Children exposed to domestic violence: Effects of gender and child physical abuse on psychosocial problems

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Abstract

This study sought to compare the specific impact on psychological and behavioral problems in children of exposure to domestic violence and of both exposure and physical victimization. These effects are examined also as a function of gender. A community sample of 79 children aged 6-12 years and their mothers were divided into three groups: witness (N = 34), abused/witness (N = 20) and comparison (N = 25). Results showed that children in the two domestic violence groups presented more symptoms and behavioral problems than did the comparison group. The abused/witness children obtained significantly higher scores on 5 of the 9 *CBCL* scales. Only one gender-specific difference was observed: Girls presented more problems on the delinquent conduct scale.

Key words: domestic violence, children, witness, child physical abuse, psychological problems, behavior problems

Witnessing domestic violence is a frequent occurrence for a great many children. In the United States, at least 1.5 million children are exposed to domestic violence each year (U.S. Census Bureau, 2000) and, in Canada, 37% of children have witnessed domestic violence where the mother feared for her life (Statistics Canada, 2001). In addition, *The Canadian Incidence Study of Reported Child Abuse and Neglect* (CIS) revealed that exposure to family violence was the most common form of emotional maltreatment, which was experienced by 58% of the children in their study (Trocmé et al., 2001). In retrospective studies, 13% to 27% of adult participants reported witnessing interparental violence (Forsstrom-Cohen & Rosenbaum, 1985; Straus, 1992). Over the past two decades, more and more research has been conducted into domestic violence and, more specifically, into its effects on children exposed to it. By and large, studies confirm its negative impact on the well-being of children. In a recent meta-analysis of the literature, Wolfe, Crooks, Lee, McIntyre-Smith, and Jaffe (2003) concluded that there was a small but unequivocal negative effect of exposure to domestic violence on the emotional and behavioral development of children. However, these researchers also underlined that several methodological issues clouded the interpretation of a large number of these studies. The purpose of our research was to remedy some of these methodological pitfalls and explore more specifically the degree to which boys and girls develop the same emotional and

behavioral problems when exposed to domestic violence. Another contribution of this study would be to take into account the co-occurrence of victimization, that is, the fact of being physically abused and of witnessing domestic violence.

Impact of domestic violence on children

Studies have found that exposure to domestic violence could have a variety of psychological and behavioral consequences for children. Witness children have been observed to present with more externalizing problems, such as aggressive behavior, hyperactivity and delinquency, compared with children spared from domestic violence (Fantuzzo, DePaola, Lambert, Martino, Anderson, & Sutton, 1991; Jaffe, Wolfe, Wilson, & Zak, 1986; Kernic, Wolf, Holt, McKnight, Huebner, & Rivara, 2003; Litrownik, Newton, Hunter, English, & Everson, 2003; Spaccarelli, Sandler, & Roosa, 1994; Sternberg, Lamb, Greenbaum, Cicchetti, Dawud, Cortes, et al., 1993). Witness children were also found to be more likely to disobey, lie, cheat, destroy toys and beat others. For a fair percentage of these children, externalizing problems were as severe as in clinical samples (Christopoulos, Cohn, Shaw, Joyce, Sullivan-Hanson, Kraft, et al., 1987; Fantuzzo et al., 1991; O'Keefe, 1994; Rosenbaum & O'Leary, 1981; Sternberg et al., 1993; Wolfe, Jaffe, Wilson, & Zak, 1985). The proportion of witness children who present with clinically significant externalizing problems has been estimated to be as high as 45% (O'Keefe, 1994).

Witness children were also found to be significantly more likely to present with internalizing problems, such as depression and anxiety, compared with non-witness children (Christopoulos et al., 1987; Fantuzzo et al., 1991; Hughes, 1988; Jaffe et al., 1986; Litrownik et al., 2003; Spaccarelli et al., 1994). These children have been described as worried, sad, unhappy, and more dependent on adults. In general, their internalizing problems were found to be more severe and to attain clinical levels more often. Overall, studies suggest that one in three boys and one in five girls present with clinical symptoms related to witnessing domestic violence.

A variety of other problems have also been observed as a function of the developmental stage of the child. Post-traumatic stress disorder and somatic complaints have frequently been noted in young children (Kilpatrick, Litt, & Williams, 1997; Lehmann, 1997, 2000; Osofsky, 1995). Academic difficulties, low social competency, low self-esteem and lower IQ have been common instead in school-aged children (Gleason, 1995; Fantuzzo et al., 1991; Fantuzzo & Lindquist, 1989; Koenen, Moffitt, Caspi, Taylor, & Purcell, 2003; Spaccarelli et al., 1994; Wolfe, Zak, Wilson, & Jaffe, 1986).

