

Development of sexually abusive behaviour in sexually victimised males: a longitudinal study

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Summary

Background Sexual maltreatment is one of the most common forms of child abuse. To identify risk factors for sexually abusive behaviour by adults, we prospectively assessed childhood experiences and personal characteristics of male child victims who became abusers in later life.

Methods In a longitudinal study (7–19 years duration), we included 224 former male victims of sexual abuse. Risk factors contemporaneous with the abuse, and putative protective influences, were identified from social service and clinical records. Evidence of later criminal acts was obtained from a nationwide search of official records.

Findings Of the 224 former victims, 26 had subsequently committed sexual offences (victim-abusers), in almost all cases with children, mainly outside their families. Risk factors during childhood for later offending included material neglect (odds ratio 3.4, 95% CI 1.2–9.7), lack of supervision (3.0, 1.1–8.3), and sexual abuse by a female person (3.0, 1.1–8.7). Victim-abusers had more frequently witnessed serious intrafamilial violence (3.1, 1.0–10.0). Six (29%) of 21 victim-abusers on whom we had relevant data had been cruel to animals (7.9, 2.0–31.4). No single putative protective factor, nor a composite protective index, significantly reduced the risk of paedophilic behaviour.

Interpretation Most male victims of child sexual abuse do not become paedophiles, but particular experiences and patterns of childhood behaviour are associated with an increased risk of victims becoming abusers in later life. Our findings have implications for the design of selective interventions with a vulnerable subgroup of male victims, aimed at reducing the risk of paedophilic behaviour in later life.

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Introduction

Sexual maltreatment is a common form of child abuse. Concerns that children might become victims of sexual abusers are having major effects on the behaviour of families in the western world. The perpetrators of such abuse are most likely to be male adolescents or adults,¹ known to the child, and members of the same household.² Estimates of the prevalence of child abuse vary from 3% to 37% in boys and from 7% to 53% in girls.³ The consequences of abuse for later mental health are substantial.^{4–6} Doubts have been raised about the effectiveness of education programmes aimed at teaching children self-protection skills;⁷ a more effective strategy could be to identify individuals at risk of becoming abusers, and to target them for preventive interventions.⁸ Being of male sex and having been a victim of sexual abuse in childhood are the most frequently cited risk factors for becoming an abuser in later life,^{1,9–11} and many professionals working with sexually abused children think that perpetrators of abuse were often themselves victims in childhood. Identification of childhood victims at greatest risk of subsequently abusing children would allow therapeutic resources to be directed more accurately and effectively than at present.

Investigations of the cycle of sexual abuse, and the causal link between involvement in sexual activity with an older person and subsequently becoming an adult who sexually abuses children, have relied on retrospective recall of childhood risk factors.^{12,13} We have assessed, from contemporaneous records, the early experiences and behavioural characteristics of men who had been sexually abused in childhood, before we obtained any evidence of later sexually abusive behaviour. In a catch-up prospective study, we obtained data by national record linkage for social and criminal outcomes for former male victims in early adulthood to allow identification of the proportion known to have sexually maltreated children in later life. Thus, we aimed to assess the risk and protective factors associated with former victims becoming abusers.

Methods

Participants

We used data from a consecutive series of male children who had been referred to a sexual abuse clinic in a teaching hospital between Jan 1, 1980, and Dec 1, 1992, and who were older than 18 years on May 1, 1999. We included people who had been sexually abused within or outside the household at the time of the original referral (mean age 11.0 years [SD 3.4]), but who had not at that time been known to have committed sexually abusive acts. There was no control group since the purpose of our study was to investigate within-group differences as predictors of subsequent sexually abusive behaviour. Ethics approval was obtained from the Research Ethics Committee of Great Ormond Street Hospital for Children

NHS Trust and the Institute of Child Health Research Ethics Committee.

Procedures

We identified objectively verifiable influences that might have increased the risk of a sexually victimised male becoming a perpetrator of sexual abuse in later life.⁹⁻¹⁷ We sought evidence for such risk variables by a nationwide search of clinical and social service case records that were contemporaneous with the original incident of abuse that brought the child to medical attention. Access to such records involved cooperation from almost every social services department in the UK. A computer program was devised to allow these qualitative data to be converted into quantitative scores, with each item linked to a time-line so that the temporal sequence of potential risk and protective events in relation to events of abuse could be established. An important feature of our method was that coding was not done at the time of record examination, but at a later stage by a team member who had not seen the original records.

