficient. Other work has suggested that age may also be an important moderating factor.

### Age

While children of all ages are impacted by exposure to domestic violence, some research has indicated that risk for negative outcomes may increase with age (Martin, 2002; Osofsky, 1999). This implies that different developmental stages may moderate the impact of exposure on child adjustment (Carlson, 2000). Violence and aggressive behaviour is known to peak during the teenage period (Valois et al., 2002). Valois et al. (2002) explained that violent behaviour tends to increase in preadolescence and peaks in late adolescence but then declines in adulthood. This may be the case because intensity and duration of exposure have been associated with higher levels of distress in children living in violent homes than with children with no such history (Carlson, 2000). Children exposed to longer periods of violence are more likely to engage in more intense and prolonged aggressive behavior (Valois et al., 2002). In the case of adolescents, particularly those who have experienced violence throughout their lives, higher levels of aggression and other behavioral problems have been associated with longer periods of exposure to domestic violence (Martin, 2002; Osofsky, 1999).

Researchers have also indicated that younger children may be partially protected from the full impact of their experience because they can not fully process the implications of violent acts (Osofsky, 2003). Martin (2002) explained that, as compared to younger children, adolescents have more sophisticated cognitive abilities and can therefore understand and interpret violent episodes more efficiently. In contrast, in their meta-analysis on exposure to domestic violence and child and adolescent outcomes, Evans et al. (2008) found no significant differences in externalizing and internalizing

symptoms between school-aged children and adolescents. Therefore, as in the case of gender noted above, age differences may account for some variability in responses to domestic violence, but alone they are not sufficient.

### **Age and Gender**

Very little research has examined the interactive effects of age and gender. However, one recent study that did take this approach found no significant differences in the level of externalizing and internalizing behaviours between school-aged and adolescent boys and girls (Evans et al., 2008). It is worth noting that in a recent review, Gewirtz and Edleson (2007) mentioned that few studies have investigated differential responses to exposure across gender and different ages, which limits our understanding of how the interaction of these variables may influence negative outcomes. One important goal of the present study is to address this gap in the literature by examining how the interaction between age and gender influences the aggressive behaviour of children exposed to domestic violence.

Another important gap in the literature is that most studies report on aggressive behaviour demonstrated by a single child within the family, despite the fact that most families, including those experiencing violence, have more than one child (Statistics Canada, 2008). This is particularly important when investigating aggression, because aggressive behaviour between siblings is believed to be the most common form of domestic violence (Eriksen & Jenson, 2006). Consequently, the link between exposure to domestic violence and sibling aggression remains vastly under-explored. It is surprising that much remains unknown about sibling aggression in violent families because “Sibling

relationships are central in the lives of children and adolescents around the world”

(McHale, Kim & Whiteman, 2006, p.127). Therefore, the present study investigated how the interaction between age and gender influences the aggressive behaviour of siblings exposed to domestic violence.

### **Sibling Relationships**

The role of siblings in the developmental process cannot be overemphasized (Brody, 1998; Dunn, 2007). Siblings are known to be important socializing agents because the quality of sibling relationships has been linked to children’s psychosocial adjustment (Updegraff, Thayer, Whitemen & Denning, 2005; Ward, 2006). Brody (1998) stressed that a positive sibling relationship is likely to create a positive learning opportunity for children, and good interpersonal skills in later life. Ward (2006) shared this view by commenting that siblings act as role models and help shape attitudes towards other future relationships. However, McHale and colleagues (2006) observed that sibling relationships may also be characterized by ambivalent feelings throughout childhood and adolescence. Ward (2006) indicated that sibling ties may have negative effects depending on the quality and context of the relationship. Patterson (1986) similarly contended that siblings may promote both positive and negative behaviours, and that the sibling relationship may serve as a training ground for antisocial behaviour. In the same way, Compton, Snyder, Schrepferman, Bank and Shortt (2003) agreed that antisocial behaviour by one sibling is likely to promote similar negative behavioural patterns in other siblings.



While much has been written on the developmental attributes of the sibling union, very little information exists on the link between exposure to domestic violence and the antagonistic aspects of sibling interactions. Currently, there is a paucity of research on siblings exposed to domestic violence. To better our understanding of the role siblings may play in the aggressive behaviour of children exposed to domestic violence, the next section highlights what is currently known about sibling relationships with a focus on aggression.

### **Sibling Aggression**

A thorough examination of the existing literature reveals that different terms have been employed in the literature to describe negative interactions between siblings. Finkelhor, Turner, and Ormod (2006), Piotrowski and Sidiqqi (2004) and Gelles (1997) referred to negative sibling interactions as sibling violence. Other terms such as sibling quarrels (Dunn & Munn, 1986), sibling assault (Caffaro & Conn-Caffaro, 1998), sibling abuse (Wiehe, 1990, 1997), and sibling aggression (Felson & Russo, 1988; Martin & Ross, 1995; 2005; Piotrowski, 1999) have been used interchangeably in the literature to describe the antagonistic aspects of the sibling relationship. Caffaro and Conn-Caffaro, (1998) noted that “The inability to accurately and consistently define sibling incest or assault has created serious problems for clinicians, researchers, and child and family protection agencies” (p. 12). In a study conducted by Felson and Russo (1988) on sibling aggression and parental punishment, aggression was defined as “an overt act involving intended harm, and conflict as a perceived divergence in interest” (p. 11). Like all other family relationships, the sibling relationship has been described as being characterized by

conflict (Martin, Anderson, Burant, & Weber, 1997) and aggression is believed to be inherent in all relationships (Martin & Ross, 1995). Martin and Ross (1995) noted that sibling aggression often co-occurs with conflict. Based on these explanations, any overt destructive acts between siblings with the intent of hurt or injury may be referred to as sibling aggression.

### **Aggression versus Abuse**

While any deliberate acts inflicted by one sibling with the intention of injuring or harming another sibling may be referred to as sibling aggression, Wiehe (1997) defined sibling abuse as “the physical, emotional, and sexual abuse of one sibling by another” (p. 2). Wallace (2005) similarly described sibling abuse as “any form of physical, mental, or sexual abuse inflicted by one child in a family unit on another” (p. 113). Although aggression and abuse may be similar based on the acts involved, Wiehe (1997) makes an important distinction between aggression and abuse.

