Reviewer's report

Title: Human resources for health planning and management in the Eastern Mediterranean region: facts, gaps and forward thinking for research and policy

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Reviewer: Raymond Pong

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General

This study has the potential of filling an information gap concerning the health workforce in a group of countries in western Asia, the Middle East and northern Africa, about which we know relatively little. As the authors have correctly noted, since health care is a labour-intensive industry, a better understanding of those providing health care is an important step towards enhancing the health care system.

The study has presented some interesting findings such as the wide variations among the countries in the East Mediterranean Regional Office (EMRO) region with respect to supplies of physicians and nurses.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

While this paper examines some important issues, it has several problems that need to be addressed. These problems are discussed as follows.

1. The authors have examined 22 countries in the EMRO region (2 countries have been excluded because of lack of health workforce data). Although these countries are in the EMRO region, the suitability of studying them together has been taken for granted and has not been discussed. EMRO is an administrative region of the World Health Organization, but it does not necessarily mean that countries in the same administrative region are sufficiently homogeneous that they can or should be examined as a group. A justification for examining the EMRO countries as a group is needed.

2. Closely related to the above, the inclusion of several countries in the analysis – Afghanistan, Iraq, Somalia and Sudan, in particular – may be problematic. This is because these countries have been invaded by foreign powers or have experienced major internal upheavals for prolonged periods of time. As a result, collapse of social order, destruction of infrastructure, population dislocation, injuries and deaths due to armed conflicts are widespread. Thus, it may not be wise to study these countries alongside the others. I even have doubts about the accuracy of health-related data (such as data on health status and the health workforce) from these countries. If these countries are to be included in the study, the authors may consider treating them separately.

3. Although the authors have correctly pointed out that ‘scatter plots do not provide evidence for causation’ (p. 9), they seem to suggest elsewhere in the paper that having more health care providers leads to better health. For instance, they assert, ‘in fact, health worker’s density improves population-based health indicators such as Maternal Mortality Rate’ (p. 4) and ‘having a health workforce that is present in sufficient numbers is crucial for saving lives’ (p. 10). Much of the data analysis in this study is an attempt to show that there is a strong relationship between health personnel availability and health status in the EMRO countries. While it is quite likely that such a relationship exists in lower-income countries, it may be less obvious in rich nations. It is possible that once a certain level of health personnel supply has been reached, having additional health care workers may not improve population health status in a significant way.

Also, what the authors have not considered is the possibility that both health personnel supply and health status are a function of other factors such as socioeconomic conditions. For instance, the wealth of a nation may lead to a greater supply of health personnel and more favourable health status. In other words, the
association between health personnel supply and population health status could be a spurious relationship. Although such data are available (see Table 2), the authors have not examined the relationships between health personnel supply and health status by controlling for socioeconomic factors such as extent of poverty and gross national income.

In short, this study suffers from a lack of theoretical reasoning behind the quantitative analysis. Merely correlating variables without any theoretical rationale is not very satisfactory and does not enhance our understanding of the issue.

4. I find the three objectives of the paper (i.e., what we know about human resources for health in the EMRO region, analysis of gaps, and identification of priorities for research and policy) somewhat disjointed. Without sufficient linkages between them, they read like three separate, unrelated sections. A better job should be done in connecting the three major sections of the paper in order to increase its coherence.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. There are a number of minor technical problems in the paper. The authors have failed to specify in the text and in the tables and figures the year(s) of the data. In other words, the readers are not told when the data were collected or in which time period the analysis refers to. Also, in Table 2, the title of the table indicates “correlations”, but the symbols used in the table are r2. It should be noted that r2 is not correlation coefficient. Instead, it is coefficient of determination, which tells us the proportion of variance explained. Such inconsistencies may cause confusion.

Discretionary Revisions (which the author can choose to ignore)

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

Level of interest: An article whose findings are important to those with closely related research interests

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

Statistical review: Yes, and I have assessed the statistics in my report.