

An Investigation into the Characteristics of the Maltreatment of Children with Developmental Delays and the Alleged Perpetrators of this Maltreatment

Ann Fudge Schormans & Ivan Brown

Abstract

Developmental delay is over-represented among those children who are reported to child welfare agencies for abuse and neglect. Little comprehensive information is available regarding the pattern of maltreatment (type, frequency, and duration), who the perpetrators are, and perpetrator-related factors that are related to maltreatment. This study compared the 666 children with developmental delay and the 7,006 non-delayed children from the Canadian Incidence Study of Reported Child Abuse and Neglect. Compared to the non-delayed children, those with developmental delays experience more maltreatment, particularly neglect, over longer periods of time and are more likely to have multiple perpetrators. Perpetrators for all children are most likely to be family caregivers — mostly biological parents or one biological parent and one other. The caregivers of children with developmental delays, compared to those without delays, are more likely to have lower education, rely on social security, have low family income, live in rental housing and live in unsafe conditions. In addition, these caregivers have higher rates of cognitive impairment, mental health problems, physical health problems, drug abuse, criminal activity, social isolation and being maltreated as a child. These dramatic findings point to numerous risk factors for maltreatment for children with developmental delays, a population that is already vulnerable in numerous ways.

As a group, children with developmental disabilities appear to be particularly vulnerable to maltreatment (Ammerman et al., 1989; Randall, Parilla & Sobsey, 2000; Westcott & Jones, 1999). Sobsey (2002) suggested that almost one-third of such children have substantiated histories of maltreatment while many more have probably experienced unreported or unsubstantiated maltreatment.

There is growing evidence of an association between maltreatment and developmental disability. Child maltreatment is implicated in a substantial number of developmental disabilities, and children with developmental disabilities are at an inflated risk of experiencing maltreatment (Garbarino et al., 1987; Hughes & Rycus, 1998). This is not a simple cause and effect relationship, nor is it universal and/or inevitable. According to Sobsey (1994), it can, however, create a cycle of maltreatment and disability: childhood maltreatment leading to permanent developmental disability that then precipitates life-long risk and vulnerability to further maltreatment. Three to six percent of all maltreated children will have some degree of permanent developmental disability as a result of abuse or neglect, and child maltreatment is a factor in 10-25% of all developmental disabilities (Sobsey, 1994).

A review of the literature highlights a number of characteristics of the maltreatment experiences of children with developmental disabilities. It appears that this group of children experience similar types of maltreatment as do children without disabilities. Although both disabled and non-disabled children who are reported for maltreatment frequently experience multiple forms of maltreatment, either simultaneously or at different times or ages, it is suggested that children with developmental disabilities do so at a significantly higher rate (Sullivan & Knutson, 2000; Verdugo, Bermejo & Fuertes, 1995). The maltreatment of children and adults with developmental disabilities is believed to be more severe than for people without developmental disabilities, especially in the case of sexual abuse (Ammerman et al., 1989; Beail & Warden, 1995; Sobsey, 1994; Sobsey & Mansell, 1994; Tharinger, Burrows & Millea, 1990). In addition, people with developmental disabilities appear to experience more physical injuries and emotional harm as a result of maltreatment (Ammerman et al., 1989; Sobsey & Mansell, 1994; Tharinger et al., 1990). Higher rates of chronic abuse and neglect are also documented for this group, as they are more likely to experience multiple episodes of maltreatment spanning a longer period of time. For example, Sullivan & Knutson (2000) found that 71% of their sample of children with a developmental disability reported repeated abuse, as contrasted with 60.1% of their sample without a developmental disability.

Increasingly, the literature suggests that for children with disabilities the alleged perpetrator of maltreatment is frequently a family member (Ammerman et al., 1989; Beail & Warden, 1995; Perlman & Ericson, 1992; Sobsey, 1994; Sullivan & Knutson, 2000; Tharinger et al., 1990). Despite this, there appears to be a perception in the general population that maltreatment of children with developmental disabilities (especially sexual abuse) occurs, to a considerable extent, at the hands of strangers or non-family members (Orelove, Hollohan & Myles, 2000; Tharinger et al., 1990). This perception likely stems from two sources: first, there is some evidence that the maltreatment of adults with developmental disabilities, including sexual abuse, is often perpetrated by non-familial paid caregivers; and second, there is evidence that sexual abuse in the general population is sometimes perpetrated by strangers.

