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Children Exposed to Family Violence: Behavioural Adjustment and the Quality

of Sibling Relationships

By

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A Thesis

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CHILDREN EXPOSED TO FAMILY VIOLENCE:
BEHAVIOURAL ADJUSTMENT AND THE QUALITY OF
SIBLING RELATIONSHIPS

BY

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A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University

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Abstract

The present study explored the relationship between children's behavioural

adjustment and length of exposure to violence as well as the nature of sibling relationships

in families with a history of violence. Thirty-one families with a history of violence,

including mothers and their two children, were recruited from a mid-sized Canadian city.

The Child Behaviour Checklist (Achenbach, 1991) and the Sibling Relationship

Questionnaire (Furman & Buhrmester, 1985) were completed by the mothers. The Sibling

Relationship Interview (Stocker & McHale, 1992) was completed by both children. The

first hypothesis investigated the correlation between behaviour adjustment and length of

exposure to violence. Results indicated that older siblings' internalizing behaviours were

correlated to length of exposure to violence and target sibling's externalizing behaviours

were correlated to proportion of life exposed to violence. The second hypothesis proposed

that siblings with more pronounced patterns of adjustment difficulties would have less

supportive and more antagonistic sibling relationships. Externalizing behaviours were

related to high levels of conflict. Internalizing behaviours were related to high levels of

warmth and conflict. Social learning theory was used to interpret the results. The use of

children's reports on the sibling relationship was a strength of this study. Limitations

included an ambiguity regarding the definition of violence and an absence of a screening

mechanism for child abuse. Directions for future research include screening for other types

of violent experiences and exploring supportive sibling relationships for children who have

been exposed to domestic violence.

Acknowledgements

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Chapter 1: Introduction

Conflict appears in all relationships. Disagreements and differences of opinion are

among the most frequent interactions that take place in daily conversations (Stein, 1997).

In every conflict encounter, individuals struggle with new and old concepts, seeking

understanding and resolution. Researchers have suggested that conflict can lead to growth

in many domains including the social, moral, and emotional areas (Ross, Filyer, Lollis,

Perlman, & Martin, 1994). Social scientists have struggled over the nature and structure

of conflict for years, arguing both the positive and negative aspects of disputes (Deutsch,

1973).

Most individuals are familiar with the concept of destructive conflict, characterized

by unresolved issues, damaged relationships and victimization (Deutsch, 1973). According

to Deutsch (1973), destructive conflict tends to expand and escalate, becoming

independent of its original causes. Important elements of destructive conflict include: a

large number of serious issues, perceptions of negative motives of each participant, high

costs to participants, and a greater intensity of negative attitudes toward the other side

(Deutsch, 1973). Conflicts can then escalate through competitiveness, misperception, and

retaliation. These characteristics of destructive conflict will likely lead to heated disputes

and impasses, leaving neither party satisfied with the outcome. Destructive conflict may

also lead to violence (Lloyd, 1990). However, some researchers argue that conflict can

stimulate growth and therefore, can also have positive characteristics and outcomes

(Valsiner & Cairns, 1992).

Constructive conflict differs from destructive conflict in three main ways: first, a high level of motivation exists to resolve the issue in conflict; second, the individuals involved have the ability to develop alternatives should an impasse result; and third, more ideas are available that can readily be incorporated into new patterns (Deutsch, 1973). Deutsch also noted that the prior relationship is an important factor in conflicts. If the prior relationship was cooperative and perceived as important to each antagonist, it is more likely that the conflict will be resolved cooperatively without irreparably damaging the relationship. Stein (1997) supported the view that individuals in dispute understand the conflict in terms of their personal context and goals. Further, Stein (1997) found that arguing can serve as a mechanism for learning new points of view, providing opportunities for change. As well, it may elicit compromise, providing participants with new coping strategies. Generally, social conflict can be defined as individuals in mutual opposition (Emery, 1992), or parties with conflicting goals (Stein, 1997).

To summarize, conflict can promote change and stimulate growth, as well as escalate and entrench differences. Relationships are important social contexts for conflicts. This social context is especially true for conflict in families, where the relationships among the members have a long history, and are intense and continuous.

Family Conflict

Family conflict differs from other types of conflict due to the social context in which it occurs. Factors that influence these qualitative differences include intimacy, permanency, and the functions of the family, factors not always a part of other social conflicts. Constructive conflict can provide family members with important interpersonal

skills for resolving conflicts in other relationships and situations. Destructive patterns of family conflict are equally influential (Cummings & Davies, 1994). Rather than enhancing personal skills, destructive conflict can hamper individual functioning as well as damage or terminate relationships. Family conflict occurs in many forms, most commonly in a dyadic situation. These include marital dyads, sibling dyads, and parent-child dyads. In marital dyads, as in all family relationships, conflict is a common and normative interaction. When marital conflict leads to violence, however, serious consequences can result for the parties directly involved, as well as those who are exposed to it - such as children.

Violent marital interactions affect children in a variety of ways (Cummings & Davies, 1994; Jenkins & Smith, 1991; Jouriles, Murphy, & O'Leary, 1989). Marital violence has been correlated with child maladjustment problems, (Grych & Fincham, 1990), behaviour problems (Wolfe, Jaffe, Wilson, & Zak, 1985), and psychological impairments (Cummings & Davies, 1994). Children in violent environments also experience behavioural and emotional disturbances, social and interpersonal problems, and impairments in thought processes (Cummings, Zahn-Waxler, & Radke-Yarrow, 1981). While understanding the impact of interparental violence on individual development is important, little research has examined the relationship between violent marriages and the quality of the sibling relationship. The present study addressed this issue.

Chapter two provides an in-depth examination of the current literature concerning the question of how exposure to interparental violence impacts children living in the home. To this end, the following issues will be discussed: (a) the effects of being exposed to family violence on children's individual adjustment, and (b) important dimensions in sibling

relationships, particularly conflict management. Lastly, the interaction between being exposed to violence and the quality of sibling relationships will be focussed upon and specific hypotheses will be presented.

Chapter 2: Review of the Literature

Exposure to Family Violence and the Effects on Children

Previous research concerning children's adjustment and exposure to conflict can be divided into two main streams: (a) studies of children from non-clinical families and their reactions to interadult conflict and anger, and (b) studies of children who have been exposed to high levels of family conflict and interadult violence. Conflict and violence are similar in that they both can hamper individual functioning and damage a relationship. Violence, however, is different from conflict in the sense that it is more severe. Some researchers have defined violence as " an act carried out with intention of, or an act perceived as having the intention of, physically hurting another person" (Steinmetz, 1987, p. 729). Destructive conflict may be unsatisfactory to the involved parties, but it does not usually involve physically hurting another. In this vein, conflict can be viewed along a continuum moving from constructive conflict to destructive conflict to violence. Violence can also be viewed as having its own continuum as some researchers speculate that differences exist in severity and emotional abuse (Graham-Bermann, 1998). The focus of the present study is on violence and its influences on children.

While these two bodies of research focus on different types of samples, they provide congruent evidence concerning how children respond to and cope with conflict and violence among family members. Clearly, children from families with a history of

violence would be expected to have more severe adjustment difficulties than children from

non-clinical families. First, the non-clinical literature is reviewed, with a focus on

children's responses to being exposed to anger and conflict. Next, a review of the work

involving families with a history of violence, and children's responses to family violence

will be considered.

Individual Outcomes in Children who are Exposed to Conflict and Violence

The expression and consequences of anger vary individually, across situations on a

variety of dimensions and domains (Cummings, Ballard, El-Sheikh, & Lake, 1991) as well

as in frequency and severity (Jouriles, Murphy, & O'Leary, 1989). When marital distress

and conflict occur, children are exposed to the interaction of their parents as bystanders

(Cummings, Simpson, & Wilson, 1993). This exposure is commonly referred to as

"background anger" - angry interactions between adults (Cummings & Davies, 1994).

It has been well documented that being exposed to a high frequency of family

anger can be harmful to the emotional, psychological, and physical health of the children

involved (Cummings & Davies, 1994; Dodge, 1980; Dunn, 1993; Emery, 1982; Emery,

Fincham, & Cummings, 1992; Fabes & Eisenberg, 1992). Children vary individually in the

intensity and severity of their reactions; some children react more strongly, while others

have milder reactions such as temporarily freezing motion, exhibiting facial distress or

tensed body movements, asking to leave the situation, or expressing concern or discomfort

(Cummings & Davies, 1994).

Children may respond to violence with changes in their behaviour patterns. A clear

distinction should be made between exposure to conflict and exposure to violence. As

mentioned, marital discord can be viewed as existing along a continuum from constructive to destructive. Martial conflict may have both negative and positive elements, while marital violence may never be constructive (Cummings, 1998). Within conflict, children may learn resolution and problem-solving skills which may reduce their stress. Violence, however, is disturbing to children and can create extreme distress for children in their behaviour and their emotional regulations (Cummings, 1998).

Both externalizing and internalizing behaviours have been documented (e.g., Berthelsen, Smith & O'Connor, 1996; Emery & O'Leary, 1982; Katz & Gottman, 1993; Moore, Pepler, Weinberg, Hammond, Waddell, & Weiser, 1991; Stocker, 1994). Externalizing behaviours include but are not limited to aggressiveness, bullying, non-compliance, disruptiveness and other forms of overt actions. Externalizing behaviours can also manifest in running away, cruelty toward others, inattention, and overactivity (Campbell, 1994; Graham-Bermann, 1998). Social learning theory suggests that children who view their parents resolve conflicts using control, intimidation, and domination may in turn use these strategies in their own disputes. Modelling, then, appears to be linked to externalizing behaviours (Fincham, Grych, & Osborne, 1994).

Internalizing behaviours include anxiety, depression, fearfulness, withdrawal, low perceived social competence, feelings of worthlessness and guilt, impaired academic functioning and somatic symptoms (Graham-Bermann, 1998; Hershorn & Rosenbaum, 1985; Hughes, Parkinson, & Vargo, 1987). Interpersonal conflict can arouse anxiety in children who are exposed to it, and thus inhibit positive coping strategies and lead to subsequent increases in negative emotion (O'Brien, Margolin, John, & Krueger , 1991).

These internalizing and externalizing behaviours have traditionally been measured using parental reports, usually provided by mothers.

Children who were exposed to extreme forms of violence, including the murder of their mothers, exhibited symptoms such as posttraumatic stress disorder, sleep disorders, severe anxiety, phobic responses, and compulsive reenactment of the events (McCloskey, Figueredo, & Koss, 1995). These children often exhibited poor school performance, conduct disorders, increased aggression, impaired social competence, and higher levels of psychopathology and behaviour problems (Fantuzzo et al., 1991). While individual differences may occur in responses to violence, these extreme types of experiences tended to have more serious implications for individual adjustment than exposure to background anger.

Exposure to violence has a serious influence on children. While children may learn positive techniques for anger management and resolution, children may also have negative reactions to being exposed to these interactions between their parents, such as anxiety, crying, and attempts at intervention (Cummings, Zahn-Waxler, & Radke-Yarrow, 1981). Various mechanisms have been proposed to explain how this type of learning occurs. For example, social learning theory suggests that children who are exposed to anger and its appropriate expression will in turn use these methods in their own conflicts through modelling and imitation (Margolin, 1981). This theory argues that children learn not only through direct reinforcement, but also vicariously through observing and imitating others. Bandura (1977, 1986) showed that, when reinforced, children's aggressive behaviours could be increased by exposing them to another person modelling aggressive behaviour. In

contrast to children who had not observed the model, the children who had watched the

adult display of aggressive behaviour displayed more aggressive behaviours themselves.

Therefore, observing how parents interact and treat each other during conflict may

influence a child's perception of relationships, which in turn may have an impact on their

behaviour in other social relationships, such as with a sibling.

Methodological Considerations

One of the most common methods used to study the impact of background anger

on children has been laboratory observation. Children observed actors engaging in staged

conflict in a controlled setting. This method may be advantageous for manipulating key

characteristics of conflict such as degree of negativity or quality of outcome in order to

study children's reactions to this exposure. Findings indicated that children do react to

these actors with crying, requests to leave, and concern (Cummings & Davies, 1994;

Cummings, Iannotti, & Zahn-Waxler, 1985). However, Cummings and Davies (1994)

argue that children may become bored with repeated laboratory situations, and

interpretations of fear and distress may not be valid. Observing actors in conflict may not

be representative of observing parents or other family members in a dispute. In addition,

this laboratory methodology has been limited to children's immediate responses. It

provides little insight into the longer term impact of being exposed to conflict on

children's individual adjustment or that of their siblings. Thus, this methodology limits the

ability to identify the risk factors associated with being exposed to background anger

outside of a controlled setting.

When marital distress becomes violent, children exposed to these interactions respond somewhat differently from children exposed to background anger (Fantuzzo, DePaola, Lambert, Martino, Anderson, & Sutton, 1991). Usually, children respond in a more intense and severe manner when faced with physical or verbal violence. Examining the literature related to exposure to violence, Porter and O'Leary (1980) found that overt parental hostility such as sarcasm, verbal abuse, and violence were better predictors of childhood behaviour and adjustment problems than marital conflict in general.

It is important to remember that most studies documenting children's reactions to spousal violence rely solely on maternal reports - children's perceptions of their own or other's behaviour are rarely taken into account (see Sternberg, Lamb, & Dawud-Noursi, 1998 for a review). By understanding a child's perspective of the situation, valuable information can be acquired about children's coping and conflict strategies. Children's reports of frequency, intensity and resolution of conflict were consistently related to reports of adjustment made by teachers and parents (Fincham, Grych, & Osborne, 1994). Interestingly, parental reports of conflict correlated only with parental reports of adjustment, thus illustrating the need to include children in the research process (Fincham, Grych, & Osborne, 1994). In addition, having sibling reports, of their own and each other's perceptions and behaviours, would provide important information concerning sibling relationships in families with a history of violence. A multimethod approach including both mothers' and children's reports on their behaviour and perceptions would be a valuable contribution to the literature.

In summary, social learning theory argues that childrens' responses to both background anger and violent interactions are likely learned through modelling and imitation (Bandura, 1986; Crosbie-Burnett & Lewis, 1993). Since the home is the primary environment for socialization, children who are exposed to violence may perceive aggressive or violent behaviour as appropriate and engage in aggressive behaviours. While children rarely imitate angry adults (Cummings, Vogel, Cummings, & El-Sheikh, 1989), aggressive models may weaken a child's inhibitions of negative activities (Bandura, 1977). That is, children may view anger in a less negative light if they are exposed to background anger on a regular basis.

Children who have these experiences with violence may experience extreme forms of stress, which in turn will affect their coping abilities. The following section explores stress and coping in children in families with a history of violence. In addition, the sensitivity hypothesis (Cummings & Davies, 1994) will be discussed as another possible perspective for understanding how violence affects children.

Stress and Coping

Children in a family with a history of violence receive a variety of contradictory and stress-provoking messages from their parents, who are engaged in highly fear provoking and threatening actions (Elbow, 1982). During a violent episode, children may be exposed to only verbal cues such as tone of voice and statements of fear, apprehension, or anger. If they are present in the same room, they may also be exposed to visual cues like hitting (Jaffe, Wolfe, & Wilson, 1990). An intense emotional display by parents is a source of stress to children, who may then attempt to intervene. A violent episode

between parents not only reinforces perceptions that violence is an appropriate means to conflict resolution, but may also trigger anxiety about a parent's self-control. Elbow (1982) suggests that children experience great levels of fear and anxiety because of deep worry over becoming "mean like Daddy" (p.465). This type of fear in children not only has obvious implications for their individual adjustment and future mental health, but also for their perceptions of family relationships (Elbow, 1982; Grych & Fincham, 1990; Markward, 1997). When families include more than one child, siblings who have been exposed to the same troubled interaction patterns may perceive them differently. However, it remains unclear whether patterns of violent behaviour similar to those that the children have been exposed to are also expressed in the sibling relationship.

