



No. 241

# Pathways from Child Maltreatment to Juvenile Offending

Anna Stewart, Susan Dennison and Elissa Waterson

*This important study demonstrates a direct path from child maltreatment to juvenile offending. The maltreatment of children is a scourge on our society — a thoroughly inexcusable practice that, unfortunately, our protective and preventive measures have had little overall success in combating.*

*This study focuses on the 41,700 children born in Queensland in 1983. It finds that about 10 per cent of these children came into contact with the Department of Families by the time they were 17 years old because of a child protection matter. About five per cent of those in the cohort had a court appearance for a proven offence. Many, but not all, of these children fitted into both categories (that is, coming into contact with the Department as well as having a court appearance).*

*The authors examine 11 predictive factors for youth offending, and find that children who suffer maltreatment are more likely to offend. Physical abuse and neglect are significant predictive factors, but sexual and emotional abuse are not.*

*This study shows that working with large administrative data sets can yield critically important information for policy-making, and can also inform practice. The policy ramifications of these data show that with appropriate analysis we can move to better levels of understanding risk and improved deployment of scarce resources.*

**Adam Graycar**  
Director

This research examines the effect child maltreatment has on juvenile offending. This relationship has implications for understanding criminal behaviour as well as implications for child protection initiatives and crime prevention strategies. Recently, the field of developmental criminology has focused attention on the impacts of exposure to risk and protective factors at different points in a child's development (Loeber & Stouthamer-Loeber 1996). Of particular interest are the factors that lead to the onset and end of criminal behaviour. While a number of risk factors have been identified as increasing the likelihood of offending, none are as consistent as the detrimental effect of child abuse and neglect.

A number of cross-sectional and longitudinal studies have reported that adolescents who experience maltreatment as children have a greater likelihood of becoming juvenile offenders (for example Alfaro 1981; Bolton, Reich & Gutierrez 1977; Brown 1984; Hamilton, Falshaw & Browne 2002; McCord 1983; Smith & Thornberry 1995; Weatherburn & Lind 1997; Widom 1989). Much of the research on the path from maltreatment to juvenile offending is cross-sectional. Cross-sectional designs generally take a sample of the population across different ages (for example, a group of eight-year-olds, 14-year-olds and 21-year-olds). Such research may then look at the co-occurrence of maltreatment and offending in each age group. One can examine whether maltreatment is associated with higher levels of delinquency and offending in each age group compared with participants who were not maltreated. However,

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because each group is only measured once, it is not possible to obtain clear evidence that the maltreatment, or accumulation of maltreatment, preceded delinquency and offending. Therefore what is often not clear is the causal evidence that maltreatment produces delinquency. Furthermore, little is known about the impact of the nature and duration of the maltreatment on the likelihood of offending.

Widom and Ames (1994) found that sexually abused children were no more likely to be arrested than other maltreated groups. Using the same data, Widom and Maxfield (2001) reported that physically abused and neglected children were more likely than sexually abused children to be arrested for a violent crime. Therefore there is some evidence that the type of maltreatment suffered by a child may heighten their risk for offending, and particularly for some *types* of offending. However, the data from these studies were drawn from maltreatment cases that had been substantiated and validated in court. Because many incidents of maltreatment are either not reported or do not proceed to court, these data may represent the more severe forms of maltreatment.

Not all abused and neglected children proceed to later offending, so it is important to identify those factors associated with maltreatment that may have an influence. The frequency of maltreatment may be an important factor. Past experiences can produce either cumulative risk or protective factors, and can affect future transition points (Developmental Crime Prevention Consortium 1999). According to Sampson and Laub (1993), juvenile offending develops primarily because of informal social control processes, occurring mainly in the family context. They propose that erratic and harsh discipline, lack of supervision, parental rejection of the child and the child's emotional rejection of their parents leaves children more vulnerable.

The timing of maltreatment appears to be relevant to offending. Thornberry, Ireland and Smith (2001) have reported that children whose maltreatment was restricted to childhood were less likely to offend than children who were only maltreated in adolescence or whose maltreatment continued into adolescence. Maltreatment may also affect the timing of the offending. Moffitt (1993) has suggested that there are two types of offenders:

- the life-course persistent type, who start engaging in delinquent behaviour and offending early in life and offend for a long period of time; and
- the adolescent-limited type, who offend for a short period of time mainly during adolescence.

