

The mental health of children who witness domestic violence

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ABSTRACT

There is now considerable evidence that witnessing domestic violence can have adverse consequences for children. Our aim is to present the socio-demographic correlates of children witnessing domestic violence and its association with childhood mental disorders. The biographic, socio-demographic and socio-economic characteristics of 7865 children and their families and measures of traumatic events including witnessing domestic violence were entered into a logistic regression analysis to establish the strength of association between witnessing severe domestic violence and childhood disorders. About 4% of children had witnessed severe domestic violence according to parent reports. Factors independently associated with a greater likelihood of a child witnessing domestic violence were: older age group, mixed ethnicity, physical disorder, several children in family, divorced parents, living in rented accommodation, poor neighbourhoods, the mother's emotional state and family dysfunction. Witnessing severe domestic violence almost tripled the likelihood of children having conduct disorder but was not independently associated with emotional disorders. There is a growing need for more research on the consequences of witnessing domestic violence to increase the awareness of social workers and policy-makers to identify the needs of children who witness domestic violence.

INTRODUCTION

As well as the considerable body of research which has focussed on children who are the victims of physical, sexual, emotional or psychological abuse (Fantuzzo *et al.* 1997; Mohr *et al.* 2000; Levendosky *et al.* 2002; Adams 2006), a lot of attention has also been paid to the consequences of children, particularly younger children, witnessing domestic violence (McGee 1997; Kitzmann *et al.* 2003; Rivett *et al.* 2006; Holt *et al.* 2008).

Witnessing domestic violence does not necessarily mean being within visible range of the violence and

seeing it occur. Many children describe traumatic events that they have heard but have not seen the violence (McGee 1997; Edleson 1999). Children can also witness domestic violence indirectly by witnessing the outcome of the violence and noticing the injury to their mothers, the broken objects or perhaps their mother's depression (McGee 1997).

Witnessing domestic violence is not uncommon among children (Huth-Bocks *et al.* 2001). In the USA, it is estimated that approximately 10 million children witness domestic violence (McFarlane *et al.* 2003; Maxwell & Maxwell 2003; Sullivan *et al.* 2004). In England and Wales, more than 34 000 children pass

through domestic violence refuges annually (Rivett *et al.* 2006). In an English national prevalence study of 2869 young adults, 26% had witnessed domestic violence at least once between their parents, and 5% more frequently (Cawson 2002).

Witnessing domestic violence can have serious adverse effects on children's well-being (Fantuzzo *et al.* 1991; Zuckerman *et al.* 1995), including psychological, emotional and behavioural problems (Zuckerman *et al.* 1995; Mitchell & Finkelhor 2001; McFarlane *et al.* 2003; Sullivan *et al.* 2004; Hornor 2005; Skopp *et al.* 2005; Rivett *et al.* 2006).

A meta-analysis of 118 studies on the psychosocial outcomes of children exposed to domestic violence demonstrated that children who witnessed domestic violence had significantly worse outcomes relative to those who had not. The psychosocial outcomes of children witnessing domestic violence were not significantly different from those of physically abused children (Kitzmann *et al.* 2003).

Children who have witnessed domestic violence have been found to be fearful and inhibited and show more anxiety and depression than other children who do not witness domestic violence (Edleson 1999; Maxwell & Maxwell 2003; Zinc & Jacobson 2003; Adams 2006).

Apart from internalizing disorders, children who witness domestic violence also show more behavioural problems or aggressive and antisocial behaviours (Eiden 1999; McFarlane *et al.* 2003; Duncan *et al.* 2005).

Children who witness domestic violence can react by exhibiting trauma symptoms (Levendosky *et al.* 2002) and be at a higher risk of developing post-traumatic stress disorder (Davis & Siegel 2000; Mitchell & Finkelhor 2001; Chemtob & Carlson 2004; Hornor 2005; Adams 2006; Rivett *et al.* 2006) or at least show evidence of behavioural or emotional disorders which are close to the criteria of post-traumatic stress disorder (Zuckerman *et al.* 1995; Eiden 1999). These post-traumatic disorder-related symptoms may persist into adulthood (Von Steen 1997) or for younger children persist into later childhood or early adolescence (Becker & McCloskey 2002).

Both age and sex have been found to moderate the degree of problems associated with children witnessing domestic violence (Von Steen 1997; Edleson 1999; Becker & McCloskey 2002; Maxwell & Maxwell 2003). Children in the youngest age groups appear to exhibit more problems than those in other age groups (Edleson 1999; McFarlane *et al.* 2003; Hornor 2005). Children as young as 12 months, and

through the pre-school age years, have been shown to experience physiological and psychological problems as a result of witnessing verbal violence between partners (Von Steen 1997). Whereas infants in violent homes tend to have sleeping and feeding disorders which can result in poor weight gain (McFarlane *et al.* 2003; Hornor 2005), pre-school children witnessing domestic violence commonly show withdrawn behaviours and anxiety and fearfulness, and school-age children witnessing domestic violence show change in behaviours which affects their school performance (Hornor 2005).

