

SHORT REPORT

Record linkage of domestic assault victims between an emergency department and the police

Adrian Boyle, James Kirkbride, Peter Jones

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Community surveys show that domestic violence is a common problem affecting about 5% of the population each year.¹ Around 1% of emergency department visits in the UK are attributable to domestic assault.^{2,3} The British Home Office estimates that 2.9 million domestic assault injuries occur every year in the UK.¹ It is not clear how many domestic assault victims who present to an emergency department also have their assault recorded as a crime by the police. We aimed to identify what proportion of cases presenting at the emergency department had their assault recorded by the police and what the completeness of these lists were.

METHODS

We compared confidential lists of recorded domestic assault victims from the Cambridgeshire and Essex constabularies with a list from the emergency department of Addenbrooke's Hospital, Cambridge, over 2001. Cases were excluded from the study if the postcode fell outside the catchment area of the emergency department. The reliability of the cases at the emergency department was substantial ($\kappa = 0.8$). Capture/recapture techniques were used to estimate the completeness of the lists.

Imputed estimate of
the total number of cases

$$= \frac{\text{Cases appearing on the first list} \times \text{cases appearing on the second list}}{\text{Cases appearing on both lists}}$$

Completeness of a list

$$= \frac{\text{Number appearing on either list}}{\text{Imputed estimate of the total number of cases}} \times 100$$

RESULTS

Fourteen cases appeared on both lists, including three men (table 1).

Cases appearing on both lists were matched on both sex and name. Other matching variables and combinations produced similar estimates. The mean index of deprivation (measured ecologically by postcode) and mean age (33 years) were practically similar in cases presenting to either or both

agencies. Severity of injury at the hospital, as measured by admission to hospital, outpatient follow up, or discharge did not seem to predict recording by the police (table 1).

DISCUSSION

Our results show that most domestic assaults are not reported to either agency and that most domestic assaults presenting to the emergency department are not recorded as crimes by the police. The British Crime Survey found that 12% of victims of domestic violence would report their assault to the police and 10% would report their assault to medical staff, but is potentially compromised by recall bias.¹ Our study shows similar estimates using a more efficient method. Ten per cent of domestic assaults recorded by the police result in conviction.⁴ This implies that less than 1% of domestic assault who present to an emergency department will lead to conviction, assuming there is no dependence.

There are a number of limitations to this study. Poor documentation in the emergency department in cases of domestic violence has been identified before.⁴ Other analyses included cases that were possibly attributable to domestic violence. Estimates from this were similar.

Record linkage techniques have been criticised, particularly when only two lists are examined.⁵ Positive dependence (that is, appearing on one list improves the chances of appearing on another list) between the lists is unlikely in this case as the number of matches is so low. Negative dependence is

What this paper adds

- Routine data can be used with record linkage techniques to estimate assault rates similar to surveys
- Most domestic assaults reported to emergency departments are not recorded as a crime by the police

Policy implications

Interventions for victims of domestic violence should be easily available at both police and emergency departments

Table 1 Estimated completeness

All cases/n	Female/male	Imputed completeness of list (%)	95% Confidence intervals
ED/158	91/67	5.3	3.9 to 10.4
Police/263	201/62	8.8	6.0 to 17.3
Police and ED lists combined with duplicates excluded/407	281/126	13.7	9.2 to 17.3

theoretically possible, but it seems implausible that an emergency department and police would discourage a person from seeking help at another agency. Human populations are rarely closed, but our cross sectional approach should mitigate against that. Our sample is drawn from a single emergency department and the external validity may be questioned, although the consistency of our estimate with findings of other studies would argue otherwise. Our results did not generate prevalence data as the denominator population of the catchment area is uncertain, however significant proportions of patients attend emergency and police departments a substantial distance from their home residence, and an estimate of the completeness of the list is useful information.

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Authors' affiliations

A Boyle, J Kirkbride, P Jones, Department of Psychiatry, Addenbrooke's Hospital, Cambridge, UK

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Correspondence to: Dr A Boyle, Department of Psychiatry, Box 189, Addenbrooke's Hospital, Hills Road, Cambridge CB4 6DU, UK; boylea@doctors.org.uk

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