It is thought that early neuropsychological problems, personality characteristics and other negative childhood experiences may contribute to an individual being a persistent offender over the life-course. Although not specifically identified by Moffitt (1993), maltreatment is one negative experience that may have a profound impact on children's developmental paths and engagement in criminal behaviour.

The present study explores whether some maltreatment experiences leave children more prone to juvenile offending than others. The study has two aims. The first is to look at the relationship between child

maltreatment and juvenile offending. It is hypothesised that children who have been maltreated will be more likely to offend in adolescence than children for whom there is no evidence of maltreatment. Also of interest is which characteristics of the maltreatment experience are predictive of later offending. The second aim is to explore children's experiences with maltreatment in relation to those factors predictive of subsequent offending.

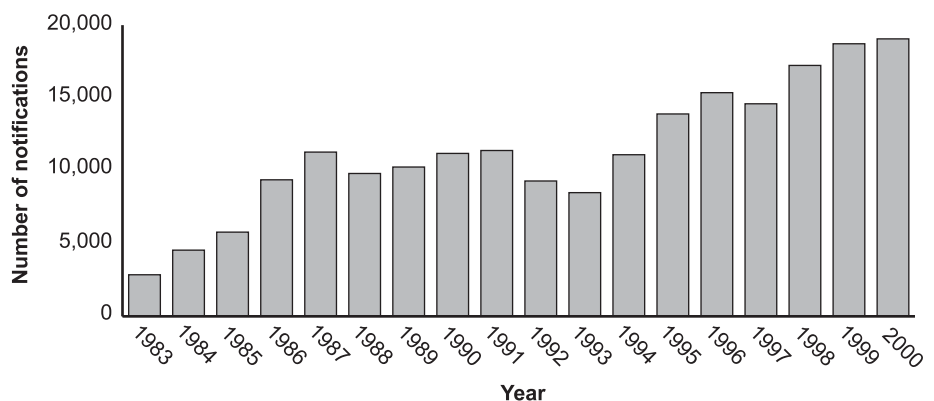
## Method

### Data Sources

Children born in 1983 who had recorded contact with Queensland's Department of Families child protection system and/or the juvenile justice system were included in the study. These data were extracted in 2000 when the children had turned 17 and were no longer under the jurisdiction of the Department.

There were approximately 41,700 births (52% male and 48% female) in Queensland in 1983 (Australian Bureau of Statistics census data). Immigration and migration increased this population and in 2000 there were 53,700 17-year-olds (51% male and 49% female). Of this population, 2.6 per cent were Indigenous (2.1 per cent Aboriginal and 0.5 per cent Torres Strait Islander). The death rate for the population decreased from the baby years to middle childhood and increased slightly during the teenage years.

Figure 1: Number of children subjected to notifications in Queensland (1983–2000)



Source: Annual Reports, 1983–2000, Queensland Department of Families

**Table 1:** Individual children's (N=4,656) experience with notifications by number of substantiated and unsubstantiated notifications

	Notified children		Maximum number of notifications	Total number of notifications	
	N	%*		N	%
Only unsubstantiated notifications	1,771	38.0	7	2,372	24.2
Only substantiated notifications	1,645	35.3	12	2,236	22.8
Both substantiated and unsubstantiated notifications	1,240	26.6	23	5,203	53.0
Total	4,656	100.0		9,811	100.0

\* Percentages do not sum to 100 due to rounding.  
Source: Stewart, Dennison & Waterson 2002

**Child Protection System**

In Queensland the Department of Families has the statutory authority for the protection of children (*Children's Services Act 1965* and *Child Protection Act 1999*). Family Service Officers investigate child maltreatment notifications, finding them to be either "substantiated", "at risk" or "unsubstantiated", and arrange for the protection of children according to their findings. Cases assessed as "substantiated" or "at risk" are those where there is "reasonable cause to believe that the child has been harmed or is at risk of harm" (Department of Families 2002, p. 21). These cases are categorised according to the child's experience of harm (physical abuse, emotional abuse, sexual abuse or neglect). For this study, substantiated cases of child maltreatment included cases assessed as both "substantiated" or "at risk".

Since 1983 there has been a dramatic increase in the number of child protection notifications received by the Department (Figure 1). Such an increase cannot be accounted for by the small population change. Rather, these increases reflect changes in community attitudes towards maltreatment and the Department of Families' child protection policies and strategies.