The more severe interparental violence becomes, the more stressful it is for children; under these conditions, children may not adjust easily to changes in family relationships, divorce, or disruptions in the home (Cummings & Davies, 1994). Being exposed to conflict, as mentioned, is different from being exposed to violence. A prevalent pattern of findings in the literature indicates that children who have been exposed to violence tend to display more aggressive behaviours than children who have been exposed to conflict (Fantuzzo et al., 1991; McCloskey et al., 1995). When the frequency of hostile episodes increases and becomes a regular family behaviour pattern, the level of anger expressed may escalate, thereby prolonging conflict (Cummings & Cummings, 1988). The escalation of conflict is one perspective taken in understanding the dynamics of family violence. Parents in conflict often respond to the other's anger with more anger of their own, and some research suggests that anger escalation is associated with more frequent

exchanges of verbal abuse, yelling, threatening gestures, and physical assault (Jacobson &

Margolin, 1979; Rosenbaum & O'Leary, 1986).

In one study, exposure to verbal conflict induced moderate levels of anxiety and

conduct problems in children, while exposure to verbal plus physical violence was

associated with clinical levels of conduct disorders and high levels of anxiety (Fantuzzo et

al., 1991). With each exposure to violence, it is hypothesized that levels of anxiety and

fear will increase. This emotional arousal can promote a sense of helplessness which may

inhibit the healthy development of both autonomy and self-control (Davies & Cummings,

1998), furthering children's fear of loss of their own sense of control (Elbow, 1982).

Repeated exposure over time has been considered a serious risk factor for children's

individual adjustment and social relationships. The more children are exposed to violence

escalation, the more likely they are to display clinical levels of internalizing and

externalizing problems (Fantuzzo et al., 1991).

Sensitivity Hypothesis

Cummings and Davies (1994) have proposed that children from high conflict

families do not become accustomed or habituated to the conflict. In fact, the opposite may

occur - the children become more sensitive to conflict displaying greater emotional

distress. Childrens' increase in sensitivity and negativity may be explained by reciprocity:

continued exposure to violence increases the child's experienced distress and arousal thus

increasing their likelihood of responding negatively. According to the sensitivity

hypothesis, children's emotional levels and behaviours become part of the violent

situation. Children may attempt to intervene, or distract their parents diverting the

attention to themselves and they may in fact become emotionally aroused and distressed

before actual violence occurs (Cummings, 1998). Sensitization is also evident in children's

greater emotional, behavioural, and social reactions (Cummings, 1998). The sensitivity

hypothesis maintains that children who have a history of family violence will be sensitive

to any conflict because of this generalization. This hypothesis also suggests that the longer

children are exposed to family violence, the more severe and long term their adjustment

difficulties may become.

Developmental Trends

Throughout childhood and adolescence, many developmental gains are made.

Exposure family violence may affect children of different ages differently. Studies have

found that experiencing violence within the home can disrupt development processes

(Moore & Pepler, 1998). For example, preschool children who have been exposed to

violence displayed limited empathy and compassion (Fantuzzo et al., 1991; Graham-

Bermann, Culter, Litzenberger, & Schwartz, 1994), while school children experience

impaired cognitive concentration (Fantuzzo et al., 1991). In addition to academic

obstacles, exposure to interparental violence increases the tendency to react emotionally

and show distress, and increases levels of aggression inhibiting the ability to form

relationships with peers (Cummings et al., 1985; McCloskey et al., 1990)

Aggression begins to emerge in early childhood and once in place can be difficult

to eradicate (Cummings et al., 1985). With anger and aggression being closely linked, it

has been found that anger decreases an individual's threshold for becoming aggressive

(Cummings & Davies, 1994). Exposure to violence may reduce children's ability to

control their own emotions and behaviours (Cummings et al., 1984). This inability to

control or regulate one's emotions could then lead to an increase in aggression, antisocial

behaviours, and a decrease in obedience and compliance over time (Cummings et al.,

1981). Exposure to violence may then contribute to aggressive behaviour in children to a

much greater extent than exposure to background anger. On average, children exposed to

violence have been found to have fewer social skills, lower self-esteem, and to be more

distressed than children who experience background anger (Fantuzzo et al., 1991). In

addition, Fantuzzo and Lindquist (1989) found that violence observed within the home

during childhood was often repeated later in life.

Another important developmental finding concerns fear reactions to adult anger.

The "scared" reaction decreases with age, most prominently between five and nine years

of age. Cummings et al. (1991) found that the older children better understand that the

parental expression of anger may not directly relate to them. These children also had more

confidence in their ability to cope with negative situations. School-age children were more

likely to react to conflict with prosocial behaviours such as comforting and intervening

(Cummings et al., 1984). However, school-age children who had been exposed to violence

displayed a wide range of externalizing and internalizing behaviours. For some of these

children, overactivity and disorganized behaviours impeded school performance as well as

the ability to maintain other relationships (O'Keefe, 1994). Similarly, in other studies, it

has been found that inattention and opposition were prominent in reactions of school

children (McKloskey et al., 1995). Other reactions included internalizing factors like guilt,

fear, and taking responsibility for the incidents (Campbell, 1994).

Cummings, Vogel, Cummings, and El-Sheikh (1989) found that children's

responses to various forms of anger became more differentiated during middle childhood.

Resolution seemed to be more salient for children between 6-9 years of age. As school-

age children became more proficient at empathic skills, they became more cognizant of

apologies, and the response of reconciliation increased with age. School-age children

perceived hostile interactions to be the most negative, and this perception increased as the

children got older. Cummings, Pellegrini, Notarius, and Cummings (1989) also found that

children's sensitivity to and involvement with others' conflicts increased with age. Porter

and O'Leary (1980) proposed that marital conflict might affect school-age children more

than adolescents, as younger children are likely to spend more time in the home with their

parents and have fewer outside relationships. As well, school-age children tend to have

better cognitive schemas of emotional events than preschool-aged children (Bugental,

Blue, Cortez, Fleck, & Rodriguez, 1992). As children mature, they learn to discriminate

among verbal, facial and physical cues more effectively.

These developmental trends have several implications for sibling relationships.

First, sibling relationships tend to be stable over time (Vandell & Bailey, 1992). Given the

relative stability of aggression over time, the quality of the sibling bond may be

undermined in children who have been exposed to violence. Second, age may be an

important factor in developmental outcomes for siblings. The sibling relationship may be

distressed due to an age differential in understanding and response to the exposure to

violence. Third, the presence of a positive and supportive sibling relationship may be

paramount in compensating for a difficult family environment. This notion may be

especially true for younger children whose limited access to peers leaves them fewer opportunities for developing supportive relationships outside the family.

The role of siblings in families where children have been exposed to interparental violence is not well understood. With marital violence and sibling aggression being linked, the value of examining sibling relationships in families with a history of violence has heightened importance. Issues of individual adjustment have been the main concern of researchers investigating children from violent homes, and the quality and nature of family relationships have not received much attention. Children who have been exposed to interparental violence often are not alone - they and their sibling(s) are often both present. Understanding the interaction between risk and resilience factors associated with being exposed to violence and the role of the sibling relationship may provide insight for predicting developmental outcomes.

Difficulty with peer relations outside the home raises the question of how sibling relationships are managed within the home especially since sibling relationships are one of the primary sources of socialization for pre-school and school-aged children (Howe & Ross, 1990). To date, it is unclear whether increased aggressiveness demonstrated with peers can also be seen in sibling relationships. In the following section, a brief overview of the dimensions of normative sibling relationships will be given, followed by a discussion of individual adjustment in children from violent homes and the quality of their sibling relationships.

The Sibling Relationship

Siblings play an important role in how children learn to manage conflict within the family (Cummings & Smith, 1993). The dual dimensions of antagonism and companionship need to be examined to determine the potential benefit and risk of the sibling relationship for children who have been exposed to marital violence. Siblings are natural playmates for one another, providing affection and sources of entertainment. Many children have reported deep attachments to their siblings (Dunn, 1993; Stocker, Dunn, & Plomin, 1989). This bond can provide a safe haven for disclosing secrets, doubts, and fears as well as sharing humour, and discussing topics parents may not understand (Dunn, 1993). The sibling relationship is both complementary and reciprocal, a balance that is stable over time. Siblings can be excellent sources of companionship, help and support, due in part to the amount of time spent living together throughout the life span. Individual differences, however, are clearly seen in these relationships. Dunn and McGuire (1992) note that several factors play a role in determining whether the sibling relationship develops into a warm supportive one or a hostile and conflicted one, including the temperament of the child, age and age spacing of siblings, birth order, the quality of the parent-child relationship with each child, differential parental treatment of siblings, and gender.

It appears that children may receive benefit from both giving and receiving comfort from their siblings (Dunn & McGuire, 1992). However, more than 90% of school-aged children report agonism, and 79% cite quarrels as important features in their relationships

with their siblings (Vandell & Bailey, 1992). These dimensions of companionship and

antagonism interact to form the ambivalent bond that is unique to siblings.

The Role of Conflict in Sibling Relationships

Conflicts among siblings may be one mechanism through which children

differentiate themselves from other family members (Brody & Stoneman, 1990; Shantz &

Hobart, 1989). This mechanism may assist children in developing their own personalities

and temperaments, as well as their conflict and coping styles. Normative patterns of sibling

conflict provide insight into this developmental process. For children with warm

relationships with their siblings, conflict may be viewed as an opportunity to develop

emotional regulation and behavioural control (Stormshak, Bellanti, & Beirman, 1996).

Interestingly, sibling conflict is the most common form of family dispute, as well as the

most frequent and often the most intense (Vandell & Bailey, 1992).

Vandell and Bailey (1992) note that sibling conflicts are comprised of quarrelling,

fighting, resisting, refusing, protesting, and opposing involving two individuals. This

definition is important as researchers have recorded incidents of aggression without

knowing if mutual opposition is occurring, a mistake since healthy aspects of sibling

relationships include wrestling, teasing, and arguing in fun which can often be one-sided.

Aggression, often defined as intentional harm directed toward someone, may be a

component of conflict but is not a necessary attribute (Vandell & Bailey, 1992).

Furthermore, sibling conflicts may include verbal altercations, physical aggression, and

debates as well as compromise and resolution. Therefore, sibling conflict, like other family

conflict, can have both constructive and destructive elements.

Constructive Conflict

Constructive sibling disputes can promote both conflict management skills (Ross,

Filyer, Lollis, Perlman, & Martin, 1994) and emotional skills (Piotrowski, 1995).

Constructive conflict can enhance sibling ties by improving social understanding and

problem-solving skills. Affective intensity is relatively low with constructive conflicts as

they are often resolved through negotiations and compromise acceptable to both parties

(Vandell & Bailey, 1992). Social learning theory suggests that children learn interactive

behaviours in the home which are generalized to other relationships outside the home

(Dunn & McGuire, 1992). Thus, learning prosocial relationship skills with siblings may

extend to positive peer relationships as well.

Destructive Conflict

As previously mentioned, destructive conflict is characterized by high levels of

negativity, often spreading beyond the initial subject of the dispute and escalating into

intrusive coercion (Vandell & Bailey, 1992). Both parties are likely to be left feeling

frustrated and dissatisfied. While the sibling relationship may be the most enduring social

bond, like any relationship, it can be undermined by destructive conflict. Vandell and

Bailey (1992) reported that some children experience hostile, aggressive relationships with

their siblings. Recurring incidents of verbal and/or physical aggression within the sibling

relationship may lead to siblings actively avoiding each other. Thus, instead of prosocial

learning, some children may learn inappropriate social behaviours through their

interactions with their siblings.

Sibling Conflict in Families with a History of Violence

Normative processes in sibling relationships include both positive and negative elements. What happens when siblings are exposed to interparental violence? Very little is known about the nature of or processes within sibling relationships in families with a history of violence. However, given our current understanding of normative processes in these relationships, and how they may function in other stressful situations (e.g. during divorce), it appears that sibling relationships can play either a compensatory role (East & Rook, 1992), or an antagonistic one (Dunn, Slomkowski, Beardsall, & Rende, 1994; Smith, Berthelsen, & O'Connor, 1996; Stocker, 1995).

Compensatory Sibling Relationships

Rutter (1983) suggested that for some children who lack a supportive family relationship, such as with a parent, it may be adaptive to compensate for that missing link elsewhere. This notion exemplifies the potential role of the sibling relationship for children in families with a history of violence. The positive qualities of the sibling relationship may be important for fostering a sense of well-being and feeling of support.

Sibling bonds may be one important factor contributing to resiliency in children which needs to be further investigated. "Resiliency in children is developed through their ability to form relationships with others, their ability to problem solve and their capacity to make use of people in their environment" (Berthelsen et al., 1996, p.1). Interestingly, El-Sheikh, Cummings, and Goetsch (1989) found that the presence of a peer during a conflict experience was associated with more positive and less negative emotional expressions. This finding implies that peer relationships may be compensatory in buffering the effects of

interparental violence. What remains unclear from this research is whether siblings in a

violent family have the same compensatory effects.

Indeed, some researchers have found that siblings actively seek each other out for

comfort during interparental conflict (Cummings & Smith, 1993; Smith, Berthelsen, &

O'Connor, 1996). It has also been documented that siblings can become closer and

increase their mutual cooperation and protection in the face of family stress by turning to

one another for support and alliance (Bank & Kahn, 1982; Hetherington, 1988), an

important observation in the study of children exposed to family violence. As well,

children with companionate, caring sibling relationships have demonstrated more warmth

and communication and lower levels of aggression and rivalry (Vandell & Bailey, 1992).

These findings provide insight into the coping mechanisms that may be used by some

children exposed to violence. Such supportive sibling relationships may increase self-

esteem, assist in developing appropriate coping strategies, and enhance a child's social

competence (Stormshak et al., 1996). Thus, a compensatory sibling relationship may be

one important factor in tempering the effects of family violence.

<u>Antagonistic Sibling Relationships</u>

While some sibling relationships may buffer the effects of being exposed to family

violence, others may exacerbate these effects. Studies have shown that antisocial children

tended to have siblings who displayed the same behaviours, thereby exacerbating the

potential for aggressive behaviours to be learned through modelling (Stormshak, Bellanti

& Bierman, 1996). In fact, the sibling relationship may act as a training ground for

aggressive and antisocial behaviours (Patterson, 1986). The "sibling trainer" hypothesis

proposes that brothers and sisters of problem children actively contribute to problem

behaviour in the family (Neilson & Gerber, 1979, as cited in Patterson, 1986). Indeed,

children who are labelled as antisocial, delinquent, and externalizing are likely to have

siblings with similar characteristics. Ineffective family management on the part of the

parents, such as high levels of violence, sets the stage for siblings to engage in antisocial

exchanges (Patterson, 1986).This perspective implies that if one child displays

externalizing behaviours, his/her sibling is also at risk to do so. This negative reciprocity

has serious implications for the sibling relationship since aggressiveness and antisocial

behaviours may become mutually reinforcing. Because siblings spend much time together

by virtue of their living arrangements, the entrenchment of aggressive behaviour and

inappropriate interactions is facilitated if not encouraged (Patterson, 1986). The

generalization of negative behaviour patterns has dire consequences for developing

prosocial relationships outside the home, as well as undermining any positive bond

between siblings.

