Reviewer's report

Title: Why medical students choose psychiatry - a 20 country cross-sectional survey

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Reviewer: Nyapati Rao

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This is an important study. It examines the factors associated with the choice of psychiatry as a career by medical students in twenty countries. With the increasing global burden of treating mental illness, policy makers are recognizing the need for more psychiatrists and this study attempts to delineate the factors that contribute to the choice of psychiatry as a career by medical students the world over. A related issue is the movement of these physicians to the West seeking training in psychiatry, which is not addressed in this study. Conducting this study must have been a challenge and the organizers must be complimented for pulling this off. The study has the potential to shed light on an important public health issue in many developing countries, but it is not clear whether the study has met its mark.

The literature quoted is mainly from the United States, whose relevance as a model or template for the current study on the international medical students is not too clear, given the vast differences between the US and the rest of the world in the organization and practice of medicine. This reviewer wonders whether it would have been more useful to have built a survey addressing more culturally sensitive (non-Western) topics like the influence of local healing traditions, plans to migrate after medical school, the stigma about psychiatry, language of instruction, and such other topics. On the other hand, not including the US in this study is a major shortcoming because the methods have been deeply influenced by previous studies done in the US. The form of psychiatry that is practiced in the US is uniquely a product of that culture. It is suggested that the reason why psychiatry is not too popular has to do with its infirm identity as a medical specialty, its lack of financial appeal, and prejudice against mental illness. It is unclear how these factors manifest their prevalence in a wide spectrum of cultures differing in social orientation and economic strength from the US.

Also, the reasons for choice of a specialty vary over a period of time. For example, in the US, anesthesia was once a poorly subscribed specialty, but now it has become more desirable. So comparing studies from the past with current world-wide factors is a problem.

The methodology appears confusing and may be problematic. That the choice of the countries was opportunistic is understandable. But then, the manner of combining paper and electronic methods may contaminate the results. For example, there may be issues of privacy, and consequently honesty of
responses, arising due to the different administrations of the survey. The study does not address how these may have been accounted for or possibly impacted the internal validity of the results. There also appear to be ad-hoc steps taken to increase sample size. Why not take the lack of response as data in itself? Why should any attempt be made to expand the numbers? Furthermore, given its complexity, would a combined qualitative and quantitative approach have made more sense? This is especially significant given that the study did not identify any reasons given by medical students for an ‘unlikely’ response in choosing psychiatry.

The study reported using a cross-sectional design but was conducted over a span of two years. This issue would likely impact the internal validity of the cross-sectional design as two years are long enough for countries to undergo major social, economic, political and institutional changes. For example, the implementation of new health care laws in the US in 2014 could impact the choice of psychiatry as a specialty by medical students within a short span of a few months.

There is a significant issue with the coding of the binary variable of ‘likely/unlikely’ from the Likert scale in the actual survey. The Likert scale value of ‘possible’ was coded as ‘unlikely’ in the binary variable. While the coding of ‘seriously consider’ and ‘definitely’ as ‘likely’ has a strong theoretical basis, the same cannot be applied to the coding of ‘possible’ as ‘unlikely’, when the concepts overtly are antonyms. The fact that this survey was translated into various languages further complicates this issue and the methodology for addressing this problem should be highlighted.

The startling finding of didactic training in psychiatry leading to a higher ‘unlikely’ response rate puts into question the theoretical basis of the hypotheses and the applicability of the logistic regression. Without a satisfactory explanation this finding gives an ad-hoc flavor to all the results. The current explanation that students prefer clinical experiences over didactic training underscore the importance of the former but do not explain the impact found for the latter variable.

There does not appear to be an organizing thread or theme in the Discussion section. The study classifies countries by income levels but does not provide sufficient results based on these criteria. There are other social variables that have not been given their apparent due in this work. Given psychiatry’s widely varying popularity, and the predominance of local healing traditions such as shamans, mystics and differing attitudes towards doctors, it is somewhat disingenuous to treat psychiatry as a universally accepted discipline. Well-known factors influencing cultural perceptions of psychiatry and mental health have not been accounted for by this study. For example, the pervasive impact of stigma on the choice of psychiatry as a specialty is likely to play a significant role in such a cross-cultural analysis. The study measures personality variables but does not provide measures of internalized and societal stigma that are likely to strongly impact the dependent variable.
A related question would be what are the reasons for higher interest in psychiatry in Europe and Canada than in Africa? Is the reason for lack of popularity in Africa the draw of local healing traditions? What is the influence of poverty on choice of specialty?

The paragraph on personal motivation on choice of psychiatry is not clearly written.

The paragraph on “Decision Stability” is not clear. What is conversion rate to psychiatry? The writing in this section needs to be improved.

Overall, the Discussion lacks depth and it repeats observations made in the earlier sections. It does not add much new information to the extant literature. Important pieces of information related to the outcome such as reasons for not choosing psychiatry, as well as perceptions of stigma related to psychiatry and mental illness, have not been explicitly accounted for by this research. It would be helpful to outline an in-depth discussion to account for the results reported in the study, such as the adverse impact of didactic training on the choice of psychiatry as a specialty.

In conclusion, the paper under review addresses an important issue. While it is impressive in the effort expended in conducting the study, it is disappointing in reporting the study for all the reasons cited.

**Level of interest:** An article of importance in its field

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

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