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Nine years after child sexual abuse☆

Heather Y. Swanston[a], Angela M. Plunkett[a], Brian I. O'Toole[b], Sandra Shrimpton[a], Patrick N. Parkinson[c], R. Kim Oates[a,*]

[a]*Department of Paediatrics and Child Health, The University of Sydney, and The Children's Hospital at Westmead (Royal Alexandra Hospital for Children), Locked Bag 4001, Westmead, NSW 2145, Australia*
[b]*Centre for General Practice Integration Studies, School of Community Medicine, The University of New South Wales, Sydney, NSW, Australia*
[c]*Faculty of Law, The University of Sydney, Sydney, NSW, Australia*

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Abstract

Objective: During 1988–1990, 103 children presented to Child Protection Units (CPU) at two children's hospitals in Sydney, Australia. Nine years later, the psychological adjustment of these young people (mean age = 19.1 years, *SD* = 3.4 years; range = 14–25 years) was compared with that of non-abused young people of similar age and gender to assess group differences and examine potential risk factors.
Method: At intake, data on the nature of the index sexual abuse, demographics and the family environment were collected by clinicians. A comparison group, of similar age and gender, was selected from schools in the catchment area of the CPUs. Six years after presentation for the abuse, records of the statutory child protection authority were checked to determine any further notifications for abuse and/or neglect. Nine years after intake, 49 of the abused young people and 68 of the non-abused young people and/or their parents were interviewed and assessed.
Results: The sexually abused young people performed more poorly than non-abused young people on psychometric tests of depression ($p = .001$), self-esteem ($p < .001$), anxiety ($p < .001$), behavior (Child Behavior Checklist: $p = .01$; Youth Self Report: $p = .01$; Young Adult Self Report: $p < .001$), and despair ($p = .001$). They were also more likely to have a history of bingeing ($p = .002$), self-inducing vomiting ($p = .02$), smoking cigarettes ($p = .01$), and using amphetamines ($p = .002$), ecstasy ($p = .002$) and cocaine ($p = .004$). Potential risk factors were in two groups, family and child. Family factors: family functioning, parental drug/alcohol problems, mother's sexual abuse history, mother's depression and socio-economic status. Child factors: despair and hopefulness, number of negative life events, ratings of their father's care, previous notifications for child sexual abuse and

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* Corresponding author.

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placements in out-of-home care by the statutory child protection authority. In the presence of other risk factors, child sexual abuse was a significant predictor of self-esteem, behavior and bingeing.
Conclusions: Rather than focusing only on the individual's child sexual abuse, treatment may also need to address the family's functioning and the individual's feelings of despair.

Keywords: Child sexual abuse; Depression; Self-esteem; Anxiety; Behavior disorder; Despair; Bingeing

Introduction

Sexual abuse during childhood has been shown to affect later psychological functioning in community-based studies (Fergusson, Horwood, & Lynskey, 1996; Mullen, Martin, Anderson, Romans, & Herbison, 1993) and amongst clinical subpopulations (Goodman, Rosenberg, Mueser, & Drake, 1997; Read, 1997). It is associated with depression and low self-esteem (Mullen et al., 1993; Mullen, Martin, Anderson, Romans, & Herbison, 1996), increased risk of further victimization (Fergusson, Horwood, & Lynskey, 1997), eating disorders (Wonderlich, Wilsnack, Wilsnack, & Harris, 1996), suicide attempts (Fergusson & Lynskey, 1997; Plunkett, O'Toole, Swanston, Oates, Shrimpton, & Parkinson, 2001) and drug abuse (Wilsnack, Vogeltanz, Klassen, & Harris, 1997). Although not all survivors have adverse effects (Kendall-Tackett, Williams, & Finkelhor, 1993) these studies indicate that child sexual abuse is an independent predictor of adult psychopathology, with more severe abuse having a greater chance of psychological problems in adulthood (Fergusson et al., 1996; Mullen et al., 1993).

However, many studies have not controlled for the various confounding or intervening factors that may be independently associated with poor adjustment, and may also differ between abused and non-abused samples such as the quality of family and peer relationships (Lynskey & Fergusson, 1997), pre-abuse factors (Paradise, Rose, Sleeper, & Nathanson, 1994), family disruption and other stressors (Mannarino, Cohen, & Berman, 1994).

Few studies have been designed to assess the relative importance of child sexual abuse and the set of potential predictors or effect modifiers of outcome that could influence adjustment following abuse. Despite increased understanding of the effects of child sexual abuse, less is known about the factors which may protect from the development of later psychological disturbance, although some research has directly examined factors that may protect from later psychopathology and promote resilience (Fergusson & Lynskey, 1996; Mullen et al., 1993).

This study examines a range of outcomes amongst a group of young people who were sexually abused during childhood. It follows a cohort of young people for 9 years after sexual abuse was documented and compares them with young people of similar age and gender from a well-defined population base. In addition, a broad range of potential confounders, including demographic factors, other negative life events, and family functioning was examined. The effects of sexual abuse on later psychological functioning were examined in multivariate models, taking these factors into account. This is one of the longest follow-up studies of child sexual abuse yet published.

Method

Abused young people

Between 1988 and 1990 a total of 187 children presented to the Child Protection Units of two Sydney metropolitan children's hospitals. They had all experienced sexual abuse involving physical contact, were aged between 4 and 15 years at presentation and resided in metropolitan Sydney, Australia. Concerns about sexual exploration between peers and abuse of children with developmental delay were not included.

Eighty-four of the children in this group of 187 were reviewed after 18 months (Stern, Lynch, Oates, O'Toole, & Cooney, 1995) and again after 5 years (Swanston, Tebbutt, O'Toole, & Oates, 1997). The remaining 103 were not included in those reviews either because they initially declined to participate (25%) or were not thought by the clinical team to be appropriate for interviewing at that time (75%) (Lynch, Stern, Oates, & O'Toole, 1993). This group of 103 comprised the sample reviewed in this study. A detailed review of the original records suggested that, in four of the original sample of 103, sexual abuse had not been adequately substantiated, leaving 99 children for this study. At the 9 year follow-up, these sexually abused young people were aged between 14 and 25 years.