Other researchers have found that marital violence can directly affect sibling

relations, promoting agonistic behaviour and decreasing the likelihood of prosocial

interactions (Goodwin & Roscoe, 1990). As Patterson (1986) has indicated, dysfunction

in the family may facilitate aggression in children, and the sibling relationship may provide

reinforcement for aggressive and antisocial behaviour. Intense aggression and hostility

between siblings increases the probability of sibling violence - that is, one or both children

may become perpetrators of violence against the other, a serious threat to healthy

adjustment. Unfortunately, little is known about the general quality of sibling relationships

in families with a history of violence. Even less is known about how exposure to violence influences sibling relationships.

Violent interactions among siblings have been found to be a significant predictive factor for violent adult behaviour and these interactions have been more likely to occur in families with a history of violence (Goodwin & Roscoe, 1990). However, little is understood either about the process of sibling violence or its effects. Thus, it is important to study how interparental violence influences the quality of the sibling relationship as this relationship may have implications for the development of intersibling violence.

Implications for the Sibling Relationship in Families with a History of Violence

Little information is available concerning how siblings deal with violence. It is not clearly understood whether children will buffer each other against the stress of marital strife or become active participants in the cycle of violence they experience. Siblings exposed to the same interparental violence may respond differently. Age and age spacing, birth order, gender, and developmental stage may have an impact on children's understanding and reactions to violence. Repeated exposure to adults modelling violence seems likely to increase aggressiveness and externalizing behaviours in the sibling relationship. A hostile sibling relationship may be an important additional risk factor for children in violent families. It must be remembered, however, that some children cope with stress in an internalizing fashion. The implications of these patterns of coping for the sibling relationship need to be addressed in order to better understand the role of siblings in violent families.

Children's Coping and the Role of Siblings

The way in which children cope with anger or conflict undoubtably varies with the demands of the social context. Karniol and Heiman (1987) found that children used passive coping strategies such as ignoring, distancing, and internalizing when angered by high-status provokers such as adults, while they used more active coping techniques like yelling, retaliation, and tattling when angered by low-status provokers like peers or siblings. Children who have been exposed to the aggressive coping strategies of violent parents may model these mechanisms in their own conflicts, and may be more likely to do so when faced with provokers of similar status, such as a sibling. Children who had not been exposed to violence tended to seek the aid of an adult when involved in a physical confrontation (Fabes & Eisenberg, 1992). These children were deemed to be socially competent and popular, and engaged in conflict less frequently than children considered less socially competent.

Internalizing and Externalizing Implications for Sibling Relationships

Children who demonstrate externalizing behaviours are more likely to be aggressive, non-compliant, and dominant. If both siblings in a family demonstrate an externalizing pattern of behaviour, it would be expected that the sibling relationship would be highly aggressive and more likely to involve violent interactions. Patterson (1986) proposed that siblings train each other in aggressiveness by reinforcing this type of behaviour. Thus, a high degree of escalation would be likely with two children with externalizing behaviours.

Children who demonstrate internalizing behaviours are more likely to be fearful, anxious, and withdrawn. If both siblings exhibit internalizing difficulties, the sibling relationship may be supportive, since both children may attempt to allay their fears through the support of the other. The relationship may also be avoidant, since they might withdraw from each other. In families where only one child demonstrates externalizing or internalizing behaviour patterns and the other does not, the quality of the sibling relationship is more difficult to predict. As in families without a history of violence, these children may demonstrate warmth and support to each other, as well as conflict, rivalry and competition (Dunn & McGuire, 1992).

In families where one sibling demonstrates an externalizing pattern and the other sibling demonstrates an internalizing pattern of behaviour, a bully/victim pattern may emerge (Olweus, 1980). The bully persona is characterized by aggressive behaviour with weak inhibitions against aggression and a positive attitude toward violence (Rigby, 1994). At the same time, children who are prone to victimization demonstrate low self-esteem, and internalizing behaviours (Rigby, 1994). Rigby (1994) argues that children who engage in bully behaviours with their peers are modelling behaviours learned in the home. Rigby (1994) also found that the family situation as a whole plays a role in producing bully behaviours in children. This research suggests that siblings may experience bully and/or victimizing behaviours within their home, as a result of learning these interactions through exposure to interparental violence. Children who experience continual negative interactions may internalize this model, developing a view that relationships are hostile and

confrontational (Rigby, 1994). This tendency for bullying and victimization within the home might contribute to sibling violence.

Unfortunately, the studies of bully/victim relationships have traditionally focussed on school and peer situations. With the evidence that Rigby (1994) and Bowers, Smith, and Binney (1992) have uncovered with regard to the role of the family, it is important to further investigate bully/victim dynamics within the home. Bullies have been found more often in "disengaged family systems" such as a violent family (Bowers et al., 1992, p.373) while families high in warmth and cohesion are less likely to produce a bullying or victimized child.

Summary

It has been suggested that violence may be learned through role models and reinforcement by parents and siblings (Bandura, 1986; Patterson, 1986). Mihalic and Elliott (1997) argue that when violence is reinforced it can develop into a coping response to stress or a conflict resolution method. Direct reinforcement may include punishment for the behaviour, laughing at the interaction between siblings. Indirect reinforcement of violence may be ignoring the behaviour, paying more attention to the violence and so forth.

Previous studies have clearly shown that exposure to violence can be detrimental to children's individual adjustment (Cummings, 1998; Graham-Bermann, 1998; McCloskey et al., 1995). These children demonstrated a wide range of reactions, such as externalizing and internalizing behaviour patterns. As well, the degree and severity of exposure to violence has been argued to be an important factor in children's individual

adjustment (McCloskey et al., 1995). However, it should be remembered that often these children are not being exposed to violence alone - both they and their sibling may be present. Little is known about the quality and processes in sibling relationships in families with a history of interparental violence. Since it has been argued that exposure to aggressive role models can increase sibling aggression (Patterson, 1986), it appears that sibling relationships in families with a history of violence are at risk for high levels of aggression and hostility.

Statement of Problem

The majority of previous research on children exposed to violence has focussed on individual adjustment issues. Children's responses to anger have been studied using laboratory observations; however, these have rarely included interactions between family members. In past research, maternal reports have been heavily relied upon as the sole source of information concerning the effects of anger and violence on children (Fantuzzo & Lindquist, 1989). However, it must be emphasized that the child's perspective is of equal importance. Throughout previous research, the influence of the sibling relationship was often ignored. The purpose of the present study was to explore and describe the types of sibling relationships in families with a history of violence.

The present investigation contributed to the literature by using a multi-method approach utilizing both sibling reports and maternal reports of the quality of sibling relationships. The sensitivity hypothesis (Cummings, 1998) suggests that stronger patterns of externalizing and internalizing behaviour would be expected to be associated with longer exposure to family violence. It was further predicted that siblings with more

pronounced patterns of internalizing and externalizing behaviour would have less

supportive and more antagonistic sibling relationships. Since the nature of this study was

exploratory, two general hypotheses were developed, followed by several predictions.

Hypotheses

Hypothesis 1

It was hypothesized that length of exposure to family violence would be positively

and significantly correlated with internalizing and externalizing behaviour problems in both

younger and older siblings.

Hypothesis 2

It was hypothesized that differing combinations of internalizing and externalizing

patterns of behaviour in sibling dyads would be differentially related to the quality of the

sibling relationship. The specific combinations are identified in detail below:

Externalizing Groups

It was first predicted that between group differences would exist. Specifically, it

was predicted that the conflict subscale means for the dyads with both siblings

demonstrating externalizing behaviours would be significantly higher than the conflict

subscale mean for the dyads with neither sibling demonstrating externalizing behaviours.

It was then predicted that several within group differences would exist.

Specifically, it was predicted that: (a) if both siblings demonstrated a pattern of

externalizing behaviours, the conflict subscale mean would be significantly higher than the

warmth subscale mean, indicating a hostile sibling relationship for these dyads; (b) if one

sibling in the dyad demonstrated a pattern of externalizing behaviours and the other did

not, the conflict subscale mean was expected to be significantly higher than the warmth subscale mean, indicating a hostile sibling relationship; (c) if neither sibling demonstrated an externalizing pattern of behaviour, the warmth subscale mean would be significantly higher than the conflict subscale mean, indicating a positive relationship for these dyads.

Internalizing Groups

For the internalizing combinations, it was predicted that: (a) if both siblings demonstrated a pattern of internalizing behaviours, the warmth and conflict subscale means would be significantly lower than for the dyads with one sibling internalizing and one not, as well as for the dyads where neither sibling was internalizing, indicating a more avoidant relationship; (b) if one sibling in the dyad demonstrated a pattern of internalizing behaviours and the other one did not, the warmth and conflict subscale means would be lower than the subscale means for the dyads with neither sibling internalizing, indicating a more avoidant relationship; (c) if neither sibling demonstrated an internalizing pattern of behaviour, it was predicted that the warmth subscale mean would be significantly higher than the conflict subscale mean, indicating a positive sibling relationship.

Chapter 3: Method

Thirty-one families were recruited for the Winnipeg Area Conflict and Behavioural Adjustment in Children Project between November, 1996 and March, 1998. Twenty-nine families were included in the present analyses; two families had missing data and were not included. Three family members from each family participated: the target (younger) sibling (ranging in age from 4-14 years), an older sibling, and their mother. In order for families

to participate, mothers must have been receiving or have completed treatment and/or

counselling for partner abuse. Families were renumerated $75.00 for their participation.

Participant Recruitment

Several recruiting procedures were utilized for the present study. First, twelve

clinical agencies who had treatment groups for battered women were contacted in order to

gain approval for recruitment (eg: Klinic, Mount Carmel Clinic, Fort Garry Women's

Centre). Letters of invitation describing the nature of the present study (see Appendix A)

were given to staff members at these agencies to distribute to potential participants.

Mothers were encouraged to contact the University of Manitoba by telephone or postage-

paid postcards indicating their interest in the present study. A complete list of agencies is

presented in Appendix B. Secondly, private clinicians were notified of the present study by

mail and encouraged to tell their clients about this opportunity (see Appendix C). The

third recruiting procedure involved advertisements in local newspapers and home

advertisements, which described the present study and encouraged interested persons to

contact the University of Manitoba for more information. Each family was screened over

the telephone to determine if they fit the criteria for the present study (see Appendix D for

screening protocol).

Protocol

Mothers were offered a choice of settings for data collection: a local agency or the

Family Research Laboratory at the University of Manitoba. At the start of the first

appointment, rapport was established by talking with the children and their mother for a

few minutes prior to explaining the procedures. The mother signed an informed consent

form both for herself and her children (see Appendix E) and demographic information was

gathered about the family (see Appendix F). Mothers were then interviewed alone and

asked to complete the parent form of the Child Behaviour Checklist (Achenbach, 1991)

for each sibling and the Sibling Relationship Questionnaire (Furman & Buhrmester, 1985).

During this time, each sibling was interviewed separately, using the Sibling Relationship

Interview (Stocker & McHale, 1992). Several other instruments were also administered,

including a tape-recorded interview and a video-taped observation as part of the larger

project. These assessments were not used in the present study. All measures and

procedures were piloted prior to data collection to ensure that the instructions were clear

and that the time frame was reasonable. Any measures not completed during the first

meeting were administered at a second appointment. Upon completion of the second visit,

families were paid.

<div align="center">Participants</div>

Table 1 presents detailed demographic information concerning mothers. Mothers'

ages ranged from 26 to 46 years ($\underline{M}$ = 33.93, $\underline{SD}$ = 4.62). Fourteen mothers had 12 years

of education or fewer, and 15 mothers had more than 12 years of education.

It was interesting to note that 19 families out of 29 (70.4%) had a total family

income of less than $20,000 per year. The low income cut-off (LICOs) for families of

three is $27,063 (Statistics Canada, 1998). While Statistics Canada maintained that these

figures were not official poverty lines, it was clear that the majority of these mothers and

their children lived in very low income environments (see Appendix G for all LICOs).

Table 1

Demographic Information for Mothers

	Absolute Frequency	Percentage
Years of Schooling [a]		
8 yrs or less	2	6.9%
9-12 yrs	12	41.4%
13-16 yrs	14	48.3%
more than 16 yrs	1	3.4%
Marital Status [a]		
married	4	13.8%
living with partner	3	10.3%
separated	7	24.1%
divorced	10	34.5%
single	5	17.2%
Hours worked for pay/week [b]		
not working	12	44.4%
10-14 hrs	3	11.1%
15-24 hrs	2	7.4%
25-40 hrs	5	18.5%
more than 40	5	18.5%

Demographic Information for Mothers continued

Ethnic group [c]

Aboriginal	9	36.0%
Caucasian	2	8.0%
other	14	56.0%

Religious affiliation [d]

Aboriginal	3	10.7%
Protestant	4	14.3%
Roman Catholic	7	25.0%
Mennonite	1	3.6%
Buddist	1	3.6%
none	5	17.9%
other	7	25.0%

Total Family Income [b]

<$10,000	8	29.6%
$10,001-20,000	11	40.7%
$20,001-30,000	5	18.5%
$30,001-40,000	1	3.7%
$40,001-60,000	1	3.7%
>$60,000	1	3.7%

Demographic Information for Mothers continued

Length of Time in Therapy [d]

less than 1 month	1	3.6%
1-6 months	5	17.9%
6-12 months	5	17.9%
more than a year	17	60.7%

Received medical attention for injuries

related to violence [a]

yes	15	51.7%
no	14	48.3%

Note. Percentages do not include missing data.

[a]n=29. [b]n=27. [c]n=25. [d]n=28

Fifteen mothers (51.7%) reported receiving injuries from violence. Of these 15 mothers, 14 reported that medical attention had been sought. Of these 14 who were treated by a doctor or emergency room, 10 reported receiving medical attention from a doctor or emergency room more than once. One mother reported receiving medical treatment 25 times.

Table 2 presents detailed demographic information concerning target and older siblings. Target siblings (17 boys and 12 girls) ranged in age from 4 to 14 years ($\underline{M} = 7.89$, $\underline{SD} = 2.50$). Older siblings (19 boys and 10 girls) ranged in age from 6 to 17 years ($\underline{M} = 10.83$, $\underline{SD} = 3.00$). Ten siblings in the sample (17.2%) were adolescents (over age 12 years), specifically one target sibling and nine older siblings. The composition of the dyads were as follows: 11 boy pairs, 4 girl pairs, 6 older boy/younger girl pairs, and 8 older girl/younger boy pairs. All but two siblings resided with their mother at the time of the present study although 14 (48.3%) had lived separately from their mothers at one time. Five mothers reported that their children had experienced injuries related to violence, while 23 mothers did not (one mother did not respond to this question).

