Peer Review Report

Review Report on Measuring the Evolution of Risk Communication Strategy for Health Authorities during the COVID-19 Pandemic: An Empirical Comparison between China and the United States

Original Article, Int J Public Health

EVALUATION

Q 1 **Please summarize the main findings of the study.**

Study's main findings:

– The topics that the CDC and NHC were asked about during COVID-19 news conferences evolved according to infection rates.
– When responding to questions, both the CDC and NHC did so with a relatively neutral and objective tone. However, the non-objective sentiments of the CDC swung more dramatically. This suggests that the CDC's emotions were more sensitive to the state of the pandemic.
– The CDC and NHC adopted different risk communication strategies and had specific change routines during early months of the pandemic. The NHC had a more stable change route than that of the CDC, indicating that its risk communication strategy tended to be "precautionary". Therefore, the NHC appeared to have a high sensitivity in terms of the risk perception towards the (current and future) pandemic. In comparison, the change route for the CDC was much more volatile, which means that the change degree of risk communication strategy is huge, and the change routes vary with the pandemic condition. In conclusion, the above findings indicate that the two institutions tend to adopt different risk communication strategies when facing the pandemic.
– Finally, the study demonstrated that communication strategies can be measured with topic variation, emotion expressions, and confirmed cases.

Q 2 **Please highlight the limitations and strengths.**

Limitations:

– The study "only conduct the quantitative correlation analysis from the topical and emotional perspectives to examine the risk communication strategy, and the casual relationship among topics, sentiments, and confirmed cases should be explored." (Is that actually the case? In Figure 4 it appears that you did actually take into consideration the number of confirmed cases? Or is a distinction being drawn between "correlation" and "casual relationship"?) I'm having a hard time understanding this limitation.
– The study also lists the number of countries as a limitation. Although this is a minor one.
– The study's time period can be considered as a limitation, given that it only covers the early months of 2020, and the pandemic didn't really kick off until March 2020 (especially in the United States).
– Another limitation could be the fact that the study did not code the topics that were discussed during the "announcement" part of the news conferences. They could have potentially served as a better indicator to determine the institutions' risk communication strategies.
– The study's methodology is an interesting way of revealing the strategies of health institutions. However, it leaves many areas of their strategies unexplored.

Strengths:

- News conferences by health institutions are a salient part of risk communication and make for a pertinent dataset.
- China and the US are interesting case studies.
- The study's conclusions on how the NHC and CDC responded to questions are very interesting.
- The study demonstrates the impact that the pandemic has on the priorities of journalists.
- The study showed an interesting methodology to unpack the strategies of health officials as they were executed rather than planned.
- The figures (particularly 2 and 4) are particularly easy to read and understand, and really help to visualise the study's main findings.
- The study used three experts to code the themes.

Q 3   **Please provide your detailed review report to the authors. The editors prefer to receive your review structured in major and minor comments. Please consider in your review the methods (statistical methods valid and correctly applied (e.g. sample size, choice of test), is the study replicable based on the method description?), results, data interpretation and references. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.**

Overall, I managed to follow the paper and understood each segment. I found the dataset that you used to be particularly good as press conferences were probably the most important risk communication vehicle during the pandemic. The results were also very interesting, particularly those concerning the tone of the responses. I found your figures 2 and 4 to also be really interesting and easy to follow.

Major Comment:

- I didn't quite understand why the authors opted to focus on the Q&As -- and not the announcements -- for the topic and sentiment analyses? And having done so, does this allow you to reach conclusions such as the ones on lines 209-211? (Or 212-214?) How can we know the topic preferences of the organisations if the analysis is based on the Q&As rather than the announcements? (It does, however, for example, support the conclusions reached on the lines 207-209.) Are you basing this on the fact that the CDC and NHC picked the questions that they answered? If so, was that the case?

Minor Comments:

- On line 35, the paper states that the infodemic "increases the degree of public fear and uncertainty", but there doesn't appear to be a citation for this claim (the citations are put before this claim).
- On lines 30-40, it states that "It is your view...". Is it possible to change that to a source making that claim?
- Lines 62-63: Please add "first quarter of 2020..."
- The time period appears to be a bit of a limitation. Although it is interesting in many ways, it is also the very early stages of the pandemic in the United States. Perhaps it could be mentioned in the limitation segment?
- Lines 84-86: I would suggest to switch those two sentences around.
- Line 216, I would say that it "can help to explain...", since there are probably other reasons for these differences.
- I didn't quite understand the limitation starting on line 262?
- Is Figure 1 needed? It looks like it is rather made for a presentation or a report.
- Is it possible to explain Peter Sandman's risk communication strategy in a bit more detail? Does it have any limitations or criticisms worth mentioning?
- Are there any limitations to using just 3 indicators to determine risk communication strategies? If so, perhaps they should be mentioned. (Although I found it to be a very interesting way of revealing risk communication strategies in practice rather than theory).
- I'm not sure if "change route" is explained anywhere? If not, I would suggest adding a sentence or two.

PLEASE COMMENT

Q 4   **Is the title appropriate, concise, attractive?**

Yes, it is very appropriate for this journal.

Q 5 **Are the keywords appropriate?**

Yes. Maybe just the name of the organisations could also be added (especially the "CDC").

Q 6 **Is the English language of sufficient quality?**

The paper's English needs some work. And the majority of the paper should ideally be written in the past tense. Only parts of it are.

It is still, nevertheless, easy to read and follow the paper, but some editing is needed.

Q 7 **Is the quality of the figures and tables satisfactory?**

Yes.

Q 8 **Does the reference list cover the relevant literature adequately and in an unbiased manner?)**

Yes, it does so.

QUALITY ASSESSMENT

Q 9	Originality	■ ■ ■ ■ ■
Q 10	Rigor	■ ■ ■ ■ ■
Q 11	Significance to the field	■ ■ ■ ■ ■
Q 12	Interest to a general audience	■ ■ ■ ■ ☐
Q 13	Quality of the writing	■ ■ ■ ☐ ☐
Q 14	Overall scientific quality of the study	■ ■ ■ ■ ■

REVISION LEVEL

Q 15 **Please make a recommendation based on your comments:**

Minor revisions.