Non-abused comparison group

To provide a comparison group for previously documented 18 month and 5 year follow-up, a group of 84 children not known to have been abused was selected randomly from schools in the Sydney metropolitan area using probability sampling proportional to the size of the school (Stern et al., 1995). These children were interviewed at intake, at 18 months, and at 5 years. Because there was very little difference at baseline between the 84 abused children followed at 18 months and 5 years and those followed at 9 years (Lynch et al., 1993), this comparison group was deemed suitable for the present study and was therefore enlisted and assessed at 9 years.

Procedure

At intake, data on the nature of the index sexual abuse, demographics and the family environment were collected by clinicians from the Child Protection Units. Social workers rated family functioning and the mother-child relationship on 5-point Likert scales (Lynch et al., 1993). Nine years after intake, attempts were made to trace the abused and non-abused groups. Young people and their (non-offending) parent, usually the mother, were asked to complete a set of psychometric tests and take part in an interview. Confidentiality agreements were signed by the researchers and records of the Department of Community Services (the statutory child protection authority) were checked to determine whether any of the abused and non-abused young people had been notified to the Department for any form of abuse or neglect before and after intake to the study.

Methods used to locate these young people included sending letters to the last known address, searches through old Australian telephone directories and electoral rolls, and sending

letters via the Departments of Community Services, Social Security and Corrective Services, the Roads and Traffic Authority and Medicare (the Australian government body which administers health insurance). If it proved impossible to contact young people using these methods, a death search was carried out through the Australian National Death Index. The study was approved by the Human Ethics Committee of the Royal Alexandra Hospital for Children. All participants gave informed, written consent in accordance with the Ethics Committee requirements.

Measures

Young people

Young people completed self-report measures of depression, self-esteem, anxiety, behavior, family functioning, personal hopefulness, despair and perceptions of how their parents cared for them as children. With the exception of behavior and anxiety in the older young people, the measures have been described in earlier phases of the study (Stern et al., 1995; Swanston et al., 1997).

Depression was measured with the Children's Depression Inventory (Kovacs, 1980) or the Beck Depression Inventory (Beck, Steer, & Garbin, 1988) and self-esteem with the Piers-Harris Children's Self-Concept Scale (Piers & Harris, 1984) or the Coopersmith Self-Esteem Inventory (Coopersmith, 1981). The McMaster Family Assessment Device (Epstein, Baldwin, & Bishop, 1983) was used for family functioning. Perceptions of the level of parents' care, over-protection in the social realm and over-protection in the personal realm (infantilisation sub-scale) were measured with the Parental Bonding Instrument (Parker, Tupling, & Brown, 1979). Hopefulness and despair were measured with the Hunter Opinions and Personal Expectations Scale (Nunn, Lewin, Walton, & Carr, 1996). Anxiety was measured using the Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978) for those 17 and under and the Beck Anxiety Inventory (BAI; Beck et al., 1988) for those 18 and over.

The Youth Self Report (YSR; Achenbach, 1991) for adolescents aged 11 to 18 and Young Adult Self-Report (YASR; Achenbach, 1997) for young adults aged 19 and over were used to assess behavior. A clinical cut-off greater than 60 on the Total Behavior Problems Scale distinguished young people with significant behavioral problems.

Significant life events were documented with a checklist which incorporated items from two other scales (Johnson & McCutcheon, 1980; Newcomb, Huba, & Bentler, 1981). Two short questionnaires asked about health (e.g., dieting and drug use). A structured interview asked about: current and recent living situation; occupation, aims and ambitions; contact with counseling and other agencies; knowledge and experience of any form of child abuse and hopes for the future. Young people who had experienced child sexual abuse were also asked about reabuse, contact with the court system and contact with the abuser.

A rating of socio-economic status was defined using the ANU2 index (Broom, Duncan-Jones, Lancaster Jones, & McDonnell, 1977), incorporating information given by the young person on their occupation, or if still dependent on their parents, parental occupation. A three-level division of socio-economic status was used: low, medium or high.

Parents

Parental anxiety was measured using the Beck Anxiety Inventory and family relationships using the McMaster Family Assessment Device (Epstein et al., 1983) and the Parental Bonding Instrument (Parker et al., 1979). Parents completed the General Health Questionnaire (GHQ-28; Goldberg, 1978), a measure of mental health which has been validated in an Australian population (Tennant, 1977).

The parent interview included: child's living situation; demographic information; behavior, use of treatment and other services; other agency contacts or interventions; reabuse of the child; mother's history of child sexual abuse and parent's hope for the future. For parents of children in the sexual abuse group, information was obtained about legal proceedings and further contact with abuser.

Depending on the age of the child, either the Achenbach Child Behavior Checklist (CBCL; Achenbach, 1991) or the Young Adult Behavior Checklist (YABCL; Achenbach, 1997) was used to gain the parent's perspective on their child's behavior.

Analysis

Data were analyzed using SPSS for Windows Version 6.0 (Statistical Products and Service Solutions, 1993). The strategy was to identify individual predictors of outcome (depression, self-esteem, anxiety, behavior, despair and bingeing) after controlling for exposure (sexual abuse), using a multivariate regression paradigm. Groups were combined for analysis, but the variable indicating exposure (1 = abused, 0 = non-abused) was always entered into the regression model first, with other potential predictors entered subsequently so that the effect of other predictors could be observed after controlling for group as strong differences were found between the sexually abused and non-abused groups in the earlier stages of this study (Stern et al., 1995; Swanston et al., 1997).

The overall scores on depression, self-esteem and anxiety were converted to *Z* scores based on means for these measures obtained from the non-abused young people at intake, 18 month follow-up and 5 year follow-up. Univariate analyses were conducted to test associations of the potential predictor variables or potential confounders of the outcome variables. Bivariate correlations were used to examine relationships between continuous variables; mean scores were compared between binary variables with *t* tests; non-parametric statistics were used to test associations among non-normally distributed variables, and chi-square analyses or Fisher exact test were used to compare categorical data. Analysis of variance was used to examine relationships between continuous outcome variables and ordinal variables. Statistical significance was set at $p < .05$. Although multiple bivariate statistical tests were conducted, we did not adjust by Bonferroni or other methods in order to permit maximum sensitivity for each variable, to be overinclusive rather than underinclusive in variable selection for later multivariate analysis, and to allow the expression of possible weak associations in the presence of a limited sample size. Multivariate analyses used multiple linear regression for continuous outcome variables and multiple logistic regression for binary outcome variables.