All of the siblings in the present study had been exposed to violence. Exposure to violence was based on mothers' interpretation of their childrens' experiences. The mothers' estimated the exposure to violence each of their children had experienced. It is not known how the mothers defined violence nor how they defined exposure. Specifically, the range of exposure to violence for target siblings varied from less than one month to as long as 120 months ($\underline{M} = 49.40$, $\underline{SD} = 33.70$). Of the target siblings exposed to violence for more than one year, 21 had been exposed for more than two years, and 12 had been

Table 2

Demographic Information for Target and Older Siblings

	Absolute Frequency	Percentage
Length of time in therapy [a]		
not at all	8	28.6%
less than a month	1	3.6%
1-6 months	4	14.3%
6-12 months	5	17.9%
more than a year	10	35.7%
Received medical attention injuries		
related to violence [a]		
yes	5	17.9%
no	23	82.1%
Present during violence [b]		
yes	29	100.0%
Period of time exposed to violence [a]		
less than a month	1	3.6%
1-6 months	1	3.6%
more than a year	26	92.9%

<u>Demographic Information for Target and Older Siblings continued</u>

Lived separately from mother in the

past (in care, with other parent, etc) [b]

yes	14	48.3%
no	15	51.7%

<u>Note.</u> Percentages do not include missing data

[a]n=28. [b]n=29.

exposed for more than five years. Older siblings also ranged in their exposure to violence from less than a month to 132 months ($\underline{M}$ = 54.43, $\underline{SD}$ = 36.38). Of the older siblings exposed to violence for more than a year, 22 had been exposed for more than two years and 13 had been exposed for more than five years.

<div align="center">Measures</div>

Child Behaviour Checklist (CBCL) - Parent Form

Mothers completed the Child Behaviour Checklist, a series of 118 items describing child behaviour problems for each sibling (see Appendix H). In each item, the child is compared to other children of the same age on a three-point scale ranging from "not true" to "often true". The CBCL is designed to assess social competence and behaviour problems such as internalizing and externalizing patterns of children age 4 to 18 years. The benefit of this checklist lies in the ability to discriminate between children who are experiencing problems and those who are not. Factor analysis has shown that the questions form two broad band scales, internalizing and externalizing, and several narrow band scales (Achenbach, 1991). The internalizing score encompasses behaviours characterized by fear, inhibition, and over-control. The externalizing score includes aggressive, antisocial, and undercontrolled behaviours.

Cluster analyses have identified profile types that can be used to classify children according to their overall behaviour patterns. Norms were based on large, randomly selected samples of nonreferred children. Achenbach (1991) reported that the scales were internally consistent with one week test-retest reliabilities of .88 and .95 for internalizing and externalizing, respectively.

In the present study, the internalizing subscales (withdrawn, somatic complaints and anxious) and externalizing subscales (delinquent and aggressive) of the CBCL were used to determine the behavioural adjustment of each sibling. The target and older sibling's score were calculated using the 1991 profile scoring sheets. T-scores were assigned according to scoring manual for the CBCL. T-scores provided a metric that was similar for all subscales (see Achenbach, 1991 for a complete explanation on T-score development and assignment). Each sibling, target and older, was assigned a T-score for internalizing and externalizing subscales. In the present study, T-scores were used because they provided a similar metric. Therefore, siblings of different ages and genders could be compared more easily.

The T-score of 67 was used as the clinical cut-off, above which the siblings were categorized as exhibiting clinical levels of internalizing and/or externalizing behaviours, and below which they were categorized as non-clinical. In the CBCL scoring manual, three different ranges of clinical behaviour are described: non-clinical (T<65), borderline (T=65-70) and clinical (T>70) (Achenbach, 1991). The cut-off of 67 was used to categorize the groups in the present study for several reasons. First, it was not the purpose of the present study to make any claim for behavioural diagnosis, thus the borderline range was not useful for the present analyses. Second, the CBCL scoring manual recommended using 67 as a statistical cut-off as it was the mid-point in the borderline range (Achenbach, 1991). Third, after scoring the CBCL for each sibling, it appeared that very few would fall in the borderline range and that the 65-70 T-score range would not be useful for

categorization purposes in the present study. The 90th percentile (T-score above 67) has

been proposed as the level which indicates clinical behaviour problems (Achenbach, 1991).

In the present study, it was found that for internalizing behaviours more than 44%

($\underline{n}$=13) of the target siblings and 68% ($\underline{n}$=20) of older siblings had T-scores in the clinical

range. For externalizing scores, it was found that 38% ($\underline{n}$=11) of the target siblings and

54% ($\underline{n}$=16) of older siblings had T-scores in the clinical range.

Internalizing and Externalizing Groups

T-scores from the CBCL were used to categorize target and older siblings into

three mutually exclusive groups. T-scores were used rather than raw scores as this

allowed for comparison among ages and genders. Also, several other studies have also

used T-scores for better comparisons (Fantuzzo, et al., 1991; O'Keefe, 1994; Smith et al.,

1997). If a sibling scored above 67 on the externalizing subscale, he/she was assigned to

the externalizing group. The three mutually exclusive categories were: (a) both siblings

had an externalizing T-score above the cut-off point (Group I A); (b) one sibling had an

externalizing T-score above the cut-off point while the other sibling did not (Group I B);

and (c) neither sibling had an externalizing T-score above the cut-off point (Group I C).

This same procedure was also applied to create three internalizing groups (Group II, A-B-

C).

Internalizing and externalizing groups were created independently. Each target

sibling and each older sibling was categorized twice: once into an externalizing group and

once into an internalizing group. It must be noted that while assignment to internalizing

and externalizing groups was conducted independently (for example: siblings pairs were

categorized by their externalizing patterns of behaviours, and then also categorized by their internalizing behaviours), it was possible and likely that a child who was categorized as demonstrating an externalizing pattern of behaviour on the basis of their externalizing T-score would also be categorized as demonstrating an internalizing pattern of behaviour on the basis of their internalizing subscale T-score (see Table 3 for the number of dyads in each group and the degree of overlap).

Length of Exposure to Violence

Mothers were asked to estimate the length of time their children had been exposed to violence. The demographic questionnaire requested a categorical answer (see Appendix F) followed by an open-ended question which asked "how long specifically had the children been exposed to violence". Exposure to violence was recorded in months and estimated by the mother for each sibling.

The Sibling Relationship Questionnaire (SRQ)

The Sibling Relationship Questionnaire (SRQ; Furman & Buhrmester, 1985) was completed by mothers and assessed the quality of sibling relationships with respect to four dimensions: warmth/closeness, relative status/power, conflict and rivalry (see Appendix I). This 48-item instrument had a five-point rating scale ranging from "hardly at all" to "extremely much". Items assessed mother partiality, intimacy, prosocial behaviour, companionship, similarity, nurturance by and of the sibling, admiration of and by the sibling, affection, dominance of and by the sibling, quarrelling, antagonism, and competition. Positive items were summed to form a warmth subscale. Negative items were summed to form a conflict subscale. Both warmth and negative subscales scores were later

Table 3

Number of Sibling Dyads and Overlap in Each Group of Internalizing and Externalizing Behaviour Combinations

Group	Number of Dyads	Degree of Overlap of Siblings in the Same Internalizing Group
Target & older sibling externalizing	10	7 (70%)
One sibling externalizing/ one not	7	5 (71%)
Neither target or older sibling externalizing	12	4 (33%)

		Degree of Overlap of Siblings in the Same Externalizing Group
Target & older sibling internalizing	10	7 (70%)
One sibling internalizing/ one not	13	5 (38%)
Neither target or older sibling internalizing	6	4 (80%)

separately standardized (see section on Aggregate Subscales). Furman and Buhrmester

(1985) found the ten-day test-retest reliability of the SRQ to be .71. With the present

sample, Cronbach's alphas for the warmth and conflict subscales were .89 and .81

respectively indicating good internal consistency. Rivalry was a third subscale but was not

used in the present study.

The Sibling Relationship Interview (SRI)

Both the target and older siblings independently completed the Sibling Relationship

Interview (SRI), a 26-item self-report instrument that assessed four dimensions of sibling

relationships: affection, power/symmetry, hostility, and rivalry (see Appendix J). The SRI

was developed originally by Stocker and McHale (1990) and later revised by Stormshak et

al. (1996). Again, the positive items were summed to form a warmth subscale and the

negative items were summed to form a conflict subscale. See Appendix J for example of

items. The rivalry items were not used in the present study. Both siblings rated the

frequencies of feelings and behaviours which they expressed towards one another based on

a four-point scale ranging from 1 (not at all) to 4 (all the time). For target siblings,

Cronbach's alphas on the warmth and conflict subscales were .77 and .87 respectively

indicating good internal consistency. For older siblings, Cronbach's alphas on the warmth

and conflict subscales were .76 and .83 respectively indicating good internal consistency.

Standardization of these subscales is discussed below.

Creation of Aggregate Subscales

It has been demonstrated that assessments by different informants tend to be moderately correlated (Achenbach, McConoughy, & Howell, 1987).This suggests that although there is some consistency, informants also provide unique information about their experience. Thus, an aggregate variable using multiple informants should serve to enhance the reliability and validity of the assessment of the sibling relationship.

Since the alpha scores on the SRI showed good internal consistency, the target sibling and older sibling's subscale scores were combined. Cronbach's alphas on the new aggregate warmth and conflict subscales were .75 and .82 respectively. The mother's raw scores on the SRQ were added to the raw SRI target/sibling combination and internal consistency was again assessed. Cronbach's alphas for the new aggregate scores combining mother and sibling reports for the warmth and conflict subscales were .89 and .89 respectively.

The new aggregate warmth and conflict subscales were then standardized. This procedure was done by taking each sibling's warmth score, dividing by the total possible score for warmth (215), and multiplying by 100 for a percentage. The new minimum for warmth was 21.86 and the maximum was 100. Conflict subscale scores were standardized by taking the child's score on the conflict scale, dividing by the total possible score for conflict (166), and multiplying by 100. The new minimum score for conflict was 20.48 and the maximum was 100.

Chapter 4: Results

Table 4 displays descriptive statistics for the variables used in the analyses of the present study. The alpha level selected was $p < .10$. Due to the small sample size and the exploratory nature of the present study, this alpha was appropriate. This alpha level was used throughout the present study.

Hypothesis 1

The first hypothesis proposed that more pronounced levels of internalizing and externalizing behaviours would be positively and significantly related to length of exposure to violence. Exposure to violence was quantified in two ways: in months and the proportion of life each sibling was exposed to violence. Pearson-product moment correlations were performed using the variable of estimated length of exposure to violence (in months) and the siblings' internalizing and externalizing T-scores. Pearson product-moment correlations were used because they are appropriate for measuring strength and direction of association of interval variables (Glass & Hopkins, 1984).

A proportion variable was created by dividing each child's estimated length of exposure to violence in months (the numerator) by their age in months (the denominator). This variable represented the proportion of a child's lifetime they were exposed to violence. The premise for creating this variable was that the proportion of lifespan that a sibling was exposed to violence would magnify any relationship between length of exposure and externalizing and internalizing behaviour problems. The literature has clearly demonstrated that younger children tend to be more at risk than older children for

Table 4

Descriptive Statistics for Target and Older Siblings

	Mean	SD	Range
CBCL Externalizing Subscales			
Target sibling	63.61	10.46	42-87
Older sibling	66.00	13.10	44-93
CBCL Internalizing Subscales			
Target sibling	64.54	11.25	48-87
Older sibling	69.15	8.65	45-83
Estimated number of months exposed to violence			
Target sibling	49.40	33.70	1-120
Older sibling	54.43	36.38	1-132
Estimated proportion of life exposed to violence			
Target sibling	.50	.32	.007-1
Older sibling	.42	.28	.006-1
Warmth Subscale (aggregate/standardized)	62.23	11.64	22.33-81.40
Conflict Subscale (aggregate/standardized)	63.75	11.84	33.13-79.52

Note. clinical range T>67

developing behavioural problems (Fantuzzo et al., 1991; Graham-Bermann, et al., 1994).

If this is the case, then using an estimated proportional value of life span exposed to

violence should reflect a stronger relationship between exposure to violence and behaviour

difficulties for target siblings while reflecting a weaker influence for older siblings.

Table 5 includes the pattern of correlational findings. Correlations analyses showed

that the target sibling's internalizing patterns of behaviours were not correlated to length

of exposure to violence. Target siblings' externalizing patterns of behaviour were

positively and significantly related to the estimated proportion of their lifespan they had

been exposed to violence but not the estimated absolute frequency of exposure to violence

in months. Target sibling's externalizing behaviours were not significantly correlated to

either the estimated absolute length of exposure to violence or the estimated lifespan

proportion exposed to violence.

Older sibling's internalizing patterns of behaviour were positively and significantly

correlated with both the estimated absolute frequency of length of exposure to violence as

well as the estimated proportion of their lifespan exposed to family violence. The older

sibling's externalizing patterns of behaviour were not correlated with either measure of

exposure to violence. Therefore, the first hypothesis was supported (see Table 5 for

correlations). The correlations suggest that target siblings' externalizing behaviours were

related to the proportion of their lifetime exposed to violence, while older siblings'

internalizing behaviours were related to both estimates of exposure to violence.

Table 5

Pearson Product-Moment Correlations for the Target and Older Sibling Between Length of Exposure to Violence and

Internalizing and Externalizing T-Scores

Variable [a]	1	2	3	4	5	6	7	8
1. Target: Length of exposure to violence	--	.96*	.90*	.85*	.22	.35*	.29	.24
2. Older: Length of exposure to violence		--	.90*	.93*	.16	.37*	.24	.15
3. Target: Proportion of lifespan exposed to violence			--	.92*	.15	.31	.36*	.15
4. Older: Proportion of lifespan exposed to violence				--	.10	.32*	.27	.01
5. Target: Internalizing T-score					--	.25	.63*	.41*
6. Older: Internalizing T-score						--	.43*	.49*
7. Target: Externalizing T-score							--	.71*
8. Older: Externalizing T-score								--

[a] n=28.

*p < .10

Hypothesis 2

To test the overall hypothesis that the combination of differing degrees of

internalizing behaviour in sibling dyads and the combination of differing degrees of

externalizing behaviour in siblings dyads would be differentially related to the quality of

the sibling relationship, a one way analysis of variance (ANOVA) with three levels of

group (A: both siblings demonstrating adjustment difficulty, B: one sibling demonstrating

adjustment difficulty/one not, and C: neither sibling demonstrating adjustment difficulty)

and two levels of relationship (warmth and conflict) was conducted separately for

externalizing and internalizing patterns of behaviour. An unbalanced ANOVA design was

utilized as there were unequal numbers of observations in the comparison groups.

Although the sample size of the present study was small, the robust nature of F supports

its use (Glass & Hopkins, 1984). One assumption of the analysis of variance test is that the

population variances for the different groups are all equal. Moderate differences among

the sample variances do not invalidate the results of the F test (Levin & Fox, 1994). The

data of the present study met the assumptions of the statistical tests used, with the

exception of a random sample. This violation means that generalizability for the results of

the present sample are limited.