Based on social learning theory, Wiehe (1997) concluded that abuse is a learned behavior, and explained that children may learn and model abusive behavioural trends from older siblings and other adults such as parents. Particularly in the case of siblings, Wiehe further clarified that in response to abuse by older siblings, younger siblings may move from a passive status (victim) to an active status (aggressor). Actions such as physical assaults, if not interrupted, can become normative behaviour. A repeated pattern of such aggressive behavior is indicative of an abusive relationship (Wiehe, 1997). This means that although behaviours such as hitting and slapping may be common to both aggression and abuse, the latter is a behavioural pattern that is established over time.

Based on this view, it may be the case that aggressive siblings are at risk for abusive behavior. Given these distinctions between aggression and abuse, in the present study sibling aggression was defined as any willful physical or verbal acts between siblings designed to cause harm. This definition specifically focuses on biological siblings between the ages of 5-18 years living in the same household.

Some previous research has examined age and gender differences in sibling aggression, although these studies did not sample siblings exposed to domestic violence. Martin and Ross (1995) investigated developmental changes and gender differences in sibling aggression among preschool-aged children. Older siblings engaged in more severe physical aggression, and boys engaged in higher levels of aggression than girls. These results were partly attributed to gender differences in socialization patterns. In a more recent short term longitudinal study, Martin and Ross (2005) investigated the development of physical and verbal aggression among school-aged siblings across two time points. They found that all children in the study sample engaged in some level of physical and verbal aggression with their sibling, and that frequency of aggressive acts decreased over time. Results also revealed that older siblings were more likely to direct aggressive acts towards younger siblings during both time periods of the study. One major limitation of this study was the reliance on observational data only, rather than using a multi-method approach.

In another study on sibling aggression, Felson and Russo (1998) examined the frequency of verbal and physical aggression among school-aged children. The study revealed that girls were just as likely as boys to engage in physical and verbal aggression

with their siblings. However physical aggression was found to be more common among siblings of the same sex. The study also found that there was a decline in physical and verbal aggression over time. A major weakness of this study was the use of parent and child report without observational data. These findings are indicative of how age and gender may interact to influence aggression between siblings. Unfortunately, very few studies to date have focused on the nature of sibling aggression in children exposed to domestic violence.

### **Sibling Aggression in Children Exposed to Domestic Violence**

Waddell, Pepler and Moore (2001) conducted one of the few studies addressing sibling aggression in children exposed to domestic violence. They recruited families with a history of domestic violence from shelters, and two comparison groups of families without a history of violence from the community. One comparison group included lone parent families, and the other included two parent families. Both physical and verbal sibling aggression were assessed. Children and mothers reported on the quality of the sibling relationships, and children were observed to assess the quality of sibling interactions during a cooperative and a competitive task. Surprisingly, mothers reported that siblings from violent homes used less verbal and physical aggression as compared to children from the comparison groups. The study also found no significant group differences in maternal reports of overall externalizing behaviours. To assess the quality of observed sibling behaviour, observational coding was conducted using rating scales of nine behavioural dimensions of paired opposing attributes which included an aggressive versus nonaggressive category. Observational findings indicated that shelter sibling

dyads tended to display more supportive and cooperative behaviours than their counterparts from lone parent non-violent families; no difference in observed aggressive behaviour were found. Major strengths of this study were the use of non-violent comparison groups, and the use of a multi-method assessment using reports from children and mothers, as well as observations of sibling interactions. Limitations of this research included a very small sample size ( $n = 10$  siblings dyads exposed to domestic violence), and recruitment of violent families from shelters only. In addition, observations of sibling interactions consisted of 10 minutes of a cooperative task and 15 minutes of a competitive task. A longer unstructured observation period would have provided opportunity for more naturalistic interaction, including aggression. Most importantly, this study did not address how gender or age accounted for variability in child adjustment in children. Thus, to date, no study has specifically investigated the role of age and gender in sibling aggression in children exposed to domestic violence.

In their review on sibling relationships in childhood and adolescence, McHale and her colleagues commented that methodological problems have made it difficult to obtain consistent findings on gender and negativity between siblings (McHale et al., 2006). In the same way, Aguilar et al. (2001) admitted that there have been mixed findings on the role of gender composition among sibling dyads. McHale et al. (2006) explained that the problem of small sample size has also contributed to the dearth of literature on the potential effect of age on the sibling relationship. In addition, the majority of studies based on sibling reports have been one-sided, and have not included comparisons of older versus younger siblings' experiences from the same family

(McHale et al., 2006). A likely explanation for inconsistencies in research findings in this domain may be attributed to variations in perspectives depending on raters and context. For example, discrepancies between parents and children's reports on experiences of domestic violence have been documented in the literature (Jouriles et al., 2001). Many parental reports have underestimated the effect of exposure to domestic violence on their children (Edleson, 1999). In his research, Edleson (1999) noted that "who reports the child's problems may also skew the information we receive" (p. 15). Research limited to shelter samples may also reflect inherent biases, as many families experiencing domestic violence do not seek refuge from shelters (Statistics Canada, 1999). Therefore the use of a multi-method approach, drawing upon community-based samples of children exposed to domestic violence, are important methodological considerations that need to be taken into account in order to minimize potential problems identified in the existing literature.

### **Summary**

While the link between exposure to domestic violence and child aggression has been extensively documented in the literature, very little attention has been given to sibling aggression. In addition, work on sibling aggression in non-violent families has been limited to variables such as influence of birth order, or parental responses to aggression, to name a few. Although there is evidence in the literature suggesting that negative sibling interactions may be linked to violent family processes, to date no study has been specifically conducted to investigate the relationship between exposure to domestic violence and sibling aggression among children of school going and adolescent age. Measurement issues have been central to methodological limitations in the domain.

This has contributed to a lack of a better understanding of the potential link between exposure to domestic violence and mediators such as age and gender in relation to sibling aggression. Bearing in mind that aggressive children may be at risk for abusive behaviour, there is a compelling need to investigate negative sibling interactions in relation to exposure to domestic violence.