Predictors, or risk factors, for outcome were family functioning, despair and hopefulness, parental drug/alcohol problems, the number of negative life events experienced in the last

year, mothers' child sexual abuse history, any previous notifications for child sexual abuse, socio-economic status and other demographic variables, young people's ratings of their fathers' care and mothers' depression, and placements by the statutory child protection authority in out-of-home care. Demographic variables included age, sex, follow-up lag, socio-economic status, having a supportive person in their lives, number of changes of address and other household changes since intake, age of leaving school, young people's level of education attained and whether they were currently employed or studying.

Results

Participants

Of the 99 sexually abused young people, four had died between intake and review. Two had committed suicide, one had been murdered, and one had died from drug overdose. Of the remaining 95, 49 young people and/or their families agreed to participate, 30 were not able to be located, and 16 were located but declined to participate, giving an overall follow-up rate of 52%, or 75% (49/65) for those located after 9 years. There were 36 parents who participated and 38 young people. There were no significant differences between participants and those lost to follow-up in terms of the abuse characteristics recorded at intake.

Of the 84 non-abused young people, eight revealed that they had been sexually abused between intake and the 9 year review, although none of these cases had been reported to the authorities. These eight were excluded from the study. Two young people were now living overseas, five families did not wish to participate and one family was not approached because of current family distress, leaving a comparison group of 68 parents and/or young people (66 parents and 66 young people), a follow-up rate at 9 years of 89%.

We recognize that the limitations of sample size in this study may have precluded the detection of more subtle effects in the analysis. With 99 and 66 subjects, the study has a power of 80% (at alpha $= .05$) to detect bivariate odds ratios of the order of 2.33 or to detect differences of approximately .22 standard deviation units, which may have seen some important variables not reach threshold for statistical significance.

Demographics

The young people in the abused and non-abused groups were followed up at comparable ages: 19.1 years for abused young people ($SD = 3.4$ years) and 18.0 years for non-abused ($SD = 3.0$ years) ($p = .06$). There was a similar gender distribution in the two groups, with males comprising 27% of the abused group and 24% of those non-abused ($p = .44$). There were no significant differences between the two groups in terms of: follow-up lag; having a supportive person in their lives; number of changes of address and other household changes since intake; age of leaving school; level of total education; and whether they were currently employed or studying. Differences in socio-economic status approached significance, with more abused young people in the low socio-economic group (52% vs. 30% in the non-abused

group) and more non-abused in the medium socio-economic group (54% vs. 31% in the abused group: $\chi^2 = 6.63$, $df = 2$, $p = .05$).

Parent, family and life event variables

The abused young people had significantly fewer siblings at follow-up than the non-abused [mean .79 (*SD* 1.08) vs. 1.38 (1.46); $t = -2.23$, $df = 102$; $p = .03$]. Forty-three percent were living with a biological parent at follow-up compared to (85%) of the non-abused, a significant difference (Fisher exact test, $p = .01$).

The sexually abused group experienced more changes in parent-figures since intake to the study than those in the comparison group [mean = .93 (*SD* 1.93) vs. .8 (.42); $t = 2.83$, $df = 45$; $p = .01$] and significantly more (48%) reported parents with a history of drug/alcohol problems than non-abused young people (13%) (Fisher exact test, $p = .001$). The group who had been sexually abused rated their families as functioning less well than did the comparison group [mean = 2.3 (*SD* .56) vs. 2.02 (.55); $t = 2.24$, $df = 91$; $p = .03$]; however, there were no significant differences in the way the two groups of parents rated their own family functioning. Abused and non-abused young people did not differ in their ratings of mothers' and fathers' care for them and their ratings of their mothers' infantilisation of them. However, abused young people rated their fathers as being significantly more infantilising than those not abused [mean = 5.04 (*SD* 3.16) vs. 2.68 (3.42); $t = 2.85$, $df = 77$; $p = .01$]. Abused young people rated their fathers and mothers as being more over-protective than those in the comparison group rated their fathers [mean = 10.27 (*SD* 6.03) vs. 5.21 (5.52); $t = 3.9$, $df = 77$; $p < .002$] and mothers [mean = 9.54 (*SD* 6.29) vs. 5.61 (5.83); $t = 2.77$, $df = 80$; $p = .01$].

Parents' ratings of their own anxiety and psychological distress did not differ significantly between abused and non-abused groups. There were no significant differences in parents' ratings of how well their own parents cared for them. Significantly more mothers of abused young people (58%) had histories of child sexual abuse compared to mothers of non-abused young people (15%) (Fisher exact test, $p = .01$).

Significantly more of the abused group had been pregnant or had partners who had been pregnant than the non-abused (29% vs. 3%) in the last year (Fisher exact test, $p = .001$) and significantly more had children than those not abused (19% vs. 3%) (Fisher exact test, $p = .01$). They experienced significantly more negative life events than those not abused [mean = 6.02 (*SD* 3.57) vs. 2.97 (2.29); $t = 4.75$, $df = 55$; $p < .001$].

Of the abused young people, 76% had sought therapy compared to 33% of those not abused (Fisher exact test, $p < .001$). Non-abused young people sought therapy for a variety of reasons, including behavioral problems, learning difficulties and family therapy. Abused young people sought therapy mainly for the abuse.

Outcome measures

There were no significant differences between abused and non-abused groups in terms of hopefulness. The two groups differed significantly on the outcome variables: depression, self-esteem, anxiety, behavior, despair, bingeing, self-induced vomiting and drug abuse.