A number of studies suggest that the maltreatment of people with disabilities is perpetrated by paid caregivers who gain access and opportunity to this group of individuals directly through the disability service system (Brown, Stein & Turi, 1995; Mansell, Sobsey, Wilgosh & Zawallich, 1997; Sobsey, 1994; Sobsey & Doe, 1991). Sobsey (1994) reported that 56% of sexual abuse was perpetrated by service providers, compared to 28% by familial caregivers. Generalizing from such reports is difficult because people with developmental disabilities reside in a variety of living and caregiving situations. In the wake of de-institutionalization, more people with developmental disabilities are now living in their family homes, especially children. A significant number, however, still reside in out-of-home placements, including permanent settings (e.g., group homes, institutional settings) and temporary care (e.g., respite care), and multiple moves are not uncommon. One potential outcome of this kind of discontinuity of care and involvement with the disability service system is an increased vulnerability to maltreatment by non-family members (Balogh et al., 2001).

Complicating our understanding of this issue, however, is that often these studies focus solely on adults or do not distinguish between adults and children (Brown et al., 1995; Sobsey, 1994; Sobsey & Doe, 1991).

A strong emphasis in the literature, primarily during the 1990s, on childhood sexual abuse (Goldman, 1994; Randall et al., 2000; Sullivan et al., 1991; Sullivan & Knutson, 2000; Tharinger et al., 1990) may prove to have been misleading. This largely singular focus on sexual abuse, to the exclusion of other forms of child maltreatment, may have had two unforeseen consequences. First, it may have resulted in sexual abuse appearing to be a more common occurrence than it actually is. Second, while studies demonstrate that strangers are sometimes the perpetrators of childhood sexual abuse (Cupoli & Sewell, 1988; Kenny & McEachern, 2000; Romans & Martin, 1997), inadequate attention has been paid to the alleged perpetrators of other forms of maltreatment, possibly creating a skew in our understanding of who the offenders of child maltreatment are.

The fact is we have very limited information at the present time as to who are the perpetrators of maltreatment for children with developmental delays. Making reference to the alleged perpetrators of maltreatment against children in the general population, Becker (1994) suggested that perpetrators are, generally, a very diverse group. It is no longer adequate to describe alleged perpetrators along such dichotomous parameters as offending against either children or adults; offending against family members or acquaintances or strangers; or offending in non-contact ways (i.e., exhibitionism) or through bodily contact.

Although the maltreatment of children, both with and without disabilities, has existed throughout the ages (Chadwick, 1999; Garbarino et al., 1989; Verdugo & Bermejo,

1997; Winzer, 1997), organized efforts to understand child maltreatment is a fairly recent phenomenon. In Canada, one attempt to facilitate the understanding of, and response to, child maltreatment has been the Canadian Incidence Study of Reported Child Abuse and Neglect (CIS), a national study on child maltreatment (Trocmé et al., 2001). This present paper analysed data from the CIS for a subset of 666 children identified as having a developmental delay and builds upon two previous analyses of this subset of children in the CIS (Brown, 2002; Fudge Schormans, in press). The immediate questions being asked are: 1) what is the pattern of maltreatment (type, frequency, duration) reported for children with developmental delays as compared to children without developmental delays; 2) who are the alleged perpetrators of this maltreatment for children with and without developmental delays; and 3) what perpetrator-related factors might help us to better understand the maltreatment of children with developmental delays as compared to children without delays.

Method

Procedures

This examination into the maltreatment of children with developmental delays made use of data collected for the Canadian Incidence Study of Reported Child Abuse and Neglect (CIS), Canada's first national study exploring the incidence of reported child maltreatment and the characteristics of children and families being investigated by Canadian child welfare systems (Trocmé et al., 2001). The purposes of the CIS were to examine (1) the rates of reported physical abuse, sexual abuse, neglect, emotional maltreatment and multiple forms of maltreatment; (2) the severity (chronicity and evidence of harm or risk) of maltreatment; (3) the characteristics of reported children, families and alleged perpetrators; and (4) the relationship between incidence of maltreatment and specified determinants of health. A fifth purpose was to monitor short-term investigation outcomes (substantiation and placement rates, child welfare court involvement and criminal prosecution of perpetrators) (Trocmé et al., 2001).

The CIS used a multistage stratified sampling design to, first, select a representative sample of child welfare sites and, second, to sample cases within those sites that corresponded to determined criteria regarding child maltreatment. At least one site was chosen from each province and territory having a child population under 275,000. Further stratification (by region and agency size) was employed for larger provinces. In addition, 4 provinces allocated funding to allow for over-sampling. From a field of 327 child welfare service areas, 51 sites were selected. Of the 9,936 family cases opened at these sites during a three month time period (from October 1 to December 31, 1998), 4,548 cases were screened out, resulting in 5,388 family cases involving 7,672 children investigated for suspected or reported child maltreatment. Not included in the study were those cases opened for reasons other than child maltreatment, new allegations on cases currently open at the time of data

collection, cases of maltreatment not reported to child welfare, and children already in child welfare care. The child maltreatment investigation was the unit of analysis.

