Does child abuse influence subsequent sexual behaviour and risk of AIDS?

Sir – We are concerned about the prevalence of child sexual abuse in Italy. It is approaching 5%, which is similar to estimates (from 1–5%) for other western societies.¹ This implies that in Italy about 450 000 children aged 0–14 years are already or will become sexually abused each year. It has been estimated that in 1994 in the USA about three million children were abused.²

We are also concerned about the effect that this abuse may have in later life. Indeed, sexually abused children exhibit behavioural indicators such as: bizarre, sophisticated, or unusual sexual behaviour or knowledge; seductive or promiscuous behaviour; poor peer relationships; prostitution; forcing sexual acts on other children; truancy; and self-injurious behaviour.³

In a national survey concerned with sexual behaviour which was based on a random sample of young Italian adults in 10 cities, there was a specific question about child abuse.¹ The anonymised questionnaire was posted to a randomly selected sample of 8404 men and women – 1% of the total population aged 19–24.

Altogether 2776 questionnaires have been returned completed so far. A possible association between child abuse and risk behaviour, was sought for among the 1339 males. Sixty four (4.7%) of them had experienced sexual abuse during childhood. Even given the limitations of the data obtained, the prevalence of child abuse that is nearly 5% is alarming.

More of those who were abused in childhood were already sexually experienced (86%) than those not abused (68%) (odds ratio (OR) = 2.97, 95% confidence interval (95% CI) 1.27,6.96). They were also more likely to have engaged the services of a prostitute (23% versus 11%) (OR = 2.35, 95% CI 1.28,4.31). Even when only those males who were homosexually experienced were considered, those who had been abused had an OR of 2.27 (95% CI 1.21–4.26) for having experienced sex with prostitutes (29% versus 15%). The tendency to use prostitutes seems to be independent of the tendency to be sexually experienced. Although based on relatively small numbers, the chance of developing homosexual or bisexual tendencies is markedly increased (9.4% versus 0.5%) (OR = 22.38, 95% CI 6.63,75.49). These activities are also known risk factors for HIV infection.

It seems from these preliminary results that sexual abuse in childhood is a trauma which has a lasting effect on psycho-sexual development in adolescence and ultimately in adulthood. Although, the data should be considered with caution because of the possibility of confounding, campaigns aimed at limiting child sexual abuse may have important consequences for AIDS prevention as well.

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Decline in sex ratios at birth, England and Wales, 1973–90

Sir – In reply to W J James’s letter in the December 1996 issue of the Journal,¹ we wish to point out the following. We originally analysed the sex ratio for the period 1950–92 using logistic regression and found a significant linear decreasing trend, even after allowing for the proportion of births to older mothers, who are known to be more likely to produce girls.² This time period was chosen before inspection of the data: we had been comparing the sex ratio of births in Cumbria for the period 1950–89 with the national sex rate³ and had extended our consideration of the national figures to the most recent year for which the proportion of births to older mothers was available.

James⁴ observes that the sex ratio is no longer falling so we repeated our analysis for the period 1950–94 and found that the significant linear trend remained with the same odds ratio (OR) and 95% confidence intervals (95% CI) as for the period 1950–92. The proportion of births to mothers over 35 years is known only for the period 1950–93 and, including this proportion as a possible explanatory variable as before, the decreasing trend remains significant with the odds ratio as before but a slightly narrower confidence interval (95% CI: 0.9996, 0.9997).

We further tested whether the increase in sex ratio during the period 1990–94 was significant. Using logistic regression as before, we found a significant linear trend (p = 0.01) with an OR of 1.002, (95% CI: 1.000,1.003). However, the significance levels associated with a statistical test such as this, with the time period to be tested chosen after inspection of the data, are not valid and the real significant levels are less extreme. So in this case there is no evidence, as yet, that the increase has occurred other than by chance.

Similarly, James, referring to his recent paper,² states that sex ratios of white births in the USA rose during the years 1965–75 and fell during the years 1975–88. Unfortunately, no results of any statistical analysis were reported, the conclusions being inferred from visual inspection of the data. Without the data we were unable to check whether these trends were statistically significant.

Although it is accepted that increased cotralate increases the sex ratio,³ there is no evidence that this mechanism operates at a population as opposed to an individual level. James⁴ refers to reports that the cotralate rate in the US increased by 22% in the period 1965–75 when the sex ratio was increasing and decreased by 27% in the later period, 1975–88; although the accuracy of such reports may be open to speculation. No statistical analysis has been presented to indicate whether there is a significant correlation between these changes in cotralate rates and the sex ratio in the US and, indeed, any such analysis, referring to changes in the cotralate rate over two consecutive periods rather than the cotralate rate in each year, would be unreliable as it would be based on only three points, in this case, the years 1965, 1975, and 1988.

James points out that whereas Williams et al⁴ reported a lowered sex ratio in association with pollution, Lloyd et al⁵ reported the opposite effect. The former study referred to pollution from an incinerator and the latter to pollution from a steel foundry. It is possible that different chemicals might affect the sex ratio in different directions or that both observations are chance findings.

Further investigations of the fluctuations of the sex ratio ideally require analysis over a much longer period of time, using time series methodology and including covariates known for each year.

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6 Williams P LR, Lawson, AB, Lloyd OL. Low sex ratios of births in areas at risk from air pollution from incinerators as shown by geographical analysis and 3-dimensional mapping. Int J Epidemiol 1992;21:311–19.

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6 Williams P LR, Lawson, AB, Lloyd OL. Low sex ratios of births in areas at risk from air pollution from incinerators as shown by geographical analysis and 3-dimensional mapping. Int J Epidemiol 1992;21:311–19.