However, Hughes, Graham-Bermann and Gruber (2001) estimated that 55% to 65% of children were not severely affected by witnessing domestic violence. On the other hand, in their review of studies on children who have witnessed domestic violence, Kitzmann, Gaylord, Holt, and Kenny (2003) obtained a lower rate with up to 37% of the children exposed to marital violence showing no clinical outcomes, resembling non-witnessing children. These results suggest that witnessing domestic violence can interfere for some children with normal development and could often lead to negative outcomes in both the short and long term.

Such a developmental psychopathology framework highlights the need to examine normal or abnormal child development in relation to meaningful moderators, such as sex and age, and to consider different types of outcome. However, results to date have generally been mixed in this regard. Some studies have found no gender-specific differences (Fantuzzo et al., 1991; Hughes, Parkinson, & Vargo, 1989; O'Keefe, 1994; Litrownik et al., 2003), others observed more externalizing or internalizing problems in girls aged 6 to 12 years (Christopoulos et al., 1987; Spaccarelli et al., 1994; Sternberg et al., 1993; Yates, Dodds, Sroufe, & Egeland, 2003), and others still noted more in boys from the same age group (Jaffe et al., 1986; Porter & O'Leary, 1980; Wolfe et al., 1986; Yates et al., 2003). In the light of these inconclusive re-

sults, further research was clearly required into gender as a potential moderator of the impact of domestic violence on children.

Co-occurrence of violence

The co-occurrence of child physical abuse in maritally violent families is another confounding variable neglected by many researchers. The percentage of children both physically abused and exposed to domestic violence is difficult to measure. The numbers reported have ranged from 5% to 100%, depending on the informant (McGuigan & Pratt, 2001). Nevertheless, the average co-occurrence rate in maritally violent families has been estimated at 40% (Appel & Holden, 1998; Straus, Gelles, & Steinmetz, 1980). For this large proportion of children, the question of whether this co-occurrence has an additive effect remains a very relevant one, as few studies have sought to elucidate the potential impact of being both a witness to domestic violence and a victim of physical abuse.

Besides this hypothesis of cumulative stress, it is possible that these families differ in terms of certain characteristics from those in which violence is limited to the two partners and, consequently, that children are exposed to other sources of stress related to their living conditions. In their meta-analysis, Wolfe et al. (2003) identified only four studies designed to address this question. In three of these, the children were recruited in shelters (Hughes, 1988; Hughes et al., 1989; O'Keefe, 1995), whereas in the study by Sternberg et al. (1993) the children were from a low social class and living in the community with both parents. According to Wolfe et al., these four studies suggested a small effect size revealing that children who were both witnesses and victims functioned more poorly, especially where externalized behaviors were concerned, than did those who only witnessed spousal violence. They concluded that further research was needed to determine whether this trend was significant.

Limitations of previous studies

Wolfe et al. (2003) and Saunders (2003) pointed out other methodological limitations that might have hampered our understanding of the impact of domestic violence on children. One of these concerned sampling procedures. Aside from not taking into account direct violence against children, a large number of studies were conducted in shelters. This limits the generalization of findings, as these children had to deal with the added stress of this transitional residence and of separation from fathers, friends and neighborhoods. Furthermore, researchers failed to take into consideration the impact of developmental issues, as many studies were conducted on children from wide age groups ranging from 4 to 16 years without controlling for this variable (Jaffe et al., 1986; Kernic et al., 2003; Porter & O'Leary, 1980; Wolfe et al., 1986). Some studies (Hughes, 1988; Hughes et al., 1989; Lehmann, 1997) have shown that younger children presented with more symptoms. Finally, most studies relied on the mothers' evaluation of their children's adjustment. Mothers might have overestimated their children's problems owing to the stress that they themselves faced (Wolfe et al., 1985) or underestimated it owing to their own denial of the violent domestic situation (Henderson, 1993). Unsurprisingly, Sternberg et al. (1993) and Hughes et al. (1989) observed divergences between evaluations provided by mother and child.

Purpose of the study

The purpose of this study was to determine the specific effect of witnessing domestic violence versus being both a victim of physical abuse and a witness to domestic violence on the psycho-

logical and behavioral problems of children. More specifically, we predicted that children who were both victims of physical abuse and witnesses to domestic violence would register the highest levels of internalizing and externalizing problems as evaluated by their mothers, as well as the highest levels of anxiety and depression problems as evaluated by the children themselves. Children who only witnessed domestic violence were expected to present higher levels of psychological and behavioral problems relative to the comparison group. A second aim of this study was to explore the effect of gender on the children's maladjustment. Because of the contradictory results obtained to date, this study sought to answer the following question: Is there a difference between how boys and girls adjust in the face of domestic violence? In order to avoid some of the methodological pitfalls of previous research, this study recruited mothers and their children in the community, used only children aged 6 to 12 years, and relied on two sources of report by querying both the child and the mother about the child's symptoms and behaviors.

