

The Impact of Violence on Child Outcomes in a Child Protection Sample: Implications for Intervention¹

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Abstract

The impact of family violence is investigated on outcomes involving the adjustment of children related to attachment and behavioural disorders, school-related problems, delinquency, and overall risk. This study examines the rates of child maltreatment in families served by a child protection agency at two time periods (1995 and 2001). Three distinct groups of maltreated children are investigated: children exposed to woman abuse, physically abused children, and children experiencing both physical abuse and exposure to woman abuse. The results indicate increasing proportions of maltreated children in the care of a child protection agency in the 2001 sample compared to the children in care in 1995. The hypothesis that the effects of children who are exposed to woman abuse compared to children who are physically abused is supported. Children experiencing both forms of maltreatment experienced poorer adjustment on outcomes of attachment disorder and on a measure of overall risk compared to either form of maltreatment alone. The findings are discussed in terms of child welfare policy and community-based models of service that reflect the outcomes from these forms of maltreatment.

KEYWORDS: Child maltreatment, physical abuse, exposure to woman abuse, child welfare.

Introduction

Many families served by child protection services (CPS) have experienced either exposure to or victimization by violence (Rittner, 2002; Trocmé et al., 2001). It is estimated that vicarious trauma also occurs in 30% to 60% of families where there is either child maltreatment or woman abuse (Edleson, 1999). Since the mid 1990s, Ontario's Children's Aid Societies (CAS) have experienced a dramatic increase in agency referrals as well as admissions to care (Trocmé et al., 2001). Related research by the authors highlights that children receiving service at the CAS of London and Middlesex are at greater risk in 2001 than are children seen at this agency in 1995 (Whitehead, Leschied, Chiodo & Hurley, 2003). The current study investigates family violence in the context of understanding risk to child outcomes. The primary purpose of this study is to test the hypothesis of increased rates of children exposed to interparental violence and physical victimization at the CAS of London and Middlesex in 1995 and 2001. Additionally, this study addresses the impact of child maltreatment on outcomes that are related to adjustment of children.

Evidence suggests that belonging to a family with a history of spousal abuse is a risk factor for child abuse (Straus, Gelles & Steinmetz, 1980; Ross, 1996). Although rates of intergenerational transmission of violence vary across studies, it is generally accepted that 30% (\pm 5%) of women with a childhood history of abuse are likely to abuse their own offspring (Kaufman & Zigler, 1987). It is estimated that six of seven cases of child abuse involve a physical injury that does not come to the attention of authorities (Schene, 1987).

Between 1993 and 1998, the estimated number of investigations of child maltreatment substantiated by Ontario's CASs nearly doubled, rising from 12,300 to 24,400 (Trocmé et al., 2001). This increase varies considerably by type of maltreatment. The estimated number of substantiated investigations of emotional maltreatment increased nearly nine-fold, while investigations for neglect and physical abuse nearly doubled. Consistent with decreases reported across the United States (Jones, Finkelhor & Kopiec, 2001), the estimated number of investigations of substantiated sexual abuse in Ontario decreased by almost 50%. In 1998, 8% of these child maltreatment investigations led to a child being admitted to CAS care (Trocmé et al., 2001).

CAS becomes involved when a child has been or is likely to be neglected or abused. Research and policies have suggested that children who witness domestic violence are considered at risk of suffering emotional harm (Jasinski & Williams, 1998; Wolfe & Korsch, 1994). Between 1993 and 1998, the Ontario Incidence Study of Reported Child Abuse and Neglect found an 870% increase in cases of substantiated emotional maltreatment, largely reflecting trauma following exposure to domestic violence (Trocmé et al., 2001). A growing awareness on the part of CASs about the potential harm to children exposed to woman abuse reflects a heightened concern for children in families in which there is woman abuse (Trocmé et al., 2001; Trocmé, Fallon, MacLaurin & Copp, 2002).