Textual quotes relating to risk and protective factors were recorded verbatim, and indexed by the date of the document from which the information was extracted. The actual dates of the events could not be reliably ascertained. All quotes relating to a particular variable were linked. Subsequently, coding of this material was based on review of relevant quotes, translated into quantitative scores. Reliability of data extraction and coding were assessed before extraction and before coding. For dichotomous variables, a κ of at least 0.5 was required; for ranked variables, a Kendall's τ of 0.6 was required. Information for risk and protective factors was obtained only up to the first recorded episode of abusive behaviour by patients. For boys who had been victims but did not become abusers, data were obtained until their 16th birthday, or until the date at which their clinic or social services file had been closed, if that had occurred earlier.

We sought objective evidence of subsequent sexually abusive behaviour in our study group. We obtained caution and conviction data, from the police forces of England, Wales, and Scotland. Convictions are obtained if a finding of guilt is made in a magistrate or Crown court. Cautions are given to individuals by the police and do not constitute a finding of guilt, but are recorded in an individual's criminal record. Therefore, we searched the police national computer database and local police records (by hand) in every area that patients had been known to reside in since their initial attendance at hospital. We identified the areas in which individuals had initially resided from national health records, and traced subsequent addresses with the assistance of the Office of National Statistics. Accordingly, we crossreferenced information on offences committed since the original referral on local and national records. We also recorded all incidents of sexually abusive behaviour that were documented in files held by social services.

Definition of sexually abusive behaviour

We classed an individual as having committed sexually abusive acts if at least one of three sets of criteria were met: 1) they had received a caution or conviction for rape or indecent assault on an adult or child or for unlawful sexual intercourse with a child; 2) aged 12-16 years, sexual contact had been documented with a child younger than 16 years who was at least 2 years younger than them or who they had coerced, or both; and 3) aged 6-11 years, genital contact had been documented with a child at least

2 years younger than them in cases in which no coercion occurred, or there had been genital contact with coercion irrespective of age difference. The third criterion was distinguished from sex play with peers in the following way. We coded individuals aged 6-11 years as perpetrators of sexual abuse if we found a quote in clinic or social services files indicating any one of three types of behaviour. First, fondling the unclothed, or partly unclothed, genitals of another individual (who was 2 years younger than them or using force) on more than two occasions. Second, performing a penetrative sexual act on an individual who was 2 years younger than them or using force. Third, unspecified sexual abuse of an individual documented by a quote by a psychological health-care professional or a social worker. Sex play was defined as sexual contact that did not meet these criteria.

Risk and protective variables

Variables mediating outcome were classified on the basis of whether they were risks that had been experienced by the child, whether they were child behaviours believed to indicate risk, or whether they were protective factors. We selected seven key environmentally mediated risks on the basis of previous findings:¹⁶ sexual victimisation by a female person; experience of physical abuse; witnessing intrafamilial abuse; physical neglect (failure of provision of material resources); supervisory neglect (lack of supervision appropriate to child's age); rejection by carers (including evidence of emotional abuse); and discontinuity of care (indexed by parental separations, periods of care in children's home or foster home, or both). Additional variables indicating risk, defined in terms of the child's behaviour, included antisocial behaviour, fire setting, cruelty to animals, encopresis, and enuresis.

Protection was defined as an influence, independent of risk, which interacts with one or more risk factors to reduce their influence.¹⁸ A valid protective factor should have an effect on outcome only at high levels of risk. We assessed whether exposure to protective factors decreased the risk of sexually abusive behaviour in people who were otherwise at high risk. We constructed a protective index from variables shown to affect outcome in victims of sexual abuse:¹⁹⁻²¹ good relationship with an adult (ever); good relationship with a sibling (ever); good relationship with a peer (ever); years spent in foster care; non-abusive male carers by age 12 years; non-abusive female carers by age 12 years; length of time cared for by same carer; and number of care units experienced by age 12 years. A care unit was defined as a period of care by the same person or pair of people meeting the definition for main carer, which had lasted for at least 1 month. We rarely had access to standardised measures of intelligence, but we did have information concerning schooling and whether special educational needs had been invoked.