Univariate analyses

Depression, self-esteem, anxiety and despair

Sexually abused young people were significantly more sad or depressed than those in the non-abused group [mean = 1.16 (*SD* 1.64) vs. .08 (1.21); $t = 3.54$, $df = 61$; $p = .001$]. They had significantly lower self-esteem [mean = −1.28 (*SD* 1.60) vs. .02 (1.14); $t = -4.40$, $df = 59$; $p < .001$], were significantly more anxious [mean = .97 (*SD* 1.18) vs. .04 (1.07); $t = 4.49$, $df = 102$; $p =< .001$] and significantly more despairing than those in the comparison group [mean = 13.22 (*SD* 6.76) vs. 8.45 (5.46); $t = 3.35$, $df = 74$; $p = .001$].

Behavior

Parents noted more problems in the younger age group. Their reports using the CBCL showed more problems in the sexually abused group [mean = 58.45 (*SD* 12.67) vs. 46.11 (10.11); $t = 3.99$, $df = 54$; $p < .001$]. There was no difference between the groups in parent reports using the Young Adult Behavior Checklist. Sexually abused young people scored significantly higher on the YSR total problem behavior scale [mean = 58.13 (*SD* 12.85) vs. 48.03 (12.97); $t = 2.54$, $df = 49$; $p = .01$] and on the YASR [mean = 62.74 (*SD* 11.17) vs. 51.3 (9.19); $t = 4.09$, $df = 51$; $p < .001$]. Those who had been sexually abused were also more likely to have run away from home ($\chi^2 = 13.74$, $df = 4$, $p = .01$).

Bingeing and vomiting

Forty-nine percent of the abused young people had a history of bingeing, compared to 18% of the non-abused young people (Fisher exact test, $p = .001$). Nineteen percent reported a history of self-induced vomiting compared to 5% of those not abused (Fisher exact test, $p = .02$).

Health

When rating their overall health, 8% in the sexual abuse group reported excellent health compared with 33% of the comparison group ($\chi^2 = 10.02$, $df = 3$, $p = .02$).

Drug use

There were no significant differences between the groups in use of alcohol, marijuana, hallucinogens, or heroin, although significantly more abused young people used cigarettes, amphetamines, ecstasy, and cocaine (Table 1). Those in the sexual abuse group were more likely to report having dealt in drugs ($p = .03$).

Other problems

The young people in the sexual abuse group were more likely to have had accidents and injuries ($p < .001$), fought with family members (.001), lost friends (.04), lost jobs (.03),

Table 1
Frequency (%) of types of drugs used by sexually abused and non-abused children

Drug	With a history of using the drug (%)		
	Abused ($n = 38$) (%)	Non-abused ($n = 66$) (%)	Significance (p)
Hazardous drinking	3	3	NS
Tobacco	71	47	.01
Marijuana	42	37	NS
Depressants	13	3	NS
Inhalants	13	3	NS
Hallucinogens	18	15	NS
Amphetamines	29	6	.002
Ecstasy	24	3	.002
Cocaine	21	3	.004
Heroin	11	2	NS
Codeine	5	0	NS

become violent (.01), broken up with a partner (.01) and sought help because of a physical or emotional reaction arising from their drug or alcohol use (.001).

Reports of other abuse

One in three young people in the abuse group reported further experience of sexual abuse, either as children or adults, since intake. Not all of these episodes were officially reported. Twenty-two percent of the sexually abused young people had a history of one or more placements by the Department of Community Services. Twelve percent had been made wards of the State. There had been no placements or wardships in the comparison group.

Multivariate analyses

Predictive models were formulated for outcome variables which differed significantly between abused and non-abused young people and where there were sufficiently large cell sizes for multivariate and logistic regressions (Table 2). Abused and non-abused young people were combined for multivariate analyses thus references to "young people" below are for the combined group. The variable "abused/non-abused status" was forced into every predictive model to allow for group differences but was only significant in the models for self-esteem, behavior (CBCL) and bingeing in the presence of other variables.

Depression

Young people who were more sad or depressed had higher levels of despair ($p < .001$) and rated their families as functioning more poorly ($p < .001$). Group, despair and the young person's rating of family functioning explained 66% of the variance in depression.

Table 2
Predictive models

Variables	Regression coefficient	Standard error	*T*	Significance (*p*)
Depression ($F_{3,61} = 39.84$, $p < .001$)				
Group	−.23	.25	−.93	.36
Despair	.11	.02	5.61	<.001
Family functioning (young person's rating)	.88	.22	3.99	<.001
Self-esteem ($F_{3,61} = 56.30$, $p < .001$)				
Group	.59	.21	2.75	.11
Hope	.11	.02	7.07	<.001
Family functioning (young person's rating)	−1.19	.18	−6.67	<.001
Anxiety ($F_{3,58} = 15.76$, $p < .001$)				
Group	−.15	.30	−.49	.62
Parental drug/alcohol problems	−.99	.33	−2.99	.004
Despair	.11	.02	4.66	<.001
Behavior				
CBCL ($F_{3,44} = 15.28$, $p < .001$)				
Group	−8.16	3.39	−2.41	.02
Mother's child sexual abuse history	−7.49	3.42	−2.19	.03
Family functioning (young person's rating)	13.26	3.01	4.41	<.001
YSR ($F_{2,47} = 24.39$, $p < .001$)				
Group	−5.64	3.15	−1.79	.08
Family functioning (young person's rating)	15.28	2.46	6.22	<.001
YASR ($F_{3,40} = 35.74$, $p < .001$)				
Group	−3.42	2.09	−1.63	.11
Life events	1.63	.34	4.80	<.001
Despair	.87	.16	5.60	<.001
Despair ($F_{3,67} = 15.55$, $p < .001$)				
Group	−1.58	1.56	−1.01	.32
Previous notifications for sexual abuse	8.16	3.41	2.39	.02
Socio-economic status (dummy variable 1)	−4.16	1.88	−2.21	.03
Socio-economic status (dummy variable 2)	−.45	1.92	−.24	.81
Father's level of care for child	−.22	.07	−3.14	.003
Bingeing (Model $\chi^2 = 19.97$, $df = 2$; $p < .001$) ($n = 75$)				
Group	−1.48	.57	.23	.01
Despair	.13	.05	1.14	.01

Self-esteem

Young people who had better self-esteem rated their families as functioning more poorly ($p < .001$) but were more hopeful ($p < .001$), an unexpected result. Group, hopefulness and the young person's rating of family functioning explained 66% of the variance in self-esteem.

