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EDITED BY TOM FAHY

Number needed to detain

Sir: In his introduction to risk assessment Conor Duggan (1997) clearly demonstrates how the predictive values of any test, with a given specificity and sensitivity, are likely to change as the base-rate of violence in the population under study changes. In his example the positive predictive value is much better in a population at high risk of future violence, such as a special hospital population, compared with one where violence is much less commonly found, such as in general adult psychiatry. Thus, in his example in the high-risk population, the test identifies nine of the 10 individuals who go on to commit violence at the expense of identifying five false positives. In the low-risk population the nine individuals are identified at the expense of 59 false positives.

I would like to introduce a concept – the number needed to detain (NND) – to act as a summary measure of the number of individuals who need to be detained over one year to prevent one offence, on the assumption that only those assessed as being at high risk of offending are detained. Statistically the NND is the inverse of the positive predictive value.

The concept of the NND is derived from the statistic 'the number needed to treat' (NNT) which has gained wide acceptance over the past few years as a measure of treatment effect (Cook & Sackett, 1995). Thus in Conor Duggan's example in the special prison population the NND is 1.56 (14/9), that is less than two individuals need to be detained to prevent one offence, whereas in general adult psychiatric practice the NND is 7.56 (68/9), that is nearly eight people need to be detained to prevent one offence.

I would recommend the use of the NND to psychiatrists having to explain why they did not detain a patient who subsequently went on to commit an offence. For example they may be able to demonstrate that when the decision was taken on the basis of the individual's base-rate risk of violence and the consequent predictive value of the best risk assessment, that the NND was estimated to be 100 individuals for one year. This dramatically illustrates the ethical dilemma they were faced with.

Cook, R. J. & Sackett, D. L. (1995) The number needed to treat: a clinically useful measure of treatment effect. *British Medical Journal*, **310**, 452–454.

Duggan, C. (1997) Introduction. In *Assessing Risk in the Mentally Disordered* (ed. C. Duggan). *British Journal of Psychiatry*, **170** (suppl. 32), 1–4.

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Social course of schizophrenia

Sir: We are disappointed that the recent article by Craig *et al* (1997) on the outcome of schizophrenia in different countries did not take the opportunity to substantively move the debate forward. They resort, instead, to the use of a very large methodological hammer (i.e. recursive partitioning) to make the point – made previously in the work of Edgerton & Cohen (1994) as well as others – that the developing/developed site dichotomous variable is of questionable value in understanding the sociocultural factors that shape the course and outcome of schizophrenia.

It would have been preferable if Craig *et al* had addressed some of the important issues raised by the DOSMD research rather than offering what is no more than a minor modification of the original results. A more ambitious re-analysis of the WHO DOSMD data might have examined how locally shaped methods of case-finding and the methodological problems they create may have affected the clinical and social characteristics of patients at a number of sites. The authors have not critically examined the question of better outcome for women. Why should one expect better outcomes for women in Chandigarh when, by even a cursory reading of the literature, it is obvious that women's health and social status in Northern India are relatively poor? The authors also fail to consider how recent epidemiological work may change our notions about the WHO DOSMD data.

However, Susser *et al* (1996) have demonstrated the possibility that acute brief psychoses may constitute a distinct diagnostic category different from that of schizophrenia. If that proves to be true, and given that the developing sites had an incidence rate of acute brief psychosis that was tenfold greater than was to be found among the developed sites, it means that the DOSMD investigators, to a large extent, may have been comparing the course and outcome of different conditions, that is schizophrenia for patients in the developed sites and acute brief psychoses for patients in the developing sites. Finally, and perhaps most disappointing, is that a paper that purports to be sensitive to sociocultural issues assumes gender and marital status (see also Jablensky & Cole, 1997) to be variables that have "inherent validity and reliability" even though the discipline of anthropology offers abundant evidence to the contrary. Leaving aside the question of whether the institution of marriage is the same in these locales, let us examine, briefly, a demographic reality. There is, in the Indian sub-continent, and Northern India in particular, a population imbalance. There are significantly more men than women. The same is true in Nigeria, although not to the same extent. Surely, this imbalance implies that the sociocultural worlds in which gender roles are defined and shaped are very much different in Northern India and Nigeria than in locales where there is no significant difference in the population gender ratio.

Craig, T. J., Siegel, C., Hopper, K., et al (1997) Outcome in schizophrenia and related disorders compared between developing and developed countries. A recursive partitioning re-analysis of the WHO DOSMD data. *British Journal of Psychiatry*, **170**, 229–233.

Edgerton, R. B. & Cohen, A. (1994) Culture and schizophrenia: the DOSMD challenge. *British Journal of Psychiatry*, **164**, 222–231.

Jablensky, A. & Cole, S. W. (1997) Is the earlier age at onset of schizophrenia in males a confounded finding? Results from a cross-cultural investigation. *British Journal of Psychiatry*, **170**, 234–240.

Susser, E., Finnerty, M. T. & Sohler, N. (1996) Acute psychoses: a proposed diagnosis for ICD-10 and DSM-V. *Psychiatric Quarterly*, **67**, 165–176.

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