### **Purpose of the Present Study**

The major purpose of the present study was to determine how age and gender may moderate the effects of exposure to domestic violence on aggression between siblings. To achieve this objective, a community-based sample was recruited to control for potential confounding variables that may be associated with shelter samples. In addition, a multi-method approach to the measurement of aggression was utilized, drawing upon mother, older sibling, younger sibling, and independent observer reports in order to increase the reliability of the research findings. Finally, the present study included children ranging in age from 5-18 years so that age differences could be assessed.

### **Hypotheses**

Based on the two guiding theoretical frameworks, notably social learning theory and family systems theory, and the extant literature, the following hypotheses were proposed:

**Gender Differences**

1) Sister dyads would exhibit less physical aggression on average as compared to mixed sex dyads, and mixed sex dyads would exhibit less physical aggression on average as compared to brother dyads.

2) Sister dyads would exhibit less overall aggression on average (combining physical and verbal aggression) as compared to mixed sex dyads, and mixed sex dyads would exhibit less aggression on average (combining physical and verbal aggression) as compared to brother dyads.

**Age Differences**

1) Younger siblings would exhibit less verbal aggression on average as compared to older siblings.

**Age & Gender Differences**

1) Older brothers would display more physical aggression on average than older sisters.

2) Older sisters would display more verbal aggression on average than older brothers.

3) Older brother would display more overall aggression on average (combining physical and verbal aggression) than older sisters.

It was further expected that length of exposure to domestic violence would be significantly related to sibling aggression and would be controlled for as a covariate in all analyses. Finally, additional analyses were conducted to explore if aggressive behaviour by girls would be more frequent in those families in which mothers displayed physical violence towards their partners than in families in which girls were exposed to paternal physical violence only.



## CHAPTER III

### Method

#### Recruitment

Participants for the present study consisted of a non-random sample of 47 families with a history of domestic violence recruited from the community using a variety of means including newspaper adverts, posters and mail flyers. Participation was voluntary. Interested participants phoned researchers and were screened on the following criteria: 1) Families had to have at least 2 siblings of school-age (5 to 18 years of age) who were willing to participate; 2) Mothers and children spoke English fluently; 3) Mothers self-identified as having a history of intimate partner violence, and 4) Mothers had received or were currently receiving counselling concerning their abuse.

#### Procedures

Families who met screening criteria were invited to choose one of four locations for interviews; these included three local agencies or on campus. Mothers provided written informed consent while children provided oral consent. Each family member was interviewed separately and privately; mothers were interviewed first while children were videotaped. As well, when age appropriate, each family member was also given the option of completing the instruments on their own, with an interviewer present to answer questions. In an effort to establish rapport, demographic information and selected instruments were administered first in a structured interview format. All interviewers were female, and whenever possible family members were interviewed by women of

similar ethno-cultural origin. Families were also provided \$75 cash remuneration and information about local community resources such as a crisis hotline.

### **Participants**

#### **Children**

Child participants consisted of 47 sibling pairs. This included 9 sister dyads, 18 brother dyads and 20 mixed sex dyads, consisting of 11 with older brothers and 9 with older sisters. There were 27 male and 20 female younger siblings, who were 8.5 years old ( $SD = 2.4$ ) on average. There were 29 male and 18 female older siblings, who were 11 years old ( $SD = 2.7$ ) on average. Siblings were spaced 2.8 years ( $SD = 2.0$ ) apart on average, and average family size was 2 children. If there were more than 2 eligible children in a family, mothers were asked to choose two siblings to participate. Mothers also reported 62% of children had received some prior counselling.

#### **Mothers**

Mothers were 35 years old ( $SD = 5.3$ ) on average. Most of them were lone parents (74%), defined as being separated, divorced, widowed or never married. Mothers self-identified their ethno-cultural background as European-Canadian (62%), Aboriginal (30%) and multiracial (8%). In addition, 57% had a high school education or less and 64% had annual family income of under \$20,000. This income level was below the urban low-income cut-off (LICO) of \$27,000 for a family of three set by the Canadian government (Statistics Canada, 1999). In the mid-sized Canadian city in which these families were recruited, approximately 63% of lone parents lived under the LICO; therefore, the household income of the lone parents who participated in this study was

representative of lone parents residing in the community. All mothers in this study had also received counselling concerning their abuse, ranging from less than one month (9%) to more than one year (49%).

## Measures

### Measures Administered to Mothers

**Violence history.** To measure their violence history, mothers completed the Physical Aggression subscale of the Conflict Tactics Scale (CTS) (Straus, 1979). The Physical Aggression subscale measures 8 violent behaviours that occurred within the context of a conflict with a partner in the past 12 months, and each behaviour is rated on a 7-point scale ranging from 0 (never) to 6 (more than 20 times). Mothers provided reports on their own and their partner's behaviour, but were more comfortable reporting about themselves. In the present study, 66% of mothers reported an intimate partner had directed violent behaviour towards them in the context of a conflict at least once in the past year. These behaviours included being pushed, grabbed or shoved (66%), kicked, bitten or hit (50%), beaten up (34%), and being threatened with a weapon (28%). In addition, 68% of mothers also reported directing at least one violent behaviour towards an intimate partner in the context of a conflict during the past year. These behaviours included pushing, shoving or grabbing (62%), kicking, biting or hitting (34%), and threatening with a weapon (15%). It is important to note that prevalence estimates of female-to-male violence vary across studies, but that male-to-female violence has been shown to be more destructive in terms of both physical and psychological outcomes (Schafer, Caetano, & Clark, 1998).

**Child Exposure to Violence.** Mothers estimated the length of their children's lifetime exposure to intimate partner violence. In the present study, on the average younger siblings were exposed for 3.9 years ( $SD = 2.9$ ) and older siblings were exposed for 4.8 years ( $SD = 3.6$ ).