To gather standardized information about child maltreatment and the characteristics of maltreated children and maltreating families from the child welfare workers conducting investigations, the Maltreatment Assessment Form was developed for use as the primary data collection instrument in the CIS. The Maltreatment Assessment Form consists of three sections: 1) an Intake Fact sheet, to record information regarding the referral and identification of children referred for investigation of maltreatment; 2) a Household Information sheet, to document information related to characteristics of the child's caregiver(s) and household; and 3) a Child sheet, to report information concerning characteristics of the maltreated child and consequences of the maltreatment. The Maltreatment Assessment Form was filled out by the participating investigating child welfare workers at the completion of the child maltreatment investigation. An overall participation rate of 90 percent was achieved. Data from the Household Information and the Child sheets is the focus of this analysis.

Examination of the maltreatment of children with developmental delays was further facilitated by a component of the CIS measurement instrument, the Child Functioning Checklist. This checklist was developed as an index of the types of concerns frequently identified in child maltreatment investigations. Although this checklist was developed in consultation with child welfare workers and researchers it is not a validated measurement instrument with established population norms. Rather, it allows for documentation of child functioning concerns that workers become aware of during child maltreatment investigations. As a consequence, incidence rates are likely an underestimation of these concerns. This checklist was comprised of seventeen child functioning concerns (one of which was developmental delay) representing physical, emotional, cognitive, and behavioural issues. These child functioning concerns were identified by workers completing the Maltreatment Assessment Form as having been confirmed (by formal diagnosis and/or direct observation) or suspected but not verifiable at the time of the investigation. The categories for confirmed and suspected were collapsed during analysis as this distinction was not always made clear in all the research jurisdictions.

Participants

The analysis presented in this paper is based upon a sample of 666 children, identified as developmentally delayed on the Child Functioning Checklist of the Maltreatment Assessment Form, drawn from the total CIS sample population of 7,672 children being investigated for child maltreatment. The 666 children described as having developmental delays comprise 8.68% of the total sample. Significantly more of the children labelled as having developmental delays are boys (60.9%) than are girls

(39.1%). This over-representation of boys with developmental delays is found across all age categories. The mean age of children labelled developmentally delayed in the sample is 7.2 years ($SD=4.26$). 19.52% of the group of children identified as having developmental delays are also described as having additional physical or developmental disabilities, compared to 1.76% of children without developmental delays. A large majority (91.9%) of children reported to have developmental delays live with their biological parents. The rest were reported as residing with foster parents, adoptive parents, step-parents, or others.

Results

Categories of maltreatment reported

The four main maltreatment categories addressed by the CIS are physical abuse, sexual abuse, neglect/failure to provide, and emotional maltreatment. The CIS Maltreatment Assessment Form collected information on up to three categories of maltreatment per investigated case. For example, some children may have been reported to child welfare for a single category of maltreatment (e.g., sexual abuse) whereas other children may have been reported for two or more categories (or types) of maltreatment (e.g., physical abuse, emotional maltreatment, and neglect). The percentage of children with and without developmental delays reported for these three categories of maltreatment are shown in Table 1. Overall, children with developmental delays were more likely to be reported for multiple categories of maltreatment (34.8%) than were children without developmental delays (23.1%). Neglect is the most frequently reported single type of maltreatment for all children, across the primary, second, and third maltreatment classifications. As a primary maltreatment type, physical abuse is the second most frequently reported, with about one-third of all children reported for this type of maltreatment. For the second and third maltreatment classifications, however, emotional maltreatment is the second most frequently reported maltreatment type for all children. Sexual abuse is reported least often for all children across all maltreatment classifications.

A series of chi-square analyses were conducted to contrast the number of children with and without developmental delays reported for each of the four types of maltreatment and each of the three maltreatment classifications. There were significant differences between the two groups of children within the primary maltreatment classification, with children with developmental delays reported for more neglect ($X^2=14.460$, $p<.001$) but less emotional maltreatment ($X^2=13.037$, $p<.001$) than children without developmental delays. This finding was repeated in the second maltreatment classification as children with developmental delays continued to be reported more often for neglect ($X^2=13.911$, $p<.001$) and less often for emotional maltreatment ($X^2=4.781$, $p<.05$). In the second maltreatment classification, children with developmental delay were also less frequently reported for physical abuse

($X^2=4.510$, $p<.05$). The two groups of children did not differ statistically for reported types of maltreatment in the third maltreatment classification.