However, there is little agreement on the types of reactions from boys and girls to witnessing domestic violence although both sexes are negatively affected (Maxwell & Maxwell 2003). Results from several studies (Von Steen 1997; McFarlane *et al.* 2003) suggest that as a result of witnessing domestic violence, boys experience externalized behaviour problems (i.e. aggressiveness, disobedience), while girls are more likely to experience internalized problems (i.e. anxiety, depression). However, Becker and McCloskey (2002) suggest that girls from violent homes are at risk of externalized problems throughout adolescence. Similarly, McFarlane *et al.* (2003) found that girls, 12–18 years, of abused mothers showed behaviour problems such as aggression and delinquency. Cummings *et al.* (1994) reported that adolescent males experience sadness about the violence while female adolescents tend to feel anger (Cummings *et al.* 1994).

These findings on the association between children witnessing domestic violence and mental-health problems have usually been based on high risk or clinical samples, with little knowledge from general population studies. The purpose of our investigation was threefold: (a) to present the prevalence of witnessing severe domestic violence among a representative sample of children and young people aged 5–16 in Great Britain; (b) to examine the socio-demographic, socio-economic and social functioning correlates of witnessing domestic violence; and (c) to look at the extent to which witnessing domestic violence is associated with conduct and emotional disorders in these young people.

METHODS

The data set used to investigate all three aims of the current study was created from the second national survey of the mental health of children and young people carried out by the Office for National Statistics

in the UK in 2004 for the Department of Health (Green *et al.* 2005). As the parents of each child living under 16 in the UK are entitled to receive child benefits unless the child is under the care of social services, the centralized computerized records from the Child Benefit Register were used as a sampling frame to select children aged 5–16 throughout England, Wales and Scotland.

The list of children was stratified by region, by postal sector within region and by age within sex within postal sector. Twenty-nine children were systematically selected from each of the 426 postal sectors.

Because the list of children was not held by the national survey organization, the sample selection and advanced letters were sent out by the guardians of the database in order to protect the confidentiality of the children and their contact addresses.

A letter was sent to the parents or primary caregivers asking them to reply only if they did not wish to take part in the research – an opt-out procedure. Failure to reply was taken to mean permission for approach by an interviewer. However, an interviewer call was always preceded by an introductory (advanced) letter giving parents another chance to refuse to take part. This second letter from the survey organization stressed the importance of the survey, the legitimacy of the survey sponsor and the survey organization, and the importance of the selected household or person's participation as well as the voluntary nature of their participation.

In the first national survey on the mental health of children in the UK carried out in 1999, 6% opted out and 15% refused when the interviewer made a visit (Meltzer *et al.* 2000). The corresponding rates in the 2004 survey were 9% and 17%, respectively (Green *et al.* 2005).

Hence, 12 294 opt-out letters were despatched by the Child Benefit Centre. A small number of sampled children (6% overall) were ineligible because the family had moved with no trace or had emigrated, or the child was in foster care, outside the age criteria of 5–16 or had died. Excluding those children whose parents had opted out (9%), 10 496 children were included in the target sample whose addresses were allocated to interviewers.

Interviewers then visited the parents at the sampled addresses to explain fully about the survey and to seek their agreement to take part. This is the normal understanding of what constitutes informed consent in the survey context. There is no evidence that such standard procedures are viewed by the public as in any

way coercive as interviewers always make clear that participation in a survey is voluntary and that, even if they start the interview, people can refuse to answer particular questions. At the interview stage, 21% of parents refused to take part and 3% could not be contacted.

If the child was aged 5–10, a face-to-face interview was conducted with the parent and a postal questionnaire was sent to the child's teacher. If the child was aged 11–16, the parent was interviewed first followed by the young person, then a questionnaire was mailed to the teacher. Thus, information was collected from up to three sources (parents, children and teachers) on 76% of the families approached for interview, resulting in 7977 achieved interviews. Eighty-three per cent of teachers returned their questionnaires (after initial mail out and two reminder letters).

The sampling design, the interviewing procedures and the interview schedule were granted approval by The Central Office for Research Ethics Committees of the UK.