**Quality of Sibling Relationship.** Mothers completed the Sibling Relationship Questionnaire (SRQ) designed to assess parent perceptions of the sibling relationship (Furman, & Buhrmester, 1985, 1990; Furman, Jones, Buhrmester, & Adler, 1989). The original SRQ questionnaire consisted of 48 items, each presented as a 5-point Likert scale ranging from 1 (hardly at all) to 5 (extremely much); however, the father partiality dimension of the original measure was excluded due to the substantial number of lone parent families in the present sample. For purposes of the present study, a sibling aggression subscale was created that consisted of 5 items including: insult and name calling; fighting; meanness; getting mad and argument; and hitting. A principal components analysis with varimax rotation was conducted with these 5 items. Results are shown in Table 1. All items loaded on a single factor with a loading of .30 or higher, with the exception of "mean to each other". Therefore, this item was removed from this subscale; Cronbach's alpha for the 4-item scale was .94.

### **Measures Administered to Siblings**

**Quality of the Sibling Relationship.** Both siblings completed the Sibling Relationship Interview (SRI) originally developed by Stocker and McHale (1992). It was revised by Stormshak and colleagues to include behaviours both initiated and received by each sibling (Stocker & McHale 1992; Stormshak, Bellanti & Bierman, 1996). All items

consisted of a 4-point Likert scale, ranging from 1 (not ever) to 4 (a lot). An aggression subscale of 8 items was created for each sibling using 4 items initiated by the sibling and 4 items received by the sibling; these included: fighting, meanness, getting mad and hitting or punching. A principal components analysis with varimax rotation was conducted separately for older and younger siblings. All 8 items loaded on a single factor with a loading of .30 or higher for both younger and older siblings; these results are shown in Tables 2 and 3 respectively. Therefore, all 8 items consisting of both physical and verbal aggression items were combined into a single subscale for each sibling. Cronbach alphas for the aggression subscales were .86 and .84 for older and younger siblings respectively.

Descriptive statistics for all aggression variables are summarized in Table 4. Associations between variables are reported in Table 5. Maternal reports of sibling aggression were positively and significantly correlated with both younger and older sibling reports of aggression; however, observer reports of sibling aggression were unrelated to all other measures of aggression. In addition, analyses of mean differences between mother reports and older and younger sibling reports were not significant. Therefore, maternal, older and younger sibling reports were combined to create a family aggression variable, while observed aggression remained a separate variable. All variables were standardized prior to further analysis.

**Unstructured Observation.** To observe sibling interactions, children were asked to “wait” in a living-room like setting while their mothers were interviewed and completed questionnaires. They were provided with a snack and with a variety of materials,

including a Trouble Game, Lego, Barbie doll, drawing materials, chalkboard and hand-held videogame (Mega Man). Unstructured interaction was video-taped for a minimum of 30 minutes. A video camera was mounted in one of the ceiling corners, and a microphone was mounted on the ceiling to capture interactions while a research assistant watched sibling behaviour on a monitor in a room next door. During this observation period, siblings were asked to remain in the room and others did not enter unless they were asked to.

**Sibling Interaction Observation Coding Scheme.** A coding scheme was developed to assess the quality of sibling interactions. While both positive and negative interactions were coded, the focus of the present study is on aggressive behaviour only. Physical aggression was defined as any overt behaviour that included hitting, punching, kicking, serious wrestling, throwing an object at somebody but missing and physical threat (e.g., raising fists). Verbal aggression was defined as any behaviour that included yelling, name calling, swearing, insulting, hostile teasing or hostile comments such as I hate you, jokes or threats, telling or tattling. Interactions between sibling dyads were coded jointly, not independently. Each coding interval was 30 seconds long. Inter-rater reliability was assessed by two independent observers coding 25% of the sample of videotapes; coefficient kappa was .81 for physical aggression and .80 for verbal aggression.

## CHAPTER IV

### Results

#### Data Analysis

The overall goal of the present study was to investigate the nature and extent of age and gender differences in sibling aggression in children exposed to domestic violence. Analyses consisted of three main phases. In the first phase, aggression variables were created based upon the degree of association between them, as previously described in the methods section. In the second phase, age differences and gender differences in aggression were assessed separately. In the third phase, the potential interaction of age and gender differences was investigated. The alpha level used in all analyses in the present study was  $p < .05$ . Mean differences in aggression were assessed by analyses of variance (ANOVA) and  $t$  tests. These analyses are based on two major assumptions: the data must follow a normal distribution and groups must be of equal variance (Hassard, 1991). In the present study these assumptions were met; it must be mentioned however that ANOVA and independent  $t$  tests are believed to provide reliable results even if there are slight deviations in assumptions (Hassard, 1991). Significant analyses of variances were followed by post-hoc comparison tests using Tukey's Honestly Significant Difference (HSD).

#### Gender Differences Analyses

**Hypothesis 1.** It was expected that sister dyads would exhibit less physical aggression on average as compared to mixed sex dyads, and that mixed sex dyads would exhibit less physical aggression on average as compared to brother dyads. However,

since measures of physical and verbal aggression were combined to create a single family report aggression variable, gender differences were tested relative to overall aggression levels between gender groups.

**Hypothesis 2.** It was hypothesised that sister dyads would exhibit less overall aggression on average (combining physical and verbal aggression) as compared to mixed sex dyads, and that mixed sex dyads would exhibit less aggression on average (combining verbal and physical aggression) as compared to brother dyads.

To investigate these proposed gender differences in aggression, 3 different groups of sibling dyads (Brothers, Sisters, and Mixed Sex) were created. An ANOVA was conducted with these three groups as the independent variable and with family aggression reports (maternal, older and younger sibling report combined) as the dependent variable. A second ANOVA was also conducted using observer reports as the dependent variable. Results indicated that there were no significant gender differences in aggression among the 3 groups of sibling dyads for family aggression,  $F(2, 87) = 0.29, p = .80$ , but there was a trend that suggested gender differences in observer reported aggression,  $F(2, 91) = 2.66, p = .075$ . Follow-up post hoc tests suggested that brother dyads tended to engage in more observed aggression than sister dyads  $t(52) = 2.41, p < .06$ , while there were no significant mean differences between brothers and mixed gender dyads, or between sisters and mixed gender dyads. Table 6 contains descriptive statistics for observed aggression and family aggression reports for these groups.

