Author’s response to reviews

Title: An Evaluation of Variation in Published Estimates of Schizophrenia Prevalence from 1990-2013: a Systematic Literature Review

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Version: 3 Date: 2 July 2015

Author’s response to reviews: see over
July 2, 2015

Ms. Diana Marshall  
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United Kingdom

Dear Ms. Marshall,

Attached with this cover letter is a revised manuscript entitled “An Evaluation of Variation in Published Estimates of Schizophrenia Prevalence from 1990–2013: a Systematic Literature Review.” Below are our detailed responses to each reviewer’s comments.

Thank you again for your time and consideration of this article.

Sincerely,

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Reviewer’s report

Title: An Evaluation of Variation in Published Estimates of Schizophrenia Prevalence from 1990 to 2013: a Systematic Literature Review
Version: 2
Date: 2 June 2015

Reviewer: Somnath Chatterji

Reviewer’s report:
This paper is a systematic review of the published estimates of the prevalence of schizophrenia in the general population that updates a previous review by Saha et al. The merits of the study, besides the update, is an attempt to understand the various factors that may contribute to variations in prevalence estimates within and across countries and regions.

Major Compulsory Revisions
1. None.

Minor Essential Revisions
2. The authors need to clarify what exactly they mean when they say in lines 124-125 on page six that when a study "...presented multiple prevalence estimates per period..., only one estimate was selected per period..." It is not clear if this means that if a study presented both lifetime and 12 month estimates the study, only one of these estimates was included based on some criteria or if a study presented multiple estimates for the same period, say 12 month, one estimate was selected from that study though it is difficult to understand how one study would present multiple estimates for the same period unless this was driven by different criteria for estimating the prevalence.

We have made a clarification in paragraph 4 of the Methods section to indicate that studies occasionally did present multiple estimates for the same period, using different criteria to estimate prevalence (for instance, 12-month prevalence in 2008, 2009, and 2010, or lifetime prevalence calculated using DSM III-R, DSM IV, and DSM V). In these cases, we selected only one estimate per period (for example, one estimate of 12 month prevalence and one estimate of lifetime prevalence, if the study presented more than one of each) using the criteria described in the text, to minimize variability when comparing estimates.

3. While the authors discuss several reasons for the variations, with some variations difficult to explain, they should perhaps mention that sample sizes would matter hugely for a condition of relatively low prevalence and designs that use screening procedures (e.g., a 2 stage design or an enrichment approach) may produce estimates that are very different from those generated from interviewing of the entire sample or those from case registries as in the Danish van Os study as diagnostic practices of clinicians and over time need examining before these estimates can be collated.

We agree that these are important factors to consider when assessing prevalence. Our study was designed to minimize the variability due to sample size – we excluded studies with fewer than 200 screened people and only included population-based studies. Although we did not observe any variation in prevalence due to sample size, we have added text in paragraph 1 of the Discussion section which states that it is still an important source of variation.

4. Finally, it would be useful for the authors to share their thoughts on what an ideal schizophrenia prevalence study would look like that would also be cost-effective, e.g., some combination of large general population samples interviewed by trained lay interviewers using a standard instrument adapted to be culturally sensitive after local testing and an algorithm for the diagnosis based on standard criteria.
combined with a partial clinical reappraisal or other alternatives. This would help guide future efforts and
to guide intervention planning.

Thank you, text to address this point has been added to the end of the Discussion section.

Discretionary Revisions
5. None

**Level of interest:** An article of importance in its field  
**Quality of written English:** Acceptable  
**Statistical review:** No, the manuscript does not need to be seen by a statistician.
Reviewer's report

Title: An Evaluation of Variation in Published Estimates of Schizophrenia Prevalence from 1990 to 2013: a Systematic Literature Review

Version: 2 Date: 10 June 2015

Reviewer: Paul Lysaker

Reviewer's report:
An important and carefully written piece. the goal of seeking to "understand the factors that could account for this variation in prevalence estimates" is quite worthy.

Major Compulsory revisions

My only major concern about this ms is its assumption that there should not be variability in rates of sz.- given the number of environmental factors have been identified as contributing to sz including poverty, migratory status, cannabis use etc. rates might be expected to not be the same - see van Os et al and McGrath et al (which is cited but not discussed) for many discussions about this. This possibility should be dealt with seriously and comments that failures to detect the disease “may be due to different perceptions and levels of awareness”.should be tempered with possibilities that rates do in fact differ

Thank you for this comment. We intentionally excluded studies which assessed only specialized populations such as migrants, the homeless, and incarcerated individuals as we sought to assess prevalence in the general population. We have also made edits to the Limitations and Conclusions sections to indicate that the factors described here may contribute to variation, but other unmeasured factors may also contribute to variation between studies. We have also tempered language that may lead the reader to believe that true variations in schizophrenia do not exist between populations.

Minor revisions
The course of the illness is portrayed a chronic and this is a controversial point. many suggest that the course may be prolonged but different kinds of recovery are possible - c.f. the longitudinal studies of harding, ciompi, m bleuler etc.

We have revised the opening sentence to remove the reference to schizophrenia as a chronic disease.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests: I declare that I have no competing interests’