Anxiety

Young people whose parents had problems with drug/alcohol were significantly more anxious than those whose parents did not ($p < .001$). Young people who were more anxious were also more despairing ($p < .001$). Forty-five percent of the variance in anxiety was predicted by group, parental drug/alcohol problems and young person's level of despair.

Behavior

CBCL. Those whose mothers had a history of child sexual abuse had significantly higher total behavior problem scores ($p = .01$). Parents' ratings of family functioning were significantly higher among young people with higher total behavior problem scores ($p < .001$). Group, mother's child sexual abuse history and parent's rating of family functioning predicted 51% of the variance in behavior.

YSR. Group and young person's rating of family functioning accounted for 51% of the variance in behavior. Those who rated their family's functioning more poorly had higher total problem behavior scores ($p < .001$).

YASR. Young people who had higher total problem behavior scores had more negative life events ($p < .001$) and were more despairing ($p < .001$). The number of negative life events was significantly correlated with despair ($p < .001$). Sixty-nine percent of the variance in behaviour was predicted by group, number of negative life events and despair scores.

Bingeing

Group and despair predicted 21% of the variance in bingeing. Young people with a history of bingeing were significantly more despairing ($p =< .001$).

Despair

Despair was predicted by group, previous notifications for sexual abuse, socio-economic status and the young person's rating of how well their father cared for them. These variables explained 38% of the variance. Young people with previous notifications for sexual abuse had significantly higher despair scores ($p < .001$). Those with high socio-economic status were less despairing than those with low socio-economic status ($p < .01$). Young people who were more despairing rated their fathers' level of care for them more poorly ($p = .001$).

Discussion

Demographic, family and parent variables

This review of sexually abused children seen 9 years after their initial presentation shows that, as young adults, they have many more problems than a matched non-abused comparison group.

They reported more changes in parent figure, more drug/alcohol problems in their own parents and poorer family functioning than the comparison group. Their own mothers were more likely to have experienced sexual abuse in their own childhood. They had a higher incidence of pregnancy, experienced more negative life events, were more depressed, more anxious, more despairing, and had lower self-esteem. They had a higher incidence of behavior problems, reported more health problems, had more accidents, and were more prone to drug use. One in three had suffered further sexual abuse.

Although family functioning prior to the abuse is unknown, 31% of families in the abused group were rated as functioning extremely poorly at intake (Lynch et al., 1993). The poor family functioning which continued beyond intake is likely to have contributed to the children's outcomes.

At an average age of 19, nearly one in five in the sexual abuse group had one or more children. Twenty-nine percent reported they or their partner being pregnant in the last 12 months, making it more difficult to continue with education or move into paid work. These findings are consistent with other findings of high rates of pregnancy amongst adolescents who reported child sexual abuse (Stock, Bell, Boyer, & Connell, 1997).

Young people in the sexual abuse group rated both their parents as being significantly more over-controlling in the social realm, and their fathers as also being more controlling in the personal and social realms. This result was not attributable to a large number of young people having been sexually abused by a father or father figure as this was not the case in this study. The significance of these poor ratings of parents by young people in the sexual abuse group is highlighted by the fact that a key predictor of resilience amongst female children who were sexually abused, is the quality of their relationship with the non-offending parent (Spaccarelli & Kim, 1995). Poor self-esteem has been shown to be partially predicted by having an over-protective mother in women who had experienced child sexual abuse (Romans, Martin, & Mullen, 1996).

Depression

Despair and the young person's rating of family functioning predicted depression scores, a finding which is consistent with other studies where depression is significantly correlated with despair (Nunn et al., 1996), attributional style (Nolen-Hoeksema, Seligman, & Girgus, 1986) and deprivation in the form of a lack of parental care (Portegijs, Jeuken, van der Horst, Kraan, & Knottnerus, 1996). Using a life events model, child sexual abuse is a negative life event, where the child's reaction to this event determines psychological adjustment (Kumar, Steer, & Deblinger, 1996).

Self-esteem

Self-esteem was significantly lower in the sexual abuse group at a univariate level. Child sexual abuse remained a significant predictor of self-esteem in the regression model, findings which are consistent with other researchers (Kendall-Tackett et al., 1993; Romans et al., 1996).

Family functioning and hope also predicted self-esteem. This finding is consistent with that of Wind and Silvern (1994) in a study of women who had experienced intrafamilial abuse

where family stress and abuse independently contributed to self-esteem. Not surprisingly, young people who had better self-esteem were also more hopeful, suggesting that clinical work with sexually abused children should aim to promote hopefulness.

Self-esteem deficits may result directly from the experience of child sexual abuse, or be secondary to its effects, which may explain the finding in our earlier study that soon after abuse, self-esteem deficits are related to more severe sexual abuse (Stern et al., 1995).

Anxiety

The elevated levels of anxiety in the sexual abuse group is similar to the findings of others (Mullen et al., 1993; Tebbutt, Swanston, Oates, & O'Toole, 1997; Wilsnack et al., 1997). Psychiatric diagnoses of anxiety disorders have also been found to be related to a history of childhood sexual abuse (Fergusson, Lynskey, & Horwood, 1996; Pettigrew & Burcham, 1997; Pribor & Dinwiddie, 1992; Silverman, Reinherz, & Giaconia, 1996; Stein et al., 1996).

It has been suggested that there may be a specificity between child sexual abuse and anxiety disorders (Pettigrew & Burcham, 1997; Silverman et al., 1996), and that child sexual abuse may be linked with particular anxiety disorders (Stein et al., 1996). However, although anxiety was higher amongst young people who had been sexually abused, this experience was not a significant predictor of anxiety in this study.

Behavior

Being a member of the sexually abused group, mothers' child sexual abuse history and parents' ratings of family functioning were significant predictors of parents' ratings of their children's behavior on the CBCL. The mothers' own history of child sexual abuse may be an artefact if the research raised unresolved issues for the mothers which may have influenced how they perceived their children's behavior after sexual abuse. It is known that mothers' psychological symptomatology can influence how they rate their children's behavior (Newberger, Gremy, Waternaux, & Newberger, 1993), although their ratings may still distinguish clinical from non-clinical children (Friedlander, Weiss, & Traylor, 1986).