Externalizing Patterns of Behaviour and the Quality of Sibling Relationships

Table 6 displays the means from the analysis of variance for the warmth and

conflict subscales using externalizing scores. The results of the analysis of variance using

the warmth subscale indicated that there were no significant differences between the

matched and mismatched patterns of externalizing behaviours. The results of the analysis

Table 6

Means for Externalizing and Internalizing Predictions: Differences Between Relationship

Subscales

	Warmth Subscale	Conflict Subscale
I. Externalizing groups		
Group I A (both externalizing)	61.91$_c$	70.36$_{a,c}$
Group I B (one externalizing/one not)	61.53	66.01$_b$
Group I C (neither externalizing)	62.91	56.93$_{a,b}$
II. Internalizing groups		
Group II A (both internalizing)	63.77$_a$	68.98$_b$
Group II B (one internalizing/one not)	65.22$_c$	62.42
Group II C (neither internalizing)	53.18$_{a,c}$	57.93$_b$

Note. Means with the same subscript letter are significantly different from each other at

$p < .10$.

of variance using the conflict subscale was significant, $F_{(2,26)} = 4.64$, $p < .10$ (see Table 6

for means). Thus, the hypothesis that differing combinations of externalizing behaviours

would be differentially related to the sibling relationship was supported. Although the one-

way ANOVA comparing warmth was not significant, several planned comparisons were

conducted to test a priori theoretical hypotheses. The paired Student's t-test was chosen

to test all a priori predictions. A total of nine t-tests were conducted with the externalizing

groups.

Between Group Differences

It was predicted that the conflict subscale mean for dyads with both siblings

demonstrating externalizing behaviours would be significantly higher than the conflict

subscale mean for the dyads with neither sibling demonstrating externalizing behaviours.

The prediction (comparison a) that the conflict subscale mean for Group I A (both

externalizing) would be significantly higher than for Group I C (neither externalizing) was

supported, $t(16) = 2.98$, $p < .10$. The prediction (comparison b) that the conflict subscale

mean for Group I B (one externalizing/one not) would be significantly higher than for

Group I C (neither externalizing) was supported, $t(18) = 1.81$, $p < .10$ (see Table 6 for

means).

Within Group Differences

Prediction I

It was predicted that if both siblings demonstrated a pattern of externalizing

behaviours (Group I A), the conflict subscale mean for this group would be significantly

higher than the warmth subscale mean, indicating a hostile sibling relationship. This

prediction (comparison c) was supported, t (9) = -2.20, p<.10 (see Table 6 for means).

Prediction 2

It was predicted that if one sibling in the dyad demonstrated a pattern of

externalizing behaviours and the other did not (Group I B), the conflict subscale mean for

this group would be significantly greater than the warmth subscale mean, indicating a

hostile sibling relationship. This prediction was not supported (see Table 6 for means).

Prediction 3

It was predicted that if neither sibling demonstrated an externalizing pattern of

behaviour (Group I C), the warmth subscale mean for this group would be significantly

higher than the conflict subscale mean, indicating a more positive relationship. This

prediction was not supported (see Table 6 for means).

Therefore, three out of nine t-tests were significant. In summary, when both

siblings demonstrated externalizing behaviours, their relationship was more conflictual.

When neither sibling demonstrated externalizing behaviours, their relationship was more

warm.

It should be noted that one outlier score (family 10) was found in the conflict

aggregate subscale. This outlier score was three standard deviations below the mean.

When analyses were repeated without this outlier score, results of the ANOVA or t-tests

did not change.

Internalizing Patterns of Behaviour and the Quality of the Sibling Relationship

Two one way analyses of variance utilizing the internalizing groupings were

conducted. The one-way ANOVA comparing warmth subscales was significant, $F (2, 26)$

$= 2.60$, $p < .10$. While the one-way ANOVA comparing conflict subscale means was not

(see Table 6 for means). The hypothesis that differing combinations of internalizing

behaviours would be differentially related to the quality of the sibling relationship was

supported. Again, planned comparisons to test a priori hypotheses were conducted. A

total of nine t-tests were conducted with the internalizing groups.

Between Group Differences

Prediction 1

It was predicted that in sibling dyads where both siblings demonstrated

internalizing behaviours (Group II A), warmth subscale means would be significantly

lower than the warmth subscale means in sibling dyads in which only one sibling exhibited

internalizing behaviours (Group II B). It was further predicted that the conflict subscale

means for Group II A would also be significantly lower than the conflict subscale means

for Group II B. These comparisons were not significant.

It was also predicted that in sibling dyads where both siblings demonstrated

internalizing behaviours (Group II A), the warmth subscale means would be significantly

lower than warmth subscale means in sibling dyads in which neither sibling exhibited

internalizing behaviours (Group II C). Warmth subscale means for Group II A were

significantly higher than Group II C, $t (15) = 1.90$, $p < .10$ (comparison a). It was further

predicted that the conflict subscale means for Group II A would also be significantly lower

than the conflict subscale means for Group II C. Conflict subscale means for Group II A
were significantly higher than for Group II C, t (15) = 1.86, $p < .10$ (comparison b). Thus,
this prediction was not supported (see Table 6 for means).

Prediction 2

It was predicted that in sibling dyads where one sibling in the dyad demonstrated
internalizing behaviours and the other did not (Group II B), their relationship would be
significantly less warm and less conflictual than in sibling dyads in which neither sibling
exhibited internalizing behaviours (Group II C). The warmth subscale mean for Group II
B (one internalizing/one not) was significantly higher than the warmth mean for Group II
C (neither internalizing), t (18) = 2.21, $p < .10$ (comparison c). No differences were found
between the conflict scores. This prediction was not supported (see Table 6 for means).

Within Group Differences

Prediction 3

It was further predicted that within group differences would exist for Group II C
(neither sibling internalizing) where the warmth subscale mean would be significantly
higher than the conflict subscale mean. This prediction was not supported (see Table 6 for
means). Therefore, three out of nine t-tests were significant. In summary, internalizing
patterns of behaviours were differentially related to the quality of the sibling relationship.

It should be noted that one outlier score (family 10) was found in the warmth
aggregate subscale means. This outlier score was three standard deviations below the
mean. When analyses were repeated without the outlier score, the warmth subscale mean
for Group II B (one internalizing/one not) was no longer significantly higher than the

warmth mean for Group II C (neither internalizing). No other analyses utilizing the internalizing groups differed when the outlier score was not included.

Chapter 5: Discussion

The primary objective of the present study was to explore the quality of sibling relationships in families with a history of violence. While other researchers have studied the adjustment of individual children exposed to violence, little work has examined this unique dyadic relationship. In the present study, several hypotheses concerning the adjustment of siblings in families with a history of violence as well as their sibling relationships were tested. While it has been well documented that violence can be distressing to children, many studies have focussed on the immediate responses of children exposed to violence (Wolfe et al., 1985). The present study breaks new ground by investigating a community sample of children with a history of family violence. Mothers who had attended counselling or were still receiving treatment were recruited; thus, the mothers and children in the present study were not reporting on immediate reactions to violence. All of the participants were no longer in violent situations. The length of time elapsed since the violence ended varied for each family. Studying children's responses to violence based on variable time frames is a strength of the present research since it expands the current knowledge base. However, generalizing the findings of the present study to other populations, such as families housed in temporary crisis shelters who may demonstrate more immediate responses to violence, may not be appropriate. It is important to keep this context in mind when interpreting the results of the present study.

Hypothesis 1

The first hypothesis proposed that the length of exposure to violence would be positively and significantly correlated to the target and older siblings' internalizing and externalizing behaviours. In the present study, the length of exposure to family violence was positively and significantly related with internalizing and externalizing behaviours in younger and older siblings. Older sibling's internalizing behaviours were positively and significantly associated with estimated exposure to violence, while target sibling's externalizing behaviours were positively and significantly associated with exposure to violence. Therefore, exposure to violence is associated with adjustment in children. However, it appears that the type of adjustment varies depending on developmental level.

Younger Siblings

In the present study, the longer mothers estimated their children were exposed to family violence, the more likely they were to rate school-aged target siblings (aged five to fourteen years) higher on under-controlled or externalizing behaviours. Since it is assumed that the children in the present study are no longer exposed to violence at home and their mothers have undergone some form of treatment, this finding represents an enduring pattern of maladjustment that has persisted over an unknown period of time. Why might this be the case? If the concepts of the sensitivity hypothesis are applied (Cummings, 1998), their current patterns of behaviours may stem from their previous coping responses to family violence. Previous exposure to an extreme uncontrollable stressor such as family violence may have heightened these children's awareness of and reactions to a variety of stressors. If so, this pattern of coping behaviour may now be triggered by much less

extreme stressors in their environment, such as conflict with their parent or sibling. Therefore, these children's heightened sensitivity may persist over time, and may be generalized to less severe stressors, accounting for the sustained pattern of externalizing behaviour over time seen here.

Social learning theory (Bandura, 1986) can also be used as an explanatory framework for these findings. Social learning theory complements the explanation of the sensitivity hypothesis by addressing current ongoing mechanisms that may prolong adjustment difficulties. Specifically, if the social learning theory concepts of modelling and positive reinforcement are applied to these findings, siblings may be both observing and reciprocating patterns of externalizing behaviours with each other. Further, it should be noted that there were more brother dyads than sister or mixed gender dyads in the present sample. It has been suggested in the literature that boys may be more likely than girls to respond to severe stress with externalizing patterns of adjustment (Katz & Gottman, 1993). Taken together, these mechanisms may also help explain the apparent persistence of younger (target) siblings' under-controlled patterns of behaviour over time.

In the present sample, school-aged younger (target) siblings ranging in age from five to fourteen years of age had been exposed to family violence for one-half (49%) of their lifetime on average. Therefore, it seems reasonable to assume at least some of these children were exposed to family violence as toddlers and preschoolers. Developmentally, young children are limited in the variety and sophistication of coping strategies they can draw upon in response to the powerful stressor of family violence (Cummings et al., 1984). Evidence from other research has shown that young children respond to distressing

events with their own distress, and that later they will often deny or pretend to have ignored distressing events. Young children who face severe stress often have difficulty developing self-soothing and self-comforting strategies. Young children are also more dependant upon direct feedback from the situation, including debriefing from their parents, in their appraisals of situations as well as their understanding if the longer term implications of family interactions (Cummings & Smith, 1993). Specifically, they are more likely to blame themselves as the cause of marital conflict and/or violence. Lastly, it must also be noted that young children are only just developing their ability to reliably control their desires and impulses during the preschool and early school-aged years.

In conclusion, taken together, the evidence discussed above suggests that younger (target) siblings may be more likely to develop a pattern of under-controlled response to the stress of family violence than their older counterparts. Their aggressive, non-compliant and destructive behaviours may reflect an earlier response pattern combining high arousal and an egocentric causal misinterpretation of highly stressful events; these behaviours may also reflect a deficit in the early development of self-comforting and self-control mechanisms which, for reasons outlined above, continue to persist in the absence of ongoing family violence.

Older Siblings

In the present study, the longer mothers estimated their children were exposed to family violence, the more likely they were to rate school-aged and adolescent older siblings (aged six to seventeen years) higher on over-controlled or internalizing

behaviours. It should be noted that approximately 30% of older siblings (n=9) were

adolescents, which may have important implications for understanding this finding.

The sensitivity hypothesis can again be useful in understanding why this pattern of

behaviour may have persisted over time. Again, these patterns of behaviour may stem

from early experiences of exposure to family violence. The older siblings reactions may

again be heightened by exposure to violence but unlike the younger children under-

controlled behaviours, the older sibling demonstrate their arousal in over-controlled

patterns of behaviour.

Whether children have been exposed to family violence or not, as they begin to

experience puberty and enter into adolescence, (usually between the ages of 9-12 years)

both boys and girls become more self-aware and self-conscious. Girls especially are at risk

for lower self-esteem and more critical self appraisal. Adolescents are often anxious about

their pubertal development and sexuality in general. Lastly, adolescents are more likely to

report short-term feelings of melancholy and longer term feelings of depression than

children or adults.

Adolescent older siblings in the present study may be experiencing a "double

whammy" consisting of adjustment difficulties linked with prior exposure to family

violence combined with pubertal onset of the challenges of adolescence. The combination

of prior adjustment difficulties and the developmental demands of adolescence may help to

explain why their mothers may be more likely to report over-controlling patterns of

behaviour including anxiety, depression and withdrawal from the parent-child relationship.

Over-controlling patterns of behaviour that may have begun earlier in childhood may

become exacerbated or may be more likely to persist over time due to the challenges of pubertal transition discussed above.

These findings are consistent with prior research conducted on this topic. Older children have been noted to display more internalizing behaviours than younger children (Hughes & Barad, 1983; Hughes, 1988). As well, younger children have been found to have high levels of externalizing behaviours (Hughes, 1988). Developmentally, older children may be more adept at controlling their behaviours than younger children, and their adjustment seems to reflect that they tend to internalize their reactions. Younger children, however, may react to exposure to violence in a more behavioural way, as indicated in their externalizing patterns of behaviour.

There seems to be little coherent understanding of the mechanisms related to the development of behavioural difficulties of children/adolescents exposed to family violence. Although exposure to violence has been documented as a serious risk factor, it may be that a number of other risk/resilience factors interact with exposure to violence such as socio-economic status, the quality of the parent-child relationship, the quality of the sibling relationship, family resources, history of addiction in the family, culture, family composition, ethnicity, and class, and influence behavioural adjustment in complex ways. Additionally, individual characteristics may moderate (Baron & Kenny, 1986) the impact of exposure to violence on behavioural adjustment such as the history of child abuse, temperament, age, and gender.

It is also important to consider that several studies have found that mothers who are abuse survivors consistently under-report internalizing symptomology in children,

whereas children themselves who had been exposed to domestic violence tend to report clinical levels of withdrawal, anxiety and depression (Moore & Pepler, 1998; Fantuzzo et al., 1991). Thus, for the present sample, the older siblings may be more overt than their younger siblings in displaying their anxiety, fear, and sadness. The older siblings may be more clingy and shy, seeking out their mother more often, helping her to identify the internalizing behaviour patterns. Whereas, the target sibling may be clingy as well but might seek out their sibling or another person leaving the mother with the potentially false impression that her younger child is not internalizing.

Conclusion: Hypothesis 1

In conclusion, the first hypothesis of the present study demonstrates exposure to violence is positively and significantly correlated with adjustment in younger and older siblings. Specifically, estimates of exposure to violence were related to externalizing behaviours in younger (target siblings) and internalizing behaviours in older siblings. This maladjustment, however, seems to varies developmentally in that timing of exposure may be just as important as frequency and severity.

Methodologically, it appears that the proportional lifetime measure of exposure to violence was more effective for the present sample. Creation of a proportional variable had developmental implications for both siblings; the same absolute frequency of exposure seems to be meaningfully different. Future studies may benefit from considering exposure to violence in such a way, and to assess the role of the timing of exposure to violence more directly.

Considering that one-third to half of the siblings in the study scored in the clinical range of internalizing and externalizing patterns of behaviour, the correlational pattern of results in the present study may reflect an inadequate "ceiling". A ceiling effect can occur with measures that test atypical groups of persons (Glass & Hopkins, 1984) in that, since all members of an atypical group score very high or very low, variability may be not be adequately assessed. Since Pearson product-moment correlations depend in part on the variability of each variable, a ceiling effect may reduce or erase significant associations In the present study, CBCL T-scores were used in the correlational analyses. While T-scores provide a common metric for comparison since they are highly skewed and restricted in range, they may also be subject to a ceiling effect, and therefore reducing the likelihood of a significant correlation. This ceiling may be another possible explanation for the limited findings in this hypothesis.

Finally, the use of a single source of assessment of exposure to family violence limits the results of the present study. Knowing only the mothers perception of exposure to violence may not be enough information to accurately measure the impact of family violence on children. A multi-method approach is stronger and would likely provide a broader understanding of the child's experience. Children's own assessments of violence were measure in the larger project from which this data was obtained using the Violence Exposure Questionnaire (VEX) by Fox and colleagues but was not available for the present study.

