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Homicidal behaviour and mental disorders

SIR: The important study of Modestin & Ammann (1995) includes some misleading conclusions. The writers emphasise that “women with mental disorders . . . were no more likely than controls to have committed violent crimes”. Their data shows that the female psychiatric in-patients committed six violent crimes whereas the controls committed none. Although the statistical test used by the authors did not indicate statistical significance, this may be a type I error. The authors also conclude that schizophrenia and affective disorders do not elevate the risk of violent behaviour, but alcoholism does. However, among men, the odds ratios for violent crimes was 3.1 for schizophrenia and 8.8 for affective disorders. The fact that 99% confidence intervals were very wide (lower ends below 0.6) was due to the small number of subjects, and therefore, the authors’ conclusion on major mental disorders and the risk of violent behaviour is dubious. The authors’ conclusion that “mental disorders . . . do not contribute to criminal behaviour” cannot be verified in a statistically significant way (with 99% CI) to be true or false in their relatively small sample.

We have analysed all forensic psychiatric examinations conducted on persons charged with a homicide during several years in Finland. Our results indicate that schizophrenia is associated with up to a 10-fold risk of committing a homicide among women (OR 10.8; 95% CI 5.5–21.3) and with about a 7-fold risk among men (OR 6.7; 95% CI 2.7–16.3). The odds ratio for alcoholism was about 16 (OR 16.0; 95% CI 11.3–22.6) among

men and about 50 (OR 48.8; 95% CI 33.5–71.2) among women, when compared with the general population (Tiihonen *et al*, 1993; Eronen, 1995). The lower ends of 95% CI were clearly above 1.0 which indicates that the risk increase is significant at the 95% level. In a recent Finnish 3-year sample of homicide recidivists all offenders were type 2 alcoholics (85%) or schizophrenics (15%) (Tiihonen & Hakola, 1994) which also indicates that schizophrenia and the combination of alcoholism and personality disorders are the most important mental disorders causing homicidal behaviour.

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- TIIHONEN, J., ERONEN, M. & HAKOLA, P. (1993) Criminality associated with mental disorders and intellectual deficiency. *Archives of General Psychiatry*, **50**, 917–918.
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Seizure threshold in bilateral and unilateral ECT

SIR: Abrams *et al* (1973) reported shorter seizure durations with unilateral compared with bilateral ECT, and this has been confirmed by Weiner (1980). The general consensus of opinion is that bilateral ECT is associated with longer seizures compared with unilateral treatment. In addition, as seizure threshold increases, the seizure duration decreases and vice versa. However, the recent College video on ECT states that bilateral ECT is associated with an increased seizure threshold compared with unilateral treatment, and this is reiterated in the accompanying handbook. We would welcome clarification on this by the Special Committee on ECT as we are involved with the teaching of ECT to junior psychiatrists and regularly use both the video and handbook as a teaching aid.

- ABRAMS, R., VOLAVKA, J. & FINK, M. (1973) EEG seizure patterns during multiple unilateral and bilateral ECT. *Comprehensive Psychiatry*, **14**, 25–28.

WEINER, R. D. (1980) The persistence of electroconvulsive therapy induced changes in the electroencephalogram. *Journal of Nervous and Mental Disorders*, **168**, 224–228.

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REPLY: Well designed studies that control for stimulus intensity do not support the suggestion that bilateral ECT leads to either longer convulsions or cerebral seizure activity measured by electroencephalogram than unilateral ECT (Sackeim *et al*, 1987; 1993). The study by Abrams *et al* (1973) concerned multiple monitored ECT where three or four electrical stimulations were applied about two minutes apart during prolonged anaesthesia and is of uncertain relevance to the contemporary practice of ECT. Weiner (1980) did not report original data to support the suggestion that bilateral ECT leads to longer cerebral seizure activity.

Bilateral ECT with the bifrontotemporal placement is associated with a higher seizure threshold than right unilateral ECT with d'Elia's placement at the outset of treatment and throughout the course of treatment. The original data in support of this statement and possible explanations are given in the reference cited in the accompanying handbook (Sackeim *et al*, 1991).

ABRAMS, R., VOLAVKA, J. & FINK, M. (1973) EEG seizure patterns during multiple unilateral and bilateral ECT. *Comprehensive Psychiatry*, **14**, 25–28.

SACKEIM, H. A., DECINA, P., KANZLER, M., *et al* (1987) Effects of electrode placement on the efficacy of titrated, low-dose ECT. *American Journal of Psychiatry*, **144**, 1449–1455.

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Late-life depressive disorder

SIR: While Van Ojen *et al* (1995) make use of large numbers of subjects and use the AGE-CAT

diagnostic system, which is to be commended, there do appear to be a number of drawbacks to their study.

Firstly, one has to question the validity of MMSE scores of less than 26. This is at best a fairly crude screening tool for evaluating cognitive function. Furher *et al* (1992) conclude their study by stating that functional impairment has “a basic confounding effect on cognitive state” as measured by the MMSE in depression in elderly subjects. The CAMDEX schedule does contain sections relating to functional ability, but in this study, only part of it was used.

Van Ojen *et al* also state that a correlation exists between severity of depressive symptoms and cognitive function, but this was only significant in male subjects in the Furher *et al* study. A further area of concern would be the omission of the prevalence of prescribed medication; 80% of subjects over 65 regularly take prescribed medication, and the effect of this cannot be ignored in relation to cognitive function. Similarly, ethnicity and level of anxiety would also be sources of error in the MMSE.

To assume that depression in old age, in the absence of past psychiatric history, is primarily due to “prodromal” Alzheimer's disease appears to be a gross over-simplification. From the organic point of view Rabins *et al* (1991) demonstrated diffuse subcortical abnormality on the MRI in depressed subjects, but concluded that this was unlikely to be an early dementing process, and that it is likely that there are organic changes specific to depression.

FURHER, R., ANTONUCCI, T., GAGNON, M., *et al* (1992) Depressive symptomatology and cognitive functioning: an epidemiological survey in an elderly community sample in France. *Psychological Medicine*, **22**, 159–172.

RABINS, P., PEARLSON, G., AYLWARD, E., *et al* (1991) Cortical magnetic resonance imaging in elderly inpatients with major depression. *American Journal of Psychiatry*, **148**, 617–620.

VAN OJEN, R., HOOPER, C., BEZEMER, D., *et al* (1995) Late-life depressive disorder in the community I & II. *British Journal of Psychiatry*, **166**, 311–319.

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AUTHORS' REPLY: Among elderly community members, impairments in the functional, cognitive, and effective realm may be entangled. In order to disentangle the interrelationships our research group has recently commenced the analysis of follow-up data describing groups of elderly subjects with either functional or cognitive impairment, depression and anxiety, combinations of these or no