Ontario introduced the *Ontario Child Welfare Eligibility Spectrum* (Ontario Children's Aid Societies, 2000), a tool that assists caseworkers in making consistent and accurate decisions about the eligibility for service at the time of CAS referral. It considers adult conflict in the home to be a form of emotional maltreatment. With the introduction of the *Eligibility Spectrum*, the province introduced the use of a standardized province-wide risk assessment model to measure risk. The *Risk Assessment Model for Child Protection in Ontario* (Ontario Association of Children's Aid Societies [OACAS], 2000) is part of the provincial strategy to ensure that any child who has been abused is protected from any "likely harm" in the future. The Risk Assessment Tool considers substantiated cases of child abuse and neglect a significant risk factor only when the child is presently suffering the consequences of that abuse (i.e., the abuse/neglect must be verified). Despite the evidence that finds children who are exposed to interparental violence as seriously impaired as children who are the direct victims of physical abuse (Rudo, Powell & Dunlap, 1998), the Risk Assessment Tool does not consider exposure to interparental violence alone a risk factor of future harm to the child.

Ontario's professional social work training programs have a formal curriculum that is directed toward increasing the knowledge of the child protection worker about the dynamics of child maltreatment and, more specifically, training regarding the effects of child witnesses to the abuse of women. For a long time, six Canadian provinces have added exposure to woman abuse as a category of maltreatment requiring child protection investigation. Currently, *Ontario's Child and Family Services Act* (CFSA, 2001) does

not define a child being exposed to domestic violence as a form of maltreatment despite our understanding that woman abuse and child abuse frequently coexist. Trocmé et al. (2002) indicate that the dramatic increase in investigations of woman abuse may influence child protection workers to seek alternative means, such as the development of services and inter-agency protocols, to bring cases of children exposed to woman abuse to the child protection system without further compromising the victimized parent.

This study tests data collected from the CAS of London and Middlesex, a large child protection agency in southwestern Ontario, at two time periods (1995 and 2001), to examine the proportion of cases of child maltreatment. Evidence is reported on the rates of child maltreatment for children who are admitted to CAS care compared with those who are maintained within their own homes with the support of CAS and community resources. The impact that exposure to woman abuse and physical victimization may have on outcomes involving the adjustment of children is examined. The following summary provides a brief review of prior research on the outcomes that have linked child maltreatment and child outcomes that are of specific concern to the child protection system.

1.1 Child Abuse and Neglect

The consequences of child maltreatment go beyond immediate physical injuries. Victims can experience negative physical, psychological, and behavioural consequences not only in childhood and adolescence (Brown, Cohen, Johnson & Smailes, 1999), but also into adulthood (Wolfe & McGee, 1994). For example, Trickett (1997) reported that a history of physical abuse is associated with internalizing behaviours (e.g., depressive, suicidal thoughts) and externalizing behaviours (e.g., aggressive behaviour). Other studies have found that victims of maltreatment exhibit more problems of adjustment (Pelcovitz, Kaplan, DeRosa Mandel & Salzinger, 2000), and more difficulties with peer relationships than children who are not maltreated (Cicchetti, Toth & Rogosch, 2000).

1.2 Children Exposed to Woman Abuse

Studies have documented the devastating effects on children growing up in a family with domestic violence. Straus et al. (1980) indicate that witnessing and experiencing violence as a child leads to an increased use of violence in adult intimate relationships.

In samples of mothers who have experienced partner violence, between 75% and 100% report that their children have witnessed the violence (Hughes, 1986; Jouriles, Barling & O’Leary, 1987; Pagelow, 1990; Rosenberg, 1987; Wildin, Williamson & Wilson, 1991). There is some professional consensus that a child witness to violence is inherently abusive (see e.g., Echlin & Marshall, 1995). Further, between 45% and 70% of children exposed to domestic violence are also victims of physical abuse (Fantuzzo & Mohr, 1999). It is therefore important to explore the unique and/or additive effects of witnessing abuse and experiencing direct physical abuse.

A recent review of the literature on child maltreatment concluded that there are few differences in symptomatology between children who are victims of physical abuse and children who witness partner violence (Rudo, et al., 1998). Other evidence suggests that children who experience both exposure to violence and physical victimization may be at higher risk for impaired functioning than children who witness violence alone (Rudo et al., 1998; Margolin, 1998).