Hypothesis 2

The second hypothesis of the present study explored the role of the sibling

relationship for children exposed to family violence. It may be that a positive or negative

sibling relationship was one of many factors interacting with exposure to violence and this

combination of factors contributed to the behavioural adjustment of the siblings in the

present study. This relationship was investigated as a possible stressor or support.

In the present study, it was found that the target siblings and the older siblings

externalizing behaviours were positively and significantly correlated. Recall that 38% of

target siblings and 54% of older siblings had externalizing T-scores in the clinical range for

the CBCL. This finding was consistent with other studies, particularly the sibling trainer

hypothesis, which has suggested that children may mutually reinforce aggressive and

hostile behaviours (Patterson, 1986). This theoretical perspective proposes that brothers

and sisters of children with behavioural difficulties actively contribute to difficult

behaviour in a family. Patterson (1986) found that children who were labelled as

externalizing were more likely to have siblings who displayed the same externalizing

behaviours. Social learning theory argues that children are more likely to engage in

behaviours that are rewarding, and that are reinforced either directly or vicariously

(Bandura, 1977, 1986). Children who have been exposed to violence may perceive

aggressive interactions as normal and use these tactics in their own relationships

(Cummings et al., 1989). In the present study, this notion was supported; siblings'

externalizing behaviours were significantly correlated. Specifically, conflict subscale means

were significantly higher for the dyads where both siblings demonstrated externalizing

patterns of behaviour than for dyads with one sibling demonstrating externalizing

behaviours and the dyads with neither sibling demonstrating externalizing patterns of

behaviour, indicating that the dual-externalizing dyads had more conflicted relationships.

Externalizing Predictions

Dyads in which both siblings displayed externalizing problems had more hostile

and conflicted sibling relationships. Social learning can be used to explain these findings. If

the concepts of modelling and positive reinforcement are again applied, it is clear that

externalizing siblings are reinforcing each others behaviour patterns with aggressive

interactions. The sibling trainer hypothesis which complements the social learning theory

model posits that children with problems are more likely to have siblings with similar

problems. These troubled interaction patterns can become mutually reinforcing. It may be

especially problematic for the dyads with both externalizing siblings. This combination of

two aggressive siblings may be the most reinforcing and hostile. Dyads with one

externalizing sibling and one not are also more conflicted than the dyads with neither

sibling externalizing. However, the dyads with only one externalizing sibling did not have

significant differences between warmth and conflict. Therefore, these dyads (one

externalizing and one not) not may not be as mutual in their aggressive interactions, and

may not reinforce each others hostile behaviours as much as the dual-externalizing sibling

dyads. However, it is clear that externalizing behaviours are a significant factor when

examining conflict in sibling dyads.

This finding has potential implications for the development of sibling violence.

Goodwin and Roscoe (1990) reported that exposure to family violence increased the

likelihood that siblings themselves would engage in aggressive interactions. Keeping with

a social learning theory and modelling perspective, Patterson argues that siblings will

reinforce these aggressive interactions, and suggests that the interactions will increase in

frequency and severity. Goodwin and Roscoe (1990) argue that as the severity of

aggression between siblings increases, the risk for violence between siblings also increases.

Intersibling violence has been reported as the most common from of family violence

(Gelles & Cornell, 1985; Gelles & Strauss, 1979; Goodwin & Roscoe, 1990) and

externalizing patterns of behaviour may be a predictive factor of potential sibling abuse.

The differing combinations of externalizing dyads (both, one externalizing/one not,

neither) did not differ significantly on their warmth subscale scores. Since warmth and

conflict were not correlated, this result implies that conflict alone may be an important

factor in examining the relationships of externalizing siblings. This result also implies that

different levels of behavioural adjustment may not be a factor in the levels of warmth

experienced by siblings.

Although some researchers have focussed on the negative patterns in sibling

relationships of aggressive children (Patterson, 1986), others have found that externalizing

children also experience support from and positive interactions with their siblings

(Stormshak et al., 1996). In the present study, warmth was independent from conflict. The

sibling trainer hypothesis, which stemmed from social learning theory, suggests that

siblings actively contribute to problems in families. Patterson (1986) found that

aggressiveness and antisocial behaviours such as those typically exhibited by externalizing

children contributed to a negative and hostile sibling relationship. However, sibling

training may be occurring for both aggressive and warm sibling interactions. Externalizing

problems may be associated with higher levels of conflict but the warmth levels may not

necessarily be lower than for other combinations of externalizing problems in sibling

dyads. For instance, the second externalizing prediction proposed that if one sibling in the

dyad demonstrated a pattern of externalizing behaviours and the other did not, the

relationship would be more negative than positive. This prediction was not supported,

indicating no differences between warmth and conflict for these siblings.

Not all children choose to model their sibling or their violent parent(s). For

example, Group I B with one sibling in the dyad demonstrated externalizing patterns of

behaviours while the other did not indicates that some siblings choose not to imitate each

other or their parent(s). Although they were significantly more conflicted in their

relationships than the dyads with neither sibling externalizing, they did not differ

significantly on their warmth and conflict subscale. How do we account for individual

differences in sibling reactions? Social learning theory suggests that experience with the

social world is an important factor in addressing this question (Bandura, 1977, 1986;

Crosbie-Burnett & Lewis, 1993). First, the child or adolescent acquires a range of

behaviours, learns the appropriate situations for those behaviours, and when these

behaviours are reinforced by others, becomes motivated to continue using these

behaviours. In terms of the present study, the siblings have been exposed to family

violence, have learned a response and/or behaviour set that works in that situation such as

aggression or other externalizing behaviours. In some form, these aggressive and

externalizing behaviours are reinforced, encouraging the siblings to use these behaviours

again. However, as the child ages, he/she has a larger and increasing repertoire of behaviours to choose from. Another possibility is that one sibling may observe the other sibling being punished for aggressive behaviours and learn vicariously that a particular behaviour would not be rewarding. New situations and behaviours arise from the increased exposure to social experiences such as school, books, movies, television, and the neighbourhood. Each sibling in a family may have different experiences and develop different behavioural responses. Differential parental treatment of each sibling may influence how each child reacts to violence and to their sibling. Secondly, as a child becomes older, their social environment changes because society, ranging from parents to legal systems, changes their expectations of the child (Crosbie-Burnett & Lewis, 1993; Grych & Fincham, 1990). Thus, for the present study, different ages and social environments may explain the individual differences in siblings exposed to family violence and their sibling relationships.

One perspective that should be addressed here is the possibility of a bully/victim relationship. Recall that the bully persona tends to demonstrate externalizing types of behaviours such as aggression, a positive attitude toward violence and weak inhibitions. Since one sibling in the dyad is indeed demonstrating externalizing and potentially bullying behaviours while the other sibling is not, it may be that the non-externalizing sibling is in fact internalizing. Victim personas are characterized by low self-esteem, are insecure and anxious (Bernstein & Watson, 1997) which are characteristics consistent with internalizing patterns of behaviours. Recall as well that there was considerable overlap between externalizing and internalizing patterns of behaviour in the sibling dyads (see Table 4).

Rigby (1994) argues that the family system as a whole is a critical component of the development of bully and/or victim patterns. Exposure to violent interactions between parents may contribute to these patterns through modelling (Olweus, 1980).

Conclusion: Externalizing Predictions

The hypothesis that different combinations of externalizing behaviours would be differentially related to the quality of the sibling relationship was supported. The combination of two externalizing siblings showed a pattern of hostile sibling relations, with more conflict than warmth in their relationships. As well, the dyads with one sibling externalizing and one not had more conflicted relationships than the dyads with neither sibling externalizing. In summary, the results for externalizing behaviours in the present study seem to suggest that conflict is a more salient factor in the quality of the sibling relationship than warmth. Dyads where both siblings were externalizing had more hostile relationships than other dyads. The sensitivity hypothesis posits that a child with externalizing and aggressive behaviours is likely to have a sibling with similar behaviour patterns. These aggressive patterns can become mutually reinforcing, increasing the hostile interactions between two externalizing siblings such as those in the present study. Warmth was not found to be different among the varying externalizing groups. The dyads with one externalizing sibling was more hostile than the dyads with neither externalizing sibling. These results imply that externalizing behaviours contribute to hostile relationships. For the dual externalizers, this combination leads to high levels of aggression and hostility, and lower levels of warmth in the sibling relationship. For dyads with one externalizing sibling,

the relationship had more conflict than dyads with neither however, they did not have lower levels of warmth.

Previous research has shown that the tone of sibling relationships is a unique balance of conflict and warmth (Barnes & Austin, 1994). This ambivalence within sibling relationships explains why siblings may not differ significantly on warmth, regardless of their externalizing patterns of adjustment (Dunn et al., 1994). Externalizing behaviours may be more predictive of the conflict differences in sibling dyads rather than warmth.

Internalizing Predictions

The hypothesis that different combinations of internalizing behaviours in sibling dyads would be differentially related to the quality of the sibling relationship was supported. When individual means were examined more closely, significant differences also emerged. Surprisingly, the results were found to be significant in the opposite direction than predicted. First, the sibling dyads who exhibited clinical levels of internalizing behaviours had higher levels of conflict and warmth than the dyads with neither internalizing, although it was predicted that they would have lower levels of warmth and conflict. Secondly, sibling dyads with only one sibling exhibiting internalizing behaviours had higher levels of warmth than the sibling dyads who did not have internalizing difficulties. These findings, while unexpected, provided a unique look at the role of internalizing behaviours in a dyadic relationship. Clearly, there was something special about the internalizing groupings created in the present study.

Many researchers have found that internalizing children have difficulty forming peer relationships and lack supportive links with others (Sternberg et al., 1993; Cicchetti

& Lynch, 1995). In the present study, it was found that internalizing siblings were in fact

higher on warmth and conflict than siblings who did not exhibit internalizing behaviours.

While some studies (Holden, 1998; Peled, Jaffe, & Edleson, 1995) found that children

with internalizing problems withdrew from social contacts, thus having little conflict or

warmth to share with each other, the results from the present study suggested that, in fact,

internalizing siblings seemed to be very involved with each other. Stormshak et al. (1996)

suggest that children who have moderate levels of conflict and warmth tend to have

involved sibling relationships. Previous research found that children who exhibited

internalizing symptomology may in fact have a more positive relationship with their sibling

than with peers (East & Rook, 1992). Although it may seem counterintuitive to have both

clinical levels of withdrawal and anxiety, such as those shown by internalizing children, as

well as high levels of warmth, East and Rook (1992) found that internalizing children

derived high levels of support from their siblings and continued to demonstrate adjustment

difficulties at an individual level.

Social learning theory can explain these findings. Individuals need to form secure

attachments with others (Bretherton, 1993). Children exposed to family violence have

often had their models of safe and reliable relationships damaged (through exposure to

violence) and become insecurely attached to their caregivers and siblings (Graham-

Bermann, 1998). Mothers in violent relationships may not be able to provide consistent

parenting, which in turn can make children feel insecure. Insecurely attached persons tend

to be emotionally dependent on others but at the same time anxious and angry, easily

aroused emotionally by fear of abandonment (Dutton, Saunders, Starzomski, &

Bartholomew, 1994). Emotional dependency and insecurity provides a plausible explanation for the co-existence of warmth and conflict, such as the high warmth and conflict demonstrated by the internalizing siblings in the present study. Children exposed to family violence may be insecurely attached to their caregivers or siblings, and may become emotionally dependent on their siblings. This reliance on each other may be interpreted by mothers and siblings themselves as a warm and loving relationship. In fact, these insecure and dependent siblings may be reinforcing their fearfulness and high anxiety levels, ultimately displaying high levels of internalizing behaviours. As the sibling trainer hypothesis suggested about aggressive interactions being reinforced, it may be that internalizing behaviours can also be reinforced.

Some studies found that children exposed to family violence were more supportive to each other in the face of violence (Stormshak et al., 1996) and others found that children with internalizing behaviours had higher levels of conflict with peers than other populations (Stocker, 1994). Thus, children with high levels of internalizing problems may have high levels of warmth and high levels of conflict in their sibling relationships similar to the internalizing dyads of the present study. This type of relationship resembles a more normative sibling relationship (Dunn, 1992). As mentioned earlier, healthy sibling relationships are often characterized by warm and positive interactions as well as negative and antagonistic ones. The fact that these internalizing dyads had higher levels of conflict and warmth, and seemed to be quite involved with each other may be a protective factor against exposure to violence.

Withdrawal and ambivalence are common behaviours in the sibling relationship (Vandell & Bailey, 1992). At an extreme level, these are also characteristic of internalizing behaviours. Vandell & Bailey (1992) argue that conflict between siblings is normal and important, and does not influence warmth between the siblings. Siblings, as mentioned, are natural playmates for each other, and many report strong attachments with one another (Dunn, 1993; Stocker et al., 1989). While many sibling report receiving comfort and affection from each other, many also report that conflicts are another important feature of their relationships (Vandell & Bailey, 1992). Thus, it may be that the siblings in the present study are indeed modelling each other and reinforcing their internalizing behaviours, however, because these behaviours are also similar to the ambivalent nature of normative sibling relationship, the quality of the sibling relationship is not affected by internalizing behaviours.

Conclusion: Internalizing Predictions

Internalizing behaviours in sibling dyads were differentially associated with the quality of the sibling relationship. Interestingly, the results were in the opposite direction than predicted. Dyads with both siblings internalizing had higher levels of warmth and conflict, indicating a more involved relationship than dyads with neither sibling internalizing. Dyads with one internalizing sibling had higher levels of warmth than dyads with neither sibling internalizing. These results seem to suggest that siblings are more likely to demonstrate a compensatory relationship that offers resilience to stress if they are internalizing rather than if they are not, or if they are externalizing.

Strengths and Limitations

The present study explored the idea that externalizing behaviours would be related

to a certain type of sibling relationship (hostile), and that internalizing behaviours would

be related to other types of sibling relationships (avoidant). As predicted, some children

had hostile relationships while others did not. Still others demonstrated, unexpectedly,

involved relationships. However, an important point to note is that these relationship

differences are occurring in the same sample. Each sibling relationship was interpreted

based on two separate criteria - internalizing and externalizing patterns of behaviour.

These separate lenses may give a false impression of the nature of sibling relationships in

families with a history of violence. In fact, the quality of the sibling relationship may

depend on the interaction between internalizing and externalizing behaviours and the

numerous combinations that could occur in a dyadic relationship. This concept may be

especially important for the dyads where one sibling exhibited internalizing or externalizing

problems and the other sibling did not. For example, while it was true that only one sibling

in that dyad was exhibiting externalizing behaviours and the other was not, it may be

important to investigate what the non-exhibiting child was doing. This combination may be

especially important in understanding the dynamics of bully/victim relationships

(Bernstein & Watson, 1997). Other factors may be playing a role in these dyadic

combinations. One must be cautious in suggesting that siblings who did not demonstrate

externalizing problems would have a positive sibling relationship without considering the

possibility that they may be experiencing internalizing behaviours, and vice versa.

As previously mentioned, there was a significant relationship between internalizing and externalizing scores for target siblings as well as for older siblings, indicating a clear relationship between these subscales. Thus, it may be misleading to treat these behaviours as independent. Clearly, a combined score would be beneficial in exploring this interaction further as there was considerable overlap of internalizing and externalizing behaviours in the dyads. A combined score was not used in the present study as its purpose was to explore internalizing and externalizing behaviours separately. This overlap implied that siblings were not experiencing a single set of adjustment difficulties and it may be inaccurate to study their sibling relationship based on this presumption. Identifying this discrepancy, that is the different relationships in the same sample, is a clear addition to the literature. Understanding that the separation of adjustment into two distinct spheres of internalizing and externalizing can produce different results may clarify the contradictions other researchers have reported and guide future research.