INSTRUMENTS

Childhood psychopathology

The survey instrument used to produce the prevalence of clinically recognizable mental disorders among children was the Development and Well-Being Assessment (DAWBA). It was designed for use in the first national survey of child mental health in Great Britain. The DAWBA was constructed in order to combine some of the best features of structured and semi-structured measures. This new structured interview was supplemented with open-ended questions. When definite symptoms were identified by the structured questions, interviewers used open-ended questions and supplementary prompts to get parents and young people aged 11 or over to describe the problems in their own words. An abbreviated form was mailed to a teacher nominated by the family as knowing the child well. A case vignette approach was used for analysing the survey data, i.e. using clinician ratings based on a review of all the information for each child – potentially from parent, child and teacher. The case vignette approach was extensively tested among community and clinical samples in the pre-pilot and pilot phases of the survey. (Goodman *et al.* 2000). Diagnoses were subsequently generated based on the *ICD-10* (World Health Organization 1993) research diagnostic criteria using the information from all available informants.

In validation studies, the DAWBA provided excellent discrimination between community and clinical samples (Goodman *et al.* 2000). Within the community sample, children with DAWBA diagnoses differed markedly from those without a disorder in external characteristics and prognosis, while there were high levels of agreement between the DAWBA and case notes among the clinical sample (Kendall's tau $b = 0.47-0.70$).

Witnessing domestic violence

The question on whether the child had witnessed 'severe domestic violence' was embedded in the section on Post Traumatic Stress Disorder in the clinical assessment schedule. Implicitly, the reference period was the lifetime of the child. The section listed 10 types of trauma which can be broadly categorized into three categories: (a) those experienced directly by the child, i.e. as a participant rather than a witness (had a serious or frightening accident, kidnapped, been in an earthquake or a war, severely attacked or threatened by mugger or gang, severely physically or sexually abused); (b) witnessing severe domestic violence; and (c) witnessing other events such as a sudden death, overdose, suicide, serious accident, heart attack or seeing a family member or friend severely attacked or threatened.

Child's physical health

The term physical health is used here to cover all conditions except mental disorders. To assess whether the child had a physical-health problem, parents were shown three lists of the most commonly accruing health problems in children. They comprised either specific health problems, e.g. asthma, eczema, epilepsy, diabetes, or broad categories of condition such as stomach or digestive system problems, difficulties in coordination, sight and hearing problems etc.

Neighbourhood-level socio-economic characteristics

A Classification of Regional Neighbourhoods (ACORN) was used to obtain a measure of neighbourhood-level socio-economic characteristics. It is a means of classifying areas according to various Census characteristics (geographic and demographic), devised by CACI Ltd. An ACORN code is assigned to each Census Enumeration District (ED) which is then copied to all postcodes within the ED. The classification consists of 56 area types. These can

be collapsed into 17 higher-level groups and five top-level categories as used here: wealthy achievers, urban prosperity, comfortably off, moderate means and hard pressed.

Data collection procedure

Lay interviewers (approximately 300) regularly involved in the British Office for National Statistics surveys were used to collect the survey data. Special attempts were made to trace families whose addresses or names had changed because of various circumstances. Because of the need to collect accurate quantitative and qualitative data within the DAWBA, interviewer training emphasized the need to obtain respondents' descriptions of any problems and concerns in their own words, facilitating this with open-ended prompts and recording the answers verbatim.

Interviewers completed the face-to-face interview with the parent or main caregiver first – about 95% were mothers, and permission was subsequently sought to ask questions of the sampled child. Young people aged 11 or over had a private face-to-face interview and also completed a computer-assisted self-completion interview directly on a laptop computer for more sensitive questions about violent behaviour, smoking, alcohol and drug experiences.

RESULTS

Prevalence of witnessing domestic violence

Three hundred and forty children and young people (4.3% of the sample) had witnessed severe domestic violence according to parent reports. Moreover, witnessing domestic violence was the most frequently reported trauma followed by the child having a serious accident and the child witnessing the death of a close family member. Thirty per cent of children who had witnessed severe domestic violence had also experienced another trauma event. The two most common additional traumas were witnessing violence to other family members or friends and the child having a serious and frightening accident.

Statistical analyses

To improve the representativeness of the survey, a weighting procedure was applied to the data. First, a weight was applied to correct for the unequal sampling probabilities of the children which arose because of the delay between selecting the area and children

samples, and second, to match the age/sex/region structure of the population at the time of the survey. These data were also adjusted to take account of the missing teacher data.

The association between witnessing domestic violence and each variable was determined initially by univariate (unadjusted) logistic regression. To reduce the confounding effects of different factors on witnessing domestic violence, multivariate logistic regression was performed, taking account of all the factors which were significantly associated with witnessing domestic violence when analysed separately. As many of the correlates of witnessing domestic violence are known risk factors for childhood psychiatric disorder, multiple logistic regression was used to identify the independent correlates of conduct and emotional disorders, including witnessing domestic violence as an exposure.

