PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (**http://bmjopen.bmj.com/site/about/resources/checklist.pdf**) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Workplace violence against nurses in Chinese hospitals: a cross-sectional survey
AUTHORS	Jiao, Mingli; Ning, Ning; Li, Ye; Gao, Lijun; Cui, Yu; Sun, Hong; Kang, Zheng; Liang, Libo; Wu, Qunhong; Hao, Yanhua

VERSION 1 - REVIEW

REVIEWER	David G Legge La Trobe University, Australia
REVIEW RETURNED	02-Dec-2014

GENERAL COMMENTS	Please use the plural voice in referring to 'data' line 7 page 15: nurses instead of nursed Line 24, page 16: consistent instead of consistence The meaning of the sentence commencing on line19, page 18, is not clear Line 21, page 18: angels, not angles Sentence commencing line 4, page 19, not clear

REVIEWER	Therese Hesketh UCL, UK
REVIEW RETURNED	22-Dec-2014

GENERAL COMMENTS	This is a potentially interesting paper on an important subject. It is of note that it comes from Heilongjiang where the famous Harbin incident occurred. It does add a little to our knowledge in this area. However, the paper has some major problems: 1. The English is quite poor and if the paper is considered for publication it needs to be very substantially re-written in good English. Given the level of the English, it is very surprising that the American author is attributed with drafting the manuscript. 2. The background sets the scene for an international audience, though parts of this section are somewhat confusing, largely because of the poor English. For example, the section on Yi Nao is not well explained for an international audience who will be unaware of it. 3. The major problem with this paper is the poor description of the methods. a) It is not clear why only tertiary hospitals were used. Given that 17 hospitals were sampled it would have been better if some lower level facilities were included for comparison purposes, especially since the overcrowded nature of hospitals (a more serious issue in high

	level facilities) is cited as a cause of the violence. b) How were 100 nurses purposively selected to obtain 588 questionnaires (not just a typo for 600) or is this 100 departments? How were the questionnaires distributed? Were they asked to return by post, were that collected by researchers, or how? Which clinical departments were included apart from ER and ICU? How many nurses in each facility? Was there clustering of WPV at hospital level ie was it more common in some hospitals than others – and why? c) The in-depth interviews are potentially the most interesting part of this study, but it is not clear how they were conducted? Were they transcribed? How were they analysed? d) It is not clear what the logistic regression is controlling for – it does not seem to add to the results. e) The use of PTSD scales needs more explanation – what do the scores mean in terms of severity of PTSD? f) Shift working appears to be important. How is this defined? – which nurses do not work shifts of some sort g) What is meant by "preventable". Preventable how? 4. In the results section the interview part is hard to follow. It is not clear which parts are being said by who, for example on page 13 paragraph starting from "Conversely…." Much of the next two pages sounds like the voice of the authors rather than the interviewees. There is some confusion about the relative role of Yi Nao - the percentages on page 16 about the perpetrators don't add up. (93.5% of physical violence by patients and 24% by Yi Nao?). This is confusing. In fact one of the most interesting findings is the fact that 3.5% of violence is caused by other health workers. On page 17, surely the possibility of reverse causation about violence and anxiety should be considered. And how was anxiety level measured? There is no limitations section. Finally, the objective of identifying the contextual and systemic causes and risk factors is covered very superficially, and this could have been very interesting. Rather there is a focus on socio-demographic indicators, which are probably of less importance in trying to understand causation.

VERSION 1 – AUTHOR RESPONSE

Reviewer #1
Reviewer Name David G Legge

>Comment: Please use the plural voice in referring to 'data'
> line 7 page 15: nurses instead of nursed
> Line 24, page 16: consistent instead of consistence
> The meaning of the sentence commencing on line19, page 18, is not clear
> Line 21, page 18: angels, not angles
> Sentence commencing line 4, page 19, not clear

Response:
Thank you for your patient correction, and we have corrected these in our revised manuscript.

Reviewer: 2
>Reviewer Name Therese Hesketh

>Institution and Country UCL, UK
> Please state any competing interests or state ‘None declared’: None Declared.
>
>This is a potentially interesting paper on an important subject. It is of note that it comes from Heilongjiang where the famous Harbin incident occurred. It does add a little to our knowledge in this area. However, the paper has some major problems:
> Comments:
>1. The English is quite poor and if the paper is considered for publication it needs to be very substantially re-written in good English. Given the level of the English, it is very surprising that the American author is attributed with drafting the manuscript.
Response:
Actually the American author David H. Peters did not attribute with drafting the manuscript, but he involved in the project design discussion and provided a lot ideas and full text literature. We described this in the contribution at the end of the manuscript.
And this manuscript had been re-written by a native speaker.