1.3 Links to Child Behaviour

Witnessing violence is linked to emotional and behavioural dysregulation and subsequent psychopathology in children (Cummings, Davies & Campbell, 2000). In general, children exposed to domestic violence demonstrate more externalizing and internalizing symptomatology (Kolbo, Blakely & Engleman, 1996; Jaffe, Wolfe, Wilson & Zak, 1986), increased behaviour problems and psychopathology (Fantuzzo et al., 1991), and increased rates of depression and aggression (McCloskey, Figueredo & Ross, 1995), compared to children from nonviolent homes. Children who witness woman abuse have unique emotional needs because the abused mother may be emotionally unavailable due to coping with her own trauma (Groves, Zuckeman & Marans, 1993).

1.4 Child Characteristics

Children’s level of understanding and coping difficulties differ with age. The impact of exposure to violence cannot be assessed without considering a child’s level of development (Jaffe, Wolfe & Wilson, 1990). Younger children may be disproportionately exposed to partner violence and particularly vulnerable to it (Fantuzzo, Boruch, Beriama, Atkins & Marcus, 1997). Younger children are more likely to show signs of

health problems and physical ailments, emotional problems and aggressive behaviour (Jaffe et al., 1990). School-age children may have more resources to cope with exposure to violence, however, behavioural problems for older children become apparent as children enter school and interact with teachers and peers (Jaffe, Wilson & Wolfe, 1988). Jaffe et al. (1986) reported that older children have conduct problems, academic difficulties, and exhibit emotionally needy, fearful, and anxious behaviour.

1.5 General Risk for Child Outcomes

Improvements in the delivery of child protection services in Ontario led to the introduction and use of a standardized province-wide risk assessment model to assess risk. The *Risk Assessment Tool* (Ontario Children's Aid Societies, 2000) provides a standardized approach to making child protection decisions. Risk assessments estimate the level of risk to which the child is exposed, or the likelihood of the degree of future risk. Jagannathan and Camasso (1996) suggest that structured risk assessment is designed to coordinate service provision through prioritization. For example, Marks and McDonald (1989) reported that risk levels serve as a proxy for intensity of service intervention in a sample of abused and neglected children. Children and families deemed most likely to be involved in abuse or neglect incidents receive more immediate attention and priority for specific services. Salience is given to risk assessment factors reflected in a child's behaviour, the family's history of abuse or neglect, parenting capacity or family stressors – considered singly or in some combination – in violent families because of the devastating effects that exposure to or victimization from violence has on a child's cognitive, emotional, social, developmental, and physical well-being (Cicchetti et al., 2000; Jaffe et al., 1990).

1.6 Present Study

This study examines the extent to which varying experiences of child maltreatment is associated with poor child outcomes. Three distinct groups of maltreated children are investigated (i.e., children exposed to woman abuse, physically abused children, and children who are both exposed to woman abuse *and* victims of physical abuse) to assess how these experiences of maltreatment impact a child's emotional, behavioural and social functioning. Building on prior research, the following hypotheses are examined:

1. Children admitted to the care of the Children's Aid Society (CAS) will reflect higher rates of child maltreatment in 2001 compared to children admitted to the care of CAS in 1995.
2. Exposure to woman abuse will be associated with poor child outcomes related to the diagnoses of behavioural and attachment disorders, delinquency, and scores on a risk scale, similar to the effects of physical abuse.
3. Exposure to woman abuse and physical abuse will be associated with higher levels of poor child outcomes compared to the experience of physical abuse alone or witnessing interparental violence.

Method

2.1 Participants

A retrospective file review of child protection cases seen at the CAS of London and Middlesex from the years 1995 and 2001 was conducted. 213 children were identified at the time of the most intensive CAS intervention in 1995 or 2001 as experiencing maltreatment. These cases constitute a subset of an initial sample that consisted of 1,042 children randomly selected from 2,316 child protection cases from 1995 and 2001. To capture sufficient cases of our sub-groups of interest (e.g., children in CAS care), we over-sampled from these groups. That is, we included a larger proportion of cases in the sample than would have been found in the population of cases in the given year. To adjust for over-sampling, we applied a mathematical correction, referred to as a statistical weight, to each case, to allow for population inferences to be made from these samples.