It was further expected that length of exposure to violence would be significantly related to sibling aggression. As shown in Table 7, proportion of lifetime exposure to



domestic violence was significantly correlated to observed aggression, but not to family aggression reports for the entire sample. Therefore, an analysis of covariance (ANCOVA) was conducted for observed aggression only. Results from observer reports indicated a significant gender effect after controlling for the effect of proportion of lifetime exposure to violence,  $F(10, 52) = 8.4, p < .05$ . Follow-up post hoc tests comparing mean differences in aggression showed that brother dyads engaged in significantly more observed aggression than sister dyads  $t(52) = 2.41, p < .05$ , while there were no significant mean differences between brothers and mixed gender dyads, or between sisters and mixed gender dyads.

### **Age Differences Analyses**

**Hypothesis 1.** It was expected that younger siblings would exhibit less overall aggression on average as compared to older siblings. To test potential age differences in aggression, two groups were created; *Younger siblings and older siblings*. Younger siblings consisted of all children under the age of 12 (regardless of their sibling status) and the older sibling group consisted of all children over the age of 12 years (regardless of their sibling status). Before conducting mean comparisons, the degree of dependence between older and younger sibling reports of aggression was tested empirically; these were not significantly correlated,  $r(47) = .02, p = .88$ . Therefore, an independent  $t$  test was conducted to determine if older siblings exhibited more aggression than younger siblings on average. Means are reported in Table 8. Results of an independent  $t$  test indicated that there were no significant differences between these groups. Therefore, the hypothesized age differences were not supported.

**Age and Gender Differences Analyses**

Although the two original hypotheses specified that 1) older brothers would display more physical aggression than older sisters, 2) older sisters would display more verbal aggression than older brothers, since verbal and physical aggression items were combined in all analyses, age and gender differences were investigated for overall aggression only using both family and observer reports.

**Hypothesis 1.** It was anticipated that older brothers would display more physical aggression on average than older sisters. To test this hypothesis, two independent *t* tests were conducted comparing older brothers and older sisters on both family and observer reports of aggression. Results indicated that on average, older brothers and sisters did not differ significantly for either family or observer reports of aggression. Means are reported in Table 9.

**Hypothesis 2.** It was anticipated that older sisters would display more verbal aggression on average than older brothers. This hypothesis was addressed by the previous analysis as measures combining verbal and physical aggression were used.

**Hypothesis 3.** It was hypothesized that older brothers would display more overall aggression on average (combining physical and verbal) than older sisters. This hypothesis was also addressed by the previous analyses combining physical and verbal aggression measures.

Subsequent analyses further explored age and gender differences by comparing younger and older brothers in terms of family and observer reports of aggression; these results were also not significant. Similarly, comparisons of younger and older sisters also

indicated no significant differences in either family or observer aggression reports. Refer to Table 9 for corresponding means.

### **Gender Differences in Aggression relative to Exposure to Maternal Violence**

Lastly, analyses were conducted to explore if girls exposed to maternal physical aggression towards intimate partners engaged in more sibling aggression than girls not exposed to such aggression, and if girls exposed to maternal physical aggression towards intimate partners displayed more sibling aggression than boys with similar exposure. Groups were created based upon maternal reports that distinguished physically violent mothers from non-physically violent mothers. In order to thoroughly explore potential group differences in aggression relative to exposure to maternal violence, four independent *t* tests were conducted using family and observer aggression reports as dependent variables, comparing the following groups: 1) girls exposed to maternal violence vs. girls not exposed, 2) boys exposed to maternal violence vs. boys not exposed, 3) girls and boys exposed to maternal violence vs. their non-exposed counterparts, and 4) girls exposed to maternal violence vs. boys exposed to maternal violence. Before conducting mean comparisons, the degree of dependence between target groups was tested empirically and these were not significantly correlated.

When girls exposed to maternal violence were compared to girls who were not exposed, no significant differences were found for either family or observer aggression reports. Means are presented in Table 10. Subsequent analyses indicated there were also no significant differences between boys who were exposed to maternal violence and boys who were not exposed, and no significant differences between the group of girls and boys

exposed to maternal violence and their non-exposed counterparts. Interestingly, boys exposed to maternal violence were significantly more aggressive with siblings than girls exposed to maternal violence as reported by observers,  $t(62) = 2.04, p < .05$ ; however, there were no significant differences in family reports of sibling aggression for these two groups.

## CHAPTER V

### Discussion

The primary goal of the present study was to investigate the degree to which age and gender impacted sibling aggression in children exposed to domestic violence. It was expected that brothers dyads would display significantly more sibling aggression than sister dyads, and that sibling dyads with at least one brother would also display significantly more aggression than sister dyads. As hypothesized, brothers displayed more observed aggression than sisters but not mixed sex dyads; this was the case when proportion of lifetime exposure to domestic violence was statistically controlled. In addition, boys displayed significantly more observed aggression than girls when exposure to maternal physical violence towards a partner was taken into account, but this was not the case for family reported aggression. Contrary to expectations, no age differences in sibling aggression were found, and no significant age and gender interaction effects were noted.

Consistent with prior research, results in the present study lent support to the assertion that children may be negatively influenced by exposure to violence by parents and other significant adults in the home. These findings are consistent with both family systems theory (Cowan & Cowan, 2006; Cox & Paley, 2003; Walsh & Harrigan, 2003) and social learning theory (Bandura, 1978, 1969) perspectives that propose that such behavioural patterns may be attributed to environmental influences in the home. Numerous investigators have also linked exposure to domestic violence with the increased likelihood of aggressive behaviour by children (eg. Allen et al., 2003; Baldry,

2003; Moretti et al., 2006). In fact, destructive marital relationships have been linked with maladjustment in children (Davies & Cummings, 1994) and some researchers have also identified similarities between negative sibling interactions and destructive marital relationships (Jenkins & Smith, 1990; Patterson, 1986; Stocker & Youngdale, 1999).

The present study made a significant contribution to the literature by focusing on aggression between siblings specifically. Although other studies have found children exposed to domestic violence to be more aggressive overall, the present study broke new ground by investigating sibling aggression from the perspective of three differing family members, as well as the perspective of an objective observer. It is important to note that while family members' reports of sibling aggression were highly inter-related, observed aggression was not correlated with family reports. No significant gender differences were found based on family members' perspectives; however, significant gender effects were noted with observed aggression.