Table 1: Percentage of Children With and Without Developmental Delays Who are Reported for Multiple Categories of Maltreatment

<i>Category of Maltreatment</i>	<i>Maltreatment Classification</i>					
	<i>Primary (%)</i>		<i>Secondary (%)</i>		<i>Third (%)</i>	
	<i>No Delay</i>	<i>Delay</i>	<i>No Delay</i>	<i>Delay</i>	<i>No Delay</i>	<i>Delay</i>
Physical Abuse	30.8	29.1	12.3	8.3*	9.2	7.6
Sexual Abuse	10.4	9.9	5.5	4.7	6.0	6.8
Neglect	41.8	49.4**	45.4	6.2**	42.5	46.2
Emotional Abuse	7.0	11.6**	36.9	30.8*	42.3	39.4

* $p<.05$, ** $p<.001$

Maltreatment was also more likely to be substantiated for children with developmental delays than for children without developmental delays. This difference was found to be statistically significant ($p<.01$) for all three maltreatment classifications. For children with developmental delays, the substantiation rate for the primary category of maltreatment was 51.7% compared to 46.0% for non-delayed children. The rate of substantiation for the second maltreatment category was 56.2% for children with developmental delays and 46.9% for children without delays. For the third maltreatment category, substantiation for children with developmental delays was 65.2% as contrasted with 56.9% for children without delays.

Duration of maltreatment

The majority of children in the study are less likely to experience a single incident of maltreatment and more likely to experience multiple incidents of maltreatment over a period of time (see Table 2). Within the primary maltreatment classification, the duration of maltreatment for children with developmental delays was significantly different for children with and without developmental delays ($X^2=36.151$, $p<.001$). Fewer children with developmental delays were reported for a single incident of maltreatment (13.3%) and more were reported for maltreatment lasting longer than six months (52.6%) than were children without developmental delays (23.1% and 40.9% respectively). A similar finding was found for the second maltreatment classification ($X^2=22.243$, $p<.001$). No statistically significant difference was found in the duration pattern of the two groups of children for the third maltreatment classification.

Table 2: Duration of Maltreatment for Children With and Without Developmental Delays Across Three Maltreatment Classifications

<i>Duration of Maltreatment</i>	<i>Maltreatment Classification</i>					
	<i>Primary (%)</i>		<i>Secondary (%)</i>		<i>Third (%)</i>	
	<i>No Delay</i>	<i>Delay</i>	<i>No Delay</i>	<i>Delay</i>	<i>No Delay</i>	<i>Delay</i>
Single Incident	23.1	13.3	10.1	4.0	6.8	4.0
< 6 Months	18.4	19.8	17.2	16.5	13.5	12.9
> 6 Months	40.9	52.6	54.6	67.6	64.5	69.4
Unknown	17.6	14.3	18.1	11.9	15.2	13.7

Alleged perpetrator of maltreatment

The operational definition of "alleged perpetrator" in the CIS refers to the individual who is alleged, suspected, or guilty of child maltreatment. The alleged perpetrator for all children in the CIS study is most often the primary caregiver, and, more specifically, this primary caregiver is typically a biological parent (see "relationship to investigated child" in Table 5). For children without a developmental delay, 95.8% of primary caregivers are a biological parent. For children with a developmental delay, the rate of primary caregivers who are biological parents is slightly lower (91.9%), and this group is slightly more likely to have alternative caregivers (i.e., adoptive parent, foster parents).

Table 3 shows the alleged perpetrators across the three maltreatment classifications for children with and without developmental delays. Again, there were differences between the two groups of children. The frequency with which the biological mother was reported to be the alleged perpetrator of maltreatment was significantly higher for children with developmental delays than for children without delays in the primary maltreatment classification ($X^2=11.693$, $p<.01$), second maltreatment classification ($X^2=12.805$, $p<.001$), and third maltreatment classification ($X^2=7.639$, $p<.01$). For the primary maltreatment classification, the foster family was also identified as the alleged perpetrator more frequently for children with developmental delays than without delays ($X^2=5.761$, $p<.05$), although the reported frequency was low. Another relative was more frequently reported as the alleged perpetrator for children with developmental delays than without delays in the third maltreatment classification ($X^2=4.189$, $p<.05$).