About 10 per cent (N=4,656) of the 1983 birth cohort came into contact with the Department of Families because of a child protection matter. These children accounted for 9,811 notifications (mean=2.1 per child) and 5,053 substantiated notifications of maltreatment (mean=1.8). Fifty-three per cent of the children were female (accounting for 54 per cent

of notifications). Twelve per cent of children (N=514) were Aboriginal and less than one per cent (N=27) were Torres Strait Islanders. Both groups of Indigenous children were over-represented in child protection notifications. While acknowledging the higher levels of over-representation for Aboriginal Australians than for Torres Strait Islanders, these children were categorised together as Indigenous.

Little previous research has examined children's life-course experiences of maltreatment. Although 50 per cent of notifications received by the Department are not substantiated, the majority of children notified (62%) ended up with at least one substantiated notification (Table 1). Over one-quarter of children had both substantiated and unsubstantiated notifications, which accounted for over 50 per cent of all notifications.

Of the 2,885 maltreated children, 66 per cent had only one maltreatment incident. These accounted for 38 per cent of all substantiated notifications of maltreatment. Thirty-four per cent of maltreated children had multiple maltreatment incidents, accounting for 62 per cent of all substantiated notifications

(Table 2). Furthermore, a small number of children (6%) were repeatedly victimised, accounting for 22 per cent of all maltreatment incidents.

Children who were repeatedly victimised usually experienced multiple types of maltreatment (Table 3). Of these children, 34 per cent had at least one sexual abuse incident, 68 per cent had at least one physical abuse incident, 68 per cent had at least one neglect incident and 54 per cent had at least one emotional abuse incident.

**Juvenile Justice System**

The *Juvenile Justice Act 1992* (Qld) regulates young people's contact with the Queensland juvenile justice system. Children under the age of 10 cannot be held criminally responsible.

The 1983 birth cohort was responsible for a total of 7,491 finalised court appearances. Of these appearances, three resulted in a "not guilty" outcome and 496 had an outcome of "no case to be heard". These appearances were excluded, leaving 6,992 proven offences committed by 2,593 children (about five per cent of the relevant Queensland population). Of these children, 22 per cent were Indigenous (accounting for 38 per cent of all appearances) and 79 per cent were male (accounting for 82 per cent of all appearances).

**Results**

To examine the relationship between maltreatment and juvenile offending, the child protection and juvenile justice databases were merged. Children whose first conviction preceded

**Table 2:** Distinct children (1983 birth cohort; N=4,656) by number of substantiated maltreatment episodes

Number of incidents of maltreatment	Maltreated children		Substantiated notifications	
	N	%	N	%
1	1,895	65.7	1,895	37.5
2	520	18.0	1,040	20.6
3	203	7.0	609	12.0
4	96	3.3	384	7.6
5+	171	6.0	1,125	22.3
Total	2,885	100.0	5,053	100.0

Source: Stewart, Dennison & Waterson 2002

**Table 3:** *Maltreated children's experience of each type of maltreatment*

	Children with one maltreatment incident (one maltreatment type)		Children with multiple maltreatment incidents (one type)		Children with multiple maltreatment incidents (multiple types)		Total children experiencing maltreatment	
	N	%	N	%	N	%	N	%
Sexual abuse	421	22.2	33	8.7	221	34.2	666	23.1
Physical abuse	579	30.6	115	30.3	415	68.0	1,109	38.4
Neglect	578	30.5	184	48.4	417	68.4	1,179	40.9
Emotional abuse	317	16.7	48	12.6	332	54.4	697	24.2
No. of children	1,895	100.0	380	100.0	610*		2,885*	

\* Totals do not sum as children could experience more than one type of maltreatment.  
Source: Stewart, Dennison & Waterson 2002

their first maltreatment notification were excluded (N=31). The resulting data set contained 6,541 child records:

- 3,978 children (61%) with only a child protection record;
- 647 children (10%) with both a child protection record and an offending record; and
- 1,916 children (29%) with only an offending record.

Children with one or more substantiated maltreatment notifications were more likely (17%) than children with no substantiated maltreatment (10%) to have a later offending record (Table 4). This lends some support to the hypothesis that maltreated children are more likely to offend than children for whom there is no evidence of maltreatment. However, there was no opportunity to control for variables such as socioeconomic status that may also distinguish between the two groups.