Some gender differences in aggression have also been previously reported in the literature. For example, Kerig (1999) and Kerig et al. (1999) identified a linkage between gender and aggressive behavior in children exposed to domestic violence, suggesting that boys are more aggressive than girls. Gender differences have been similarly noted in the sibling aggression literature (Martin & Ross, 1995, 2005). Length of exposure to violence has also been typically associated with the likelihood of increased aggression (Martin, 2002, Ososky, 1999). Therefore, it makes sense that the present findings revealed significant gender differences in aggression when proportion of exposure to violence was taken into account.

It is however important to note that only one study to date has specifically addressed potential links between exposure to domestic violence and aggressive sibling interactions among school-going and adolescent children (Waddell et al., 2001). Waddell et al. found that siblings exposed to domestic violence were not more aggressive than siblings who were not exposed. Both the present study and the Waddell study adopted a multi-method approach, using both behaviour observations and self report. However, the two studies did differ in terms of sample size, with the present sample size being more than four times larger. In addition, the present study utilized naturalistic observations, while Waddell and colleagues asked siblings to perform specific cooperative and competitive tasks. It must also be mentioned that Waddell and colleagues recruited participants from shelters, while participants in the present study were recruited from the community, and had counseling experience. Perhaps most importantly, Waddell and colleagues did not address the impact of age and gender on sibling aggression.

In contrast to prior research, no significant differences in levels of aggression between older and younger siblings were found in the present research. In a recent study on the quality of the sibling relationship and the effect of domestic violence among school-going age children, Troupel-Cremel, Pinel-Jacquemin, and Zaouche-Gaudron (2009) acknowledged the impact of gender and age on the quality of the sibling relationship. Aguilar and colleagues (2001) identified several controversies surrounding the role of gender in predicting aggressive outcomes among siblings and research has not previously compared reports from younger and older siblings from the same family (McHale et al., 2006). “Most sibling abuse studies rely exclusively on parents’ reports”

(Caffaro & Conn-Caffaro, 1998, p. 27). Troupel-Cremel et al. (2009) noted that prior works in the sibling domain have also relied heavily on observational studies and admitted that the perception of the reporter of sibling experiences have greatly influenced the pattern of past research findings. Given these concerns, the present study made a significant contribution to the literature by including maternal, sibling and independent observer reports on aggression. In addition, while most prior research on children's exposure to domestic violence has relied heavily on shelter samples, participants in the present study were drawn from the community, and had counseling experience. Thus, inconsistencies between the present findings and previous research may be attributed to differences in methodological strategies.

Although social learning theorists and family systems theorists propose that destructive sibling interactions may be attributed to negative environmental influences in the home, these theories have been limited by a bias towards environmental influences. Other factors such as birth order, age-spacing (McHale et al., 2006), ineffective parenting, parental favoritism (Caffaro & Conn-Caffaro, 1998), and parental discipline strategies (Felson & Russo, 1998) are also known to influence the nature of sibling interaction. It is unclear how these other factors may have impacted the present results.

It is also interesting to note that significant gender differences were found using observer reports of sibling aggression, but not family member reports. Correlational analyses revealed that family member reports of aggression were positively and significantly inter-related with each other, but were independent of observer reports of aggression. Thus, family members shared a perspective or "bias" that observers did not.



While the inclusion of family reports may have enhanced the reliability and validity of the present findings, reports from family members may also be limited by elements of subjectivity. Family interactions may vary among different families and may be assessed differently depending on the rater and context. Therefore, a likely explanation for discrepancies between family member reports and that of independent observers may be due to distinctions in interpretations of sibling interactions. Some researchers also believe that fear of retaliation and family loyalty issues may lead to underreporting of negative sibling behavior by siblings (Caffaro & Conn-Caffaro, 1998). Osofsky (1995) wrote “Children, out of fear, may try to be unseen while observing; and parents, wishing that their children were not exposed, may be reluctant to acknowledge it” (p. 7). Women who have experienced IPV and are receiving any form of clinical services are known to have experienced the most severe forms of violence (Carlson, 2000) and may therefore be biased in their perceptions of other types of violence due to their traumatic experience. Therefore, family reports of aggression may have been influenced by their history of violence, while observer reports were not.

Another possible explanation for the trend observed in the present findings may be the high acceptance of abusive behavior by siblings and mothers. Gelles (1997) explained that many parents ignore aggression among siblings and in fact consider aggressive behavior among siblings as an integral part of development. In the case of children and mothers exposed to domestic violence, Waddel et al. (2001) noted that mothers and children from violent homes may consider negative sibling interactions as normative behavior. It must also be noted that the majority of participants in the study

had received or were receiving counseling as a result of their experiences with domestic violence at the time of the study. Therefore, they may have been more aware or more sensitized to the potential effects of their violent history than families recruited from shelters.

Brothers who were exposed to violent behaviour by their mothers and their mothers' intimate partners were observed to be more aggressive with their sibling than girls with such exposure. The present findings differed from those of Moretti et al. (2006), who found that girls exposed to maternal violence may be more at risk for aggression than their male counterparts as reported by observers. Given that past research on gender differences has typically identified boys as more aggressive than girls (Evans et al., 2008), the present finding provides further evidence that indeed boys may be more strongly affected by exposure to any form of domestic violence and therefore display more intense forms of aggressive behaviour than girls. In the case of boys, some parents also believe that it is important for boys to indulge in some aggression (Gelles, 1997). In effect, this unpredicted gender pattern detected in the current study may also be a reflection of the notion of gender role expectations from parents and from society at large.

In summary, brothers in the present study were engaged in more sibling aggression than sisters only when length of exposure to violence was controlled and when maternal violence was taken into account, and this was only for observed aggression rather than family member report. Clearly, future replications of the present findings are required to provide a clearer and more realistic picture of how age and

gender may predict the outcomes of sibling aggression among children exposed to domestic violence among school-going and adolescent children. Nonetheless, these findings suggest that not all children exposed to domestic violence model negative parental behaviours.

