

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.

This paper was submitted to a another journal from BMJ but declined for publication following peer review. The authors addressed the reviewers' comments and submitted the revised paper to BMJ Open. The paper was subsequently accepted for publication at BMJ Open.

(This paper received three reviews from its previous journal but only two reviewers agreed to published their review.)

ARTICLE DETAILS

TITLE (PROVISIONAL)	Impact of workplace violence and compassionate behavior in hospitals on stress, sleep quality, and subjective health status among Chinese nurses : A cross-sectional survey
AUTHORS	Zhang, Shue; Liu, Wenhui; Wang, Jinghui; Shi, Yu; Xie, Fengzhe; Cang, Shuang; Sun, Tao; Fan, Lihua

VERSION 1 – REVIEW

REVIEWER	Lisa Pompeii University of Texas
REVIEW RETURNED	30-Oct-2017

GENERAL COMMENTS	<p>This paper addresses and important public health issue. The title and abstract do not reflect the contents of the paper. It is unclear throughout if patient and visitor perpetrated violence is also measured and considered in the analysis. The analytical approach seems appropriate but the supporting document about the approach is not included in the methods section. The paper reads well in some areas and not-so well in other areas.</p> <p>Abstract Results: What's the response rate of 1024 nurses surveyed? What's the overall N that the frequencies are based on? Background: This doesn't make sense. There are numerous grammatical and punctuation errors in the background section, making some of this hard to understand. It's disjointed and hard to follow. Page 3, Table 2: Were the night shifts also 12 hour shifts? Page 4, line 24, what is the gastrointestinal discomfort referring to?</p> <p>Page 5, Lines 31-39. Was this conducted in March or February? Is this a convenience sample or snowball sample? More detail about how nurses were recruited and invited to be in the study is needed. How representative is this sample of nurses in China or among those that you are generalizing the findings?</p> <p>Page 6: Line 24 - what is "so on"? Page 6 - did this study only look at coworker and supervisor violence? Much of the background section pertains to patient perpetrated violence.</p>
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	<p>What is mobbing behavior? what is smear reputation?</p> <p>What are the alpha metrics provided after WPV (=0.85) etc.</p> <p>Page 7: Statistical analysis - what is the hypothesis that you're testing?</p> <p>Table 3: What is accumulated violence? This is not described in the methods section. Is this total number or various types (that doesn't consider the number of times)?</p> <p>Table 4: What is the "on the job" compassion style category? Table 5: how was accumulated "compassion" calculated?</p> <p>Details of the the multiple linear hierarchical regression models outlined on page 12 should be including in the statistical analysis section above and not in the findings section. In particular, this section should outline how mediators are considered in this analysis and why.</p>
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REVIEWER	Nicola Magnavita Università Cattolica del Sacro Cuore, Rome, Italy
REVIEW RETURNED	19-Nov-2017

GENERAL COMMENTS	<p>This work is interesting because it addresses a very complex topic, the relationship between workplace violence and compassion. In the Introduction, the authors correctly define workplace violence and compassion. This latter definition (P3 L36) includes 3 elements: noticing another suffering, feeling empathy for the others' pain, and responding to the suffering in some way. This definition fits perfectly with compassion for patients, but it is totally inappropriate to describe the feelings that anyone feels towards colleagues or superiors, especially if they exert violence against him/her. I think it is important to establish "who" has compassion "of whom". Are the workers having compassion on the superiors, or is it the opposite? The questionnaires that were distributed were fairly clear on this issue? This seems to me to be the main methodological inconsistency of this study, which authors have to definitively clarify. It would be useful to point out how compassion questions were composed</p> <p>In the definition of violence (P3 L16), indeed, authors state that WPV is launched by "any patients and their relatives, or any other individual". It seems that the questionnaire calls to consider colleagues and superiors as "they who provide support and compassion", excluding them from the number of those who exert violence. This is false. There is a significant literature on lateral violence that is exerted on workplace by colleagues and superiors. This is another methodological inconsistency.</p> <p>(P6 L31) I do not understand the instructions, "During the past years, have you been put in a situation where a COWORKER or SUPERVISOR?" I think something is missing.</p> <p>(P6 L38) I think it is not appropriate considering that suffering "rarely" of Mobbing Behavior, Intimidation Behavior, Physical Violence and Sexual Harassment can be coded as "non-experienced WPV". We can all understand that these forms of violence are unacceptable and can have serious consequences, even if they rarely happen.</p>
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	<p>I have many doubts about the goodness of the questionnaire used to measure violence. Personally, in fact, I believe that it is not possible to experience physical violence and sexual harassment every day throughout the year and continue working. A questionnaire that provides unanswerable answers is not a good questionnaire.</p> <p>(P6 L41) I also wonder how patient and relatives may exert a Mobbing Behavior against staff. There are two possibilities: either the questionnaire used was inadequate, or it was explained badly.</p> <p>(P7 L21) The method of measurement of sleep quality is very poor. This is a limitation of the study.</p> <p>Most nurses have night shift, others do not. This may be related to self-perceived sleep quality. The type of work is an important factor, which must be taken into account in correlations (see Table 6).</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Reviewer Name

