Reviewer's report

Title: A systematic review of the incidence of schizophrenia: the distribution of rate items and the influence of methodology, urbanicity, sex and migrant status.

Version: 3 Date: 16 October 2003

Reviewer: William Eaton

Reviewer's report:

McGrath et al
A systematic review of the incidence of schizophrenia

Comments from William W. Eaton

This carefully done paper represents an extraordinary effort which is of great value. It will be a useful reference source for psychiatric epidemiologists. That being said, it suffers from important flaws. It is difficult to read and enjoy, in general, because of the way the material is presented.

The graphical presentation could be improved. Beyond the overall and sex specific incidence, the cumulative plots provide more detail, and take up more room, than is necessary— the presentation should follow Tufte’s advice in maximizing the information to ink ratio— most of the cumulative plots are filled with blank space. For example, in figure 2, the two sex specific cumulative plots could be combined with the overall incidence plot, allowing some enlargement of the figure, increasing ease of interpretation, with no sacrifice in precision. Figure 3 would be more effective as three sets of side by side box plots; Figures 5 through 8, which are very informative and important, could use this method of presentation also. Figure 4 is a waste of good space. Figures 9 through 14 might be omitted or consigned to the web, because the value of comparisons such as those presented is not very strong when they originate from different studies, with different methods.

The detailed statistical data, such as the harmonic means, skew, and so forth (on the right hand side of the tables) do not need to be presented, and the statistical comparisons are justified neither by the quality of the data, nor by the interest of the reader. I value the visual information in the figures more highly than the tabular information, if the box plot strategy is used. I don’t think Tables 4 -14 are worth presenting.

I believe the authors will have to take a stronger editorial and organizational stance as regards age standardization— that is, choose the single rate that best represents a study; or, alternatively, generate comparisons of populations which have roughly equal ages. It could be that crude and age standardized comparisons should be limited to populations with roughly the same fertility and mortality schedules (as in the UN life tables).

It may not be feasible, but it might be worth a try, to construct a horizontal box plot or forest plot of one rate from each of the core studies, with the first author and date in the left margin— that way, the reader could check to see if any given study were included. The horizontal plot should be organized from top to bottom in either alphabetic order or in order by date, facilitating search for any given study. If it were by date, that would facilitate visual inspection for trend. It could be organized to include other details, such as the continent of the study (revealing the strong history of European studies and the relative absence of African studies, for example). If organized by date, it might be split into two or three meaningful periods.
The writing suffers from poor choice of words, occasional redundancy, and some mistatements. Many epidemiologists consider the first task in the epidemiological profile to be that of prevalence, not incidence, since it is easier to estimate and quantifies burden. Certain phrases are misleading, such as “rate items,” which suggests psychometrics or questionnaire construction—it did not help that the first definition of “rate items” was on page 20. “Taxonomic” is a poor choice of words, because it implies systematic classification by causal or phylogenetic features—possibly “methodologic” is more accurate. “Epidemiology of incidence studies,” even with quotation marks, begs unnecessary argument as to the definition of epidemiology. I found the apparent equation, on page 7, of case detection with sensitivity, and reliability with specificity, confusing. On page 8, the paragraph on age standardization is a little bit too didactic and might even be omitted. On page 9, it would be more clear to insert the word “proportion” after “cumulative incidence,” to make it clear that it is not a rate.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its specialized field or of broad interest

Quality of written English: Needs some language corrections before being published

Statistical review: No

Declaration of competing interests:

None