### **Limitations and Recommendations for Future Research**

While the present study made a significant contribution to the literature in a number of ways, several limitations existed which could be addressed in future works. The first limitation was the lack of a comparison group. To provide further support for the claim that children from violent homes may be at greater risk for maladjustment problems, it would have been very beneficial to have a comparison group of children from non-violent homes. This would have helped distinguish between potential differences in the quality of sibling interactions between children from violent homes and non-violent homes. Future replications of the present study including comparison groups would also help provide more in depth clarification of the assertion that exposure to domestic violence may be predictive of negative sibling interactions.

The next limitation was the small sample size. Statistical comparisons of age and gender differences in aggression were limited by low power caused by the small sample size in the present study. Future studies on age and gender differences using larger samples of girls and boys would not only help minimize the problem of low statistical power in study findings but would also ensure more realistic inferences based on study findings.

The sample selection process was also a limiting factor in the present study. Although the participants were recruited from the community, the study was based on a self-selected sample of convenience since participation was voluntary. As already noted the majority of mothers and children who participated in the present study had either received some prior counseling or were in therapy when the study was being conducted. This may raise some issues with subjectivity in reports on aggression. Perhaps aggression reports from other groups of participants with no intervention experience may have yielded different study results. In effect, the present findings cannot be generalized to other groups of children and women who have not received services. Therefore future research consisting of a random selection of participants would provide a more balanced and objective view of how exposure to domestic violence may be a threat to the sibling relationship.

Tied to the problem of sample selection was the lack of a diversified and representative sample. Findings in the present study may have been affected by a lack of ethno-cultural diversity in the families recruited; the majority of participants were Caucasian. Since interpretations of sibling interactions may be influenced by cultural context (Hines & Malley-Morrison, 2005), future research including participants from different ethno-cultural backgrounds would ensure a more cross cultural interpretation of the quality of the sibling relationship in families with a history of domestic violence. This would also increase the generalizability of research findings as well as the applicability of study outcomes to other related groups of children.

Another sampling limitation was the high proportion of lone parents consisting of mothers from low income groups. Perhaps future studies comparing sibling aggression in different family arrangements and income groups would help provide a broader assessment of the quality of the sibling relationship, as well as antagonistic behaviour among siblings exposed to violence.

The measurement technique used in the assessment of the quality of sibling interactions may also have been a limiting factor. Although reports on aggression among sibling dyads were based on multiple perspectives, findings were based on a single timepoint of measurement. It would have been interesting to know how the sibling relationship relative to exposure to domestic violence may change over time. Therefore future works in the domain should include a more longitudinal approach and other follow-up techniques to provide a holistic understanding of how the quality of sibling interactions among children exposed to domestic violence may progress over time.

The means indicated that the overall level of aggression in the sample was relatively low. This is comparable to rates of aggression between siblings not exposed to domestic violence reported in the literature (Martin & Ross, 1995, 2005). Further research must conduct an empirical comparison to determine if siblings exposed to domestic violence are indeed more aggressive on average as compared to their non-exposed counterparts.

The family measure of aggression included some individual items, such as getting mad that did not specifically denote aggression and may have indicated sibling hostility rather than aggression. Future research must measure acts that are specific to aggression.

This would help provide a more indepth understanding of how children's interactive patterns may be negatively impacted by exposure to domestic violence.

Although younger siblings and older siblings were approximately three years apart in age, the variation in age in this sample was limited. Therefore future research must include more adolescent-aged siblings. This would enhance a better understanding of the potential impact of age on the progression of aggression.

Lastly, assessments of negative sibling interactions were solely limited to overt acts such as verbal and physical aggression. Taken into consideration the fact that children exposed to violence of any kind may be at increased risk for both internalizing and externalizing behaviours, it would be helpful if future investigations included disengagement behavioural patterns among sibling dyads. This would provide a broader picture of maladjustment symptomology among siblings from violent homes.

### **Implications for Practice**

Sibling violence is the most prevalent form of domestic violence. Gelles (1997) stated that "The existence of social norms that encourage expressions of aggressive behavior among siblings hinders the recognition of sibling violence as abnormal and worthy of serious concern" (p. 97). Therefore the present results may have some important clinical implications. Caffaro and Conn-Caffaro (1998) noted that treatments offered by child and family therapists have typically not included the sibling relationship. Thus, preventive and intervention efforts geared towards families who have experienced domestic violence must include mandatory screening for sibling violence. This would

help clinical child and family professionals to identify any children who may need more professional attention vis-à-vis the sibling relationship.

The present findings suggest that boys exposed to domestic violence may be more aggressive than girls, especially if they have a brother. This implies that boys may be at greater risk for screening and intervention. Length of exposure to violence was also found to be significantly related to level of aggression in the present study. This implies that while family intervention initiatives specifically designed to detect sibling violence must be sensitive to gender issues, the duration of an individual's exposure to domestic violence must also be taken into account irrespective of age. This would help ensure more accurate diagnoses of sibling violence cases.

Although substantial group differences were not noted, the study confirms that sibling interactions are characterised by ambivalence. This calls for drastic changes at the policy making level. Therefore government and other non-governmental organizations must help expand family-friendly policies to include programs on detrimental effects on negative sibling interactions for parents and children. Such policies would enhance well-being at the individual, family and at the community level.

Ultimately, education and training for family professionals must include more extensive information on the existence of negative sibling interactions as manifestations of exposure to domestic violence. Increased awareness of the implications for inter-sibling violence in the family domain would promote well-being at all levels of society.

### **Conclusion**

The overall purpose of the present study was to emphasize the emergence of negative sibling interactions in relation to exposure to domestic violence. Siblings have been described as one of the “hidden victims” (Gelles, 1997) of domestic violence. In view of the fact that siblings contribute immensely to the development of individuals across the lifespan, it is important to draw attention to the impact of domestic violence on the quality of the sibling relationship. The empirical and theoretical literature suggests that individual factors such as age and gender may moderate the negative impact of interparental violence and aggression. Findings of the present study suggest that gender may be an important moderating factor for sibling aggression. It is hoped that dissemination of these findings may help to raise awareness of the potential for sibling violence among children exposed to domestic violence. The present study filled an existing gap in the literature by using a multi-method approach with a community-based sample.

