Author's response to reviews

Title: Factors associated with 2009 pandemic influenza A (H1N1) vaccination acceptance among university students from India during the post-pandemic phase

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Author's response to reviews:

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Dear Editor:

Thank you very much for your letter in which you sent us the referee’s reports on our paper entitled “Factors associated with 2009 pandemic influenza A (H1N1) vaccination acceptance among university students from India during the post-pandemic phase (MS: 1208906881521930). We greatly appreciate the constructive comments made by the reviewers to our article. We have addressed point-by-point, the comments raised by the reviewers and the changes incorporated are highlighted in blue color in the revised version.

We hope the manuscript has been improved satisfactorily and that you will now reconsider its publication in “BMC Infectious Diseases”.

I am looking forward to hearing from you soon.

Sincerely

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Response to the reviewer Sevtap Velipasaoglu:

The authors question the knowledge and attitude of university students towards
H1N1 and the factors associated with H1N1 vaccine refusal in India, during post pandemic period. This topic has not been thoroughly debated in medical journals and it may be of interest to the reads BMC Infectious Diseases.

We thank the reviewer for the constructive comments.

ABSTRACT:
Query: Abstract is relevant to the manuscript. However major changes are needed in the results section of the abstract once the manuscript is revised according to the suggestions (please see comments titled “results” below).
Changes have been made in the results section of the abstract as per the reviewer comment and highlighted in blue color in the revised manuscript.

INTRODUCTION:
Query: The first paragraph needs to be shortened since it is not directly related to the study.
We agree to the reviewer comments and the first paragraph was shortened and modified is highlighted in blue color in the revised manuscript.

METHODS:
Some clarification is needed in this section.
Query: How was the sample of students selected for the study (1000 out of 17 200).
The study was based on a randomly selected representative population of the students aged 18 and above. This information was provided in the methods section.

Query: Data collection and analysis subheading ends with “coded answers were unified to a list of response patterns”. Can the authors please specify what those “response patterns” were.
We regret for the error. The question was a multiple-choice question and not a open-ended question to unify a list of response patterns. We changed it accordingly.

Query: Did the authors gather any information about personal risks of students who accepted or declined the vaccine (for example did the students who were vaccinated have any other condition such as chronic medical disease, being a medical school student, etc).
We did not gather any information about their personal risks especially if they have any chronic medical disease. However, the vaccination was done by the health centre of VIT University for the students who have health check up cards.
All the students were non-medical students and bachelors in engineering belonging to different branches including biotechnology and also master students in science subjects.

Query: Was the statistical analysis performed only for gender?
Statistical analysis was performed for other characteristics also such as the school of study and perceptions in the revised MS.

RESULTS:
Query: Results section includes too many details both written in the text and shown on the table.
Modified results section is provided in the revised manuscript.
Query: Can the authors please statistically compare the vaccinated and unvaccinated group with regard to their sociodemographic characteristics (such as age, gender, type of school), knowledge of H1N1 influenza, perception about the effectiveness and side effects of vaccine and perception about other preventive measures, etc.
As per the suggestion of the reviewer, we have statistically compared the vaccinated, unvaccinated and those intend to vaccinate with regard to their gender, school of study and perceptions. Reanalyzed data is shown in Table 1
Query 3: Using a table that combines above mentioned characteristics (and excluding Figure 1) will better reflect the authors findings.
Figure 1 is excluded in the revised manuscript and the data in the figure 1 is combined in the Table 1 as suggested by the reviewer
Query 4: Figure 2 is not necessary.
Figure 2 is deleted in the revised manuscript

DISCUSSION:
Query: The first 16 lines of discussion are more convenient for the introduction section.
We modified the first 16 lines of the discussion and added some in the introduction section. Modified are highlighted in the blue.
Query: The discussion needs to be divided into paragraphs (for example cost of vaccine, risk perception, gender difference and knowledge about disease prevention are all discussed in one paragraph in the present version).
We have now divided into paragraphs in the revised version of our manuscript.
Query: Since studies about post pandemic vaccine acceptance are very limited, can the authors please compare their findings with local and international data during the pandemic.
We agree to the reviewer’s comment and compared our findings with other data during the pandemic. In this regard we referred many other relevant studies and quoted in the discussion section.
To the best of our knowledge, there were no studies conducted in India during the pandemic or post-pandemic phase.

REFERENCES:
Query: References must be checked. For example the sentence “This is in contrast to the study reported by Akan………” does not have a reference
properly placed.
The same also applies to the sentence “In the study of Kamate and coworkers….”. Many other comments on the discussion section lack references.
We have checked and added the references appropriately.

Although the language is understandable numerous grammar errors need to be corrected.
To the best of our limits, we checked the grammar errors and corrected it.

Response to the reviewer J Barrière

In summary, this work can be accepted with Discretionary Revisions, such as: in results, chapter “perceptions of the effectiveness of preventive measures …” it is stated “most of the students …were effective.” I would suggest “half of … very effective or most … if the authors pool “very effective and moderately effective” defining this as “effective”.

We thank the reviewer for the comments on our manuscript.
As per the suggestion, now we have pooled very effective and moderately effective and defined as effective in the revised manuscript.

Reviewer’s report: (Baruch Velan)

This study examines attitude and acceptance of H1N1 vaccination among university students from India during the post pandemic-phase. This study address a question of high relevance to vaccination and prevention of infectious diseases: the acceptance crisis related to vaccination related to H1N1 flu. In this aspect the study complements a rather vast body of studies conducted in different parts of the world. Nevertheless this study is one of first studies on behavior during the post pandemic period and this underscores its relevance.
The study was well designed and the queries are relevant and interesting. The interpretation and analysis of the data on the other hand is somewhat disappointing and require improvement.