Table 3: Percentage of Alleged Perpetrator of Maltreatment for Children With and Without Developmental Delays Across Three Maltreatment Classifications

<i>Alleged Perpetrator</i>	Maltreatment Classification					
	Primary (%)		Secondary (%)		Third (%)	
	<i>No Delay</i>	<i>Delay</i>	<i>No Delay</i>	<i>Delay</i>	<i>No Delay</i>	<i>Delay</i>
Biological Mother	60.7	67.4**	66.2	76.0*	69.8	81.6**
Biological Father	40.4	37.4	41.3	43.1	42.7	38.2
Stepmother	4.1	5.1	5.4	4.7	5.0	4.4
Stepfather	6.5	4.8	5.8	4.1	7.8	8.8
Adoptive Parent	.4	.9	.5	.0	.5	.0
Foster Family	.3	.9***	.2	.6	.0	.0
Other Relative	6.5	6.3	5.3	7.0	5.0	9.6***
Stranger	.4	.3	.3	.0	.3	.0
Unknown	1.1	1.5	.4	1.2	.7	.0
Other	5.0	5.0	3.4	2.3	.0	.0

* $p < .001$, ** $p < .01$, *** $p < .05$

Multiple alleged perpetrators

The reported rate of multiple (two or more) alleged perpetrators for children with developmental delays is slightly higher for children with developmental delays (28.7%) than for children without delays (24%), a difference that is statistically significant ($X^2=5.827$, $p < .05$). As shown in Table 4, at least one biological parent is alleged to be involved as a perpetrator of maltreatment in cases involving multiple perpetrators for 99% of all children included in the study.

Table 4: Percentage of Multiple Alleged Perpetrators for Primary Maltreatment Classification for Children With and Without Developmental Delay

<i>Multiple Alleged Perpetrators</i>	Developmental Status	
	<i>No Delay</i>	<i>Developmental Delay</i>
2 Biological Parents	73.8%	74.3%
1 Biological Parent and 1 Other	25.4%	24.6%
2 Other Caregivers	.9%	1.0%
2 Others	.0%	.0%

Primary caregiver characteristics

As noted, the alleged perpetrator of child maltreatment is most often the primary caregiver. To shed further light on the characteristics of perpetrators of maltreatment, a number of primary caregiver characteristics were investigated through the CIS Maltreatment Assessment Form and are presented for primary caregivers of children with and without developmental delays in Table 5. For all children in the study, the primary caregiver is most frequently a biological parent, and most commonly 31-40 years of age. For both groups of children, the primary caregiver is overwhelmingly female, white, and claims English as a first language. The majority of primary caregivers for whom education level was recorded, reported an education level of secondary school or less.

Table 5: Percentage of Caregiver Characteristics for Primary Caregivers of Children With and Without Developmental Delay

	Developmental Status	
	<i>No Delay</i>	<i>Developmental Delay</i>
<i>Relationship to Investigated Child</i>		
Biological Parent	95.8%	91.9%
Adoptive Parent	.5%	1.8%
Foster Parent	.5%	1.5%
Step-parent/Partner	1.0%	.9%
Other	2.2%	3.9%
<i>Age</i>		
<18 years	1.4%	.6%
19-21 years	3.8%	5.4%
22-25 years	10.3%	8.4%
26-30 years	19.9%	20.5%
31-40 years	49.1%	45.7%
41-50 years	13.3%	14.3%
51-60 years	1.7%	4.0%
61+ years	.5%	1.1%
<i>Sex</i>		
Female	84.5%	82.8%
Male	15.5%	17.2%
<i>Ethno-racial Heritage</i>		
White	71.0%	70.0%
Aboriginal	15.7%	18.8%
Black	3.9%	3.9%
Other	9.3%	7.3%

<i>Language</i>		
English	68.7%	64.2%
French	22.5%	28.0%
Other	8.8%	7.8%
<i>Education Level</i>		
Elementary or Less	4.8%	13.0%
Secondary or Less	39.4%	42.0%
College/University or Less	11.4%	6.5%
Unknown	44.4%	38.5%

Contrasting the percentage of primary caregiver characteristics for the two groups of children reveals differences for children with and without developmental delays. The relationship of the primary caregiver to the child was slightly less likely to be the biological mother (91.9%) for children with developmental delays than for their non-delayed counterparts (95.8%) as children with delays were slightly more likely to have a primary caregiver who was other than a biological parent. The pattern of ages for the primary caregivers was also somewhat different for the two groups, with a higher percentage of primary caregivers for children with developmental delays being age 41 and older, a trend that appears to increase after age 50. No differences were found between the two groups for primary caregiver sex or ethno-racial heritage. Although English was the primary language for the majority of both groups, French was identified as the first language by a higher percentage of primary caregivers of children with developmental delays (28.0%) than caregivers of children with no delays (22.5%) ($X^2=10.191, p<01$). Important differences were also found for education level. The primary caregiver of children with developmental delays is almost three times more likely to have an education level of elementary school or less, and less than one-half as likely to have a college or university level education than the primary caregiver of children without delays ($X^2=93.789, p<.001$).