Statistical analysis

We reviewed the distributions of variables of interest in the main sample, and assessed the proportions of missing data for each risk and protective factor. We did cross-tabular univariate analyses to estimate crude odds ratios for categorical and ordinal variables on the subsample for who we had a complete data set. We then used cross-tabular stratified analyses to identify confounding and interactions among the variables. We used multiple logistic regression analysis to estimate adjusted odds ratios and sensitivity analyses to estimate the variability of these estimates depending on the inclusion and exclusion of differing variable and product terms in the models. We

used residual analyses to assess the fit of the multiple logistic-regression models. All *p* values are two-sided. We constructed a cumulative risk index, from putative environmental risk variables, and a protective index from putative protective factors. We ran a series of logistic regressions to test whether there was an interaction between indices. Whether an individual had become an abuser was treated as a binary outcome variable. Variables were centred before the product term was derived. In the first step of the regression, we simultaneously entered the risk and protective index. In the second step, we entered an interaction term based on the product of the risk and protection indices.

Role of the funding source

The funding source did not play any specific part in the study design, collection, analysis, or interpretation of data; in the writing of this report; or in the decision to publish these data. After funding had been provided, all contacts with the funding body (a division of the UK government) concerned practical issues—eg, facilitating access to official records on former patients.

Results

We included 224 adults who had been abused as children. At the time of their original referral, 139 of 218 individuals (64%; data missing for six) had been living with their family of origin. 18 of 131 (14%; data missing for 93) were of non-white ethnic origin. At follow-up, median age was 22.3 years (range 18.1–34.3). We were able to trace variables that might have increased the risk of becoming an abuser for 170 (76%) people.

We identified 26 (12%) victims who subsequently had become sexual abusers (victim-abusers). Of these, seven (27%) had received either a caution or conviction for a sexual offence. Of the remaining 19, we found documentary evidence of abusive behaviour that had commenced after their own victimisation. The mean age at which they had committed their first offence was 14.0 years (SD 3.3); seven had commenced offending after the age of 16 years. Only a few had recognised learning difficulties: 16 of 198 (8%) victims who did not become abusers (non-abusers) had a statement of special educational needs, compared with five of the 26 (19%) victim-abusers. At follow-up, the mean age of non-abusers was 22.8 years (3.7) and of victim-abusers was 23.1 (3.7).

14 (54%) victim-abusers had committed sexual acts involving penetration, the remaining 12 had committed acts of genital or non-genital physical contact. Seven (27%) had abused more than one victim, in one instance eight victims were identified. 16 of 17 victim-abusers had abused children (but no information for age of victims was available for nine perpetrators). Most victim-abusers had abused female people, either exclusively (48%, 12 of 25) or both sexes (24%, six of 25), and 28% (seven of 25) had abused male people only (data missing for one person). Six of 23 (26%) victim-abusers had abused family members, 15 of 23 (61%) had abused people outside the family, and only two of 23 (9%) had abused both family and non-family members (data missing for three people).

19 (73%) of the victim-abusers had committed a single sexually abusive act. The remaining seven had abused over a longer period. The mean duration of abusive behaviour, for those who had abused on more than one occasion, was 3.8 years (SD 3.2, range 0.25–7.7).

Victim-abusers were more likely than non-abusers to have committed non-sexual offences, especially crimes of violence. Six (23%) of the victim-abusers had been

cautioned or convicted for a violent offence (mean 1.3 [0.5] violent crimes per person) compared with 23 (12%) of non-abusers (1.9 [1.5] violent crimes per person). Slightly more victim-abusers had been convicted or cautioned for non-violent offences than had non-abusers (11 [42%] compared with 78 [39%], respectively), and had committed more crimes per person (mean 6.1 [6.2] compared with 4.7 [4.2]). 12 (46%) victim-abusers had also received a caution or conviction for another offence.

Risk factors

Since many families contained more than one victim, we randomly selected one male child from each family unit, to ensure independence of data for statistical analysis. Thus, we analysed information relating to 83 non-abusers. Data were available for only 21 of the 26 victim-abusers in sufficient detail to enable calculation of risk and protective factors. The table shows demographic characteristics, none of which significantly distinguished the two groups. The period during which we sought evidence of sexually abusive behaviour extended from the age at which we estimated the original abuse had occurred until May 1, 1999. This period was longer for victim-abusers than for non-abusers (mean 12.5 years [3.2] *vs* 10.9 [2.7], respectively; *p*=0.024). By contrast, the period during which we sought evidence for risk factors predisposing to abusive behaviour extended from birth until age 16 years, age at first sexual offence, or the end date of medical or social service records, whichever was earliest. This period was significantly greater for non-abusers (15.0 years [2.1]) than for victim-abusers (13.0 years [2.1]; *p*<0.0001), because such data collection ceased for victim-abusers at the time of their first offence.