Therefore, logistic regression has been used in the analysis of the survey data to provide a measure of the association between, for example, various socio-demographic variables on children witnessing severe domestic violence. It allows one to estimate the effect of any socio-demographic variable while controlling for the confounding effect of other variables in the analysis. Logistic regression produces an estimate of the probability of an event occurring when an individual is in a particular socio-demographic category compared with a reference category. This effect is measured in terms of odds. For example, Table 1 shows that the child living in rented accommodation increases the child having witnessed severe domestic violence compared with a reference category of owner occupiers. The amount by which the odds of witnessing severe domestic violence actually increases is shown by the adjusted odds ratio (OR). In this case, the OR is 2.34, indicating that being a child living in social sector housing increases the odds of witnessing severe domestic violence by almost 2.5 times controlling for the possible confounding effects of the other variables in the statistical model, i.e. age, sex, number of children, family employment etc. To determine whether this increase is because of chance rather than the effect of the variable, one must consult the associated 95% confidence interval (CI).

The CIs around an OR

Table 1 shows an OR of 1.46 for the association between 'unhealthy family functioning' and the child witnessing severe domestic violence, with a CI from 1.11 to 1.91, indicating that the 'true' (i.e. population)

OR is likely to lie between these two values. If the CI does not include 1.00, the OR is likely to be significant – i.e. the association between the variable and the odds of witnessing domestic violence is unlikely to be a result of chance. If the interval includes 1.00, it is possible that the 'true' OR is actually 1.00, i.e. no increase in odds can be attributed to the variable.

Using ORs multiplicatively

The ORs presented in the tables show the adjusted odds due solely to membership of one particular category – e.g. being aged 14–16 rather than aged 5–7. However, odds for more than one category can be combined by multiplying them together. This provides an estimate of the increased odds of witnessing domestic violence being a result of being a member of more than one category – e.g. the mother having a high level of psychological distress and the family assessed as functioning poorly. For example, in Table 1, a high rather than low GHQ12 score for the mother increases the odds of the child witnessing domestic violence (OR = 1.99), while being in an unhealthy rather than a healthy functioning family also independently increases the odds of the child witnessing severe domestic violence (OR = 1.46). Therefore, the increased odds for children with mothers having high psychological distress and living in a dysfunctional family witnessing severe domestic violence compared with children with mothers having low psychological distress and living in a non-dysfunctional family is the product of the two independent ORs, 2.92.

Correlates of witnessing domestic violence

Looking first at biographic characteristics, certain groups of children were more likely to have witnessed severe domestic violence: 11–13 year olds (OR = 1.60, 95% CI = 1.16–2.21, $P < 0.001$) compared with 5–7 year olds; those with a 'mixed' ethnicity (OR = 3.47, 95% CI = 1.82–6.52, $P < 0.001$) compared with white children; and those with a physical-health problem (OR = 1.30, 95% CI = 1.04–1.62, $P < 0.05$). In terms of family characteristics, children of married or cohabiting parents were far less likely to have experienced domestic violence than those with single parents (OR = 0.13, 95% CI = 0.10–0.18, $P < 0.001$), but those in large families (with four or more children) were 50% more likely to have witnessed violence at home (OR = 1.52, 95% CI = 1.03–2.24, $P < 0.05$).

Table 1 Socio-demographic, socio-economic and social functioning correlates of severe domestic violence