>2. The background sets the scene for an international audience, though parts of this section are somewhat confusing, largely because of the poor English. For example, the section on Yi Nao is not well explained for an international audience who will be unaware of it.

Response: we tried to give more information on Yi Nao as:
Yi Nao is literally defined as ‘healthcare disturbance’. A 2006 survey of 270 tertiary hospitals reported that over 73% of the participating hospitals had experienced Yi Nao.1 Hesketh and Wu described Yi Nao as gangs consisting ‘largely of unemployed people with a designated leader. They threaten and assault hospital personnel, damage facilities and equipment, and prevent the normal activities of the hospital’. More broadly, Yi Nao describes any medical or hospital disturbance created by a group of people – such as patients, patients’ families, relatives, or Yi Nao gang members hired by patients or their families – who gather at hospitals involved in disputes with patients for actual or perceived medical malpractice. The aim of Yi Nao is to force the hospital to reduce costs or to obtain compensation from the hospitals. When financial benefit becomes their main target, they use extreme acts or criminal behaviours in a devious manner, avoiding physical violence and punishment under the law; however, they tend to threaten or abuse health workers verbally to pressure hospitals to accept their demands.

>3. The major problem with this paper is the poor description of the methods.
>a) It is not clear why only tertiary hospitals were used. Given that 17 hospitals were sampled it would have been better if some lower level facilities were included for comparison purposes, especially since the overcrowded nature of hospitals (a more serious issue in high level facilities) is cited as a cause of the violence.
Response:
a. we have to apologize for making a stupid mistake: the hospital number should be 7, not 17. And the editor Surayya Johar had found this mistake and I had explained this in an email (09-Dec-2014) before this manuscript was sent to you and the other reviewer David Legge.
b. literature study showed WPV is more popular in tertiary hospitals (Youduo Yang and Yafang Jiang, 2009) in China, and most bloody attacked against health workers were happened in higher level hospitals: a survey from the Chinese Hospital Association said that violence against medical staff was rising; in 2012, there were 27.3 assaults on medical staff per hospital recorded. And the higher level hospitals suffer more serious WPV, for they generally accept more rare, serious, and sometimes fatal disease. We had addressed these in the revised manuscript.
c. In addition, for time and financial resource limitation at that time, we had to narrow our investigation down to tertiary hospitals level; seven hospitals were purposively selected to represent different areas (east, middle, and west) of the province. Now we got a new funding from the National Nature Science

Foundation of China (NO: 71473064) and we can continue this WPV research and as you have suggested we will expand the survey to lower level and along with that we will do repeated survey at these hospitals this year and next year, then to compare the prevalence of WPV in 3 years.

>b) How were 100 nurses purposively selected to obtain 588 questionnaires (not just a typo for 600) or is this 100 departments? How were the questionnaires distributed? Were they asked to return by post, were that collected by researchers, or how? Which clinical departments were included apart from ER and ICU? How many nurses in each facility? Was there clustering of WPV at hospital level ie was it more common in some hospitals than others – and why?
Response:

a. We readdressed the sampling and method section as:
A retrospective cross-sectional survey was conducted in Heilongjiang Province. Heilongjiang has a population of 38.1 million with 69 tertiary hospitals scattered in 13 cities. Due to the time and resource limitations of this study, seven hospitals were purposively selected to represent different areas (east, middle, and west) of the province; all seven responded. As most tertiary hospitals are located in the largest city – the capital, Harbin – we selected four hospitals in Harbin (middle area). Furthermore, two hospitals were selected in Qiqihaer (the second largest city; west area) and one hospital was selected in Jiamusi (east area).
From July to September 2013, we randomly selected 100 registered nurses from various departments – including internal medicine, surgery, gynaecology, obstetrics, paediatrics, and the ICU and ER – and throughout different shifts with the help of the department managers from the seven chosen hospitals. After consenting to participate, the nurses were asked to return the completed questionnaire anonymously. To ensure anonymity, envelopes and a box were provided in the manager's office and no names or other identifiers were required. The boxes and questionnaires were the responsibility of one of the authors. Using this procedure, we obtained 588 valid questionnaires (response rate: 84%).
b. There are 300-700 nurses in each facility. Neither the prevalence of physical violence (5%-14%), nor the prevalence of non-physical violence (59%-82%) has statistical difference among these sample hospitals. There was no clustering of WPV at hospital level.

>c) The in-depth interviews are potentially the most interesting part of this study, but it is not clear how they were conducted? Were they transcribed? How were they analysed?