Primary caregiver household characteristics

Households of primary caregivers were described for five characteristics in the CIS: household family structure, family income estimate, family income source, housing accommodation, and unsafe housing conditions (see Table 6). Both delayed and non-delayed children in the study were more likely to live in a household headed by a single female parent than any other single type. Almost one-third of both groups of children resided in families that included both biological parents. The third most frequently reported family structure for both groups was one biological parent and either a step-parent, common-law partner, or adoptive parent.

Comparing the family structure for children with and without developmental delays indicated differences between the two groups of children. Compared to children

without delays, children with developmental delays were less likely to reside in a family led by a single female parent and to more frequently reside in family structures other than those headed by a biological parent ($X^2=35.442, p<.001$).

Many families in the study reported low annual incomes. Chi-square analyses contrasting the family income for children with and without delays revealed differences between the two groups: 35.4% of families of children with developmental delays in this study had incomes of less than \$15,000 per year compared to 25.7% of families of children without delays, a difference that is statistically significant ($X^2=28.646, p<.001$). Overall, families of children with delays had lower annual incomes than families of children without delays. Similarly, while the largest single primary income source for all families in the study was social assistance, unemployment or other benefits, once again differences were observed between the two population groups ($X^2=67.434, p<.001$). Families of children with developmental delays are less likely to have full-time or part-time employment and more frequently cite social assistance, unemployment or other benefits as the primary source of income.

Approximately two-thirds of all children in the study reside in rental accommodation, and less than one-quarter report owning their homes. The pattern of housing type by delay / non-delay status shows that children with developmental delays are more likely to live in rental housing, and less likely to live in purchased housing than their non-delayed counterparts ($X^2=29.445, p<.001$). This group of children is also more likely to be rated as living in unsafe housing conditions (32.2%) than children without delays (26.9%), a finding that is also statistically significant ($X^2=13.344, p<.01$).

Table 6: Percentage of for the Primary Caregivers of Children With and Without Developmental Delays

	Developmental Status	
	<i>No Delay</i>	<i>Developmental Delay</i>
<i>Household Characteristics</i>		
<i>Household Family Structure</i>		
Both Biological Parents	31.4%	31.8%
Biological Parent with Step/Common-law/Adoptive Parent	17.0%	17.3%
One Biological Parent & Other	2.4%	3.8%
Lone Female	39.3%	34.0%*
Lone Male	6.2%	5.3%
Other Family Structure	3.7%	7.7%

Family Income Estimate		
<15,000/year	25.7%	35.4%*
\$15-24,999/year	20.9%	23.3%
\$25-40,999/year	14.7%	10.3%
\$41-57,999/year	6.0%	4.4%
\$58-80,000/year	2.8%	1.8%
>\$80,000/year	1.2%	.8%
Unknown	28.6%	24.0%
Household Source of Income		
Full Time Employment	39.7%	29.1%*
Part-time/Seasonal Employment	9.8%	8.2%*
Social Assistance/Other Benefits/ Unemployment	40.2%	56.5%*
Unknown Sources	9.2%	5.5%
No Source of Income	1.1%	.8%
Housing Accommodations		
Public Rental	10.3%	12.1%
Private Rental	50.4%	57.3%
Purchased Home	24.4%	17.1%
Shelter/Hotel	1.4%	1.7%
Other	4.6%	5.7%
Unsafe Housing Conditions Noted*		
Yes	26.9%	32.3%**

* $p < .001$ ** $p < .01$

Primary caregiver concerns

Caregivers included in the study were rated for seven caregiver functioning concerns by the social workers investigating the reported maltreatment. These concerns were also analyzed to provide additional information about perpetrators of maltreatment. The percentage of primary caregivers for children with and without developmental delays who were described by each of these concerns is presented in Table 7. Overall, caregiver functioning concerns were noted for the majority of primary caregivers of both groups of children. Three quarters of primary caregivers for the group with delays were reported as having any caregiver concerns, a rate significantly higher than for primary caregivers of the non-delayed group ($X^2=46.698$, $p < .001$).

Contrasting the percentages of caregivers of the two groups of children for the seven functioning concerns studied, using a series of chi-square analyses, again revealed a number of important differences between the groups. Caregiver functioning concerns were described more frequently for primary caregivers of children with developmental delays than for primary caregivers of children without delays for every category except alcohol abuse.