Method

Procedure and subjects

The subjects were recruited through workers from local community service centers (*CLSC*) and through advertisements in non-profit community groups and in neighborhood newspapers. The advertising described a study of children exposed to parental conflicts. Interviews would take place at the subject's home, the *CLSC* or a local university. After the mother signed the consent form for her and her child to participate in the research and after the child also agreed to take part, the mother and the child were interviewed separately by two interviewers. After the interview, the child was offered a snack and the mother received $20. One child only was randomly selected per family, as the addition of siblings would undermine the assumption of statistical independence of each child in our analysis.

Families were divided into the three groups (i.e., comparison, witness, abused/witness) based on the responses provided by mothers on the *Conflict Tactics Scales-II (CTS-II*; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). Only mothers who reported at least one severe physical aggression behavior (physical abuse or injury) or more than six minor physical abuse behaviors by the spouse toward the mother or vice versa in the past year were included. Child exposure to domestic violence was recognized every time the mother stated that the child had witnessed at least one of the physical violence episodes that she reported. The child's experience as a victim of physical violence was established through the mother's responses on the *Parent-Child Conflict Tactics Scales* (*PCCTS*: Straus, Hamby, Finkelhor, Moore, & Runyan, 1996; Straus, Hamby, Finkelhor, Moore, & Runyan, 1998; see description below). The child was considered a victim of violence if the mother recognized that an adult in the family physically maltreated the child at least once in the past 12 months.

Preliminary analyses revealed that a number of women in the comparison group experienced a fair bit of psychological violence. In addition, even though we tried to recruit comparison mothers from low sociodemographic backgrounds, some of these participants were at too high an income level compared with the domestic violence groups. Consequently, we excluded 75 mothers and their children from the comparison sample.

The resulting sample consisted of 79 children aged 6 to 12 years (M = 8.6 years, SD = 1.9) and their mothers, who on average were in their mid-thirties (M = 35.5, SD = 5.2). The sample was divided into three groups: Two groups of children who had experienced some form of chronic domestic violence were compared with each other and with a comparison group. Group 1, *comparison* (N = 25; 8 boys and 17 girls), comprised children whose mothers reported no physically violent behavior between spouses or a low frequency of minor (less than

one event every two weeks) or severe (less than 15 events per year) episodes of psychological violence. In other words, these children neither witnessed nor suffered violence. Group 2, *witness* (N = 34; 20 boys and 14 girls), included children who witnessed physical violence between their parents but who were not themselves physically abused. In group 3, *abused/witness* (N = 20; 13 boys and 7 girls), children both witnessed domestic violence and were physically abused. Table 1 presents the means and standard deviations of the frequencies of child exposure to domestic violence, as reported by the children's mothers. ANOVAs revealed two main effects of gender. Girls were found to witness more minor (F (1, 53) = 5.52, $p < .05$) and severe physical assaults (F (1, 53) = 6.63, $p < .05$) than boys. The comparison group, who witnessed no assaults, was excluded from these calculations. Two main effects were also found for group variable. The witness and witness/abused groups were found to witness more minor (F (2, 78) = 43.98, $p < .001$) and more severe (F (2, 78) = 11.2, $p < .001$) psychological violence than the comparison group.

Table 1
Means and standard deviations for the number of events witnessed by the child as a function of group and gender

	Comparison		Witness		Abused/witness	
	Boys (n = 8)	Girls (n = 17)	Boys (n = 20)	Girls (n = 14)	Boys (n = 13)	Girls (n = 7)
Minor Physical Assault	0.0 (0.0)	0.0 (0.0)	6.1 (7.3)	12.9 (19.3)	7.5 (3.9)	19.7 (23.8)
Severe Physical Assault	0.0 (0.0)	0.0 (0.0)	1.8 (2.6)	8.1 (19.7)	1.7 (1.3)	12.7 (20.9)
Minor Injury	0.0 (0.0)	0.0 (0.0)	1.8 (2.4)	2.4 (6.7)	1.7 (2.1)	3.9 (4.2)
Severe Injury	0.0 (0.0)	0.0 (0.0)	0.1 (0.3)	4.1 (13.3)	0.1 (0.3)	1.1 (3.0)
Minor Psychological Violence	5.8 (6.9)	11.6 (13.8)	84.5 (41.7)	86.2 (41.9)	91.9 (39.9)	106.4 (30.2)
Severe Psychological Violence	0.4 (1.1)	0.5 (1.0)	22.4 (22.8)	29.3 (29.2)	26.2 (23.4)	9.3 (6.3)
Minor Sexual Coercion	0.0 (0.0)	0.0 (0.0)	0.85 (2.5)	2.1 (8.0)	0.0 (0.0)	2.14 (5.7)
Severe Sexual Coercion	0.0 (0.0)	0.0 (0.0)	0.35 (0.8)	3.2 (12.0)	0.0 (0.0)	0.0 (0.0)

These families reported very low income, with a mean of CDN$20,983 ($SD$ = CDN$13,379) ($F$ (2, 78) = 1.77, *ns*). Only 30% earned an income, with the majority receiving welfare benefits. The mean number of children in the home was 2.5 (SD = 1.2). Boys came from larger families with a mean of 3 children, whereas girls came from families with a mean of 2 children (F (1, 78) = 11.4, $p < .001$).

