Author’s response to reviews

Title: Violence against health care workers in China, 2013-2016: Evidence from the national judgment documents

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Author’s response to reviews:

Reply to reviewer 1’s report for “Violence against health care workers in China, 2013-2016: Evidence from the national judgment documents”

(Manuscript Number: HRHE-D-19-00193)

We thank the reviewer for the careful reading and constructive comments on our manuscript. We have made every effort to revise our paper in light of these comments and believe the paper has been improved as a result. The associated changes are highlighted in red in the revised manuscript. Our response to each of the Reviewer’s comments are as follows:

Main Comments:

1. A major concern I have is the methodology used in this paper: most of results are based on displaying raw data or risk ratio, and only one Chi-square test was conducted. The lack of rigorous statistical analyses makes this paper fail to stand out from existing literature (for example Li et al, (2019), a similar work on violence against health professionals in China with the same database). I suggest the authors to consider supporting their discussions with more statistical analyses, based on the dataset they collected. If not possible, please discussion the reason.
Thank you for this constructive comment. Following your advice, we have added more formal statistical analyses to the paper. We have also now included a reference to Li et al. (2019), which is quite relevant to our research but that we were unaware of at the time we submitted the paper. We have also accordingly updated the analyses and discussions in the paper. We believe that this adds to our descriptive presentation of the findings which we believe are of substantial interest in themselves.

We have updated with formal statistical analysis in section Results. First, considering the possibly discrepancy for each reported reason among hospital levels and health care workers, two bivariate analyses using cross table analysis and Chi-square test or Fisher’s exact test were added. We found that doctors are more likely to be victimized than nurses due to long waiting time (4.4% vs. 1.9%), rejection of request (2.2% vs. 1.9%), dissatisfaction with the treatment process (13.3% vs. 11.3%), death-related issues (8.9% vs. 1.9%), and dissatisfaction with the treatment outcome (13.0% vs. 5.7%). However, these differences are not statistically significant at the 0.05 level. It is also observed that more nurses than doctors were victimized by the perpetrators because of their dissatisfaction with their attitudes (18.9% vs. 7.4%). This difference is statistically significant (p=0.021).

Moreover, we found that compared to their secondary and tertiary counterparts, the primary hospitals are more likely to encounter WPV for such reasons as long waiting time (8.9% vs. 2.6%, 6.4%), rejection of request (6.7% vs. 1.5%, 2.7%), dissatisfaction with staff attitudes (15.6% vs. 7.1%, 9.1%), and dissatisfaction with the treatment outcome (17.8% vs. 8.2%, 9.1%). However, the secondary hospitals are more likely to encounter WPV than their primary and secondary counterparts due to death-related issues (21.9% vs. 11.1%, 11.8%). It should be noted that these differences are statistically negligible.

Following the reviewer’s comment, we have accordingly revised the manuscript as follows:

In the “Introduction” section (page 4), we have added the sentence:

“Recently, a national-level study identified 140 cases from 2010 to 2016 involving violence or disturbing public order because of medical malpractice. This study showed a significant relationship between violence and a death of a patient [22].”

In the “Results” section (page 4), we have added the following:

“We further explored the associations between the reported reasons for serious WPV against health care workers and the victims’ occupation as well as the type of health care providers (i.e., hospital levels). The results are displayed in Tables 2 and 3. Considering only 5 laboratory technicians or radiographers are involved in serious WPV, we focus primarily on doctors and nurses that account for about 90% of all cases. Table 2 indicates that doctors are more likely to be victimized than nurses due to long waiting time (4.4% vs. 1.9%), rejection of request (2.2%
vs. 1.9%), dissatisfaction with the treatment process (13.3% vs. 11.3%), death-related issues (8.9% vs. 1.9%), and dissatisfaction with the treatment outcome (13.0% vs. 5.7%). However, these differences are not statistically significant at the 0.05 level. It is also observed that more nurses than doctors were victimized by the perpetrators because of their dissatisfaction with their attitudes (18.9% vs. 7.4%). This difference is statistically significant (p=0.021).