The sub-sample in 1995 consisted of 67 maltreated children, of whom 30 (45%) were considered to be in need of protection and admitted to CAS care and 37 (55%) who were considered to be in need of protection, but received services from the CAS and other community agencies while living in their own homes. The sub-sample in 2001 consisted of 147 maltreated children with 105 (71%) who were considered to be in need of protection and admitted to CAS care and 42 (29 %) who were considered to be in need of protection, but received services from the CAS and other community agencies while residing in their own homes. There is a significant increase in CAS admissions to care of

maltreated children in 2001 compared to 1995 (71% vs. 45%) ($\chi^2 = 57.22$; $df = 1$; $p < .001$).

Initially, four groups of substantiated child abuse/neglect cases were investigated (i.e., neglect, physical, sexual, and emotional abuse). Table 1 displays the percentages of substantiated cases of maltreatment for 1995 and 2001. There is a statistically significant increase in the proportion of cases of physical abuse in 2001 compared to 1995 ($\chi^2 = 15.14$, $df = 1$, $p < .001$). There are no significant differences in the proportion of cases of neglect ($\chi^2 = 2.51$, $df = 1$, $p > .1$), sexual abuse ($\chi^2 = .77$, $df = 1$, $p > .1$), and emotional abuse between years ($\chi^2 = .01$, $df = 1$, $p > .1$).

Table 1

Frequency and Percentage of Maltreated Children for 1995 and 2001

Maltreatment Group	1995 (n=67)	2001 (n=147)
Physical Abuse	16 (3.9%)	63 (10.7%)
Sexual Abuse	12 (2.7%)	11 (1.9%)
Emotional Abuse	3 (0.7%)	4 (0.7%)
Neglect	35 (8.6%)	69 (11.8%)

For the children admitted to CAS care, the proportion of cases of neglect ($\chi^2 = 1.29$, $df = 1$, $p > .1$), physical abuse ($\chi^2 = 1.18$, $df = 1$, $p > .1$), sexual abuse ($\chi^2 = .16$, $df = 1$, $p > .1$), and emotional abuse ($\chi^2 = .06$, $df = 1$, $p > .1$) do not differ across the two years. This indicates that no single type of maltreatment is disproportionately driving the higher number of children in care in 2001 (Table 2).

Table 2*Frequency and Percentage of Maltreated Children in the Care of CAS in 1995 and 2001*

Maltreated Group	Children in Care 1995 (n = 176)	Children in Care 2001 (n = 381)
Physical Abuse	11 (7.9%)	42 (11.1%)
Sexual Abuse	2 (1.1%)	6 (1.6%)
Emotional Abuse	1 (0.7%)	2 (0.5%)
Neglect	15 (10.7%)	55 (14.6%)

Given the small number of cases of confirmed sexual and emotional abuse at the point of the current CAS referral, subsequent analyses are restricted to three maltreatment groups (i.e., children exposed to woman abuse, physically abused, and children both physically abused and exposed to woman abuse), to assess how these specific maltreatment experiences may impact child outcomes. Exposure to woman abuse includes those cases where excessive arguments or disagreements, verbal abuse, aggressive physical assaults, psychological aggression, or sexual abuse perpetrated by a woman's current partner (i.e., spouse, boyfriend, or common-law partner) at some time during their relationship and there is no evidence in the child protection file that the child is or was a direct victim of child abuse/neglect. Cases of physical abuse consist of cases where the reason for child protection service at the time of the file review is physical abuse and there is no evidence in the child protection file that violence among the child's caregiver is or was present. Neglected children are excluded from the analyses because the etiology and effects of neglect are unique and differ from the effects of physical abuse (Jaffe et al., 1990). Subsequent analyses of three maltreatment groups are performed on the 2001 data (n = 190).

2.2 Materials

Child protection files from the CAS of London and Middlesex were reviewed. A standardized coding instrument was created by the authors to guide the extraction of information from each case file. The information recorded included current and historical family information, as well as the history of the family's mental health, violence and access to social services. Information on children included past and present

access to mental health services, delinquency, and outcomes related to psychological, behavioural, and academic concerns. A manual was created that detailed the inclusion and exclusion criteria for each item to be recorded.

