

Comment on Paper by Cohen, Patel, Thara, and Gureje

Julian Leff^{1,2}

²Institute of Psychiatry, Kings College London

Methodological Issues

I agree with the authors' criticism of the use of the dichotomy between developed and developing countries, partly because of the difficulty in defining these terms and partly due to the myriad different social, cultural, and economic factors subsumed by them. While "low income" and "middle income" can be reasonably accurately defined, they also encompass a great diversity of factors, both within and between countries. In addition, the authors have aggregated 23 studies including prevalence and incidence samples and prospective and retrospective designs. They acknowledge that a meta-analysis is ruled out by this diversity of sampling procedures and methods but nevertheless proceed to treat these studies as providing equally informative findings. An incidence study is likely to miss a small proportion of individuals fulfilling the selection criteria—11% in the AESOP study¹ which used case finding procedures based on those in the International Studies of Schizophrenia (ISOs) research. However, a prevalence study will fail to include a high proportion of people who experience an acute first onset of schizophrenia from which they recover completely, thus introducing a bias toward chronicity. The International Pilot Study of Schizophrenia was based on prevalence samples because its aim was to determine whether it was possible to train psychiatrists from different countries to use assessment instruments in a reliable way, to establish whether schizophrenia exists in all the cultures studied, and to determine whether an international collaborative study in psychiatry was achievable. The success of this venture paved the way for the Determinants of Outcome of Severe Mental Disorders (DOSMeD), the main strength of its design being the collection of an epidemiologically based incidence sample followed prospectively in each center using the same instruments. Cohen and colleagues have taken a step backwards in conflating results from both incidence and prevalence studies.

¹To whom correspondence should be addressed; 1 South Hill Park Gardens, London NW3 2TD, UK; tel and fax: 00-44-2077-949724 e-mail: j.leff@iop.kcl.ac.uk.

These authors state that "Except for the China ISOs site, sampling in all the WHO studies relied on a variety of help-seeking agencies to identify potential subjects." I am particularly familiar with the Chandigarh site from the DOSMeD study because I visited it several times and went on field trips to the rural areas with the researchers. The city of Chandigarh has a highly literate population, 70% during the period of the study, and a Postgraduate Medical Institute of considerable sophistication in which the psychiatric facility was sited. The proportion of incident cases derived from help-seeking agencies would consequently be minimal. By contrast, the rural areas around the city have populations with a low level of literacy, 30% at the time, and limited access to medical facilities. To deal with this problem, Professor Wig, the director of the center, established a mobile team of psychiatric professionals who made regular circuits of the rural areas, holding outpatient clinics to identify and treat potential subjects for the study. This procedure increased the likelihood that all incident cases were identified.

It is noteworthy that the data from the Nigerian center in Ibadan were given less weight than those from other centers in the "developing" countries because the case-finding procedures, compared with those in Chandigarh, were not considered to be sufficiently comprehensive.

The Role of Families

More prospective first-onset studies have been conducted in India than in any other low-income country, and the clinical, social, and occupational outcomes are consistently good.

For this reason, the family study incorporated in the Chandigarh center's research is of particular interest. Two aspects of the findings need emphasis: the contrast between the prevalence of relatives' expressed emotion (EE) in the city and in the rural areas and the contribution made by the generally low levels of EE to the good clinical outcome of the patients in this center.

The local field workers in the Chandigarh center were trained to assess EE to an acceptable level of inter-rater reliability. The proportion of urban relatives of first-onset patients with schizophrenia who were rated as high EE was found to be 30%, while the comparable proportion for rural relatives was only 8%. At the 1-year

follow-up, levels of EE had dropped in both groups: 12.5% of urban relatives were rated as high EE, but not a single rural relative.² This latter finding has no precedent among relatives in high-income countries. A comparison across a wide variety of countries has shown that the prevalence of high EE households is greatest among the most industrialized and urbanized societies and least among rural agrarian societies.³

A comparison was made between the Chandigarh sample of first contact patients and a sample of London patients admitted for the first time with a diagnosis of schizophrenia, both groups being assessed with the same instruments. The proportion of high EE relatives was 47% in the London sample and 23% in the total Chandigarh sample ($P < 0.005$). The relapse rates at 1-year follow-up showed the same pattern; 29% and 14%, respectively ($P < 0.05$). A log linear analysis of these data revealed that the better outcome for the Chandigarh patients was wholly predicted by the lower level of EE.⁴ I would be cautious about generalizing from these results to the other Indian centers, let alone to all low-income countries, but the explanatory power of relatives' EE is such⁵ that it merits incorporation in further studies of variation in outcome across countries and cultures.

Recent research indicates that socio-environmental factors are implicated in the etiology of schizophrenia

as well as influencing its course.⁶ However, the role of these factors is unlikely to be elucidated at the national level. Focusing research on the local social environment for specific groups, particularly at the familial level, will prove more productive. The EE studies provide an example of the level of analysis that is likely to advance our understanding of cross-national differences in outcome.

References

1. Morgan C, Dazzan P, Morgan K, et al. First episode psychosis and ethnicity: initial findings from the AESOP study. *World Psychiatry*. 2006;5:40–46.
2. Leff J, Wig NN, Bedi H, et al. Relatives' expressed emotion and the course of schizophrenia in Chandigarh: a two-year follow-up of a first-contact sample. *Br J Psychiatry*. 1990; 156:351–356.
3. Leff J, Warner R. *Social Inclusion of People with Mental Illness*. Cambridge: Cambridge University Press; 2006:12–13.
4. Kuipers L, Bebbington PE. Expressed emotion research in schizophrenia: theoretical and clinical implications. *Psychol Med*. 1988;18:893–910.
5. Butzlaff RL, Hoooley J. Expressed emotion and psychiatric relapse: a meta-analysis. *Arch Gen Psychiatry*. 1999;55:547–552.
6. Morgan C, Kirkbride J, Leff J, et al. Parental separation, loss and psychosis in different ethnic groups: a case-control study. *Psychol Med*. 2007;37:495–503.