Reviewer’s report

Title: The dynamics of risk perceptions and precautionary behavior in response to 2009 (H1N1) pandemic influenza

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Reviewer: Jocelyn Raude

Reviewer’s report:

I have reviewed the paper entitled "The Dynamics of Risk Perceptions and Precautionary Behavior in Response to 2009 (H1N1) Pandemic Influenza." This interesting paper addresses an important public health issue which is the distribution and etiology of precautionary behaviors in response to an emerging health threat, by using national survey data. From my viewpoint, the paper should elicit interest from the readers of BMC ID, as well as public health officials and scholars. However, I would not recommend the publication without a few modifications. At this stage, the paper should be slightly strengthened to achieve the standards for publication in high-ranking academic journal. I think that the following comments may be useful to the authors to revise the manuscript for resubmission.

General comment:

From my viewpoint, a little number of problems associated with both conceptual and methodological issues can be identified. First of all, it seems to me that the authors tend to neglect some important pieces of the existing literature on the conceptualization and measure of risk perceptions. There are a large number of empirical or theoretical papers of importance for this topic that have been mentioned but not seriously considered by the authors. For example, risk perceptions is generally constructed in most social and cognitive models of health behavior as the combination of the perceived likelihood of becoming ill and the perceived severity of the illness. In their questionnaire, the authors introduced a very unusual item to measure the perceived severity of illness, which do not allows them to appraise the perceived severity, and therefore the perceived risk, appropriately. The results of this study needs to be partly reconsidered, or at least discussed, in light of a long line of conceptual works on risk perceptions and behaviors that may explain some apparently paradoxical results. Second, one of the scales combines both dichotomous and continuous variables. However, as much I know/remember statistics, this is technically incorrect. Unless the authors could provide supportive statistical references indicating that it makes sense to sum up the responses to these two types of variables and use the sums as coherent and distinct variables, an alternative approach to measure “pharmaceutical intervention” would be needed.

Major Compulsory Revisions:
L.5-7, p. 6: the pharmaceutical intervention scale combines both categorical and ordered variables, which seems to me either technically incorrect or, at least, very unusual in psychometrical practices. Can justify this construction from a formal statistical perspective?

Minor Essential Revisions:

L. 24, p. 4: How were study participants contacted? By phone? By email?

L.12-13, p. 6: why did not you collect any socioeconomic information about the participants such as education, occupation, race or income? They are generally considered variables of interest in health behavior research.

L.10-15, p. 10:” Significant predictors for scores on the pharmaceutical intervention scale included perceived risk. […] Sex was not a significant predictor, suggesting that risk perceptions mediate the relationship between the willingness to receive pharmaceutical interventions and sex”.

Do you mean “perceived likelihood”?

L.6, p. 11: “Perceptions about the risks associated with 2009 (H1N1) pandemic influenza (…) showed changes over time”. From my viewpoint, the nature and amplitude of this temporal change remains unclear.

Figure 3: “Proportion of Rs engaged”. What do you mean by Rs?

Discretionary Revisions:

L. 9-14, p 4: I would also recommend to the authors to read and/or mention the following supportive papers:


Lau JT, Griffiths S, Choi KC, Tsui HY. Avoidance behaviors and negative psychological responses in the general population in the initial stage of the H1N1 pandemic in Hong Kong. BMC Infect Dis. 2010 May 28;10:139.


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

Quality of written English: Acceptable

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

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