A direct logistic regression was performed to examine if the likelihood of a child's offending could be predicted from their substantiated child protection history. Logistic regression was chosen as it allows the prediction of a discrete outcome (for example, offend/not offend) from a set of predictor variables. Furthermore, the predictor variables can be examined to see how influential each variable is in the final solution. Children with missing data on Indigenous status (N=160) were excluded, leaving 2,694 records available for analysis. Of these, 382 (14%) went on to offend and 2,312 (86%) did

not offend. The 11 predictor variables were:

- sex (male/female);
- Indigenous status (Indigenous/non-Indigenous);
- age at first maltreatment incident;
- age at final maltreatment incident;
- number of notifications;
- number of maltreatment incidents;
- substantiated incidents (yes/no) for:
  - emotional abuse;
  - physical abuse;
  - sexual abuse;
  - neglect; and
- out-of-home placement (yes/no).

A test of the full model with all 11 predictors against a constant-only model was statistically reliable ( $\chi^2$  (11, N=2,694) = 394.47,  $p < .001$ ) indicating that all the predictors, as a set, distinguished between offenders and non-offenders. However, the variance in offending accounted for was small (Cox and Snell  $R^2 = .14$ ) and classification accuracy was 84 per cent. Seven of the 11 predictor variables contributed to this result, namely: sex of child, Indigenous status, timing of maltreatment, number of notifications, experience of neglect or physical abuse, and out-of-

home placement (see the logistic regression in Stewart, Dennison & Waterson 2002, p. 97).

#### Sex of Child

Twenty-five per cent of male maltreated children subsequently offended compared to 11 per cent of females. Girls were no more likely than boys to have a substantiated maltreatment notification. Boys and girls had similar numbers of substantiated incidents (mean=1.71 incidents). However, boys were younger than girls both at the first maltreatment incident (mean=7.24 years versus 7.84 years) and the final incident (mean=8.55 years versus 9.29 years). Given these limited differences, it is unlikely that maltreatment alone accounts for the substantial differences in male and female offending.

#### Indigenous Status

Maltreated Indigenous children were four times more likely to offend than non-Indigenous children. Forty-two per cent of maltreated Indigenous children committed offences compared with 14 per cent of non-Indigenous maltreated children. When examining the maltreatment of Indigenous and non-Indigenous children, there is evidence of very different experiences. Notifications of maltreatment were more likely to be substantiated for Indigenous children (72%) than for non-Indigenous children (63%). Indigenous children had higher numbers of substantiated notifications than non-Indigenous children (mean=2.08 per child versus 1.70). There were no differences in age at first maltreatment incident between

**Table 4:** *Number of children notified, by outcome of notification and juvenile justice appearance*

	Substantiated notifications				Total	
	no		yes		N	%
	N	%	N	%	N	%
Child protection record only	1,598	90.2	2,380	83.4	3,978	86.0
Both child protection and juvenile justice records	173	9.8	474	16.6	647	14.0
Total	1,771		2,854		4,625*	

\* Thirty-one children were excluded because the first conviction preceded their first maltreatment notification.

Source: Stewart, Dennison & Waterson 2002

Indigenous and non-Indigenous children. However, at the final incident Indigenous children were significantly older than non-Indigenous children (mean=9.24 years versus 8.73 years). Indigenous children were more likely than non-Indigenous children to have experienced maltreatment, and experienced more maltreatment over a longer duration.

The above finding is consistent with Alfaro's (1981) finding that minority groups are over-represented in terms of children with histories of abuse and neglect. Whether such findings mean Indigenous children are at greater risk of maltreatment or simply that they are more likely to come to the attention of the Department of Families is not known. Brown (1984) suggested that official data over-represent those with low socioeconomic status because of bias in agency activity. Given the social inequalities that exist for many Indigenous families, the higher number of maltreatment notifications may be more a function of increased attention by protective services rather than higher maltreatment levels. This finding requires further investigation.

*Age of Maltreatment*

The age of the final substantiated maltreatment was significant in determining whether the child would subsequently offend. Children who offended were older at the final maltreatment incident than children who did not offend (mean=10.6 years versus 8.6 years). Those children whose maltreatment extended into or occurred in early adolescence were more likely to offend than those who were only maltreated as a young child. These findings support Thornberry, Ireland and Smith's (2001) finding that children who experienced adolescent-only or persistent maltreatment were at high risk for later offending. Interestingly, using Thornberry, Ireland and Smith's (2001) categories, females were more likely than males to be in the adolescent-only and

persistent maltreatment groups. Indigenous children were far more likely than non-Indigenous children to be in the persistent maltreatment group (see Table 5).