We thank the reviewer for the constructive comments to improve the manuscript.
As per the suggestion and the advice of the reviewer, the interpretation and analysis of the data is modified in the revised manuscript.

Specific comments:
1) Information about H1N1 vaccination in India (Minor Essential Revisions):
Authors are encouraged to provide in the introduction pertinent information about H1N1 vaccination in India during the pandemics and after the pandemic, as well
as information about vaccine acceptance in India. More especially authors should provide information about the flu vaccination program offered to the survey group by the University. Was H1N1 vaccine offered as a mono-valent vaccine or as a constituent of the seasonal flu vaccine cocktail? This may have an effect of the attitude of the students towards vaccination.

We incorporated the changes in the introduction section and highlighted in blue colour in the revised manuscript. H1N1 vaccine offered was a mono-valent vaccine and given its details in the methods section.

2) The choice of students as a survey group (Major Compulsory Revisions):
Students are frequently used in attitude and behavioral studies, yet one cannot escape the feeling that this is often related to the convenience of using a sample group available in the backyard of the investigators. The relevance of using students in the present study is not justified properly. The linkage made by the authors between healthcare workers and students (page 1, last paragraph) in their responsibilities towards vaccination is inappropriate. The risks of contagion and spreading infection by HCW are not comparable to those by students. The same can be also said about the responsibilities of these two groups carry toward the community. The definition of students as group at high-risk for H1N1 infection are not really substantiated. The authors should avoid statements such as "students in educational institutes are the most important target population to implement vaccination programmes to avoid serious outbreaks." Instead of all this, the authors should make an attempt to provide meaningful justifications for using students (for example: targeting a highly-educated and open-minded population, targeting a population that is expected to shape public opinion, etc)

We agree to the reviewer suggestion and removed the above statement and modified accordingly in the revised manuscript. All these changes are highlighted in blue colour.

3) Gender specific behavior (Minor Essential Revisions):
Authors should provide information about the response rate to the survey among males and females. In addition, the presentation of date is somewhat misleading. The fact that 63.7% of vaccinees were females is less important than the fact that vaccination rate among males was 7% and among females 21%. Moreover, careful examination of the data presented in Table 1 indicates that difference in vaccine denials between genders is not striking (79% in males and 71% in females). Interestingly there is a gender specific difference in the ratio of those vaccinated to those planning to be vaccinated. I believe that better analysis of all his information would enrich the ms.

We reanalyzed the data as per the suggestion of the other reviewer and the changes have been incorporated in Table1.

4) Analysis of unwillingness (Major Compulsory Revisions):
The authors state that that the unwillingness to be vaccinated was examined by
direct open-ended questions, yet only 5 variations on the answers given (Table 2). This appears to be puzzling. The authors should provide more information about the reduction/unification process involved in this analysis.

We regret for the error, the question was a multiple-choice question and modified accordingly.

5) Attitude and knowledge (Major Compulsory Revisions):

The conjunction of knowledge and attitude questions (Page 6, third paragraph and Table 4) is confusing and could be misleading: The first three questions in Table 4 relate to knowledge about well established facts. The next three questions as well as the last question represent questions to which the answers are not conclusive, the answer here would reflect knowledge as well as interpretation of knowledge (e.g question 4: Knowing that high risk individuals would highly benefit from H1N1 vaccination does not mean that the respondent believe that influenza vaccine should only be given to this group). Question 7 and 8 do not examine knowledge but perception of knowledge. The authors should make these distinctions clear and present and analyze the data accordingly.

We have changed the discussion part and results section keeping in mind of the above suggestion.

6) The relevance of the observation (Major Compulsory Revisions):

The relevance of this study in the general context of H1N1 deserves better evaluation. In order to put this study in the right context one should discuss aspects such as: the relevance of this study to attitudes post or during the pandemia, attitudes of students versus that of general public. Effects of cultural determinants on attitudes in different countries. The interrelationship between knowledge and behavior.

Discussion section is modified in the revised manuscript as per the reviewer suggestion.

7) Interrelationship between knowledge and attitude: In the introduction, the authors rightfully emphesize that gaining knowledge about the H1N1 vaccine should transpires in action of acceptance during the post pandemic. Unfortunately, this is not being addressed properly in the study. It would be interesting to examine the possible correlation between knowledge manifested by subgroups of respondents their actual behavior.

Correlation between knowledge manifested by subgroups was analyzed and represented in the results section and was also discussed as per the reviewer suggestion.

8) Discussion (Major Compulsory Revisions):

Discusion should be more focused and address more specifically the relevance of the study pointed out in the above comments.

Discussion section is modified and more focused in the revised MS as per the advice.
9) Conclusions (Major Compulsory Revisions): 

The authors should be more careful in stating their conclusions:

a) There is no evidence to indicate that "unless the safety and effectiveness of the H1N1 vaccine is informed.........the negative attitude and non-compliance towards H1N1 vaccination will continue". This appears to be a wishful speculation.

b) There is not enough information to claim that "the negative attitude to vaccination is similar among students in different parts of the world in both pandemic and post-pandemic". Even if this is true, it does not necessarily indicate that international guidelines are required.

Conclusion part is modified and the changes are highlighted in blue color in the revised manuscript.