	Unadjusted odds ratio	95% confidence interval	Significance	Adjusted odds ratio	95% confidence interval	Significance
Age						
5–7	1.00	–	–	1.00	–	–
8–10	1.34	0.96–1.87	Not significant	1.49	1.03–2.14	$P < 0.05$
11–13	1.60	1.16–2.21	$P < 0.001$	1.87	1.32–2.66	$P < 0.001$
14–16	1.43	1.02–1.99	$P < 0.05$	1.68	1.16–2.43	$P < 0.01$
Ethnicity						
White	1.00	–	–	1.00	–	–
Black	0.58	0.25–1.35	Not significant	0.41	0.17–0.98	$P < 0.05$
South Asian	0.46	0.25–0.85	$P < 0.01$	0.70	0.34–1.47	Not significant
Mixed	3.47	1.82–6.62	$P < 0.001$	2.95	1.44–6.04	$P < 0.001$
Other	0.24	0.06–1.01	$P < 0.05$	0.00	0.00	Not significant
Physical disorder						
No	1.00	–	–	1.00	–	–
Yes	1.30	1.04–1.62	$P < 0.05$	1.30	1.02–1.66	$P < 0.05$
Marital status						
Single	1.00	–	–	1.00	–	–
Married/cohabiting	0.13	0.10–0.18	$P < 0.001$	0.26	0.18–0.38	$P < 0.001$
Separated	1.05	0.73–1.50	Not significant	1.04	0.70–1.54	Not significant
Divorced	1.26	0.95–1.68	Not significant	1.46	1.07–2.00	$P < 0.05$
Widow	0.43	0.15–1.23	Not significant	0.59	0.20–1.79	Not significant
Number of children under 18 in household						
1	1.00	–	–	1.00	–	–
2	0.94	0.67–1.30	Not significant	1.50	1.05–2.15	$P < 0.05$
3	1.33	0.94–1.87	Not significant	2.03	1.38–2.98	$P < 0.001$
4+	1.52	1.03–2.24	$P < 0.05$	1.86	1.20–2.90	$P < 0.01$
Family economic status						
Both parents working	1.00	–	–	1.00	–	–
One parent working	0.83	0.58–1.19	Not significant	0.86	0.57–1.29	Not significant
Neither	3.90	3.08–4.94	$P < 0.001$	1.02	0.76–1.37	Not significant
Tenure						
Owners	1.00	–	–	1.00	–	–
Social sector tenants	6.15	4.80–7.88	$P < 0.001$	2.34	1.66–3.29	$P < 0.001$
Rents privately	5.53	3.95–7.74	$P < 0.001$	3.42	2.33–5.04	$P < 0.001$
Accommodation						
House	1.00	–	–	1.00	–	–
Flat/others	2.03	1.46–2.83	$P < 0.001$	1.17	0.79–1.72	Not significant
A Classification of Regional Neighbourhoods						
Wealthy achiever	1.00	–	–	1.00	–	–
Urban prosperity	1.92	1.05–3.50	$P < 0.05$	1.10	0.57–2.13	Not significant
Comfortably off	1.69	1.07–2.67	$P < 0.05$	1.40	0.87–2.28	Not significant
Moderate means	4.09	2.67–6.29	$P < 0.001$	2.43	1.52–3.89	$P < 0.001$
Hard pressed	6.33	4.25–9.41	$P < 0.001$	2.31	1.44–3.71	$P < 0.001$
Mother's GHQ12 score						
0–4	1.00	–	–	1.00	–	–
5–8	2.29	1.70–3.11	$P < 0.001$	1.47	1.05–2.06	$P < 0.05$
9–12	3.72	2.60–5.34	$P < 0.001$	1.99	1.33–3.00	$P < 0.001$
Family functioning						
Healthy	1.00	–	–	1.00	–	–
Unhealthy	2.12	1.67–2.71	$P < 0.001$	1.46	1.11–1.91	$P < 0.01$

Socio-economic factors also seemed to be strongly associated with children witnessing domestic violence. If no parent in the household was working, the odds of the child witnessing domestic violence was four times that of children with both parents working (OR = 3.90, 95% CI = 3.08–4.94, $P < 0.001$). Similarly, children living in rented accommodation, particularly social sector tenants, were six times more

likely to have seen severe violence in the home (OR = 6.15, 95% CI = 4.80–7.88, $P < 0.001$) than those in owner-occupier households. Domestic violence was also related to anxiety and depression of the parental respondent (in 96% of cases, the mother) and 'unhealthy' family functioning. Moreover, neighbourhood characteristics were strongly associated with children witnessing domestic

violence. According to ACORN (CACI Ltd), children in 'hard pressed' areas were over six times more likely to experience domestic violence than those in 'wealthy achiever' neighbourhoods (OR = 6.33, 95% CI = 4.25–9.41, $P < 0.001$).

When these correlates were entered into a multi-variable logistic regression model, the factors that were independently associated with a greater likelihood of a child witnessing domestic violence were: older age group, mixed ethnicity, the presence of physical disorder, four or more children less than 18 years old in the family, divorced parents, living in rented accommodation, living in moderate or hard-pressed areas of the country, the mother's emotional state and family dysfunction (Table 1).

Relationship between witnessing domestic violence and mental disorders

Many of the factors associated with the increased odds of witnessing domestic violence are also associated with an increased likelihood of the child having a conduct disorder (Table 2). When biographic, socio-demographic, socio-economic variables were added into a multivariable logistic regression model to investigate the independent correlates of conduct disorder, witnessing domestic violence remained significantly associated with increased odds of having conduct disorder (OR = 1.78, 95% CI = 1.79–3.92, $P < 0.001$). However, the adjusted ORs for witnessing domestic violence in relation to emotional disorders (Table 3) showed that they were not independently related.