Measures

The *Conflict Tactics Scales-II* (*CTS-II;* Straus, Hamby, Boney-McCoy, et al., 1996) translated into French (Cyr, Fortin, & Chénier, 1997) was used to assess type and level of spousal violence. Its 78 items serve to measure frequency of use of 39 strategies by both spouses during marital conflicts in the past 12 months. Items are rated on a 7-point scale ranging from never (0) to more than 20 times (6). The items are divided into five scales: negotiation, psychological violence, physical assault, sexual coercion and injuries, with the last four including two levels of severity (minor and severe). For each strategy used by her or her spouse, the mother must specify how many times her child has witnessed (seen or heard) the events in question.

The English and French versions of this instrument present a similar internal consistency, with alphas ranging from .65 to .91 for the French and from .79 to .95 for the original English.

The *Parent-Child Conflict Tactics Scales* (*PCCTS*: Straus, Hamby, Finkelhor, et al., 1996, 1998) translated into French (Fortin, Cyr, & Chénier, 1997) was used to measure child abuse. The *PCCTS* measures the frequency with which the mother or another adult in the family used any of 22 strategies with the child in the past 12 months. The items are rated on a 7-point scale ranging from never (0) to more than 20 times (6). They are divided into five scales: non-violent discipline, psychological aggression, corporal punishment, severe physical assault and very severe physical assault. The alphas obtained by the French version used in this study compared as follows with those for the original English version, respectively: .66 and .60 for non-violent discipline, .69 and .70 for psychological aggression, .74 and .57 for corporal punishment, and .65 for physical assault, which combined the severe and very severe scales (no data available for the English version).

Mothers completed the *Child Behavior Checklist* (*CBCL*; Achenbach & Edelbrock, 1983) for the purpose of assessing her perception of her child's behavioral problems. The 113-item *CBCL* measures problems observed in the past six months and includes a global scale, two broad-band dimensions (externalizing and internalizing), and 9 narrow-band dimensions. Results are converted to *T* scores. A *T* score over 67 indicates that the child suffers from severe problems. The *CBCL* presents good test-retest reliability (.82 for the internalizing scale and .92 for the externalizing scale) and its convergent validity has been established (Quay & Peterson, 1983). The internal consistency coefficients obtained with the present sample were more than satisfactory, ranging from .69 to .92, except for the sexual problems scale (.45). The coefficients were .88 for the internalizing scores and .92 for the externalizing scores.

The *Revised Children's Manifest Anxiety Scale* (*RCMAS*; Reynolds & Richmond, 1978, 1985) is a standardized instrument comprising 28 true/false items used to evaluate anxiety levels in children aged 6 to 17 years. Results range from 0 to 28 and reflect a general anxiety level. Children who score above 20 are considered to present clinically significant anxiety problems. The internal consistency coefficients of the *RCMAS* vary from .78 to .86 depending on age group and its test-retest reliability is .98. The convergent validity of the instrument has been demonstrated (Witt, Heffer, & Pfeiffer, 1990). It was translated into French by Turgeon and Chartrand (2003). The internal consistency (alpha of .85 for the American study and .87 for French study). the test-retest reliability (.67 for the anxiety scale) and the factor structure of the French-Canadian sample were similar to that found among the U.S. sample.

The *Short Children's Depression Inventory* (*CDI*) developed by Kovacs and Beck (1977) and translated into French by Saint-Laurent (1990) was used to evaluate child's level of depression in the past two weeks. In this 27-item self-report measure, the child chooses from among three sentences the one that best corresponds to his emotional state. The global score ranges from 0 to 54, with the higher the score, the more severe the level of depression. The clinical cutoff score is estimated at 19 (Mack & Moore, 1982) and the average for a normal child population is 9 (Kovacs, 1983). The normative data for Quebec (Saint-Laurent, 1990) are comparable to those reported for the American sample. The internal consistency (alpha of .86 for the American study and .83 for our study) and the test-retest reliability (.72 for the French version) of the *CDI* were satisfactory. Despite the slight overestimation of depression cases observed with the *CDI*, its use is nevertheless recommended as a measure of psychological distress (Semrud-Clikerman, 1990).

A *sociodemographic form* completed by the mother was used to collect information on family characteristics such as age, income, education, number of children, and number of marital relationships.

Results

On account of certain slight variations across the sociodemographic variables for the three groups, we performed preliminary analyses using Pearson product-moment correlations between the sociodemographic variables and the children's adjustment scores. Results revealed significant correlations among child self-report of symptoms, mother report of child's problems and sociodemographic variables. In addition, as income was related to most of the sociodemographic variables, we decided to use income as a covariate in the variance analyses to better control the potential effects of these variations on measures.