After group differences were taken into account, family functioning predicted YASR and YSR scores. Parents' ratings of family functioning immediately after sexual abuse have been found to be poorer than those of parents of non-abused young people (Stern et al., 1995) and 9 years later, this is the case for young people's ratings. Predictors of behavior in the older young people were different from those in younger ones. After accounting for group differences, the number of negative life events and despair predicted young people's total problem behavior scores on the YASR. While older young people did not experience more negative life events than younger ones, the impact of the negative life events appears to have been more serious in those who were older.

Despair

After adjusting for group differences, despair scores were predicted by socio-economic status, the young person's rating of how well their father cared for them during childhood and

notifications for sexual abuse prior to the index sexual abuse. So in this study, young people who experienced social disadvantage, poorer parenting and previous sexual abuse were more despairing. Together with being younger at the time of the abuse and increasing association with delinquent or substance abusing peers, decreasing parental care has been shown to be predictive of increasing adjustment difficulties in young people (Lynskey & Fergusson, 1997).

Despair has been defined as the presence of negative expectancies (Nunn et al., 1996). Despair scores were significantly correlated with the number of negative life events. It may be possible that, after experiencing these repeated negative events, including sexual abuse, the young people developed a depressive attributional style and began to attribute bad outcomes to internal, stable and global factors, as described by the reformulated learned helplessness theory (Seligman, Abramson, Semmel, & von Baeyer, 1979), feeling that nothing they did could protect them from negative events (Seligman, 1992).

Bingeing

Group and despair were both significant predictors of whether young people reported a history of bingeing (one of a cluster of symptoms of bulimia nervosa), with sexual abuse being a significant risk factor of bulimic behavior (Wonderlich et al., 1996). It is not surprising that a negative event over which the young person had no control (sexual abuse) and one of the responses to its occurrence (despair) appear in tandem in the model for bingeing. Brown (1997) noted that low self-esteem, a negative attitude towards the body, a sense of shame and guilt and feelings of ineffectiveness and inadequacy are present in some sexually abused people and in eating disordered patients. Consistent with these reports of feelings of ineffectiveness, Waller (1998) reported a more external locus of control in eating disordered women who reported sexual abuse compared to those who did not.

Drug and alcohol use

The young people who had experienced sexual abuse were more likely to use amphetamines, cocaine and ecstasy than those not abused. Previous cross sectional studies have borne out the relationship between a history of child sexual abuse and illicit drug use amongst high-risk youth in detention centers (Dembo et al., 1989) and young people in psychiatric hospitals (McClellan, Adams, Douglas, McCurry, & Storck, 1995). However, in the latter study, child sexual abuse correlated with other forms of child abuse and neglect, indicating that it may be an interaction of factors which lead to later substance abuse. College women who reported child sexual abuse were far more likely to report higher levels of use of hard substances, than those not abused. However, there were no differences in the self-reported levels of alcohol or marijuana consumption (Johnsen & Harlow, 1996), a finding similar to the current study.

Conclusions

The strengths of this study included its prospective nature, the inclusion of a randomly selected comparison group, the documentation of the index sexual abuse and consideration of a range of potential confounders. The sample was followed over 9 years and a wide range of

outcome measures was examined. The main limitation of the results is the low follow-up rate within the sexually abused group. Also, the lack of detailed data on abused and non-abused children and families at intake makes it difficult to determine whether problems were present at or prior to intake or resulted directly from the abuse.

To improve sexually abused children's outcomes, family functioning, parental drug/alcohol problems, perceived level of care by fathers, mother's child sexual abuse and particularly the young person's hopefulness and despair should be addressed. Rather than focusing only on the child sexual abuse experience, treatment should also be aimed at the family's functioning and the individual's hopefulness and despair.

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References

Achenbach, T. M. (1991). *Manual for the Youth Self-Report and 1991 Profile*. Burlington, VT: University of Vermont, Department of Psychiatry.

Achenbach, T. M. (1997). *Manual for the Young Adult Self-Report and Young Adult Behavior Checklist*. Burlington, VT: University of Vermont, Department of Psychiatry.

Beck, A. T., Steer, R. A., & Garbin, M. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review*, *8*, 77–100.

Broom, L., Duncan-Jones, P., Lancaster Jones, F., & McDonnell, P. (1977). *Investigating social mobility (Departmental Monograph No. 1)*. Canberra: Department of Sociology, Australian National University.

Brown, L. (1997). Child physical and sexual abuse and eating disorders: A review of the links and personal comments on the treatment process. *Australian & New Zealand Journal of Psychiatry*, *31*(2), 194–199.

Coopersmith, S. (1981). *Coopersmith Self-Esteem Inventories*. Palo Alto, CA: Consulting Psychologist's Press Inc.

Dembo, R., Williams, L., La Voie, L., Berry, E., Getreu, A., Wish, E. D., Schmeidler, J., & Washburn, M. (1989). Physical abuse, sexual victimization, and illicit drug use: Replication of a structural analysis among a new sample of high-risk youths. *Violence & Victims*, *4*(2), 121–138.

Epstein, N., Baldwin, L., & Bishop, D. (1983). The McMaster Family Assessment Device. *Journal of Marital and Family Therapy*, *9*(2), 171–180.

Fergusson, D. M., Horwood, L. J., & Lynskey, M. T. (1996). Childhood sexual abuse and psychiatric disorder in young adulthood: II. Psychiatric outcomes of childhood sexual abuse. *Journal of the American Academy of Child & Adolescent Psychiatry*, *35*(10), 1365–1374.

Fergusson, D. M., Horwood, L. J., & Lynskey, M. T. (1997). Childhood sexual abuse, adolescent sexual behaviors and sexual revictimization. *Child Abuse & Neglect*, *21*(8), 789–803.

Fergusson, D. M., & Lynskey, M. T. (1996). Adolescent resiliency to family adversity, Journal of Child Psychology. *Journal of Child Psychology & Psychiatry & Allied Disciplines*, *37*(3), 281–292.