More than four times as many primary caregivers of the children with developmental delays as those of children without delays are noted to have cognitive impairments that might impact upon the quality of care giving provided in the household ($X^2=189.328$, $p<.001$). A significantly higher percentage of primary caregivers for the delayed group also are reported to have mental health issues ($X^2=52.703$, $p<.001$), and twice as many have physical health issues ($X^2=39.748$, $p<.001$) when contrasted to primary caregivers of children without delays. Drug abuse was also noted more frequently for primary caregivers of children with delays than for primary caregivers of children with no delays ($X^2=6.345$, $p<.05$). Also significant is a higher rate of criminal activity for primary caregivers of children with delays ($X^2=10.187$, $p<.01$), a group that is further reported to have fewer available social supports and/or more social isolation ($X^2=80.016$, $p<.001$) than primary caregivers of children without delays. Forty one percent of primary caregivers for children with developmental delay were reported as having been maltreated as a child as contrasted with 27.1% of primary caregivers of children without delays ($X^2=57.256$, $p<.001$).

Table 7: Percentage of Caregiver Concerns for the Primary Caregivers of Children With and Without Developmental Delays

	Developmental Status	
	<i>No Delay</i>	<i>Developmental Delay</i>
<i>Multiple Alleged Reported Caregiver Concerns</i>		
Any Caregiver Concerns	62.7%	76.0%*
Cognitive Impairment	3.8%	15.8%*
Mental Health Issues	19.4%	31.2%*
Physical Health Issues	7.1%	14.0%*
Drug Abuse	13.3%	17.7%***
Alcohol Abuse	26.4%	27.1%
Criminal Activity	9.9%	13.8%**
Few Social Supports	24.9%	40.8%*
Maltreated as a Child	27.1%	41.0%*

* $p<.001$, ** $p<.01$, *** $p<.05$

Discussion

The intent of this paper was to begin a comparative analysis for children with and without developmental delays along three parameters: 1) the pattern of reported child maltreatment (type, frequency, duration), 2) the alleged perpetrators of this maltreatment, and 3) the perpetrator-related factors involved that distinguish the maltreatment of children with developmental delays from their non-delayed counterparts.

Neglect is the most common type of maltreatment for both children with and without developmental delays. However, neglect is even more common for children with delays. This trend has been recognized in the literature (Sullivan & Knutson, 2000; Verdugo et al., 1995) and has, in the past, been hypothesized to be a function of the increased care demands of children with developmental delays that serve to place them at higher risk for neglect (Ammerman et al, 1989). This hypothesis, however, has more recently been criticized as inadequate to explain the maltreatment of children with disabilities (Sobsey, 1994).

Conversely, children with developmental delays are less likely to be reported for emotional maltreatment than are children without developmental delays. The reason for this may be, in part, that the data collected by the CIS underestimates emotional abuse because it is harder to detect and report, especially for children who are non-verbal or have limited communication abilities for self-reporting this type of maltreatment. Also of particular concern are the alarming findings that children with developmental delays are more likely to be reported as having experienced both multiple types and multiple incidents of maltreatment, spanning longer periods of time and inflicted by multiple perpetrators, than are their non-delayed peers.

It is interesting to note that of the four main categories of maltreatment, sexual abuse is reported least often, both for children with and without developmental delays. The reasons for this are not clear. There are, however, at least two possible explanations (which would require further investigation). It may be possible that the media and literature attention paid to child sexual abuse throughout the 1990s have resulted in an overestimation of the incidence of child sexual abuse. Conversely, this same media and literature attention may have resulted in people under-reporting sexual abuse for fear of repercussions stemming from disclosure.

Caregivers, primarily biological parents, and especially biological mothers, are most frequently reported to be the perpetrators of child maltreatment for all children. This is even more likely for children with developmental delays. In addition, while it was noted that multiple perpetrators are more often reported for children with developmental delays, it appears that biological parents are almost always alleged to be involved in these cases of multiple perpetrators. This lends support to the view that child maltreatment, for children with and without developmental delay, is most likely to occur in the family home and to be perpetrated by the primary caregiver. The finding that stranger abuse appears to be a rare event challenges the general perception that children are at greater risk of maltreatment from strangers than from their own families. A caution is warranted, however, in the interpretation of these findings. It must be remembered that, in Canada, the burden of care for children (with and without developmental delays) still rests primarily with women. The finding that biological mothers are most frequently reported as the alleged perpetrators of maltreatment of children with developmental delay raises questions regarding societal expectations of parents and support for parents of a child with a disability.