Table 2
Means and standard deviations for the CBCL T-scores, CDI and RCMAS as a function of group and gender

Scale	Comparison		Witness		Abused/witness	
	Boys (n = 8)	Girls (n = 17)	Boys (n = 20)	Girls (n = 14)	Boys (n = 13)	Girls (n = 7)
CBCL						
Withdrawn	52.8 (3.5)	54.3 (5.5)	61.1 (8.2)	62.9 (11.1)	64.9 (11.8)	62.2 (7.1)
Somatic complaints	54.1 (5.0)	55.4 (7.1)	57.7 (5.7)	61.4 (11.7)	60.4 (8.7)	64.7 (9.7)
Anxious/depressed	58.4 (8.0)	55.5 (5.6)	63.2 (8.5)	63.4 (11.6)	64.9 (10.0)	67.8 (9.5)
Social problems	52.5 (3.5)	52.6 (10.2)	57.4 (6.9)	57.1 (9.9)	61.2 (11.7)	68.0 (8.3)
Sex problems	52.1 (5.7)	50.0 (0.0)	52.9 (6.6)	55.9 (9.4)	58.4 (9.3)	52.3 (5.7)
Thought problems	52.6 (5.2)	50.5 (2.0)	56.7 (8.8)	57.9 (8.5)	59.2 (11.3)	60.8 (13.2)
Attention problems	55.4 (6.1)	55.4 (7.3)	60.4 (5.8)	60.4 (10.3)	63.9 (13.2)	70.5 (10.9)
Delinquent behavior	53.3 (3.9)	57.1 (6.1)	58.9 (7.2)	61.9 (8.8)	61.7 (10.3)	67.7 (9.4)
Aggressive behavior	54.3 (5.6)	55.0 (8.5)	61.3 (10.1)	57.7 (9.4)	66.6 (12.2)	73.7 (10.2)
Internalizing	52.6 (11.4)	53.6 (7.7)	63.1 (8.0)	63.6 (10.2)	65.2 (11.4)	67.0 (8.9)
Externalizing	52.5 (7.2)	52.3 (9.8)	59.1 (10.2)	57.9 (10.5)	65.0 (9.9)	71.8 (6.6)
Total score	52.0 (7.1)	51.6 (8.6)	61.2 (9.5)	60.0 (11.8)	65.6 (10.0)	70.5 (6.5)
Depression (CDI)	7.1 (4.8)	8.9 (8.0)	13.1 (6.3)	10.7 (7.7)	12.2 (7.3)	7.9 (4.8)
Anxiety (RCMAS)	7.4 (4.4)	11.1 (7.2)	14.0 (7.4)	14.4 (7.1)	12.5 (5.8)	9.7 (5.4)

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

To test our hypothesis, a 3 (Group) x 2 (Gender) ANCOVA, with income controlled for, was conducted to examine the effect of exposure, abuse and gender on child behavior problems. Because of the small number of subjects by group as well as the correlations between child problems, we chose to use univariate instead of multivariate analyses even though this increased the likelihood of a type I error. Simple effects were calculated to decompose interaction results and Tukey post-hoc comparisons were used for the group main effect.

First, mother evaluations of the child' problems were compared. Means and standard deviations are given in Table 2. Results of the ANCOVA as well as the simple tests are reported in Table 3. No significant effect was observed for the income covariate on any scale. The same was true for interaction effects. A group main effect was observed on all scales of the CBCL except sexual problems, and a gender main effect was significant only on the delinquency

scale. As predicted, children in the three groups differed significantly from each other, with the comparison group posting the lowest mean scores, the witness group the intermediate mean scores, and the abused/witness group the highest mean scores on the externalizing and total scales. The two groups of children who witnessed domestic violence obtained significantly higher mean scores and differed from the comparison group on the social withdrawal, anxiety/depression, thought problems, delinquency, and internalizing scales. Children in the abused/witness group differed significantly from the two other groups with the highest mean scores on the following scales: somatic complaints, socialization, attention problems, and aggression. With regard to the gender main effect, girls obtained higher scores than boys did on the delinquency scale.

Table 3

Ancova results, with income controlled for, for boys and girls as a function of the comparison (C), witness (W) and abused/witness (A/W) groups

Scale	Covariate family income		Gender Effect		Group Effect		Ge X Gr Effect	Paired comparisons (Adjusted means) C-W, W-A/W
CBCL								
Withdrawn	0.25		0.02		7.14	**	0.48	53.70 < 61.94 = 63.36
Somatic complaints	0.07		2.81		5.37	**	0.25	54.71 = 59.57 < 62.61
Anxious/depressed	0.30		0.00		5.20	**	0.46	57.13 < 63.23 = 66.21
Social problems	2.39		1.19		7.06	**	0.58	53.07 = 57.11 < 64.15
Sex problems	2.56		0.70		1.35		3.01	
Thought problems	3.73	*	0.05		3.76	*	0.37	52.19 < 57.10 = 59.49
Attention problems	1.62		1.16		6.56	**	0.53	55.86 = 60.25 < 66.82
Delinquent behavior	2.09		5.27	*	5.60	**	0.05	55.60 < 60.27 = 64.30
Aggressive behavior	1.33		0.43		10.64	***	1.19	55.07 = 59.37 < 69.76
Internalizing	0.11		0.25		9.79	***	0.01	53.22 < 63.31 = 65.97
Externalizing	2.31		0.73		10.97	***	0.62	52.98 < 58.30 < 67.92
Total score	1.21		0.31		12.23	***	0.34	52.17 < 60.52 < 67.67
Depression (CDI)	6.22	*	0.63		1.40		1.44	
Anxiety (RCMAS)	5.27	*	0.25		3.13	*	1.64	9.82 < 14.02 > 10.70