About twice as many victim-abusers (eight [38%]) as non-abusers (14 [17%]) had been sexually abused by a female person (odds ratio 3.03; 95% CI 1.1–8.7). Similar proportions of non-abusers (52 [63%]) as victim-abusers

	Non-abuser (n=83)	Victim-abuser (n=21)	<i>p</i>
Characteristic			
Age at follow-up (years [mean, SD; range])	21.7 (2.8; 18.1–30.8)	23.3 (4.3; 18.1–32.2)	0.11
Age at time of referral (years [mean, SD; range])	10.7 (3.0; 4.6–16.5)	10.7 (3.7; 5.0–19.3)	0.94
Ethnic group*			0.47†
White	42 (84%)	17 (94%)	..
African-Caribbean	3 (6%)	1 (6%)	..
Asian	1 (2%)	0	..
>1 ethnic group	4 (8%)	0	..
Living arrangements at referral			0.41
Family	54 (65%)	11 (52%)	..
Children's home	15 (18%)	5 (24%)	..
Foster home	14 (17%)	5 (24%)	..
Geographical location at referral			0.13‡
Greater London	31 (37%)	8 (38%)	..
Southeast England	42 (51%)	7 (33%)	..
Other parts of UK	10 (12%)	6 (29%)	..
On child protection register	42 (51%)	12 (57%)	0.77
Special educational needs	14 (17%)	5 (24%)	0.68
Received psychological treatment	42 (51%)	8 (38%)	0.44

*Data missing for 33 non-abusers, three victim-abusers. †For the purpose of this calculation, ethnic origin was coded as a dichotomous variable (white/non-white) because of small cell sizes. ‡For the purpose of this calculation, living arrangements at referral was recoded as a dichotomous variable (living with family/not living with family) because of small cell sizes.

Demographic characteristics of victims of child sexual abuse, and subsequent perpetrators of abuse (risk and protection sample only)

(16 [76%]) had been subjected to some degree of physical abuse (1.9; 0.6–5.7). Within this sample of physically abused children, ten of 16 (63%) victim-abusers and 24 of 52 (46%) non-abusers (between-group *p* not significant) had experienced severe beatings, including marks to the head, attempts to choke or smother, second-degree burns, and comparable injuries. 17 (81%) victim-abusers had witnessed intrafamilial physical violence, compared with 48 (58%) non-abusers (odds ratio 3.1; 95% CI 1.00–10.0). The severity of the physical violence witnessed was ranked (according to a predefined scale) and non-parametric analysis showed that victim-abusers had witnessed more intense violence than non-abusers (*p*=0.004). Abuse had almost always been perpetrated by their mother's male partner on their mother.

Victim-abusers (15 [71%]) were significantly more likely than non-abusers (35 [42%]) to have been physically neglected (odds ratio 3.4; 95% CI 1.2–9.7). A significantly higher proportion (14 [67%]) of victim-abusers had experienced serious supervisory neglect compared with non-abusers (33 [40%]; 3.0; 1.1–8.3). Rejection by carers was recorded for 35 (42%) non-abusers and 12 (57%) victim-abusers (1.83; 0.70–4.8). Discontinuity of care had been experienced by more than 90% in both samples and did not differ between groups (2.13; 0.25–18.0).

Six (29%) victim-abusers had been cruel to animals, compared with four (5%) non-abusers (7.9; 2.0–31.4), and victim-abusers were more likely to have been encopretic (2.8; 1.0–8.8). We cannot be certain of the timing of either of these behaviours in relation to specific incidents of sexual abuse, nor can we ascertain whether the abuse preceded the behaviours.

Boys who subsequently went onto abuse others had not been victims of more serious abuse, in terms of acts of penetration, than non-abusers, nor were they more likely to have been the victims of multiple abusers. There were no differences between the groups in terms of the length of time that they had lived with a sexually abusive individual (proxy for duration of abuse, which could rarely be precisely established); mean 5.7 years, SD 4.6, range 1 month to 16.0 years. Nor were the groups (total *n*=104) distinguished in terms of whether the original abuse had been by their main carers (76 of 104 [73%]), who were not necessarily biological relatives, or by people who had never been responsible for care of the index child (28 [27%]).

Risk index score was a predictor of whether or not victims would become abusers (*B*=0.19, *SE*=0.07, *p*=0.005), but protective index score was not (–0.12, 0.08, *p*=0.16). The interaction between risk and protection, which specifically tests for the presence of protective factors, was not significant (0.05, 0.03, *p*=0.07). Although age at follow-up varied widely (range 18.1–32.2 years), addition of age into analyses as a first step did not affect outcome. None of the individual protective factors from the protective index interacted significantly with the risk index.