Study limitations

Although the participation rate of parents and young people in the survey was high, about a quarter of sampled households could not be contacted or refused. Parents who refused to take part or could not be contacted may have a higher rate of children who witness severe domestic violence. In addition, there is evidence from previous child psychiatric surveys that rates of childhood psychopathology are higher among non-respondent families (Rutter *et al.* 1970; Fombonne 1994), which leads to biased estimates of prevalence of childhood mental disorders. Even though the data were weighted for non-response, it is not possible to assess the magnitude and direction of potential bias in the resulting rates.

Children under the care of local authorities were not eligible for inclusion in the household survey. Surveys carried out in 2001 and 2002 among children looked after by local authorities in Great Britain

(Meltzer *et al.* 2003, 2004a,b) found that nearly two-thirds of them entered care owing to abuse and neglect, and about half the children had a clinically recognizable mental disorder. However, as the proportion of children in care is about 0.5 % of the total population of children, the overall rate of childhood mental disorders for the whole of Great Britain would not change very much even if the children looked after by local authorities were included in the analysis.

The reporting of domestic violence, similar to that of other sensitive topics, is difficult within the social survey format. First, what is meant by severe domestic violence is open to different interpretations by parents, not only on what constitutes domestic violence but also on what they understand by the term severe. To try and reduce the sensitivity of the question, the item 'severe domestic violence' was embedded in a list of traumatic events, and parents (mainly mothers) just had to call out a number. Nevertheless, some parents may have been hesitant to admit that domestic violence had taken or was taking place, especially as the interview took place in the parent's home.

DISCUSSION

The increased odds of older children having witnessed domestic violence would be expected merely because of the greater length of times they have lived with their parents, but there were no age differences.

Our results are congruent with investigations from previous literature on domestic violence in relation to socio-economic factors. We found that children from moderate means and hard-pressed families are more likely to witness domestic violence. Fantuzzo *et al.* (1997) found, in their study of the prevalence and risk of domestic violence and children in five major US cities, that the highest rates of domestic violence occurred in low-income families.

As this is a cross-sectional study and we have no data on the frequency and severity of the violence witnessed, it is unclear from the data whether those children who developed conduct or emotional disorders witnessed domestic violence more often or it was just the effect of witnessing the violence. Zuckerman *et al.* (1995) stated that children are more likely to develop problems related to witnessing domestic violence if the violence is frequent.

The data also did not indicate the period of time since witnessing the violence. Edleson (1999) commented that children appeared to exhibit fewer problems, the longer the period of time since their last

Table 2 Socio-demographic, socio-economic, social functioning and traumatic event correlates of conduct disorder