Unfortunately the present findings provide very little evidence for the belief that the progression of sibling aggression may be influenced by age and gender. As mentioned previously, methodological and theoretical limitations and the existence of cultural beliefs may account for the present findings. It is also worth noting that, with exception of findings on gender differences between boys and girls exposed to maternal violence, observer reports on sibling aggression corroborated that of family reports. Despite the limitations, the current findings provide some credibility for the belief that,



irrespective of their backgrounds, all children may experience varying levels of positive and negative feelings in their interactions with siblings.

Although very little is known about the link between moderators such as age and gender and the antagonistic aspects of the sibling composition, the current findings highlighted some important issues on research in the sibling domain. Therefore there is a need for more research and education at all levels of society to address this ongoing phenomenon which continues to be overlooked and condoned at all levels of society. This will help ensure the well-being and safety of children who have been exposed to domestic violence.

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Table 1

*Factor Pattern for Maternal Report on Sibling Aggression*

	Aggression Items	Factor 1	Factor 2
Maternal Report	Insult/Name calling	0.87	-0.13
	Mean to each other	0.27	0.96
	Hit each other	0.79	-0.01
	Disagree and fight	0.93	-0.05
	Get mad and argue	0.88	-0.05
	Conflict	0.98	-0.05
Variance Explained		4.05	0.95

Table 2

*Factor Pattern for Older Sibling Report on Sibling Aggression*

	Aggression Items	Factor 1	Factor 2
Older Sibling Report	Get mad at Younger	0.60	0.71
	Younger gets mad at Me	0.60	0.67
	I am mean to Younger	0.67	-0.28
	Younger is mean to me	0.80	-0.36
	I start fight with Younger	0.67	-0.03
	Younger starts fight with me	0.69	0.04
	Hit Younger	0.78	-0.12
	Younger hits Me	0.68	-0.38
	Variance Explained		3.79

Table 3

*Factor Pattern for Younger Sibling Report of Sibling Aggression*

	Aggression Items	Factor 1	Factor 2
Younger Sibling Report	Get mad at older	0.75	0.15
	Older gets mad at Me	0.75	0.39
	I am mean to Older	0.69	-0.26
	Older is mean to Me	0.46	0.75
	I start fight with Older	0.72	-0.42
	Older starts fight with Me	0.67	0.09
	I hit Older	0.81	-0.41
	Older hits Me	0.77	0
	Variance Explained		4.06

Table 4

*Descriptive Statistics for Maternal and Older and Younger Siblings Reports of Combined Aggression*

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Variable	M	SD
Older Sibling Reports		
<i>Combined Aggression</i>	22.37	4.89
Younger Sibling Reports		
<i>Combined Aggression</i>	22.91	5.34
Maternal Reports		
<i>Combined Aggression</i>	16.58	4.46

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Table 5

*Pearson's Product-Moment Correlations, Means, Standard Deviations, and Range for Maternal, Observer, Younger and Older Siblings Reports on Sibling Aggression*

Variable	1	2	3	4	5	6	M	SD	Range
1. Maternal Report for Younger Sibling	--	1.00*	.45*	.38*	.13	.09	16.58	4.46	8-25
2. Maternal Report for Older Sibling		--	.45*	.38*	.13	.09	16.58	4.46	8-25
3. Younger Sib Report			--	.022	.13	.16	22.91	5.34	11-32
4. Older Sibling Report				--	-.08	-.22	22.34	4.89	10-31
5. Observed Physical Aggression					--	.65*	.68	1.78	0-10
6. Observed Verbal Aggression						--	2.00	3.12	0-12

Note: \* $p < .05$  (2-tailed).

Table 6

*Descriptive Statistics for Observer and Family Reports of Brother Dyads, Sister Dyads and mixed Sex Dyads Aggression*

Variable	Group (Gender Differences)	N	M	SD	Range
Family Report	Boys	34	18.53	2.77	13 - 22
	Girls	18	18.00	5.84	4 - 24
	Mixed	38	18.79	4.10	11 - 24
	Total	90	18.53	4.05	4 - 24
Observed Aggression	Boys	36	3.15	4.68	0- 18
	Girls	18	0.74	1.24	0 - 3
	Mixed	40	2.10	3.28	0 - 11
	Total	94	2.24	3.71	0 - 18



Table 7

*Pearson Product-Moment Correlations between Proportion of exposure to Violence and Family and Observer Aggression Reports*

Variable	1	2	3
1. Proportion of Lifetime Exposure to Violence	--	.07	.28*
2. Family Report		--	-.06
3. Observed Aggression			--

\* $p < .05$

Table 8

*Descriptive Statistics for Younger and Older Siblings Aggression*

Variable	Group	N	M	SD	Range
Family Report	Younger Siblings	68	18.26	4.37	4-24
	Older Siblings	22	19.36	2.79	14-24
Observed	Younger Siblings	69	2.20	4.01	0-18
	Older Siblings	25	2.37	2.80	0-10

Table 9

*Descriptive Statistics for Younger Brothers and Sisters, and Older Brother and Sisters Aggression*

Variable	Group	N	M	SD	Range
Family Aggression	Younger Brothers	37	18.38	3.40	11-23
	Younger Sisters	31	18.13	5.36	4-24
	Older Brothers	16	19.19	3.06	14-24
	Older Sisters	6	19.83	2.04	17-23
Observer Aggression	Younger Brothers	37	2.86	4.81	0-18
	Younger Sisters	32	1.43	2.69	0-11
	Older Brothers	19	2.59	2.94	0-10
	Older Sisters	6	1.67	2.42	0-6

Table 10

*Descriptive Statistics for Aggression among Boys and Girls exposed to Maternal Violence and Boys and Girls not exposed*

Aggression Report		<u>Exposed to Maternal Violence</u>				<u>Not Exposed to Maternal Violence</u>			
		N	M	SD	RANGE	N	M	SD	RANGE
Boys	Observer	38	3.25	4.72	0-10	18	1.81	2.85	0-11
	Family	36	18.56	3.78	11-24	17	18.76	1.99	15-22
Girls	Observer	26	1.21	2.18	0-10	12	2.01	3.44	0-11
	Family	26	18.38	5.55	4-24	11	18.45	3.56	15-24
All	Observer	64	2.42	4.00	0-10	30	1.89	3.04	0-11
	Family	62	18.48	4.57	4-24	28	18.64	2.66	15-24