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

When the child was the informant, different results were observed on the *CDI* and *RCMAS* (see Table 4). First, the covariate *income* was the only significant variable relative to child depression. A similar result was observed for anxiety, for which both a family income and group main effect was observed. Children in the witness group posted the highest mean scores and differed significantly from the abused/witness and comparison groups. No significant gender or interaction effect was observed.

Log-linear analyses were conducted, with income controlled for, to compare the number of children in each group who reached clinically significant scores. Results are given in Table 4. No significant difference was observed in terms of gender whether the mother or the child was the informant. A group main effect was obtained on each scale of the *CBCL*, with the

Table 4
Percentage of children scoring in a clinical range (higher than 67 on the CBCL scale > 67, CDI > 21, RCMAS > 20)

Scale	Comparison		Witness		Abused/witness		Gender Effect	Group Effect		G x Gr Effect	Comparisons
CBCL	Boys (n = 8)	Girls (n = 17)	Boys (n = 20)	Girls (n = 14)	Boys (n = 13)	Girls (n = 7)					
Withdrawn	0.0	11.8	40.0	57.1	69.2	57.1	0.65	18.9	***	2.23	W = A/W > C
Somatic complaints	25.0	11.8	35.0	57.1	38.5	57.1	0.99	6.55	*	1.97	W = A/W > C
Anxious/depressed	37.5	17.6	65.0	57.1	69.2	57.1	1.29	10.82	**	0.34	W = A/W > C
Social problems	12.5	5.9	30.0	28.6	46.2	71.4	0.14	12.69	**	1.38	W = A/W > C
Sex problems	12.5	0.0	20.0	28.6	46.2	14.3	0.38	8.22	*	4.16	W = A/W > C
Tought problems	12.5	0.0	25.0	28.6	38.5	42.9	0.01	10.18	**	2.45	W = A/W > C
Attention problems	25.0	23.5	70.0	42.9	61.5	71.4	0.86	9.98	**	1.86	W = A/W > C
Delinquent behavior	0.0	23.5	40.0	50.0	53.8	71.4	2.24	10.26	**	2.13	W = A/W > C
Aggressive behavior	25.0	17.6	45.0	35.7	61.5	85.7	0.001	11.84	**	1.84	W = A/W > C
Internalizing	0.0	11.8	35.0	42.9	53.8	57.1	0.6	13.4	**	1.26	W = A/W > C
Externalizing	0.0	5.9	30.0	28.6	38.5	71.4	0.95	14.17	***	1.88	W = A/W > C
Total score	0.0	5.9	40.0	37.7	46.2	28.6	0.38	17.42	***	1.68	W = A/W > C
Depression (CDI)	0.0	11.8	15.0	7.1	23.1	0.0	0.91	0.27		4.38	
Anxiety (RCMAS)	0.0	11.8	15.0	14.3	7.7	0.0	0.03	1.53		2.48	

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

mothers of the children in the comparison group less likely than the mothers of those in the witness and abused/witness group to score their children in the clinical range. Mother's evaluations did not differ between the witness and abused/witness children. On the basis of a *T* score of 67 as a cutoff point for clinical distress, the most frequent problems reported by mothers in the two domestic-violence groups were anxiety/depression (62%), attention problems (61%), aggression (57%), social withdrawal (56%), and delinquency (54%). Internalizing and externalizing problems were reported for 47% and 42%, respectively, of the children in the domestic-violence groups. According to the mothers, more than one in three children also had somatic complaints (47%), socialization problems (44%) and thought problems (34%).

The children in all three groups were less likely than their mothers to rate themselves in the clinical range, as attested to by the absence of any significant group effect or group-by-gender interaction. As little as 11% and 9% of the children in the two domestic-violence groups reported depressive or anxiety problems rated above the clinical threshold and warranting clinical intervention.

Results indicated little agreement between informants. Further analysis using Pearson product-moment correlation revealed small significant correlations between the *CBCL* anxiety/depression scale and child-reported depression ($r = 0.24$; $p < .05$) and anxiety ($r = 0.22$; $p < .05$).