The coding instrument contained the *Risk Assessment Tool*, an instrument currently in use by Ontario's CASs (Ontario Association of Children's Aid Societies, OACAS, 2000). The *Risk Assessment Tool* is part of the revised Risk Assessment Model for Child Protection in Ontario (ORAM) (OACAS, 2000) that was developed as part of the Ministry's standards for the management of child protection cases. *The Risk Assessment Tool* is used by all CASs in Ontario and is a standardized, comprehensive approach to the assessment of risk to children (Figure 1).

The *Risk Assessment Tool* includes five assessment categories called *influences*, related to the caregiver, child, family, intervention, and abuse/neglect. Within each of these influences are elements that relate to risk. There are 22 risk elements examined by the *Risk Assessment Tool*. Each risk element includes five scales of severity ranging from zero (0) to four (4). The Risk Assessment Scales are further defined by descriptions called *anchors*. The anchors help assign a rating by providing a narrative description that defines the status or functioning of a child, caregiver, or family.

A risk analysis was completed for all cases randomly selected in 1995 and 2001. Six trained researchers completed a risk assessment form and risk analysis independently from the risk analysis completed by the CAS worker in the child protection file. For each case, the risk elements were assessed on a scale of 0 to 4, with a score of 0 being the absence of risk and a score of 4 being maximum severity. For the purpose of the current study, a risk analysis is based on a 'cumulative risk assessment score' comprised of a total score of the 22 individual risk elements. Each case could, therefore, receive a cumulative risk assessment score between 0 - 88. It is important to note that the application of Risk Assessment by Ontario CASs does not include a cumulative risk assessment score.

The Ontario *Risk Assessment Tool* was not developed and is not used across all CASs in Ontario as an outcome measure. Given that this scale was not designed as an outcome measure, the authors tested the predictive validity of the *Risk Assessment Tool*. The cumulative risk assessment scores within each area of risk form a reliable scale:

Cronbach's alpha ranges from .71 - .79. The cumulative risk assessment scores are consistent with clinical judgment (i.e., the decision to admit a child to CAS care) ranging from 74% to 81% of all cases. A detailed review on the empirical basis of the Ontario *Risk Assessment Tool*, appears in Leschied, Chiodo, Whitehead, Hurley & Marshall (2003).

Figure 1

Summary of Areas for Risk Assessment

1. Caregiver Influence
 - Abuse – Neglect
 - Alcohol/Drug Use
 - Expectations of child
 - Acceptance of child
 - Physical capacity to care for child
 - Mental/Emotional/Intellectual Capacity

 2. Child's Influence
 - Child's vulnerability
 - Child's response to caregiver
 - Child's behaviour
 - Child's mental health and development
 - Physical health and development

 3. Family Influence
 - Family violence
 - Ability to cope with stress
 - Availability of social supports
 - Living conditions
 - Family identity and interactions

 4. Intervention Influence
 - Caregiver's motivation
 - Caregiver's cooperation with intervention

 5. Abuse/Neglect
 - Access to child by perpetrator
 - Intention and acknowledgement of responsibility
 - Severity of abuse/neglect
 - History of abuse/neglect/Neglect committed by present caregivers
-

2.3 Procedure

Five trained researchers working under the supervision of a project manager collected the data. To enhance reliability, the researchers received training prior to the beginning of data collection. Senior managers of the CAS of London and Middlesex and the research team met on a weekly basis to review concerns related to the file information, risk assessment analysis, or data collection procedures to ensure consistency in data interpretation and collection.

The CAS workers do not compute or document a cumulative risk assessment score based on their ratings of the 22 risk elements of the Risk Assessment Tool when completing a Risk Analysis for child protection cases. The CAS worker's ratings of the individual risk elements are, however, recorded in the child protection files. Thus, it is possible to compute a cumulative risk assessment score from the ratings of the CAS worker. A reliability analysis of the cumulative risk assessment scores rated by the researchers and the cumulative risk assessment scores by the CAS workers was performed for 253 cases. Inter-rater reliability between the cumulative risk assessment scores rated by the researchers and the cumulative risk assessment scores derived from the ratings of CAS workers is high (Cronbach's alpha = .86).