It is important to recognize that the results of the present study are relative to the context in which they were studied. This sample was self-referred and all mothers but only some of the children had received some level of counselling. Other samples such as those in shelters or individuals who have had no intervention may yield different findings. A common criticism of other studies on children exposed to family violence is the restrictive sampling (Fantuzzo & Lindquist, 1989). Shelter samples do not represent the general population in many important ways, such as family income, resources, community supports and their choices for participation in research. The present study, however, invited all women to participate at their own volition, and they came from various

situations and socio-economic levels. Therefore, although it is important to recognize the particular characteristics of the present sample, it is equally important to recognize the methodological strength in sampling from the population at large rather than a restricted shelter sample.

A strong addition to the literature made by the present study was the use of children's perceptions of their own relationships as well as mothers' reports. By far, most studies in this area rely solely on mother reports of children's behaviours (Graham-Bermann, 1998). To understand the nature of sibling relationships, it is imperative to seek the perceptions of the members in that relationship. However, it is equally important to continue to include mothers' reports. Children provide but one segment of the puzzle in the quest for understanding sibling relationships. A multi-method approach is stronger methodologically than a single form of measurement. Thus, having a mother's report as well as the siblings' reports will add to the body of knowledge gathered about this relationship. This methodological approach strengthened the results of the present study and will contribute to the strength of future work as well.

While the present study was able to use both children's and mothers' reports to explore the sibling relationships, only the mothers' reports were used for the behavioural adjustment ratings. Although the test-retest reliabilities for the CBCL are high (Achenbach, 1991), it has been noted that mothers offer more negative behavioural ratings of their own children than do other observers (Sternberg et al., 1993). Prior studies suggest that mothers tend to view their children's behaviour as more disruptive or more withdrawn. Since the CBCL is based on only one informant's perspective, it may reflect

only one perception of behavioural difficulties in a child. It may be important to consider

using more than one perspective of the siblings' behaviour when designing future studies.

In addition, children's experiences are moderated by individual characteristics (eg.

age, gender, race, temperament) which may be in turn influence their sibling relationships

(Fantuzzo et al., 1991). Siblings growing up in the same family may have vastly different

childhood experiences (Barnes & Austin, 1994). As Grych and Fincham (1990) suggest,

children's appraisals of situations differ according to age, gender, birth order and several

other factors. Consequently, siblings in the same family may have vastly different reactions

to exposure to domestic violence. Prior research has found that temperament plays a role

in children's reactions to family violence. Temperamentally sociable children tend to cope

with stress more appropriately (Fabes & Eisenberg, 1992), and may also be able to cope

more effectively with violence. O'Keefe (1994) found that temperamentally sociable

children who were exposed to violence were less likely to develop internalizing problems.

These individual characteristics were not considered in the present study and should be

included in future research. Studies exploring the impact of violence on sibling

relationships should consider these variables in order to broaden the knowledge base in

this area.

Gender is another factor that may influence the relationship among exposure to

violence and behavioural adjustment. Previous gender related research is riddled with

contradictory findings. Some studies found no gender differences in children exposed to

family violence and their behavioural adjustment (Cummings et al., 1981, 1984). Others

found that boys tend to exhibit more externalizing difficulties and girls more internalizing

patterns (Cummings, et al., 1985; Wolfe et al., 1985). Still others found that preschool

boys had more internalizing problems than did girls (Stagg, Wills, & Howell, 1989).

Clearly, gender effects need to be systematically studied. The present study did not

separate boys and girls and doing so may have clarified the relationship between

behavioural adjustment and violence.

Prior research has been plagued, as was the present study, by the lack of a clear

definition of violence (Graham-Bermann, 1998). Definitions have varied with some

researchers studying only physical episodes of violence and not verbal or implied violence,

while others have defined violence as being present only if the child had directly observed

the incident. There has been little information gathered about the psychological abuse that

can be nested in the physical abuse. Research has indicated that physical violence is usually

preceded by a complex web of intimidation including threats, insults, psychological abuse

and control (Levendosky & Graham-Bermann, 1998; Tolman, 1989; Walker, 1983) which

may be subtle and indirect in their influence. These coercive and controlling behaviours

may be a factor to consider when assessing the links between exposure to violence and

child adjustment. Although a child may not have been exposed to frequent physical

assaults, some researchers have suggested that the emotional climate of the home and the

daily observation or exposure to such negativity can be a contributing factor to negative

child outcomes (Graham-Bermann, 1998). The home atmosphere and the intimidation

tactics may have been an indirect influence interacting with the exposure to violence

contributing to the internalizing and externalizing behaviours of the siblings of the present

study. It has been speculated that a qualitative difference exists between violence that

involves slapping and kicking, and violence that includes stabbing or shooting (Davis &

Carlson, 1987; Hughes et al., 1989). In the present study, it is unknown when the violence

began in the child's life, the types of incidents that occurred or the severity of each

incidence. These differences are important to consider when studying children exposed to

family violence. However, with such a small sample, it would be difficult to recruit enough

participants for each type of violence. Also, few researchers agree on one definition of

violence (Gelles & Strauss, 1979; Hamberger, 1994). As mentioned previously, restrictive

sampling has problems of its own. It may be important to determine the onset of violence

as well as the events preceding the violence in order to understand the relationship

between violence and adjustment problems.

It should be noted that it is not known when the mothers in the present study self-

identified as abuse survivors. It is likely that these mothers were in violent situations for

variable lengths of time, thus their children were exposed to varied amounts of violence as

well. It is not known how the mothers defined violence and this factor may influence how

they subsequently estimated their children's exposure to family violence. The mothers'

perception may be a key factor in studying the adjustment of children exposed to family

violence depending on how they interpret their experiences. If some mothers' view threats

and intimidation as a severe form of violence and remove themselves and their children

from the situation immediately, it is likely that these children would react and adjust

differently than children whose mothers endured years of extreme beatings that included

hospitalization.

It was also not known if the children themselves experienced violence. The direct

experience of abuse is clearly an issue in determining how exposure to violence influences

behaviour. A child's internalizing and externalizing behaviours may be due to their own

experience of violence. Berthelsen and colleagues (1994) found that 35.2% of the children

they studied had experienced abuse themselves, and others found that child abuse often

co-occurred with exposure to family violence (Fantuzzo & Lindquist, 1989; Hughes,

Parkinson & Vargo, 1989). This concept of dual stressors highlights the difficulty in

drawing causal inferences about adjustment in children exposed to violence. Children's

adjustment may not be influenced by exposure to violence but rather by the direct

experience or the combined experience of exposure and abuse. It is not unreasonable to

speculate that families with a history of spousal violence may have a history of child abuse

(Hughes et al., 1989). Future research should address the behavioural outcomes of

children who are exposed to violence, and children who are exposed to and directly

experience violence.

Family disruption is common in families with a history of violence: other stressors

may come into play when attempting to uncover the reasons for a child's adjustment

problems (Smith et al., 1997). Several studies have alluded to the importance of the

parent-child relationship when attempting to examine the causes of child maladjustment

(Smith et al., 1997; Stocker, 1994). Disrupted parenting strategies has been linked to

distress in the parent-child relationship. Subsequently, these parental inconsistencies can

contribute to a child's behaviour difficulties (Holden, 1998). However, not all

relationships between the parent and the child in violent families are negative. Some

research has found that a positive parent-child relationship can protect against negative effects of a destructive home environment such one with family violence (Rutter, 1971). A positive mother-child relationship may be an effective buffer against the detrimental effects of violence.

The size of the sample in the present study could potentially be both a strength and a limitation. Clearly, a larger sample would be beneficial in that correlations and relationships among variables could be better examined. The larger the sample, the greater the likelihood that the groups would be initially equivalent (Levin & Fox, 1994). As well, the detection of subtle effects is enhanced by using a larger sample size. However, with this in mind, the fact that significant results did emerge in the present study illustrates that these differences were indeed quite dramatic and powerful.

A correlational design also has its limitations. Since correlations provide evidence of an association between selected variables, one cannot conclude that the selected variable caused the measured difference between the groups. Thus, while the results of the present study found that adjustment was positively correlated to exposure to violence, it is unclear if exposure to violence has a causal relationship to the development of adjustment difficulties.

Directions for Future Research

Much of the research concerning behavioural adjustment in children exposed to family violence has relied on the Child Behaviour Checklist. Additionally, the CBCL has been used to identify two areas of problem behaviours, internalizing and externalizing, and many researchers have used these subscales separately including the present study.

However, as the present study demonstrates, different results can be found in the same sample depending on whether it is viewed from an internalizing or externalizing perspective. This narrow focus may not be telling the whole story of these children. Future researchers might consider using a total problem scale or combining internalizing and externalizing scales to address this problem. The purpose of the present study was to look at sibling relationships using internalizing and externalizing patterns of behaviour, however, this may not have been the most appropriate design.

Operationally defining violence and exposure to violence is a critical issue. It is imperative to be able to accurately describe the experience of the child. What exactly was he/she exposed to? Additionally, researchers should clearly define the behaviours that count as violence including the intimidation and verbal confrontations, outcomes of seeing abuse (bruising on mothers), and the consequences of violence (court processes).

The individual characteristics of the victims, both mother and child, are important in understanding what exactly affects a child's adjustment. Controlling for other variables (SES, race, gender, family resources, sexual orientation) will also add to the understanding of the impact of violence on children.

Another area of future study is the role that timing plays in children's outcomes. Examining how the onset of violence is associated with behavioural adjustment difficulties is an important step in understanding the impact of violence. These concepts need to be studied systematically.

Conclusion

The literature reviewed highlighted the need to explore the quality of sibling relationships in families with a history of violence. Previous research indicated that children who were exposed to violence tended to develop internalizing and externalizing behavioural problems. The present study found that length of exposure to violence was positively and significantly correlated to internalizing and externalizing behaviours. These findings support the notion that greater exposure to violence is associated with greater maladjustment. However, it appears that the type of adjustment difficulty varies depending on developmental level. Older siblings' internalizing behaviours were correlated with exposure to violence while target siblings' externalizing behaviours were correlated to exposure to violence.

A more conflicted sibling relationship was associated with externalizing behaviours: dyads with both siblings externalizing and dyads with one externalizing sibling were higher in conflict than dyads with neither sibling externalizing. The results for externalizing behaviours in the present study seem to suggest that conflict is a more salient factor in the quality of the sibling relationship than warmth. Warmth was not found to be different among the varying externalizing groups.

Internalizing behaviours in sibling dyads provided a unique look at the quality of the sibling relationship. While predicted that internalizing siblings would have low levels of conflict and warmth, the opposite was found. Dyads with both siblings internalizing had higher levels of conflict and warmth than dyads with neither sibling internalizing. As well, dyads with one internalizing sibling had higher levels of warmth than the dyads with

neither sibling internalizing. These results imply that internalizing behaviours may be indicative of a compensatory relationship offering resilience to stress for children exposed to family violence.

It is important to note, however, that these different results and different relationships are occurring in the same sample. As mentioned previously, it may not be appropriate to study the sibling relationship using internalizing and externalizing problems as distinct and independent lenses. Rather, a focus for future sibling relationship research lies in understanding the interconnections among exposure to violence, total behavioural adjustment, and sibling interactions.

An important point learned in the present study and from the numerous studies done prior to this one is that no single factor can fully explain family violence and its impact. Although valuable information about sibling relationships was gained in the present study, more questions were raised than answered. Individual differences associated with abuse survivors and their family harbour much of the information missing in the present study. The weighting of individual risk and protective factors needs to be assessed in future studies on families with a history of violence including the quality of the parent-child relationship, family resources, SES, length and intensity of abuse history, temperament, gender, age, and substance abuse. Expanding the research focus to include neighbourhood characteristics, culture, and race will also improve our understanding of the dynamics of violence. Determining how these various factors balance may build a more comprehensive picture of these families and improve our ability to help all family members cope successfully with their experiences.

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Appendices

Appendix A: Letter of Invitation for Mothers

Dear Parent:

I am conducting research looking at how brothers and sisters get along with each other. It is especially important for us to study families who have a history of domestic violence. Therefore, this study is designed to study how these difficult experiences affect mothers and children. We would like to find out more about how mothers and children get along and learn to deal with conflicts with each other. We are looking for mothers and children who are living together in the same home to assist us with this project.

We are looking for families with at least 2 children over the age of 5 living at home.

If you participate, all the information you and your children provide will be kept strictly confidential. This means that your name will not appear on any of the materials, you and children will be identified using numbers, not your names. Your answers will not be repeated or revealed to anyone.

You will be paid $75 for your participation. You will be asked to come for two short visits; each will last approximately 90 minutes. You will be paid on the second visit. A few months from now, you will again be asked to help us. If you agree to participate again in

the spring, you will receive another $75. Each payment of less than $100 will not affect any allowances or subsidies you may receive in any way.

If you are interested or would like more information, please call and leave us a message at 474-9033 or return the enclosed postcard. If you choose to help us, we will arrange for you and your children to visit a playroom at or near the agency where you received this letter. These visits will be scheduled whenever it is most convenient for you. During the first visit, your children will be asked to play together in a playroom at or near the agency you attend for about an hour. They will not be asked to perform any special tasks or tests, and they will be videotaped. While they are playing, you will be asked some questions about how they get along with each other, and how parenting has been for you. After the play session, each child will be interviewed about how well they get along with each other. These interviews will last about 30 minutes and will be audiotaped.

You will be asked to come back for a second visit at the same place about 1-2 weeks later. You will be asked to join your children in the playroom for about 1 hour. This session will also be videotaped. You will be asked to discuss topics that are important to you and your children. Any interviews not completed at the first visit will be completed at the second visit. You and your children will not be given any tests. All of you will be asked about how family members get along with one another and how they treat one another, including positive and negative (violent) behaviours. At the end of this second visit, you will be paid.

In a few months from now, you will be paid another $75. If at any time or for any reason you or your children no longer wish to participate, you and your children are free to stop. The videotapes will be used for research purposes only, and will be seen by research assistants only. No one else will have access to them. All results reported will concern groups, not individuals. At the conclusion of the study, our record of your name and address will be destroyed and the video and audio tapes will be erased. At the end of the study, all parents who are interested will receive a summary of the findings. This study has been approved by the Faculty of Human Ecology Ethics Committee at the University of Manitoba.

Please let us know if you are interested in participating in this study by calling 474-9033 or by mailing the enclosed postcard. Please tell us if you would like to participate, provide a phone number where you can be reached, and drop it in the mail at your earliest convenience . If you do not have a phone number, please indicate the name of a relative, or your group leader or caseworker so that we may contact you through them. If you have any questions or concerns about the study, please feel free to ask me by calling 474-9033. Thank-you very much for your kind attention. I am looking forward very much to including you in this important project.

Sincerely,

Caroline Piotrowski, Ph. D.