Discussion

Our results show that the risk of childhood victims of sexual abuse becoming abusers themselves is lower than previously thought,⁹ despite the fact that cases referred to the specialist clinic were almost certainly more severe and complex than community cases. A strength of our study design is that putative risk and protective factors were taken from contemporaneous records that were written before the victim of sexual abuse had committed his first offence. In many cases, we were able to obtain data on

risk that pre-dated the first record of sexual abuse experienced by the child, since families had already been known to social services for other reasons.

Sexual offending usually begins in adolescence,²² therefore, the fact that men in our sample who are known to have abused others began to do so at a mean age of 14 years is not surprising. In another retrospective investigation, in which adolescent sexual abusers were compared with victims, we reported¹⁶ significantly increased odds ratios for a few risk variables, which included witnessing and experiencing intrafamilial violence and discontinuity of care. Our current results reinforce the importance of intrafamilial violence as a potential mediator between being a victim and perpetrator of sexual abuse.

Our results are consistent with studies in which data were retrospectively obtained. Parallels between our findings and others include the relevance of parental emotional rejection,²³ the effect of experiencing and witnessing physical violence,^{21,24} and lack of material care or neglect.²¹ A retrospective clinical case note review of adults attending a specialist forensic psychotherapy service⁹ noted further influences on later abusive behaviour that were similar to our results. In that study, many men who had been abused in childhood by a female relative subsequently became abusers. This finding is confirmed in other work in which abuse of boys by female relatives was hypothesised to be more likely to contribute to the victim becoming an abuser than abuse by male relatives or by people outside the family.¹³ Our finding that 52% of sexual offenders had been cautioned or convicted for non-sexual offences is consistent with earlier reports. For example, Ryan and colleagues²¹ noted that nearly two-thirds of sex offenders had committed a range of crimes against people and property. Our findings did not support the commonly reported belief that the greater the severity of abuse, the greater the risk to the victim.²⁵ Nor did they support the view that boys with learning difficulties were more likely to become sexual abusers.

Our study has several limitations. We cannot comment on the risks of subsequent sexually abusive behaviour of men who were not victims of sexual abuse in childhood. Unlike the study by Widom and Ames,²⁴ with a similar prospective cohort design to our current study, we did not have a non-abused comparison group, and the risk of becoming a sexual abuser among children referred to the same clinic for physical or emotional abuse is not known. On the other hand, by contrast with that study, we have been able to trace criminal and social services records at a national level, which is important given the mobility of our cohort.

Another limitation is the significant difference between the abused and non-abused groups in the duration of time for which we collected data on acts of sexually abusive behaviour. Because this period was slightly longer (by 15%) for subsequent abusers, a systematic bias could have arisen and non-abusers might have become abusers in due course. We cannot discount this hypothesis, but regard it as unlikely for several reasons. First, the group difference is not relevant to the underlying hypothesis that certain environmental or personality risk factors render some boys who were abused more likely to sexually abuse children in later life. The period during which data for exposure to risk was obtained was significantly longer for non-abusers than victim-abusers, because risk for the latter group ceased at the time of their first abusive behaviour. Yet non-abusers were exposed to significantly fewer risk factors than victim-abusers, and these factors are consistent with the findings of previous studies.

Second, by the time we ceased data collection, most non-abusers and abusers were older than 20 years, and all abusers had committed their first sexual offence before that age. However, we cannot discount the possibility that a subset of apparent non-abusers might have become sexual offenders in later life, and that a different set of risk factors than those we describe could be relevant. We included only sexually abusive acts that definitely occurred after victimisation, and for which associated contemporaneous risk factors could be measured. Despite this precaution, there was inevitably imprecision about the dating of events. For example, we were rarely able to establish exactly when the original abuse of the children in our study began or ended.