*Number of Notifications*

There is a strong relationship between the *number of notifications* and the *number of substantiated notifications*. Surprisingly, however, only the number of notifications predicted the child's later likelihood of offending. Maltreated children who offended had more notifications than non-offending maltreated children (mean=5.5 versus 2.4). For maltreated children, a high level of Department of Families involvement for child protection issues, regardless of the outcome of the involvement, was predictive of later offending behaviour.

*Type of Maltreatment*

The type of maltreatment was predictive of the likelihood of the child offending. Twenty-three per cent of children who were victims of physical abuse subsequently offended compared with 15 per cent of children who were not physically abused. Similarly, 23 per cent of maltreated children who were the victims of neglect subsequently offended compared with 14 per cent of maltreated children who were not neglected. Sexual abuse and emotional abuse were not related to later offending.

*Out-of-Home Placement*

Placement of the child outside the home influenced the likelihood of a child offending. Twenty-six per cent of maltreated children who were placed outside the home subsequently offended at least once, compared with 13 per cent of children who were never placed outside the home.

Of maltreated children, 37 per cent (N=1,083) were placed outside the home at least once between birth and 17 years, and one child was placed outside the home seven times. Indigenous children were more likely (50%) to be placed outside the home than non-Indigenous children (35%). Children who were placed outside the home were significantly older at their first maltreatment incident (mean=8.17 years versus 7.20 years) and final maltreatment incident (mean=10.63 years versus 7.94 years). Children with out-of-home placement had a higher number of substantiated notifications than children with no out-of-home placements (mean=2.37 notifications versus 1.38 notifications).

Almost two-thirds of children (64%) who had experienced multiple types of maltreatment had at least one out-of-home placement, compared with 27 per cent of children who had only one experience of abuse. Children who were classified as physically abused were more likely (41%) to be placed outside the home than children who were classified as neglected (37%), sexually abused (35%) or emotionally abused (35%). Placement outside the home is likely to be indicative of the seriousness of the maltreatment. In the absence of a better measure of severity of maltreatment, the present finding suggests that the greater the severity of the maltreatment, the greater the likelihood of subsequent criminal offending.

**Conclusion**

The prospective focus of the present study provides further evidence of a causal relationship between maltreatment and

**Table 5:** *Timing of maltreatment by sex of child and Indigenous status*

	Male		Female		Indigenous		Non-Ind.	
	N	%	N	%	N	%	N	%
Early childhood-only maltreatment (0-5)	367	27.6	350	22.5	86	22.5	613	26.5
Late childhood-only maltreatment (6-11)	475	35.8	511	32.8	126	33.0	819	35.4
Adolescent-only maltreatment (12+)	310	23.3	451	29.0	83	21.7	567	24.5
Persistent maltreatment	177	13.3	244	15.7	87	22.8	313	13.6
Total	1,329	100.0	1,556	100.0	382	100.0	2,312	100.0

Source: Stewart, Dennison & Waterson 2002

juvenile offending. Maltreated children are more likely to offend in adolescence than children who are not maltreated. Physical abuse and neglect are more predictive of offending than sexual or emotional abuse, consistent with the limited previous research. Young people whose final maltreatment occurs in adolescence are at greater risk for offending than children whose maltreatment does not extend beyond childhood – a finding which has implications for current theories of offending. Children with out-of-home placements, likely to be indicative of severity of maltreatment, are more likely to offend than children who do not receive an out-of-home placement.

The limitations of the data set should be considered when attempting to extrapolate results to the existence of maltreatment and juvenile offending in society. Data based only on official reports are likely to significantly underestimate the true level of child maltreatment and juvenile offending. Nevertheless, the results of this research have implications for decisions made in the child protection system regarding protective care. The subsequent outcomes for children who receive out-of-home placements or experience repeat maltreatment need to be further examined.

The data lends itself to further analysis of trajectories or pathways to offending. While maltreatment did not seem to account for differences in male and female offending, an interesting finding was that more females than males experienced persistent maltreatment or maltreatment only in adolescence. Further research needs to examine the trajectories of these females to examine how many subsequently offended. Late maltreatment may be more or less predictive of female rather than male offending. There was also a small group of children being repeatedly victimised and a small group of children repeatedly

offending. It is not known whether these are the same children in both groups.