Lisa Pompeii

Institution and Country

University of Texas

Please state any competing interests or state 'None declared':

None declared

Please leave your comments for the authors below

This paper addresses an important public health issue. The title and abstract do not reflect the contents of the paper. It is unclear throughout if patient and visitor perpetrated violence is also measured and considered in the analysis. The analytical approach seems appropriate but the supporting document about the approach is not included in the methods section. The paper reads well in some areas and not-so well in other areas.

Abstract Results: What's the response rate of 1024 nurses surveyed? What's the overall N that the frequencies are based on?

My response: Thanks a lot. We sent a web page link to our questionnaire-survey (<https://www.wenjuan.com/>) to their mobile phones. Moreover, the WeChat developed by Tencent as a social software was used as a tool for the transmission and reading. When every participant received an invitation, they can choose to determine the participation or rejection. Once the nurse chooses to participate, the web for online survey will record their information.

Background: This doesn't make sense. There are numerous grammatical and punctuation errors in the background section, making some of this hard to understand. It's disjointed and hard to follow.

My response: We have re-written this part according to the Reviewer's suggestion.

Page 3, Table 2: Were the night shifts also 12 hour shifts?

My response: Thank you very much for your pertinent suggestion. I agree with the views from the peer reviewer. "Day and night conversion" has been modified to "night shifts".

Page 4, line 24, what is the gastrointestinal discomfort referring to?

My response: Thanks to the critical issues raised by the peer review. A reference has been cited in revised paper.

Page 5, Lines 31-39. Was this conducted in March or February?

My response: We are very sorry for our incorrect writing, and Thank you very much for pointing out this mistake. The cross-sectional study was conducted from February to May 2016. This mistake has been revised.

Is this a convenience sample or snowball sample? More detail about how nurses were recruited and invited to be in the study is needed. How representative is this sample of nurses in China or among those that you are generalizing the findings?

My response: Thanks a lot. It is really true as Reviewer suggested that we have described the basic steps of snowball sampling. As shown below, the manuscript has also been revised.

Snowball sampling was used to collect data. Firstly, we selected randomly 60 nurses who were fully informed of the content of this survey from four affiliated hospitals of Harbin Medical University. This 60 nurses were called original deliverers. We sent a web page link to our questionnaire-survey (<https://www.wenjuan.com/>) to their mobile phones. Moreover, the WeChat developed by Tencent as a social software was used as a tool for the transmission and reading. Secondly, the colleagues or nursing classmates of "the original deliverers" were invited to participate in our online survey after themselves complete the questionnaire, we encouraged the transfer of questionnaires among nurses. Subsequently, the number of the samples increased with the expansion of the network relationship of nurses. Moreover, the questionnaires were self-administered. When every participate received an invitation, they can choose to determine the participation or rejection. Once the nurse choose to participate, the web for online survey will record their information. Hence, It can be count how many people had been invited by us.

My response: Thank you very much for pointing out this issue. Our study are not generalizable to all Chinese nurses, this limitation has been added in modified article.

Page 6: Line 24 - what is "so on"?

My response: Thank you! For clarity, "so on" has been replaced by "work shift" in revised paper.

Page 6 - did this study only look at coworker and supervisor violence? Much of the background section pertains to patient perpetrated violence.

My response: We are very sorry for our incorrect writing, "coworker and supervisor" has been replaced by "patient or their relatives".

What is mobbing behavior? what is smear reputation?