We do not know how generally applicable our findings are. We do not know what proportion of cases of sexual abuse identified in the London area during the period 1980–92 were referred to our specialty service. We do not know the extent to which we have underestimated the proportion of sexual abusers among those followed up into adulthood. Some might have committed offences that have never been detected. Twice as many of the offences we identified were committed outside families as were committed within families. Therefore, these offences might have been more likely to come to official attention. We did a small follow-up study, in which we directly interviewed a sample of 29 formerly abused young men at a mean age of 23.8 years (SD 4.4). This sample was drawn from the larger database of formerly sexually abused boys, for whom we had police records but incomplete social services records, and therefore could not calculate precise risk and protection indices. We knew that 12 people we interviewed had committed offences against children, although they were unaware that we possessed this information. In a wide-ranging, semistructured interview four (33%) admitted to such offences. Of the 17 individuals not known to have abused others, two (12%) admitted to having committed sexual offences; both were in the high-risk group according to family-history data. In studies of adult sexual offenders, many report having previously been a victim of sexual abuse (or at least claim to be a victim), and this proportion is significantly greater (around 50%) for sexual than non-sexual offenders (15–20%).^{26,27}

The limited sample for which we had data on both risk and protective factors has reduced the power of analyses to identify a significant interaction between these variables. Accordingly, we cannot state with certainty that previously reported protective factors are erroneous, as there is a possibility our analyses disguise a type 2 error. The negative finding on protection should not be interpreted to mean that protective factors never offset risk. In particular, too few victims had entered structured treatment programmes for us to assess the effect of therapy on risk. Other potential risk factors, including parental mental health and criminal record and measures of child adjustment, had rarely been measured contemporaneously, and thus could not contribute to our analysis.

Some misclassification of some individuals' perpetrator status could have occurred. Perpetrator status was classified in accordance with criminal records, social services files, and clinical records. All three data sources are likely to be incomplete. Criminal records could be incomplete since individuals might have become sexual abusers without the knowledge of the police or without sufficient evidence for a caution or a conviction. We scanned criminal record databases at only one time point. Individuals who subsequently displayed sexually abusive

behaviour would have been missed by the study, even if the police had been aware of later offences. Social services data would have recorded sexually abusive behaviour only if the perpetrator had been younger than 18 years (ie, a child) at the time of the offence. Both caution and social services records could have been incomplete because of incomplete tracing of individuals' movements. Movements were tracked with the aid of the Office of National Statistics. We identified family doctors with whom people in our study had registered, but this would not have detected unregistered individuals; people who are sexually deviant might be likely to remain unregistered and thus undetected.

Caution records are held by police forces local to where the offence occurred. Some police forces were more efficient than others at removing expired cautions from their databases. Cautions, even for sexual offences, do not remain permanently on an individual's criminal record. They expire after a period, or when the offender attains a certain age, which varies between regional forces. Until April, 1996, the Metropolitan Police (Greater London) kept caution records for 3 years (now 5 years) or until the individual turned 18 years old, whichever was longer. In other forces, caution records are kept for a maximum of 5 years, irrespective of the perpetrator's age.

Statements concerning sexual offending obtained from clinical and social services records might be less valid than police records. Social workers require less evidence than the police do to record a suspected sexually abusive act. Including these sources of data could have increased the sensitivity of the perpetration classification system, but reduced its specificity. On the other hand, results of our follow-up interview study suggest a bias toward underestimation of risk is more likely than false-positive identification of abusers.

To set the figure of 12% of formerly abused boys becoming abusers within a broader context, there are currently 18 513 men on the Sex Offenders Register of Great Britain (MultiAgency Public Protection Arrangements Annual Report, 2001–02). There are additionally 27 477 offenders who have committed violent or other sexual offences but who are not required to register. The population of men older than 16 years is 22 230 000 (data from Statbase, a UK government database). Therefore, the proportion of offenders on the register as a proportion of the male population is about 0.08% at a minimum, increasing to 0.21% if the additional offenders are included. Data indicate that 7% of the UK's male population have been victims of contact sexual abuse.²⁸

Public concern about paedophilia is rising. Our results suggest that other early life experiences can substantially increase the risk of subsequent sexually abusive behaviour, above and beyond the fact of sexual victimisation. With a greater understanding of the potential mechanisms underlying continuities in sexual abuse, from adolescence to adulthood, comes the possibility of designing more effective preventive intervention programmes. Our findings are of potential importance to a wide range of medical and other specialists who become professionally involved with both the victims and perpetrators of child sexual abuse.

Contributors

D Skuse and A Bentovim began the investigation; A Bentovim is the clinician to whom cases were referred upon discovery of sexual abuse. D Salter and D McMillan made equivalent, original, and substantial contributions to study design, data collection, and data management, and wrote most of the paper. M Richards and T Talbot negotiated with police and social services authorities, and helped obtain data from these sources.

J Hodges helped to develop, and analysed, measures for clinical information. R Hastings and J Stevenson were involved at all stages in the design of databases and in statistical analysis.

Conflict of interest statement

None declared.

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