	Unadjusted odds ratio	95% confidence interval	Significance	Adjusted odds ratio	95% confidence interval	Significance
Witnessed domestic violence						
No	1.00	–	–	1.00	–	–
Yes	6.13	4.64–8.12	<i>P</i> < 0.001	2.78	1.97–3.92	<i>P</i> < 0.001
Witnessed community violence						
No	1.00	–	–	1.00	–	–
Yes	2.37	1.63–3.45	<i>P</i> < 0.001	0.93	0.59–1.47	Not significant
Experienced traumatic stress						
No	1.00	–	–	1.00	–	–
Yes	3.66	2.83–4.73	<i>P</i> < 0.001	2.26	1.67–3.06	<i>P</i> < 0.001
Emotional disorder						
No	1.00	–	–	1.00	–	–
Yes	7.47	5.63–9.92	<i>P</i> < 0.001	3.72	2.58–5.36	<i>P</i> < 0.001
Age						
5–7	1.00	–	–	1.00	–	–
8–10	1.40	1.02–1.91	<i>P</i> < 0.05	0.66	0.47–0.93	<i>P</i> < 0.05
11–13	1.51	1.11–2.05	<i>P</i> < 0.01	0.82	0.60–1.11	Not significant
14–16	1.83	1.35–2.47	<i>P</i> < 0.001	0.84	0.63–1.13	Not significant
Sex						
Boys	1.00	–	–	1.00	–	–
Girls	0.51	0.41–0.63	<i>P</i> < 0.001	0.47	0.37–0.60	<i>P</i> < 0.001
Ethnicity						
White	1.00	–	–	1.00	–	–
Black	0.69	0.34–1.40	Not significant	0.40	0.16–1.00	<i>P</i> < 0.05
South Asian	0.42	0.23–0.75	<i>P</i> < 0.001	0.33	0.16–0.69	<i>P</i> < 0.001
Mixed	1.55	0.69–3.49	Not significant	1.38	0.56–3.40	Not significant
Other	0.30	0.09–0.96	<i>P</i> < 0.05	0.25	0.06–1.02	<i>P</i> < 0.05
Physical disorder						
No	1.00	–	–	1.00	–	–
Yes	1.61	1.30–1.98	<i>P</i> < 0.001	1.30	1.03–1.63	<i>P</i> < 0.05
Marital status						
Single	1.00	–	–	1.00	–	–
Married/cohabiting	0.44	0.33–0.57	<i>P</i> < 0.001	0.91	0.65–1.29	Not significant
Separated	1.10	0.75–1.62	Not significant	1.00	0.64–1.57	Not significant
Divorced	1.26	0.92–1.72	Not significant	1.28	0.89–1.84	Not significant
Widow	1.17	0.54–2.54	Not significant	1.89	0.79–4.52	Not significant
Number of children under 18 in household						
1	1.00	–	–	1.00	–	–
2	0.93	0.69–1.26	Not significant	0.56	0.38–0.84	<i>P</i> < 0.01
3	1.15	0.83–1.60	Not significant	0.65	0.47–0.90	<i>P</i> < 0.01
4+	1.82	1.29–2.56	<i>P</i> < 0.001	0.72	0.51–1.02	Not significant
Family economic status						
Both parents working	1.00	–	–	1.00	–	–
One parent working	1.53	1.16–2.02	<i>P</i> < 0.001	1.45	1.07–1.98	<i>P</i> < 0.05
Neither	3.63	2.89–4.56	<i>P</i> < 0.001	1.55	1.14–2.12	<i>P</i> < 0.01
Tenure						
Owners	1.00	–	–	1.00	–	–
Social sector tenants	3.34	2.71–4.13	<i>P</i> < 0.001	1.39	1.01–1.90	<i>P</i> < 0.05
Rents privately	1.85	1.28–2.67	<i>P</i> < 0.001	0.95	0.61–1.48	Not significant
A Classification of Regional Neighbourhoods						
Wealthy achiever	1.00	–	–	1.00	–	–
Urban prosperity	1.60	0.95–2.70	Not significant	1.33	0.75–2.36	Not significant
Comfortably off	1.99	1.38–2.68	<i>P</i> < 0.001	1.74	1.18–2.57	<i>P</i> < 0.01
Moderate means	3.00	2.08–4.34	<i>P</i> < 0.001	2.15	1.44–3.22	<i>P</i> < 0.001
Hard pressed	4.25	3.03–5.94	<i>P</i> < 0.001	1.95	1.30–2.93	<i>P</i> < 0.001
Mother's GHQ12 score						
0–4	1.00	–	–	1.00	–	–
5–8	2.98	2.28–3.89	<i>P</i> < 0.001	1.89	1.40–2.54	<i>P</i> < 0.001
9–12	5.15	3.75–7.07	<i>P</i> < 0.001	1.92	1.31–2.82	<i>P</i> < 0.001
Family functioning						
Healthy	1.00	–	–	1.00	–	–
Unhealthy	3.67	2.98–4.53	<i>P</i> < 0.001	2.71	2.14–3.44	<i>P</i> < 0.001

Table 3 Socio-demographic, socio-economic, social functioning and traumatic events correlates of emotional disorder