My response: Thanks to the critical issues raised by the peer review. We had added the in-detail explanation for every violence behavior.

What are the alpha metrics provided after WPV ($=0.85$) etc.

My response: Thank you very much for your comments. We want to explain that our understanding is that the difference violence has a internal consistency.

Page 7: Statistical analysis - what is the hypothesis that you're testing?

My response: Thank you very much for reminding me. As Reviewer suggested that the hypothesis has been added in revised paper.

We hope you give us some suggestions, and if it is necessary to remove these samples.

Table 3: What is accumulated violence? This is not described in the methods section. Is this total number or various types (that doesn't consider the number of times)?

My response: Experience of various types were summed, the aim to test the total number of types within last 12 months.

My response: Yes, it was a total number of various types and didn't consider the number of times. A participant only reported they

Table 4: What is the "on the job" compassion style category?

My response: Thank you very much for your questions. For clarity, the "on the job" has been replayed by "from their customer".

Table 5: how was accumulated "compassion" calculated?

My response: According to the coding questionnaire, "never" was coded as the non-experienced compassion from their co-workers, supervisor or customer. So, those were assigned a score of "0". Other situations were assigned as "1", representing the current state that nurses have received the compassion.

Details of the the multiple linear hierarchical regression models outlined on page 12 should be including in the statistical analysis section above and not in the findings section. In particular, this section should outline how mediators are considered in this analysis and why.

My response: Thank you very much for reading this manuscript with patience and giving crucial caution. According to your opinion, we has adjusted.

Reviewer: 2

Reviewer Name

Nicola Magnavita

Institution and Country

Università Cattolica del Sacro Cuore, Rome, Italy

Please state any competing interests or state 'None declared':

None declared

Please leave your comments for the authors below

This work is interesting because it addresses a very complex topic, the relationship between workplace violence and compassion. In the Introduction, the authors correctly define workplace violence and compassion. This latter definition (P3 L36) includes 3 elements: noticing another suffering, feeling empathy for the others' pain, and responding to the suffering in some way. This definition fits perfectly with compassion for patients, but it is totally inappropriate to describe the feelings that anyone feels towards colleagues or superiors, especially if they exert violence against him/her. I think it is important to establish "who" has compassion "of whom". Are the workers having compassion on the superiors, or is it the opposite? The questionnaires that were distributed were fairly clear on this issue? This seems to me to be the main methodological inconsistency of this study, which authors have to definitively clarify. It would be useful to point out how compassion questions were composed

In the definition of violence (P3 L16), indeed, authors state that WPV is launched by "any patients and their relatives, or any other individual". It seems that the questionnaire calls to consider colleagues and superiors as "they who provide support and compassion", excluding them from the number of those who exert violence. This is false. There is a significant literature on lateral violence that is exerted on workplace by colleagues and superiors. This is another methodological inconsistency.

My response: We are very sorry for our incorrect writing. Description about Questionnaire Part existed some mistakes, it is puzzle for readers. For clarity, we has modified the measurement of the WPV and compassion.

(P6 L31) I do not understand the instructions, "During the past years, have you been put in a situation where a COWORKER or SUPERVISOR?" I think something is missing.

My response: Thank you very much for pointing out this mistake, "coworker and supervisor" has been replaced by "patient or their relatives".

(P6 L38) I think it is not appropriate considering that suffering "rarely" of Mobbing Behavior, Intimidation Behavior, Physical Violence and Sexual Harassment can be coded as "non-experienced WPV". We can all understand that these forms of violence are unacceptable and can have serious consequences, even if they rarely happen.

My response: Thank you very much for your comments. I partially agree with the views from the peer reviewer. However, I quite understand your concern. We more willing to explain this situation. The "rarely" was regarded as non-experience of WPV base on Chinese comprehension, because our survey way of investigation could be influenced by the fuzzy memory. A 6-point Likert scale can more actually reflect the prevalence rate of violence. If only "never" were regarded as non-experience of WPV from patients or their relatives without "rarely" . It is must extortionately reported the prevalence rate of violence under Chinese thoughts in Chinese cultural context. Of course, this measurement tool should be verified and these disputes need to be examined separately. Therefore, it must be clarified in this study that a specifically developed measurement tool using the Chinese validation has a great limitation. Moreover, this limitation has been added in the Discussion.