Discussion

One aim of the present study was to evaluate the impact of witnessing domestic violence on the psychological and behavioral adjustment of children aged 6 to 12 years by determining the specific effect of exposure alone versus exposure and victimization. The results confirm that children in maritally violent families have more psychological and social problems, as reported by the mothers on 7 of the 12 *CBCL* scales, than do children in similarly poor families without domestic violence. Children from maritally violent homes experience more internalizing and externalizing problems, are more anxious, depressed and socially withdraw, have more thought and delinquency problems, and score higher on the total scale. These results confirm those observed by other researchers who noted higher levels of externalizing problems (Fantuzzo et al., 1991; Jaffe et al., 1986; Kernic et al., 2003; Litrownik et al., 2003; Spaccarelli et al., 1994; Sternberg et al., 1993; Yates et al., 2003) and internalizing problems (Christopoulos et al., 1987; Fantuzzo et al., 1991; Hughes, 1988; Jaffe et al., 1986; Spaccarelli et al., 1994; Yates et al., 2003) in children exposed to marital conflicts.

In addition, results provide a major contribution regarding the cumulative impact of being a victim of physical violence and a witness to domestic violence versus the specific impact of only witnessing domestic violence. Results reveal that abused/witness children are at even higher risk for behavior problems, as demonstrated by the overall *CBCL* score and, more specifically, by the higher level of externalizing behavior problems, somatic complaints, socialization and attention problems, and aggressive behaviors. In other words, compared with children who only witness domestic violence, these children are more likely to face relational difficulties with peers on account of greater socialization and aggressive problems and to have academic difficulties owing to attention problems. These results are consistent with those reported in the four earlier studies (Hughes, 1988; Hughes et al., 1989; O'Keefe, 1995; Sternberg et al., 1993) that specifically compared abused/witness children against witness children on the basis of mother report. In these studies, results were reported only on the externalizing, internalizing or total scale scores and were most consistent regarding externalizing problems. Only Hughes et al. (1989) found that abused/witness children scored higher on both the internalizing and externalizing scales. However, these results contrast with those of Litrownik et al. (2003), who failed to observe a cumulative effect of being a victim of physical abuse and a witness to family violence among 6-year-old children. Wolfe et al. (2003)

concluded that the experience of direct victimization might add a small effect to the one of exposure to domestic violence. Our results suggest that externalizing and relational problems are more specific to children who witness domestic violence and are also physically abused. These results are also congruent with previous studies on child maltreatment, which indicated that children from abusive homes displayed significantly more aggressive behaviors (as mentioned in O'Keefe, 1995).

Results also indicate that a high number of children from maritally violent homes experience problems warranting clinical intervention. On the basis of a *T* score of 67 or above rather than 63 as was used in numerous previous studies (e.g., O'Keefe, 1995, and Sternberg et al., 1993), we found on all scales that children in the comparison group, who shared a similar socioeconomic background with the others, were less likely to present psychological and behavioral problems according to mother report. At 47% and 42% respectively, the portion of children in our study exposed to domestic violence and presenting clinical internalizing and externalizing problems was comparable to or slightly higher than that in other studies (Christopoulos et al., 1987; Rosenbaum & O'Leary, 1981; O'Keefe, 1995; Sternberg et al., 1993). Among the more prevalent problems, anxiety/depression, attention problems, aggression, social withdrawal, and delinquency require close attention. Previous results by Fantuzzo et al. (1991) showed that children evaluated in shelters scored higher for distress than did children outside shelters. Our results might seem surprising, as they indicate a high proportion of community-living children with clinical problems. One explanation for this might be that mothers who agree to participate in a study of children exposed to parental disputes may overestimate their children's difficulties in a bid to draw attention to and obtain help for them (Hughes, 1988). This hypothesis seems plausible for the following reason: Unlike mothers in shelters, the mothers in the present study received no help and, consequently, might have had greater needs for support for themselves and their children. Also, many researchers have hypothesized that stress related to being a victim of domestic violence might impact a mother's report of her child's behavior (Hughes et al., 1989; Spaccarelli et al., 1994; Sternberg et al., 1993), as her perception could be distorted by her own psychological distress. In a recent study conducted with different informants (e.g., parents, teachers, peers) of children's behavior in the context of domestic violence, Salzinger, Feldman, Ng-Mak, Mojica, Stockhammer, and Rosario (2002) observed that parental distress was highly predictive of child outcome, which confirmed parental distress as a key factor influencing parental perception of both children's internalizing and externalizing behaviors.