	Unadjusted odds ratio	95% confidence interval	Significance	Adjusted odds ratio	95% confidence interval	Significance
Witnessed domestic violence						
No	1.00	–	–	1.00	–	–
Yes	3.85	2.69–5.52	$P < 0.001$	1.27	0.82–1.98	Not significant
Witnessed community violence						
No	1.00	–	–	1.00	–	–
Yes	3.73	2.55–5.44	$P < 0.001$	1.88	1.18–2.99	$P < 0.01$
Experienced traumatic stress						
No	1.00	–	–	1.00	–	–
Yes	3.40	2.50–4.61	$P < 0.001$	1.68	1.17–2.43	$P < 0.01$
Conduct disorder						
No	1.00	–	–	1.00	–	–
Yes	7.42	5.56–9.92	$P < 0.001$	4.04	2.83–5.57	$P < 0.001$
Age						
5–7	1.00	–	–	1.00	–	–
8–10	1.17	0.77–1.79	Not significant	0.47	0.31–0.71	$P < 0.001$
11–13	2.19	1.50–3.18	$P < 0.001$	0.49	0.33–0.73	$P < 0.001$
14–16	2.60	1.79–3.77	$P < 0.001$	0.98	0.71–1.36	Not significant
Sex						
Boys	1.00	–	–	1.00	–	–
Girls	1.40	1.10–1.78	0.01	1.72	1.31–2.25	$P < 0.001$
Physical disorder						
No	1.00	–	–	1.00	–	–
Yes	2.41	1.84–3.16	$P < 0.001$	2.20	1.65–2.94	$P < 0.001$
Marital status						
Single	1.00	–	–	1.00	–	–
Married/cohabiting	0.59	0.41–0.84	$P < 0.001$	0.98	0.63–1.53	Not significant
Separated	2.59	1.69–3.96	$P < 0.001$	2.58	1.59–4.17	$P < 0.001$
Divorced	1.77	1.19–2.64	$P < 0.001$	1.62	1.02–2.55	$P < 0.05$
Widow	0.54	0.12–2.35	Not significant	0.53	0.12–2.40	Not significant
Number of children under 18 in household						
1	1.00	–	–	1.00	–	–
2	0.68	0.49–0.95	$P < 0.05$	1.13	0.71–1.80	Not significant
3	0.91	0.64–1.30	Not significant	0.83	0.55–1.26	Not significant
4+	1.08	0.72–1.61	Not significant	1.07	0.69–1.64	Not significant
Family economic status						
Both parents working	1.00	–	–	1.00	–	–
One parent working	1.25	0.89–1.76	Not significant	1.34	0.92–1.95	Not significant
Neither	3.24	2.48–4.23	$P < 0.001$	1.30	0.90–1.89	Not significant
Tenure						
Owners	1.00	–	–	1.00	–	–
Social sector tenants	2.50	1.93–3.24	$P < 0.001$	1.28	0.86–1.90	Not significant
Rents privately	2.66	1.84–3.84	$P < 0.001$	1.75	1.13–2.71	$P < 0.01$
A Classification of Regional Neighbourhoods						
Wealthy achiever	1.00	–	–	1.00	–	–
Urban prosperity	1.06	0.59–1.91	Not significant	0.73	0.38–1.40	Not significant
Comfortably off	1.40	0.96–2.05	Not significant	1.10	0.74–1.65	Not significant
Moderate means	1.77	1.19–2.63	$P < 0.01$	1.04	0.67–1.61	Not significant
Hard pressed	2.25	1.58–3.21	$P < 0.001$	1.01	0.65–1.58	Not significant
Mother's GHQ12 score						
0–4	1.00	–	–	1.00	–	–
5–8	2.88	2.08–4.01	$P < 0.001$	1.83	1.27–2.63	$P < 0.001$
9–12	7.88	5.65–10.99	$P < 0.001$	4.45	3.03–6.55	$P < 0.001$
Family functioning						
Healthy	1.00	–	–	1.00	–	–
Unhealthy	2.24	1.72–2.93	$P < 0.001$	1.10	0.80–1.51	Not significant

witness of violence. Longitudinal studies would help to determine whether domestic violence is a predictor of conduct disorder, or a marker of families under stress that may also predict conduct disorder.

PRACTICE IMPLICATIONS

Witnessing domestic violence may teach children that violence is an acceptable way of resolving conflicts

with parents and that witnessing violence between parents predicts partner violence in early adulthood. However, routine screening for witnessing domestic violence by health providers is low (Hornor 2005), and in some cases it is difficult to estimate the prevalence of certain types of violence such as psychological violence (Adams 2006). Our study suggests that as many as one child in 25, or one in every class, is exposed to witnessing severe domestic violence at home. This estimate is similar to the 5% of young adults reported by Cawson (2002) to have witnessed frequent and ongoing violence.

Services and interventions can be conceptualized at three preventive levels, as put forward by Brooks and Webb (2007), i.e. primary, secondary and tertiary prevention. Primary prevention is beyond the scope of this paper.

Secondary prevention

This should include the improved detection and recognition of domestic violence among mothers and children who may be presenting with physical- or mental-health concerns in health services. There is a need to: (a) improve safeguarding procedures and joint working in relation to both mothers and children (rather than in isolation); (b) integrate family support and non-statutory children's agencies into care plans (such as provision of parent training in managing child behavioural problems); (c) obtain behavioural support from schools, again within an inter-agency context for families' victims of domestic violence, rather than to manage difficult behaviours *per se*; and (d) to better detect child mental-health problems by domestic violence agencies, the police and other professionals involved in order to direct access of mothers and children to mental-health services as soon as safeguarding procedures are in place.

Tertiary prevention

Some mothers and children may require mental-health services input at a later stage or for longer periods. This may include help with parenting strategies (although usually by non-specialist services) and direct therapeutic interventions. These should be coordinated with resettlement, social care or domestic violence agencies.

CONCLUSION

This study, based on the analysis of a survey of a large representative sample of children and young people in

Great Britain, has demonstrated that children witnessing domestic violence do indeed have a greater likelihood than other children of developing a conduct disorder but not emotional disorders. There is a growing need for more research on the consequences of witnessing domestic violence to increase the awareness of social workers and policy-makers to identify the needs of children who witness domestic violence.

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