Results

3.1 Participant Characteristics

Participants in this study are 190 maltreated children. The three groups of maltreated children are: 1) children exposed to women abuse alone (n = 128); 2) physically abused (n = 44); and 3) children exposed to women abuse and physically abused (n = 18). Children exposed to women abuse are significantly younger than are children who are physically abused and children experiencing two forms of maltreatment [F (2, 173) = 11.77, $p < .001$] (Table 3). The proportion of gender does not differ across maltreatment groups ($\chi^2 = 1.16$; $df = 2$; $p < .1$).

3.2 Child Psychopathology Outcomes

Two behavioural outcomes and one psychological outcome are considered: identification of an attention deficit hyperactivity disorder (ADHD); conduct disorder; and the primary

psychological (emotional) concern of the child. We also have information on whether the child was currently (or previously) on medication for an adjustment-related disorder.

The association between maltreatment and the child adjustment variable was assessed. Yates' corrected chi-square for continuity correction was applied to cells with frequencies fewer than five. When applied to 2 by 2 tables, the correction gives a better approximation to the binomial distribution (Table 3).

There is a significant difference in the proportion of maltreated children diagnosed with ADHD ($\chi^2 = 7.99$; $df = 2$; $p < .05$). A larger proportion of children exposed to woman abuse and child victims of physical abuse (33%) are diagnosed with ADHD compared to children exposed to woman abuse alone (12%) ($\chi^2 = 4.36$; $df = 1$; $p < .05$). The proportion of children diagnosed with ADHD do not differ significantly between physically abused children and children exposed to interparental violence alone ($\chi^2 = 3.53$; $df = 1$; ns). Maltreated children do not differ significantly on the proportion diagnosed with conduct disorder ($\chi^2 = 5.536$; $df = 2$; ns), on medication for an adjustment-related disorder ($\chi^2 = 5.11$; $df = 2$; ns), or identified with a primary psychological (emotional) concern ($\chi^2 = 1.85$; $df = 2$; ns).

3.3 Child Outcomes Related to the Intensity and Nature of Risk

The level of risk to which the child is exposed was measured by the *Risk Assessment Tool* (Ontario Association of Children's Aid Societies, 2000), an instrument that is part of the provincial strategy to assess the level of risk of harm to the child (Figure 1). Each risk element includes a five-point scale of severity ranging from zero to four. A cumulative risk assessment score, comprised of a total score of the 22 risk elements was used as a measure of risk to which the child is exposed.

Analysis of covariance (ANCOVA) is used to determine how each form of maltreatment relates to the risk assessment scores. The ANCOVA uses the cumulative risk score as the dependent variable. Age is used as a covariate because children exposed to woman abuse tend to be significantly younger than children who are physically abused.

A three-way ANCOVA reveals a significant difference between maltreated children on the cumulative risk assessment score [$F(2, 182) = 4.79$, $p < .01$] (Table 3). Post-hoc tests reveals that children exposed to woman abuse and physically abused score

significantly higher on cumulative risk than either children who experience physical abuse alone ($p < .04$) or children exposed to woman abuse alone ($p < .04$). There are no significant differences on cumulative risk between victims of physical abuse and children exposed to woman abuse alone ($p > .1$, ns).

Table 3

Demographic and Child Outcome Variables of Maltreated Children

Measure	Exposed Alone (n = 128)	Physically Abused Alone (n = 44)	Exposed and Physically Abused (n = 18)
Current Age (years)^a	5.9 (4.74)	10.0 (5.03)	8.3 (4.45)
<i>Males</i>	42%	41%	56%
<i>Females</i>	58%	44%	59%
Child Psychopathology			
ADHD	11.7 %	25 %	33 %
Conduct Disorder	3.9 %	13.6 %	11.8 %
Psychological Concern	6 %	9.3 %	0 %
Medication	11 %	25 %	17 %
Risk Assessment^b			
Cumulative Risk Assessment* Score	28.14 (11.33)	27.55 (12.91)	35.85 (11.66)
Child's Behaviour Risk Score ^c **	.8 (1.14)	1.36 (1.12)	1.71 (1.36)

Note: ^a = Mean age reported in years; standard deviations in parentheses.