Turning to Table 3, it can be observed that compared to their secondary and tertiary counterparts, the primary hospitals are more likely to encounter WPV for such reasons as long waiting time (8.9% vs. 2.6%, 6.4%), rejection of request (6.7% vs. 1.5%, 2.7%), dissatisfaction with staff attitudes (15.6% vs. 7.1%, 9.1%), and dissatisfaction with the treatment outcome (17.8% vs. 8.2%, 9.1%). However, the secondary hospitals are more likely to encounter WPV than their primary and secondary counterparts due to death-related issues (21.9% vs. 11.1%, 11.8%). It should be noted that these differences are statistically negligible.”

Reference


2. P6: by searching with the phrase "criminal case" in CJOS, one may get documents of criminal judgement, criminal ruling, as well as civil or administrative judgment and ruling that contain the phrase "criminal case" in the full text. So please clarify in the search strategy: a. Did you search "criminal case" as the keyword in full text, or as the type of document? b. Did you keep cases from both criminal judgment and ruling, or criminal judgement only?

Authors’ Response:

Thank you for your careful reading and giving us the opportunity to clarify our search strategy. Our search strategy was as follows:

a. We searched the “criminal case” as the type of document. Taking advantage of the in-built filter of the CJOS website, “criminal cases” were searched as the type of document.

b. We kept cases from both criminal judgement and ruling. In order to include more cases, both of judgement and ruling were included in our study. If the first instance and the second instance of one same violence case were found, we kept the second one to avoid the duplication.

Following the reviewer’s comment, we explained our inclusion strategy of the cases in more detail in the revision, as following:

In the “Search strategy and inclusion criteria” section, we now state:
“The phrase of “criminal cases” was used in advanced search for the type of document, whereas the other two phrases served as the keywords in full text.” (page 5)

“Our study did not prescribe a first-sentence or second-sentence limit, but if both first instance and second instance of one violence case were found, we kept the second one to avoid the duplication.” (page 6)

3. P6: authors mentioned "a total of 25,722 potentially relevant cases … were included." However, figure 1 shows "27,914 criminal cases remained", which means 25,722 cases were excluded instead. Please fix the inconsistency between text and figure 1.

Authors’ Response:

Thank you for pointing out this discrepancy. The numbers in the Figure 1 (27,914) is correct. Accordingly, we revised the statement in the manuscript as follows: “As a result, 13 types of crime were selected with a total of 27,914 potential cases, such as criminal acts of intentional injury, intentional homicide, and disturbing public order.” (page 6)

4. P6 and figure 1: the exclusion criteria used from the sample of 53,636 case cases is not clear. Did you only keep cases belonging to the 13 types of crime? If so, by what criteria do you select those 13 types to represent WPV?

Authors’ Response:

Thanks for this helpful comment. Yes, we only kept the cases belonging to the 13 types of crime in the analysis. We chose those 13 types out of 88 in total according to their conviction conditions and applicable situations by the expert consultation.

Following this comment, we have accordingly revised the manuscript as following: “We categorized all the types of crime from the original 53,636 cases, which totally contained 88 crime types. Then all crime types were screened according to the conviction conditions and applicable situations in consultation of jurisprudence expert on the research team. If a type of crime would possibly involve WPV towards health care workers, it would be included, otherwise, it was excluded. As a result, 13 types of crime were selected with a total of 27,914 potential cases, such as criminal acts of intentional injury, intentional homicide, and disturbing public order.” (page 6)

5. In the result section, besides proportions, the absolute value and number of missing values should also be reported. Without information on missing values, one cannot understand to which degree those proportions represent the whole sample.

Authors’ Response:

According to the reviewer’s suggestion, we have added the absolute values of each category in Figure 3-7 along with number of missing values as footnotes in the revision.
6. P18-19, last paragraph of the discussion section: authors discussed reasons of WPV by health care institutions, however, this discussion is not supported by data in results. Relative results should be added into the manuscript.

Authors’ Response:

As suggested, we have added two tables showing the discrepancy for each reported reason among hospital levels and health care workers in the revision. The two tables are presented in the edited manuscript as Table 2 and Table 3.

7. A major limitation of using litigation data is that not all WPV cases will be judged at court as criminal cases, some of them may be settled out of court. How will this limitation influence your findings and implications?

