Author's response to reviews

Title: Trends of public health research output from India 2001-2008

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Dear Editors,

Thank you for reviewing our manuscript and inviting revision. We appreciate the comments of the reviewers. Our response to each comment follows.

Reviewer 1

In the discussion we mention that of the health research papers from India in PubMed 3.3% in 2002 and 5% in 2007 were in public health compared with 12% of the papers from Australia in 2002. This comparison is from a previously published analysis (Reference 1). We cannot find any published papers from other South Asian countries or China for such direct comparison. However, we have located a paper published from China earlier this month that used PubMed for bibliometric analysis of research output. We have included this paper as Reference 31 in the revised manuscript.

Reviewer 2

1. We mention in the Methods on page 6 that “As PubMed gives institutional affiliation and its location only for the first author, papers that had the first author affiliated with an Indian institution were considered as research output from India.” Due to this feature of PubMed searching for research papers on India by first authors based at institutions outside India would have required extensive other search strategies. We were primarily interested in comparing published research papers from India between our previous published analysis of research output from India in 2002 and the more recent output in 2007. As we had used first author affiliation with an Indian institution as the inclusion criterion for the 2002 analysis, we kept the same criterion for the 2007 analysis for direct comparison. We agree that collaborative research with international institutions is an important part of research papers published on health issues of India. Our analysis included only those international collaborations that had the first author based in India. A more complete analysis of international collaborative research output related to India that includes the first author based outside India would be interesting and could possibly be explored in subsequent research.

2. We now provide more detail in the Methods on pages 8 and 9 about internet searches for reports on public health research: “Our recent review of the essential health information available from India was utilized to start the identification of sources for these reports [Ref 12]. This included websites of Ministries and other organizations of the government in India, academic institutions, international organizations and funding agencies involved in any form with public health. These initial website sources provided additional leads to other relevant organizations. The search engine Google was used to locate websites of the additional relevant organizations identified from the initial search of websites as potentially having public health research reports. Each website was searched thoroughly by examining any available database
of publications or reports and systematically reviewing all pages within the website for links to publications or reports. Over 200 websites were searched for original public health research reports produced from 2001 to 2008 (Additional file 1).”

3. We used four categories in our quality scoring based on the many trial runs that we conducted before we did the actual scoring of research reports. During the trial runs it became evident that scoring in four categories led to consistent scoring by different investigators, but having more score categories than four led to inconsistencies in scores by different investigators. The category excellent (score of 3 out of maximum 3) followed the adequate category (score of 2 out of maximum 3) as the latter category was synonymous with good. In our final assessment of reports, we categorised those reports having a composite score of 2 out of 3 (67%) as being adequate or better. As our aim was to identify the proportion of reports meeting adequate standard (composite score of 67% or more) we believe that our scoring served this purpose well.

4. We are not aware of the reasons for the lag in getting all abstracts included in the IndMed database in a reasonable period of time. Hopefully however this database will more timely data in the future.

5. We agree that the categories of diseases/conditions could be debated by some. We used previously described categories as the reviewer has noted. We did not wish to propose new categories in this paper as this could have distracted from the main purpose of our paper. Perhaps as refinements in the currently used categories of diseases/conditions get debated and become accepted, these categories could be used for future research.

6. We have now added on page 11 that “The proportion of public health research papers published in international journals, as compared with Indian journals, increased from 57.4% in 2002 to 74.8% in 2007.” Impact factors for international journals were higher than those for Indian journals in which these papers were published in both 2002 and 2007. As this is expected, it does not seem necessary to add this information in the paper.

7. The reviewer raises an important point in asking if any of the papers or commissioned research reports influenced policy and action. This issue is beyond the scope of the current paper as it would require a different approach to analysis. We however plan to take this issue up in subsequent research.

Editorial comment

Regarding the degree of interest and significance of this research for improving public health research in India, the findings in this paper have substantial implications for health policy in India. The findings indicate that acute attention to the continuing major deficits in public health research is needed urgently in India to improve population health more effectively. India has the largest total disease burden of any country in the world and relevant public health research is critical for reducing this burden. The timing of this paper is quite pertinent too as there has been a recent surge of interest in developing public health research capacity in India. In this context, the documentation in this paper of the range of research output, its trends and gaps, and the organizations producing this research, are timely. Our findings provide specific pointers for the development of a
framework to enhance public health research capacity, infrastructure and resources in India that is being currently discussed among various stakeholders in India. We highlight the policy significance of our findings in the discussion and conclusion sections of the paper. We therefore believe that the findings reported in this paper have broad significance for improving population health in India and therefore would be of interest to a wide audience including researchers, academics, practitioners and policy makers.

Please let us know if any further response about our paper were needed.

Yours sincerely,

Lalit Dandona