^b = mean risk assessment ratings; higher scores indicates greater intensity and nature of risk; cumulative risk score: minimum 1 maximum 64; standard deviations in parentheses

^c = mean risk assessment ratings; higher scores indicates greater severity of maladaptive behaviour; 0 minimum, 4 maximum.

* Bonferroni suggests a significance level of $p < .04$

** Bonferroni suggests a significance level of $p < .05$

3.4 Child Outcomes Related to Delinquency

We tested the hypothesis that child maltreatment would be associated with child outcomes related to delinquency. The variable used is a measure of the child's behaviour as rated by one risk element of the Risk Assessment Tool. This continuous variable is a broad measure of the child's age-appropriate behaviour patterns of aggression or withdrawal, experimentation with alcohol or other substances, or violent and dangerous acts to others or self. The child's behaviour was measured on a scale of severity ranging from 0 to 4 for all cases.

A three-way ANCOVA reveals significant differences between maltreated children on behavioural risk scores [$F(2, 185) = 7.355, p < .01$]. Post-hoc tests indicate that children exposed to woman abuse and child victims of physical abuse score significantly higher on behavioural risk compared to children exposed to woman abuse alone ($p < .01$). Additionally, physically abused children score higher on behavioural risk scores compared to children exposed to woman abuse alone ($p < .05$). A descriptive review of the significant findings is presented in Table 4.

Table 4

Summary of Significant Child Outcomes of Maltreated Children

Admissions to Care between 1995 and 2001	* Significant increase in children admitted to CAS care of maltreated children in 2001 compared to 1995.
Age	* Children exposed to women abuse are significantly younger than children who are physically abused.
Child Psychopathology ADHD	* A larger proportion of children experiencing two forms of maltreatment are diagnosed with ADHD compared to children exposed to women abuse or physical abuse alone.
Delinquency Behaviour Risk Score	* A larger proportion of children experiencing two forms of maltreatment score higher on behavioural risk compared to those children exposed to interparental woman abuse alone. * Physically abused children score higher on behavioural risk scores compared to those children exposed to women abuse alone.
Risk Assessment Cumulative Risk	* Children experiencing two forms of maltreatment score higher on cumulative risk assessment compared to those children exposed to woman abuse alone or victims of physical abuse alone .

Note: Two forms of maltreatment refer to children experiencing both physical abuse and exposure to woman abuse.

Discussion

This study reports on the comparative rates of child maltreatment at two time periods for children who are seen at a child protection agency. It provides a profile of the child outcomes associated with differing types of child maltreatment. One of the strengths of this study is the large sample size that makes it possible to examine different types of maltreatment, some of which are experienced by a relatively small proportion of the population.

The results of this study indicate that there are higher rates of maltreated children in CAS care in the 2001 sample compared to the children in CAS care in 1995. Children exposed to woman abuse are significantly younger than physically abused children and children experiencing both types of maltreatment. There are few differences in symptomology between children who are victims of physical abuse and children exposed to woman abuse. On a variety of child outcomes, children experiencing both forms of maltreatment (i.e., children exposed to woman abuse and physically abused) experience greater psychological, behavioural, and overall child welfare risk, compared to physically abused children or children exposed to woman abuse alone. This suggests that the co-occurrence of victimization and exposure adds to the trauma experienced by children who experience abuse as victims or witnesses.