Preventing child maltreatment in the first place is likely to produce a larger reduction in offending. By directing attention to those children who are maltreated and ensuring that the maltreatment is not repeated, significant benefits in crime reduction and outcomes for children can also be obtained. Understanding more about what maltreatment experiences lead to offending would help direct crime prevention approaches to transition points in the child's life or to risk factors so that greater success might be achieved. It is anticipated that further analysis with the present data will make a significant contribution to these important endeavours.

## Note

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## References

- Alfaro, J. 1981, "Report on the relationship between child abuse and neglect and later socially deviant behaviour", in R. Hunner & Y. Walker. (eds), *Exploring the Relationship between Child Abuse and Delinquency*, Allanheld, Osmun & Co. Publishers, Montclair New Jersey, pp. 175–219.
- Australian Bureau of Statistics (ABS) 1984–2001, *Population by Age and Sex*, cat. no. 3201.0, Australian Bureau of Statistics, Canberra.
- 1984–2001, *Demography Queensland*, cat. no. 3311.3, Australian Bureau of Statistics, Canberra.
- 1984–2001, *Deaths Australia*, cat. no. 3302.0, Australian Bureau of Statistics, Canberra.
- 1998, "Population: Special article – Experimental estimates of the Torres Strait Islander population", *YearBook Australia 1998*, Australian Bureau of Statistics, Canberra.
- Bolton, F., Reich, J. & Gutierrez, S. 1977, "Delinquency patterns in maltreated children and siblings", *Victimology*, vol. 2, pp. 349–57.
- Brown, S. 1984, "Social class, child maltreatment and delinquent behavior", *Criminology*, vol. 22, no. 2, pp. 259–78.
- Department of Families 2002, *Annual Report 2000–2001: Book 1*, Queensland: Queensland Government Printer, Brisbane.
- Developmental Crime Prevention Consortium 1999, *Pathways to Prevention: Developmental and Early Intervention Approaches to Crime in Australia*, National Crime Prevention, Attorney-General's Department, Canberra.
- Hamilton, C.E., Falshaw, L. & Browne, K.D. 2002, "The link between recurrent maltreatment and offending behaviour", *International Journal of Offender Therapy and Comparative Criminology*, vol. 46, no. 1, pp. 75–94.
- Loeber, R. & Stouthamer-Loeber, M. 1996, "The development of offending", *Criminal Justice and Behavior*, vol. 23, no. 1, pp. 12–24.
- McCord, J. 1983, "A forty-year perspective on effects of child abuse and neglect", *Child Abuse and Neglect*, vol. 7, pp. 265–70.
- Moffitt, T. 1993, "Adolescent limited and life-course persistent antisocial behavior: A developmental taxonomy", *Psychological Review*, vol. 100, no. 4, pp. 674–701.
- Sampson, R. & Laub, J. 1993, *Crime in the Making: Pathways and Turning Points through Life*, Harvard University Press, Cambridge Massachusetts, pp. 243–57.
- Smith, C. & Thornberry, T. 1995, "The relationship between childhood maltreatment and adolescent involvement in delinquency", *Criminology*, vol. 33, no. 4, pp. 451–81.
- Stewart, A., Dennison, S. & Waterson, E. 2002, *Pathways from Child Maltreatment to Juvenile Offending*, report to the Criminology Research Council (29/00-01), available at <http://www.aic.gov.au/crc/reports/stewart.html>.
- Thornberry, T., Ireland, T. & Smith, C. 2001, "The importance of timing: The varying impact of childhood and adolescent maltreatment on multiple problem outcomes", *Development and Psychopathology*, vol. 13, no. 4, pp. 957–79.
- Weatherburn, D. & Lind, B. 1997, *Social and Economic Stress, Child Neglect and Juvenile Delinquency*, New South Wales Bureau of Crime Statistics and Research, Sydney.
- Widom, C.S. 1989, "Child abuse, neglect and violent criminal behavior", *Criminology*, vol. 27, no. 2, pp. 251–71.
- Widom, C.S. & Ames, A. 1994, "Criminal consequences of childhood sexual victimisation", *Child Abuse and Neglect*, vol. 18, no. 4, pp. 303–18.
- Widom, C.S. & Maxfield, M. 2001, "An update on the 'Cycle of violence'", *Research in Brief*, National Institute of Justice, Washington DC, February.

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