Response: we readdressed this in the revised manuscript
Twenty-five interviewees were purposively selected based on their roles and experience with WPV. The interviews were digitally recorded, transcribed, and thematically coded. The final sample size was determined by saturation of information. Twelve nurses who reported WPV experiences, seven hospital administrators, and six health officials completed the interviews.
The interview data were analysed thematically. The coding framework was developed inductively from the data. The initial coding used open coding (codes derived directly from the data) and theoretical coding. The initial codes were then refined to produce a smaller set of themes. The coding framework was subject to continuing iterative revision during the analysis.

>d) It is not clear what the logistic regression is controlling for – it does not seem to add to the results.
Response:

In this study, except for description of frequencies, multiple logistic models were constructed for physical and non-physical violence: using the literature as a guide, we tried to add a few independent variables to explain dependent variable, controlling for background variables such as age, gender, marital status, education, years of experience, shift working (fixed-day-shift and 8-hour shift), department, and anxiety level about WPV.

Our study found the physical violence always accompanied with non-physical violence, in physical violence model, we code “1” for “experienced physical violence” and “0” for did not experienced physical violence (including the nurses who experienced non-physical violence). In non-physical model we coded 1 for Yes (non-physical violence reported) and 0 for No (neither physical nor non-physical violence).

>e) The use of PTSD scales needs more explanation – what do the scores mean in terms of severity of PTSD?

Response: we readdressed it in the revised manuscript
To evaluate the results of physical and non-physical violence, a post-traumatic stress disorder (PTSD) scale containing four items (rehearsal, avoidance, hyperarousal, and effort) was used to ask victims to indicate how much they were bothered by the incidents, with options ranging from 1 (not at all) to 5 (extremely). These items include ‘persistent re-experiencing of the traumatic event, such as thoughts, images, dreams, or percepts, persistent avoidance of stimuli associated with the trauma, numbing of general responsiveness, persistent symptoms of increased arousal, such as difficulty in concentrating and disturbances causing clinically significant distress or impairment in functioning’.26, 27 The diagnostic criteria are defined in the DSM-IV.27
>f) Shift working appears to be important. How is this defined? – which nurses do not work shifts of some sort
Response:
In the sample hospitals, nurses undertaking shift work can be divided into fixed-day shift and rotating-shift groups. Most clinical nurses worked 8-hour shifts; head nurses or nurses involved in infants’ breastfeeding period worked fixed-day shifts, while some hospitals extended this priority level until the children were 4 years of age.

>g) What is meant by “preventable”. Preventable how?

Response:
In the questionnaire we asked the participants “Do you think the incident could have been prevented? " yes " no
Here “preventable” refer to the respondents think the WPV occurred on them could be prevent from happening. We want let the respondents to judge if the violence can be keep from occurring if some suitable measures had been taken.

>4. In the results section the interview part is hard to follow. It is not clear which parts are being said by who, for example on page 13 paragraph starting from “Conversely….” Much of the next two pages sounds like the voice of the authors rather than the interviewees. There is some confusion about the relative role of Yi Nao - the percentages on page 16 about the perpetrators don’t add up. (93.5% of physical violence by patients and 24% by Yi Nao?). This is confusing. In fact one of the most interesting findings is the fact that 3.5% of violence is caused by other health workers.

Response: we have rewritten this part and hope can make it easy to follow.

Comments:Yi Nao - the percentages on page 16 about the perpetrators don’t add up. (93.5% of physical violence by patients and 24% by Yi Nao?).
Response:
a) Thank you for your carefulness, the relevant questions are multiple choice questions and with missing data.
b) The Yi Nao gangs usually hired by patients or their families- pretended they are relatives of patients-generally aim at financial compensation (they will get commission) from hospital for actual or perceived medical malpractice, so they seldom involve in physical violence to prevent them from

being sue and catch by the police. Yi Nao gangs always conduct non-physical violence to pressure the hospital or health workers: keep following with health workers when they are working at hospital; keep discussing with health workers representing patients or their family, or even using funeral wreaths barrier some pathway in the hospital to attract onlookers.

>On page 17, surely the possibility of reverse causation about violence and anxiety should be considered. And how was anxiety level measured?

Response:
In ILO/ICN/WHO/PSI questionnaire there is a question:“How worried are you about violence in your current workplace? (Please rate: 1 = not worried at all; 5 = very worried) " 1 " 2 " 3 " 4 " 5”We borrowed this question to measure the anxiety level about WPV.

>There is no limitations section.

>Finally, the objective of identifying the contextual and systemic causes and risk factors is covered very superficially, and this could have been very interesting. Rather there is a focus on socio-demographic indicators, which are probably of less importance in trying to understand causation.
>We revise the objectives and the contextual and systemic causes factors will be the point of our future research.
Response:
We have added the limitations section and rewritten the discussion section in the revised manuscript.