4.1 The Effects of Child Maltreatment on the Adjustment of Children

The prediction that child victims of physical abuse and witnesses to woman abuse experience higher rates of child psychopathology, what Hughes, Parkinson and Vargo (1989) refer to as a “double whammy,” is supported by the data. This is reflected in the higher proportion of ADHD diagnoses for children experiencing two forms of maltreatment. This finding is consistent with studies that find patterns of insecure attachment in abused children (Barenett, Ganiban & Cicchetti, 1999; Morton & Browne, 1998). Berliner (2002) suggests that insecure attachment may precede or be the result of abuse experiences. Adults who are inconsistent or rejecting in their parenting style may be at higher risk to commit abuse or be compromised in their ability to protect or assist their child following the abuse. Our own research finds that female caregivers who are victims of woman abuse suffer from severe mental and physical disorders, all of which

compromise the capacity to care for their children (Chiodo, Leschied, Whitehead & Hurley, 2003). It is also suggested that abused children may behave in ways that elicit rejecting and inconsistent parenting styles that, over time, compromise secure attachment (Berliner, 2002). These findings support the delivery of community-based programs such as parent-training prevention that provide caretakers with specific skills to improve parent-child interactions that may also significantly affect their child's behaviour. Unfortunately, funding for prevention programs in Ontario is minimal and there is no comprehensive, federally funded program that is in place to prevent child abuse. This is discouraging given that prevention is far less expensive than treatment (Rabasca, 1999).

On only two factors do children exposed to woman abuse differ from children who are the direct victims of physical abuse. First, physically abused children score higher in behaviour risk than do children exposed to woman abuse. The highest behavioural risk scores are reported for children experiencing both types of maltreatment. Indeed, physical abuse has been found to be associated with an increase in behavioural and discipline problems among children (Eckenrode, Carlson & Sroufe, 1993). This suggests that children who are both victims and observers of woman abuse and who are solely physical abuse victims, learn to use aggression or deviant behaviour as a "way of solving problems," making behavioural symptoms especially likely (Jaffe et al., 1990). Although experiencing woman abuse may have profound effects in other areas of psychosocial development, its effects on symptoms of behavioural risk is not apparent from our data.

Second, children exposed to woman abuse in this sample tend to be significantly younger than are children who are physically abused. Fantuzzo et al. (1997) found that younger children are often disproportionately exposed to multiple incidents of domestic violence. Previous research has adequately documented that children who are exposed to interparental violence are at greater risk for being physically abused (Jouriles et al., McClosky et al., 1995). Child protection workers need to be vigilant of this relationship in cases where there is a significant level of parental conflict. Threats or previous occurrences of woman abuse should signal the need for protective responses by both women and children.

Child protection workers are mandated to give first priority to protecting children. An overwhelmed child protection system may not routinely assess for domestic violence when investigating child abuse and neglect cases because as McKay (1994) states, “child protection workers have traditionally viewed battering not as the primary target problem within the family, but as a symptom of an underlying problem” (p.33). If identified, woman abuse may not be viewed as a priority for intervention. Data from the present study suggests that children exposed to woman abuse and children who are the direct victims of physical abuse show few differences in outcomes related to childhood adjustment. The presence of woman abuse should be treated as a risk factor in predicting potential harm to children. Risk assessment tools may be helpful in assisting case-workers to determine the degree of risk of harm facing the child in families experiencing violence.

4.2 Limitations

The available data have some limitations. Because the data retrieval instrument covers a broad range of topics, many experiences (e.g., exposure to interparental violence, physical abuse) or behaviours are assessed with a single item. It would be helpful to have additional information about the adverse experiences associated with the maltreatment such as the severity, frequency, and duration of the abuse and the child’s relationship to the perpetrator. Secondly, it is important to reiterate the point that causal relationships cannot be determined with cross-sectional data. Thirdly, the children studied are confined to the subset of families who experience violence and come to the attention of a child protection agency. As such, future research should examine the extent to which this group is representative of all children affected by family violence.

4.3 Conclusions

This study highlights the significance of violence in the lives of children served at the CAS of London and Middlesex. It is clear that these vulnerable children have serious problems resulting from the abuse. If the multiple issues of child psychopathology, school adjustment, and behavioural risk are not addressed, there is little hope of successful preventive efforts in the area of child maltreatment. Moreover, overlooking these issues may increase the likelihood of producing adults who repeat their own life

experiences, including the maltreatment of their own children. Comprehensive services that reflect the interconnected and persistent nature of these problems for both the mother and the child should be a priority for community-based models of services and supports.

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