Fergusson, D. M., & Lynskey, M. T. (1997). Physical punishment/maltreatment during childhood and adjustment in young adulthood. *Child Abuse & Neglect*, *21*(7), 617–630.

Fergusson, D. M., Lynskey, M. T., & Horwood, L. J. (1996). Childhood sexual abuse and psychiatric disorder in young adulthood: I. Prevalence of sexual abuse and factors associated with sexual abuse. *Journal of the American Academy of Child & Adolescent Psychiatry*, *35*(10), 1355–1364.

Friedlander, S., Weiss, D. S., & Traylor, J. (1986). Assessing the influence of maternal depression on the validity of the child behavior checklist. *Journal of Abnormal Child Psychology, 14*, 123–133.

Goldberg, D. (1978). *Manual of the General Health Questionnaire*. London: NFER Publishing Company.

Goodman, L. A., Rosenberg, S. D., Mueser, K. T., & Drake, R. E. (1997). Physical and sexual assault history in women with serious mental illness: Prevalence, correlates, treatment, and future research directions. *Schizophrenia Bulletin, 23*(4), 685–696.

Johnsen, L. W., & Harlow, L. L. (1996). Childhood sexual abuse linked with adult substance use, victimization, and AIDS-risk. *AIDS Education & Prevention, 8*(1), 44–57.

Johnson, J. H., & McCutcheon, S. (1980). Assessing life stress in older children and adolescents: Preliminary findings with the Life Events Checklist. In I. G. Sarason & C. D. Spielberger (Eds.), *Stress and anxiety* (pp. 111–125). Washington, DC: Hemisphere.

Kendall-Tackett, K. A., Williams, L. M., & Finkelhor, D. (1993). Impact of sexual abuse on children: A review and synthesis of recent empirical studies. *Psychological Bulletin, 113*, 164–180.

Kovacs, M. (1980). Rating scale to assess depression in school-aged children. *Acta Paedopsychiatrica, 46*, 305–315.

Kumar, G., Steer, R. A., & Deblinger, E. (1996). Problems in differentiating sexually from nonsexually abused adolescent psychiatric inpatients by self-reported anxiety, depression, internalization, and externalization. *Child Abuse & Neglect, 20*(11), 1079–1086.

Lynch, D. L., Stern, A. E., Oates, R. K., & O'Toole, B. I. (1993). Who participates in child sexual abuse research? *Journal of Child Psychology and Psychiatry, 34*, 935–944.

Lynskey, M. T., & Fergusson, D. M. (1997). Factors protecting against the development of adjustment difficulties in young adults exposed to childhood sexual abuse. *Child Abuse & Neglect, 21*(12), 1177–1190.

Mannarino, A. P., Cohen, J. A., & Berman, S. R. (1994). The relationship between preabuse factors and psychological symptomatology in sexually abused girls. *Child Abuse & Neglect, 18*(1), 63–71.

McClellan, J., Adams, J., Douglas, D., McCurry, C., & Storck, M. (1995). Clinical characteristics related to severity of sexual abuse: A study of seriously mentally ill youth. *Child Abuse & Neglect, 19*(10), 1245–1254.

Mullen, P. E., Martin, J. L., Anderson, J. C., Romans, S. E., & Herbison, G. P. (1993). Childhood sexual abuse and mental health in adult life. *British Journal of Psychiatry, 163*, 721–732.

Mullen, P. E., Martin, J. L., Anderson, J. C., Romans, S. E., & Herbison, G. P. (1996). The long-term impact of the physical, emotional, and sexual abuse of children: A community study. *Child Abuse & Neglect, 20*(1), 7–21.

Newberger, C. M., Gremy, I. M., Waternaux, C. M., & Newberger, E. H. (1993). Mothers of sexually abused children: Trauma and repair in longitudinal perspective. *American Journal of Orthopsychiatry, 63*(1), 92–102.

Newcomb, M. D., Huba, G. J., & Bentler, P. M. (1981). A multidimensional assessment of stressful life events among adolescents: Derivation and correlates. *Journal of Health and Social Behavior, 22*, 400–415.

Nolen-Hoeksema, S., Seligman, M. E. P., & Girgus, J. S. (1986). Learned helplessness in children: A longitudinal study of depression, achievement, and explanatory style. *Journal of Personality and Social Psychology, 51*(2), 435–442.

Nunn, K. P., Lewin, T. J., Walton, J. M., & Carr, V. J. (1996). The construction and characteristics of an instrument to measure personal hopefulness. *Psychological Medicine, 26*(3), 531–545.

Paradise, J. E., Rose, L., Sleeper, L. A., & Nathanson, M. (1994). Behaviour, family function, school performance and prediction of persistent disturbance in sexually abused children. *Pediatrics, 93*, 452–459.

Parker, G., Tippling, H., & Brown, L. B. (1979). A parental bonding instrument. *British Journal of Medical Psychology, 52*, 1–10.

Pettigrew, J., & Burcham, J. (1997). Effects of childhood sexual abuse in adult female psychiatric patients. *Australian & New Zealand Journal of Psychiatry, 31*(2), 208–213.

Piers, E., & Harris, D. (1984). *Piers-Harris Children's Self-Concept Scale. Revised Manual*. Los Angeles, CA: Western Psychological Services.

Plunkett, A., O'Toole, B. I., Swanston, H., Oates, R. K., Shrimptona, S., & Parkinson, P. (2001). Suicide risk following child sexual abuse. *Journal of the Ambulatory Pediatric Association, 5*, 262–266.

Portegijs, P. J., Jeuken, F. M., van der Horst, F. G., Kraan, H. F., & Knottnerus, J. A. (1996). A troubled youth: Relations with somatization, depression and anxiety in adulthood. *Family Practice, 13*(1), 1–11.

Pribor, E. F., & Dinwiddie, S. H. (1992). Psychiatric correlates of incest in childhood. *American Journal of Psychiatry*, *149*(1), 52–56.

Read, J. (1997). Child abuse and psychosis: A literature review and implications for professional practice. *Professional Psychology: Research Practice*, *28*(5), 448–456.