Caregiver characteristics are of particular interest because caregivers are most frequently reported to be the alleged perpetrators of maltreatment. Caregivers of children with developmental delays, compared to caregivers of children without developmental delays, have markedly more problematic characteristics. Among the primary caregivers included in the CIS, the primary caregivers of children having developmental delays appear more often to be single mothers, poor, dependant upon social assistance, and living in rental accommodation that is frequently unsafe. These caregivers are more likely to have additional concerns such as cognitive impairment, mental and/or physical health issues, lower education levels, a history of child maltreatment, problems with drug abuse and criminal activity. They are also likely to report having few social supports. These findings appear to confound any simplistic understanding of the maltreatment of children with developmental disabilities as being a function of the increased care demands related to the disability. Caregivers of children with developmental delays may have many more risk factors for child maltreatment than do other parents (eg. poverty; low levels of education; social isolation; cognitive, physical and mental health issues) and, consequently, they may be much more in need of prevention and support services. These risk factors appear to be strongly related to the socio-economic conditions of the caregiver. Further, the higher reported levels of problematic characteristics for the caregivers of children with developmental delays also suggests the possibility that maltreatment of children with developmental delays might well be less likely to occur in families with no concerns or fewer concerns.

It is possible that caregivers of children with developmental delays are more frequently identified and reported because they are involved with social service agencies due to their child's disability. The differential rates of caregiver concerns for caregivers of children with developmental delays and caregivers of children without developmental delays might reflect variable rates of assessment as opposed to actual differences in rates of caregiver concerns. In addition, although there appears to be an association between poverty and child maltreatment, poverty does not cause maltreatment, and the imbalance of caregivers living in poverty who are alleged to be perpetrators of child maltreatment might indicate primarily the ability of wealthier caregivers to stay out of the child protection system (Macdonald, 2001). These possibilities need to be tested carefully in future research.

The analysis conducted here was limited by the design and the data collected in the CIS. The results obtained are likely an underestimation of the maltreatment of children with developmental delays as the methodology of the CIS excluded cases already open in child protection services at the time of data collection and did not include cases of child maltreatment not reported to child protection services. As a result, the CIS does not include those cases of extra-familial child maltreatment reported to the police, a fact that may cloud our understanding of who the perpetrators of the maltreatment of children with developmental delays are. Further, the CIS is

purely descriptive and, as such, cause and effect cannot be inferred from the results obtained in this analysis. Still, the CIS represents the first comprehensive set of data in child maltreatment in Canada, and thus provides an important source of information.

Analysis of the CIS demonstrates that 8.68% of the CIS sample population were children with developmental delays yet only about 1-3% of the general population is expected to have a developmental delay (Brown, 2002). This finding alone suggests the need to understand the maltreatment of children with developmental delays more fully.

Many possibilities for future research are suggested by the present analysis. The following three appear to be timely for children with and without delays. First, it is important to track both the incidence of the types and the patterns of maltreatment over time. Second, the sources of maltreatment (who the perpetrators are) need to be tracked over time for the various types and sub-types of maltreatment. This might have particular relevance for the category of sexual abuse and resolving the debate in the literature as to whether child sexual abuse is more likely to be perpetrated by family members, paid caregivers, or someone else (Mansell et al., 1997; Miller Perrin et al., 1999; Romans & Martin, 1997; Sullivan & Knutson, 2000). In addition, further analysis of perpetrators could include a comparison of those children with developmental delays being raised in their family homes by their biological parents with those children with developmental delays being raised in alternative settings by substitute caregivers. Third, the present analysis highlights the need to explore the relationship between caregiver characteristics and the maltreatment of children with developmental delays in more detail. Other research that might prove to be of interest includes: the relationship between maltreatment and single-caregiver versus two-caregiver families; the relationship between cognitive delay in caregivers and the maltreatment of children with delays; and the relationship between the level of supports available to families with a child with a developmental delay and child maltreatment.

This analysis has been a nascent attempt to better understand the maltreatment of children with developmental delays. A number of interesting patterns in the maltreatment of this group of children have been identified. In addition, this analysis has revealed several relationships between the maltreatment of children with developmental delays and the characteristics of the alleged perpetrators of this maltreatment, relationships that warrant a more thorough investigation. Nonetheless, the analysis has contributed to our understanding of the maltreatment of this particularly vulnerable group of children.

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Correspondence

Ann Fudge Schormans or Ivan Brown
Faculty of Social Work, University of Toronto
246 Bloor Street West
Toronto, ON
M5S 1A1

Email: annfudgeschormans@utoronto.ca
ivan.brown@utoronto.ca