Assistant Professor of Family Studies

Appendix B: List of Community Agencies

Sharon Perrault, Director
Ma Mawi Wi Chi Itata
505-338 Broadway Ave
R3C 0T3
Tel: 925-0300

Tim Wall, Co-ordinator
Evolve Program
Klinic Community Health Centre
870 Portage Avenue
R3G 0P1
Tel: 784-4070

Linda Trigg, Director
New Directions for Children,
Youth & Families
400-777 Portage Avenue
R3G 0N3
Tel: 786-7051
Contact: Cris Castles

Janalee Bell Boychuk
Elizabeth Fry Society of Manitoba
773 Selkirk ..
R2W 2N5
Tel: 589-7335

Carol Barton, Executive Director
Women in Second Stage Housing
St. Norbert P.O. Box 202
R3V 1L6
Tel: 275-2600

Emily Shane, Executive Director
Jewish Child & Family Service
Suite C200 - 123 Doncaster St.
R3N 2B2
Tel: 477-7430
FAX: 477-7450
Contact: Zipora

Jaime Canassco
Mount Carmel Clinic
886 Main Street
R2W 5L4
Tel: 582-2311 ext.209

Brian Van Wallegham
Family Centre of Wpg
Portage Place
401-393 Portage Ave
R3B 3H6
Tel: 947-1401

Sharon Hunter, Counselling Coordinator
Fort Garry Women's Resource Centre
1088 Pembina Hwy.
R3T 1Z9
Tel: 477-1123

David Charabin
Elizabeth Hill Counselling Centre
301-321 McDermot Ave
R3A 0A3
Tel: 956-6560
FAX: 943-4073

Beth Rogers, Counselling Coordinator
Wpg Military Family Resource Centre
350 Doncaster
R3N 1W8
Tel: 489-7003
FAX: 489-8587

Debbie Anderson, Director
Eastman Crisis Centre
Box 2756
Steinbach, MB R0A 2A0
Tel: 326-6062
FAX: 326-2359

Appendix C: Letter of Invitation to Clinicians

Dear Colleague,

I would like to invite you to participate in a research project which investigates children who have witnessed family violence. I am interested in how these experiences affect children's behaviour and social relationships - particularly sibling relationships. Further, I will be examining what factors are relevant to these children being victimized by each other, victimizing others or becoming both victims and victimizers.

Ideally, I would like to complete a multi-method assessment including videotaped observation of children playing with their sibling and observations of children with their mother and sibling. In addition, both mothers and children will be interviewed and asked to complete questionnaires. The research would be conducted at an agency or facility close by and convenient for the family or at the University of Manitoba.

This project is affiliated with the Manitoba Research Center on Family Violence and Violence Against Women. As the principal investigator of this study, I have received funding from the Social Science and Humanities Research Council of Canada. I would like your assistance in recruiting families with a history of violence. I am looking for women who have experienced violence in a past or current relationship, and who have had or are currently receiving counseling. These women need to have a least 2 children aged 6 of age or older living with them at home. Families with more than 2 children are welcome to participate but only the 2 children aged 6 or older will be directly involved in the research.

This is because the children are interviewed and given questionnaires as part of the research and these measures are appropriate for school aged or older children. Male partners are not requested to participate in this research.

I would very much appreciate if you could inform families in your care that they are eligible for this study and pass along to them a letter of invitation; this is the total extent of your participation. This letter of invitation is directed to mothers and asks them to make a phone call or mail a postcard to find out more about the study. Each family is paid $75 for their participation.

Thus far, several agencies have lent their support including: Klinic, Mount Carmel Clinic, Ma Mawi Chi Itata, New Direction, Youth and Families, Family Center, Elizabeth Fry, Fort Garry Women Resource Centre and WISH.

I hope that you will agree to forward the enclosed letters to families who you feel may be interested in participating. If you have any questions concerning this study, or would like more letters to distribute, please feel free to call me at 474-9033.

Thank you for your time and consideration. I look forward to hearing from you.

Sincerely,

Caroline Piotrowski, Ph. D.

Assistant Professor of Family Studies

Appendix D: Telephone Screening Protocol

Hello my name is_____. A little while ago you called and left a message /mailed a postcard that let us know you might be interested in participating in our study. I'm calling to tell you more about it. Are you still interested in hearing about it?

We are looking for families who have received treatment in the past or who are currently in treatment of a history of violence. Which agency do you go to?

We would like to find mothers who have at least 2 children: one who is between 5-8 years old, and an older brother or sister. Do you have any children? How old are they? What are their names?

If you participate, we will come to your agency and interview you and your children about how they get along with each other. We would also like to videotape the children playing together, and also videotape you talking to your children. We will ask you to see us twice; each visit will last about 90 minutes. At the end of the 2 visits, you will be paid $75.

We will be calling you back in the spring. We will ask you and your family to do exactly the same things. If you agree, you will be paid $75 again then.

Do you have any questions for me? Would you and your family like to schedule the first visit?

If you think of any questions or need to change your appointment, please call us back at 474-9033 and we will be happy to talk to you.

Appendix E: Consent Form

I agree to participate in a study concerning how siblings learn to get along with each other conducted by Dr Caroline Piotrowski. I understand that this involves myself and my children being interviewed and that some answers will be audiotaped. I understand that this information is confidential and will be used and seen by researchers only. I further understand that I or my children may refuse to answer any questions, and withdraw consent to participate at any time and that this would not affect our participation in treatment groups or clinic activities in any way. Lastly I understand that payment will be made at the second visit.

Print Name_____

Signature_____

Appendix F: Family Demographic Questionnaire

Family #_____

Date:_____

Agency:_____

Please tell us about your children:

Name of Child	Sex	Date of Birth	Currently lives with you?
_____	boy girl	_/_/_	yes no
_____	boy girl	_/_/_	yes no
_____	boy girl	_/_/_	yes no
_____	boy girl	_/_/_	yes no

Please tell us about yourself, so that we can describe the group of families who participated in the study.

1. How old are you?

2. How many years of school have you completed? Begin at grade 1 and check one of the choices below.

8 years or less ( )   9-12 years ( )

13 to 16 years ( )   more than 16 years ( )

3. What is your marital status? Please check one.

Married   ( )   For how long?____

living with a partner   ( )   For how long?____

separated (still legally married)   ( )   For how long?____

divorced   ( )   For how long?____

single(never married)   ( )   For how long?____

widowed   ( )   For how long?____

4. If married is this your first marriage?   Yes   no

second   yes   no

third   yes   no

5. How many hours do you work each week for pay? (Include home-based work, work

outside of the home, self-employed)

not working for pay   ( )

1-14 hours per week   ( )

15-24 hours per week   ( )

25-40 hours per week   ( )

more that 40 hours per week ( )

6. What is your present or most recent occupation? Please be as specific as you can:

cashier, salesclerk, homemaker, auto mechanic, farmer, high school teacher, etc.

---

7. How long have you lived in Canada

less than a year   ( )

1-5 years   ( )

5-10 years   ( )

more than 10 years   ( )

all of my life   ( )

8. Other than Canadian to what ethnic or cultural group do you feel you belong to?

_____

9. Which activities do you participate in as a member of your ethnic or cultural group?

Check the ones that you do at least once a year.

Eating special foods   ( )

special in-home ceremonies   ( )

ethnic volunteer organizations ( )

other (please specify)   ( )

none   ( )

10. What is your current religious affiliation, if any (check one)

Traditional Aboriginal   ( )

Jewish   ( )

Protestant   ( )

Roman Catholic   ( )

Mennonite   ( )

Buddhist   ( )

Other (specify)   ( )

None   ( )

11. So that we can describe the group of families participating in the study, please indicate your total family income before taxes last year (income of all the families members residing in the household.

Under $10 000   ( )

$10 001 - $20 000   ( )

$20 001 - $30 000   ( )

$30 001 - $40 000   ( )

$40 001 - $60 000   ( )

over $ 60 000   ( )

For clinically referred mothers only

1. How long have you been attending treatment concerning family violence?

Less than a month   ( )   1-6 months   ( )

6-12 months   ( )   more than year ( )

2. How long have your children been attending treatment concerning family violence?

Not at all   ( )   less than a month   ( )

1-6 months   ( )   6-12 months   ( )   more than year ( )

3. Have you ever received medical attention from a doctor or emergency room for injuries received from abuse?

Yes ( )   If yes, how often? Approximately___times

No ( )

4. Have your children ever received medical attention from a doctor or emergency room

for injuries received from abuse?

Yes ( )   If yes, how often? Approximately___times

No ( )

5. Were your children ever present in the home during a violent or abusive incident?

Yes ( )   No ( )

  If yes, for what period of time did this last?

less than a month   ( )   1-6 months   ( )

6-12 months   ( )   more than year ( )   How long?_____months

6. Have your children ever lived separately from you? (Foster care, grandparents)

Yes ( )   No ( ) if Yes, with whom?_____

  For what period of time did this last?

less than a month   ( )   1-6 months   ( )

6-12 months   ( )   more than year ( )

Appendix G: Low Income Cut-Offs (LICOs)

Low Income Cut-offs (1992 base)

Seuils de faible revenu (base de 1992) - 1980 à 1997 (fin)

Size of family unit Taille de l'unité familiale	Size of area of residence - Taille de la région de résidence				
	Urban areas - Régions urbaines				Rural areas
	500,000 and over 500,000 habitants et plus	100,000 to/à 499,999	30,000 to/à 99,999	Less than 30,000* Moins de 30,000 habitants*	Régions rurales
1992 BASE - BASE DE 1992	$				
1997					
1 person - personne	17,409	14,931	14,827	13,796	12,030
2 persons - personnes	21,760	18,664	18,534	17,245	15,038
3 " "	27,063	23,213	23,050	21,448	18,703
4 " "	32,759	28,098	27,903	25,984	22,639
5 " "	36,618	31,409	31,191	29,023	25,307
6 " "	40,479	34,720	34,478	32,081	27,975
7 or more persons - personnes ou plus	44,339	38,032	37,766	35,140	30,643

* Includes cities with a population between 15,000 and 30,000 and small urban areas (under 15,000).
Comprend les villes dont la population se chiffre entre 15,000 et 30,000 habitants et les petites régions urbaines (moins de 15,000 habitants).

The low income cut-offs (1992) was determined from an analysis of 1992 Family Expenditure data. These income limits were selected on the basis that families with incomes below these limits usually spent 54.7% or more of their income on food, shelter and clothing.

Low income cut-offs are differentiated by size of area of residence and by family size.

Although Statistics Canada's low income cut-offs are commonly referred to as official poverty lines, they have no officially recognized status nor does Statistics Canada promote their use as poverty lines.

Les seuils de faible revenue (base de 1992) ont été établie par suite d'une analyse des données de l'enquête sur les dépenses des familles de 1992. Les familles dont le revenu était inférieur à ces seuils dépensaient habituellement 54,7 % ou plus de leur revenu au titre de ces biens et services étaient dans une situation financière difficile.

Les seuils de faible revenu se sont différencié par la taille de la région de résidence et la taille de la famille.

Les seuils de faible revenu de Statistique Canada sont appelés couramment "seuils de pauvreté officiels", mais ils n'ont en fait aucun status officiel comme tels et Statistique Canada n'encourage pas leur utilisation comme seuils de pauvreté.

Appendix H: Child Behaviour Checklist

Sample Questions

Choose: 0= not true   1= somewhat or sometimes true   2= very true

Externalizing Items

1. Acts too young for age

2. Argues alot

3. Demands alot of attention

4. Gets into many fights

5. Physically attacks people

6. Prefers playing with older children

7. Steals at home

8. Swearing or obscene language

Internalizing Items

1. Fears going to school

2. Feels dizzy

3. Overweight

4. Vomiting

5. Shy or timid

6. Stares blankly

7. Worrying

Appendix I: Sibling Relationship Questionnaire

Sample Questions

Choose from:

[ ] hardly at all

[ ] not too much

[ ] somewhat

[ ] very much

[ ] extremely much

Warmth Items

1. Some brothers and sisters do nice things for each other a lot, while other brothers and sisters do nice things for each other only a little. How much do _____&_____do nice things for each other?

2. How much do they tell each other everything?

3. How much do they admire and respect each other?

Conflict Items

4. How much does the younger child tell the older child what to do?

5. How much do they insult and call each other names?

6. How much do they disagree and fight with each other?

Appendix J: Sibling Relationship Interview

Sample Questions

>Choose from:

>If yes: alot [ ] or a little [ ]

>If no: not ever [ ] or maybe once in awhile [ ]

Conflict Items:

1. Some kids get mad at their brother and sister alot. Other kids don't get mad very much.

How about_____? Does he/she ever get mad at you?
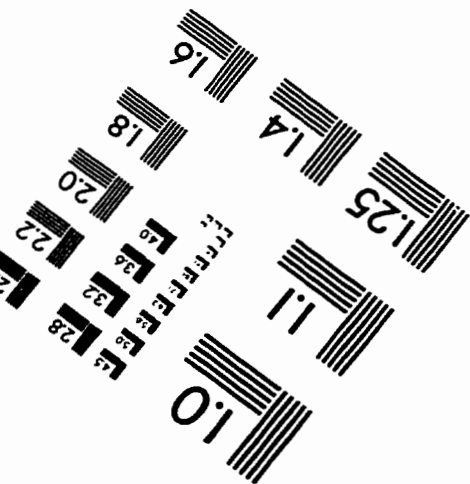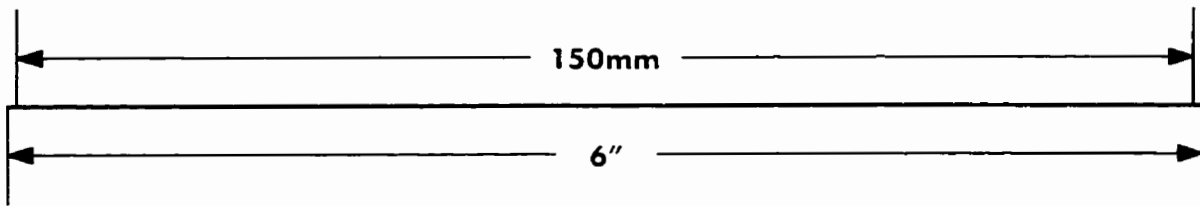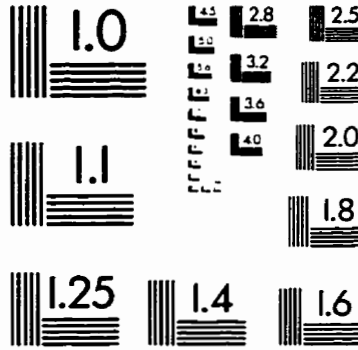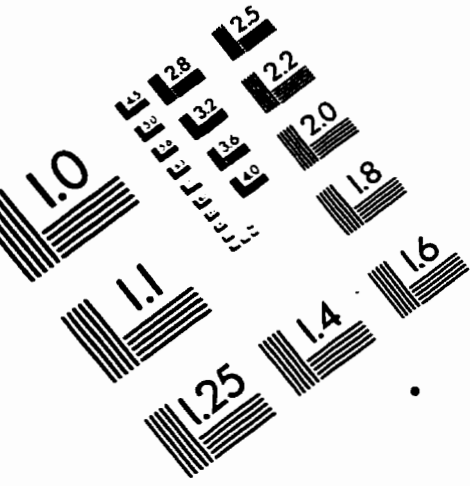
2. How about you? Do you ever get mad at _____?

Warmth Items

3. Some kids play with their brother and sister alot. Other kids don't play with their

brother or sister very much. How about_____? Does he/she ever play with you?

4. How about you? Do you ever get play with _____?

IMAGE EVALUATION
TEST TARGET (QA-3)

150mm

6"