Authors’ Response:

Thank you for the insightful comment. Our study does have the limitation that some cases could be solved or mediated out of court. First, our search will fail to capture these cases. Second, our research might have some selective bias if these cases have different distributions among regions, institutions, departments, and/or occupation types. As such, there might be discrepancies between the results reported here and the actual distributions of serious WPV against health care workers. This limitation has been added to the manuscript.

Minor Comments:

8. P4, line 43: I suppose the "violet event" is a typo for "violent event".

Authors’ Response:

Thanks for your careful reading. We have corrected this typo and repeatedly proofread the manuscript.

9. Figure 2: please check the size of dot (population) in the figure / legend. For example, in 2013 the population of Guangdong reached 100 million. However, the size for the dot of "Guangdong" is obviously smaller than the dot of "10.0 "(in ten million) in the legend.

Authors’ Response:

We previously scaled down the scatter plot, which caused it not to be proportional to the legend. The plot scale has been adjusted in the revision to keep it consistent with the legend.

10. Figure 2: please show labels of other provinces for more detailed information.

Authors’ Response:
In our revision, we did not include all the provinces’ labels in the Figure 2 to keep it readable. Instead, following the reviewer’s comment, we have added the table as Appendix Table 1 to present the number of serious WPV for each province.

11. Figure 2-7: explanations under figures overlap the main text. Please merge those explanations into the main text.

Authors’ Response:

We have moved the explanations into the main text as suggested.

12. P9: in the paragraph starts with "To account for …", both "hospital visits" and "institutional visits" were used. I suggest to only keep "institutional visits", since readers may interpret "hospital" as a specific type of health care institutions, like that in figure 3.

Authors’ Response:

Following this comment, we now use the term “institutional visits” in the manuscript and figures.

13. Please change the layout of figure 6 to increase the font size of legends, in order to make it more readable.

Authors’ Response:

We have now revised Figure 6 and believe it is now more readable than the original.

Reply to reviewer 2’s report for


(Manuscript Number: HRHE-D-19-00193)

We thank the reviewer for the careful reading and constructive comments on our manuscript. We have made every effort to revise our paper in light of these comments and believe the paper has been improved as a result. The associated changes are highlighted in red in the revised manuscript. Our response to each of the Reviewer’s comments are as follows:

1. Whether it is necessary to add to the limitations that the Chinese are not the preferred court in the process of resolving medical disputes. They may prefer to negotiate with the hospital and resort to the law when the negotiations fail to reach an agreement.

Authors’ Response:
Thanks for the comment. We have to admit that our study had such a limitation that some cases were solved or mediated by patients negotiating with the health care institutions outside of the court system. However, these out-of-court cases were not available to us. We now discussed this limitation in our revision.

2. The authors also have some important findings, but the discussion part fails to fully discuss the research results. I suggest that it can be discussed in more depth.

Authors’ Response:

Thank you for the insightful suggestion. We added two more bivariate analyses in the revision to provide more in-depth discussions in the revision.

First, different reasons might predispose patients to committing violence towards doctors or nurses. Patients possibly revealed more sensibility to health care service and less reverence for nurses than doctors, which may explain why patients perpetrated more violence gratuitously towards nurses.

Secondly, our study shows several hints of the discrepancy among different levels of hospitals for a specific reported reason that further studies could try to verify. Consistent with our former results in institutional variations, reported reasons among which primary and secondary hospitals had the most proportions (i.e., long waiting time, rejection of request, dissatisfaction with staff attitude, dissatisfaction with the treatment outcome, and death-related issues), reflecting the low-quality care in low-level hospitals.

We have revised the manuscript by adding the following passage to section Discussion (page 14):

“The disparity in reasons between violence against doctors and nurses, as well as different hospital levels, may provide policy implications to prevent WPV against health workers. Although statistically insignificant, serious WPV towards doctors occurred more before and after treatment, but less during the treatment. Moreover, the most frequently reported reasons in primary and secondary hospitals were long waiting time, rejection of request, dissatisfaction with staff attitude, dissatisfaction with the treatment outcome, and death-related issues. The patients seem to be more likely to impute the dissatisfied outcome (including a death) to doctors because the doctors were in charge of the treatments. The differences in reported reasons among different hospital levels may reflect lower quality of care in lower level hospitals.”