The evaluations provided by the mothers cannot be discussed without addressing the low level of agreement observed between mother and child report. Although other studies have documented some discrepancy between informant perspectives (Achenbach, McConaughy, & Howell, 1987; Spaccarelli & Kim, 1995; Sternberg et al., 1993), the mean and clinical scores we obtained on the *CBCL*, *CDI* and *RCMAS* paint very different pictures. In this regard, family income was found to contribute to children's depressive and anxious symptoms, but witnessing domestic violence proved related only to anxiety and then so only in the witness group. From 5% to 10% of the children reported anxiety or depressive symptoms, but these were not more frequently reported by children exposed to marital conflict, whether they were physically abused or not. According to child report, being exposed to domestic violence seemed to provoke anxiety for a small proportion of children. This stood in sharp contrast with results obtained from mother report. Yet, Hughes et al. (1989) reported results very similar to ours using the same questionnaires. In their study, children exposed to domestic violence and those who both witnessed and suffered physical abuse did not report more anxious or depressive symptoms than did the control group children. O'Brien, Margolin, and John (1995), too, observed very low scores on the *CDI* in their study. Sternberg et al. (1993), who also used the *CDI* but did not indicate the percentage of children with a clinical score, obtained a mean similar to ours and the one reported by O'Brien et al. In addition, based on the correlation between youth self-report scores and mother-report scores on the *CBCL*, Sternberg et al. (1993) observed very poor agreement and concluded "that different informants ob-

viously had very different perspectives on the children's behavior" (p. 47). This recurrent result underscores the necessity, as recommended by many researchers (Appel & Holden, 1998; Kolko, Blakely, & Engleman, 1996; Sternberg, Lamb & Dawud-Nousi, 1998), of including children and mothers as informants, as well as others (e.g., father, teacher), in order to arrive at a better picture of the adjustment and difficulties of children. Further research seems required also to verify to what degree children from low socioeconomic backgrounds have the capacity to recognize and label correctly their emotional states. From a developmental perspective, children need their parents' attention in order to learn to label their emotional states correctly and to regulate them. One indirect effect of conjugal violence could be the parents' reduced physical and emotional availability for the child's developmental needs related to emotions (Anderson & Cramer-Benjamin, 1999; Erickson & Egeland, 1996; Yates et al., 2003).

Finally, this study sought to explore whether there are any differences between boys and girls in how they adjust in the face of domestic violence. The results show no differences, be it from the mothers' or the children's perspective, except with respect to the delinquency scale, where mothers reported girls having more problems. These results are similar to those of O'Keefe (1994) and Grych, Jouriles, Swank, McDonald, and Norwood (2000) but differ from those of Christopoulos et al. (1987), Spaccarelli et al. (1994) and Sternberg et al. (1993), who found that girls showed more problems, and those of Porter and O'Leary (1980), Jaffe et al. (1986) and Wolfe et al. (1986), who found instead that boys showed more difficulties. Wolfe et al. (2003) concluded from the results of their meta-analysis that sex differences were rare and possibly hindered by unspecified factors. The present study supports that boys and girls aged 6 to 12 years experience the impact of domestic violence in very similar fashion. Regarding the only significant difference observed, Sternberg et al. (1993), too, found that girls scored higher than boys did on the delinquency scale. In our sample, this result could be explained in part by the fact that girls witnessed minor and severe physical assaults more often than boys did. Witnessing these events might have left the girls with greater emotional needs that made their behaviors more difficult to control (Jaffe, Sudermann, & Reitzel, 1991). These observations and hypothesis should be explored in future studies. In addition, these studies should include a measure of the severity of the marital violence, as recommended by Kitzmann et al. (2003).

Limits and future directions

The present study took into account some of the methodological recommendations to correct shortcomings pointed out in previous studies (Wolfe et al., 2003). These included recruiting mothers and children in their natural living environment, specifying children's experiences of violence in greater detail, and documenting the perspectives of both mothers and their children. The results of the present study show the relevance of these methodological improvements to better understand the impact on children's adjustment in the face of domestic violence. Our results confirm that domestic violence contributes to the development of emotional and behavioral problems and that also being a victim of maltreatment adds to the severity of the symptomatology, particularly as regards interpersonal relationships. These results support the hypothesis put forth by Trickett (1998) that experiencing multiple forms of maltreatment impairs the development of self-regulation in children more so than does experiencing one type of maltreatment only. The dysfunctional emotional and behavioral self-regulation of these children puts them at risk for future maladjustment as they grow. Children's difficulties observed in the present study confirm the harmful impact of domestic violence, but the slight variations observed in the profiles of these children living outside of shelters, particularly as regards aggressive behaviors, should be confirmed in future studies.

Despite the difficulty of constituting adequate comparison groups for the purpose of comparing the data regarding children exposed to domestic violence, future studies should focus on

recruiting mothers and children living in the community in order to better document children's reactions in everyday life rather than during a crisis situation. Future studies also should consider at least the mother's and child's perspective in order to gain a better understanding of the multifaceted reality of children exposed to domestic violence.

One limitation of the present study is its small number of participants. In addition, although the simultaneous examination of the children's different problems might have increased the likelihood of a type I error, this strategy was nevertheless utilized for exploratory purposes. These results need to be confirmed by other studies on a larger number of subjects.

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The study was made possible with the support of a research grant from the Conseil québecois de la recherche sociale (CQRS) (RS-2715-095).
The authors would like to thank all the research assistants for their invaluable contribution to this project.
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