Reynolds, C. R., & Richmond, B. O. (1978). What I think and feel: A revised measure of children's manifest anxiety. *Journal of Abnormal Child Psychology*, *6*(2), 271–280.

Romans, S., Martin, J., & Mullen, P. (1996). Women's self-esteem: A community study of women who report and do not report childhood sexual abuse. *British Journal of Psychiatry*, *169*(6), 696–704.

Seligman, M. E. P. (1992). *Learned optimism*. Sydney: Griffin Press.

Seligman, M. E., Abramson, L. Y., Semmel, A., & von Baeyer, C. (1979). Depressive attributional style. *Journal of Abnormal Psychology*, *88*(3), 242–247.

Silverman, A. B., Reinherz, H. Z., & Giaconia, R. M. (1996). The long-term sequelae of child and adolescent abuse: A longitudinal community study. *Child Abuse & Neglect*, *20*(8), 709–723.

Spaccarelli, S., & Kim, S. (1995). Resilience criteria and factors associated with resilience in sexually abused girls. *Child Abuse & Neglect*, *19*(9), 1171–1182.

Statistical Products and Service Solutions. (1993). *SPSS version 6.0 for Windows*. Chicago, IL: SPSS.

Stein, M. B., Walker, J. R., Anderson, G., Hazen, A. L., Ross, C. A., Eldridge, G., & Forde, D. R. (1996). Childhood physical and sexual abuse in patients with anxiety disorders and in a community sample. *American Journal of Psychiatry*, *153*(2), 275–277.

Stern, A. E., Lynch, D. L., Oates, R. K., O'Toole, B. I., & Cooney, G. (1995). Self-esteem, depression, behavior and family functioning in sexually abused children. *Journal of Child Psychology and Psychiatry*, *36*(6), 1077–1089.

Stock, J. L., Bell, M. A., Boyer, D. K., & Connell, F. A. (1997). Adolescent pregnancy and sexual risk-taking among sexually abused girls. *Family Planning Perspectives*, *29*(5), 200–203.

Swanston, H. Y., Tebbutt, J. S., O'Toole, B. I., & Oates, R. K. (1997). Sexually abused children 5 years after presentation: A case-control study. *Pediatrics*, *100*(4), 600–608.

Tebbutt, J., Swanston, H., Oates, R. K., & O'Toole, B. (1997). 5 years after child sexual abuse: Persisting dysfunction and problems of prediction. *Journal of the American Academy of Child & Adolescent Psychiatry*, *36*(3), 330–339.

Tennant, C. (1977). The General Health Questionnaire: A valid index of psychological impairment in Australian populations. *Medical Journal of Australia*, *2*, 392–394.

Waller, G. (1998). Perceived control in eating disorders: Relationship with reported sexual abuse. *International Journal of Eating Disorders*, *23*(2), 213–216.

Wilsnack, S. C., Vogeltanz, N. D., Klassen, A. D., & Harris, T. R. (1997). Childhood sexual abuse and women's substance abuse: National survey findings. *Journal of Studies on Alcohol*, *58*(3), 264–271.

Wind, T. W., & Silvern, L. (1994). Parenting and family stress as mediators of the long-term effects of child abuse. *Child Abuse & Neglect*, *18*, 439–453.

Wonderlich, S. A., Wilsnack, R. W., Wilsnack, S. C., & Harris, T. R. (1996). Childhood sexual abuse and bulimic behavior in a nationally representative sample. *American Journal of Public Health*, *86*(8 Pt. 1), 1082–1086.

Résumé

Objectif: Durant les années 1988–1990, 103 enfants se sont présentés au service de la protection de l'enfance de deux hôpitaux pédiatriques de Sydney, en Australie. Neuf ans plus tard, on a comparé l'ajustement psychologique des ces jeunes (âge moyen = 19, 1 ans; variant de 14 à 25 ans) avec celui de jeunes du même âge et sexe qui n'ont pas été abusés, pour évaluer les différences dans ces deux groupes et examiner les facteurs de risques possibles.

Méthode: Les cliniciens ont colligé des renseignements sur les mauvais traitements, les données démographiques et le milieu familial au moment de la prise de contact. On a créé un groupe de comparaison composé de jeunes enrôlés dans des écoles environnantes. Six ans après le contact initial, on a consulté

les dossiers de la protection de l'enfance afin de confirmer s'il y a eu des signalements subséquents. Neuf ans après la prise de contact, 49 victimes et 68 jeunes non abusés ainsi que/ou leurs parents ont été interviewés et évalués.
Résultats: Les jeunes qui ont été victimes d'abus sexuels démontrent des résultats moins favorables que les non victimes sur les tests psychométriques mesurant la dépression ($p =, 001$), l'estime de soi ($p =, 001$) le comportement (Child Behavior Checklist: $p =, 01$, Youth Self-Report: $p =, 01$; Young Adult Self-Report: $p <, 001$) et le désespoir ($p =, 001$). Les victimes étaient plus portés à avoir des fringales ($p =, 002$), à être boulimique ($p =, 02$), à fumer des cigarettes ($p =, 01$) et à prendre des amphétamines ($p =, 002$), la drogue extase ($p =, 02$) et la cocaïne ($p =, 004$). Le risque potentiel se manifeste dans deux groupes: la famille et l'enfant. Les facteurs familiaux sont le fonctionnement de la famille, les problèmes de drogue et d'alcool des parents, la mère victime d'agressions sexuelles dans le passé, la dépression chez la mère et le statut socioéconomique. Les facteurs pour l'enfant sont le désespoir et l'espoir, bon nombre de vécus pénibles, la façon dont il cote les soins prodigués par le père, des signalements antérieurs d'agressions sexuelles et le placement en foyer d'accueil par les autorités de la protection de l'enfance. Lorsque d'autres facteurs de risque sont présents, les agressions sexuelles prédisent de façon importante l'estime de soi, le comportement et les fringales.
Conclusions: Plutôt que de se pencher seulement sur les agressions sexuelles de l'enfant, le traitement devra aussi s'orienter vers le fonctionnement familial et les sentiments de désespoir de l'individu.

Resumen

Spanish-language abstract not available at time of publication.