I have many doubts about the goodness of the questionnaire used to measure violence. Personally, in fact, I believe that it is not possible to experience physical violence and sexual harassment every day throughout the year and continue working. A questionnaire that provides unanswerable answers is not a good questionnaire.

My response: Thanks a lot. We want to explain this situation. Physical Violence (biting, pushing, fighting, cutting, throwing things towards body, etc.) and Sexual Harassment (also including rape or attempts to rape). Harassment does not have to be of a sexual nature, however, and can include offensive remarks about a person's sex. For example, it is illegal to harass a woman by making offensive comments about women in general.

(P6 L41) I also wonder how patient and relatives may exert a Mobbing Behavior against staff. There are two possibilities: either the questionnaire used was inadequate, or it was explained badly.

My response: Thank you very much for your comments. We want to explain this situation. Mobbing Behavior as a new concept was proposed in this paper with other new meaning, these behaviors were exerted by a group of patients include the destruction of public facilities, booing, gather together to stir up trouble, public disorder, malicious camera shooting, etc.

(P7 L21) The method of measurement of sleep quality is very poor. This is a limitation of the study.

My response: Thank you very much for reminding me. I agree with the views from the peer reviewer. This limitation has been added in the Discussion.

Most nurses have night shift, others do not. This may be related to self-perceived sleep quality. The type of work is an important factor, which must be taken into account in correlations (see Table 6).

My response: Considering the Reviewer's suggestion, the night shift has been taken into account in correlations (Table 6).

VERSION 2 – REVIEW

REVIEWER	Nicola Magnavita Università Cattolica del Sacro Cuore, Roma, Italy
REVIEW RETURNED	01-Feb-2018

GENERAL COMMENTS	<p>The authors partially modified the article according to the indications received. However, the manuscript is still roughly written. References are inaccurate.</p> <p>See, for example, ref.13. The correct citation is: Lin SH, Liao WC, Chen MY, Fan JY. The impact of shift work on nurses' job stress, sleep quality and self-perceived health status. <i>J Nurs Manag.</i> 2014;22(5):604-12. doi: 10.1111/jonm.12020.</p> <p>Also the ref. 32 clearly has an error in writing the Journal's title. The Journal itself does not appear to be peer-reviewed. The year, number and page indication is wrong.</p> <p>Unfortunately, the errors of quotations correspond to much more serious errors in the statements attributed to them. In correspondence with the above mentioned article by Lin et al. from Taiwan, in this manuscript we read: "A Swedish study reported that 80% of nurses had high or very high levels of stress.13" (Introduction, 3rd page, 10th line). Among other things, the fact that a Swedish study found that in some circumstances 80% of nurses have problems, is completely meaningless for evaluating the impact of violence on stress levels of Chinese nurses. The relationship between violence and stress has been studied by many studies, some of which analyze the individual consequences of violence on the behaviour of nurses to patients [Magnavita N, Heponiemi T. Workplace violence against nursing students and nurses: an Italian experience. <i>J Nurs Scholarsh.</i> 2011;43(2):203-10. doi: 10.1111/j.1547-5069.2011.01392.x]. Other studies have shown that the relationship between violence and stress is mutual: violence causes stress, and the stressed person is prone to violence [Magnavita N. Workplace violence and occupational stress in healthcare workers: a chicken-and-egg situation-results of a 6-year follow-up study. <i>J Nurs Scholarsh.</i> 2014 Sep;46(5):366-76. doi: 10.1111/jnu.12088. --- Magnavita N. The exploding spark: workplace violence in an infectious disease hospital--a longitudinal study. <i>Biomed Res Int.</i> 2013;2013:316358. doi: 10.1155/2013/316358]. These studies, and other relevant works on the subject, must be mentioned.</p> <p>Even on the relationships between violence, sleep and stress it is good to mention pre-existing studies, which have recently been revised [Magnavita N, Garbarino S. Sleep, Health and Wellness at Work: A Scoping Review. <i>Int J Environ Res Public Health.</i> 2017 Nov 6;14(11). pii: E1347. doi: 10.3390/ijerph14111347].</p>
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VERSION 2 – AUTHOR RESPONSE

Reviewer:

Reviewer Name
Nicola Magnavita

Institution and Country
Università Cattolica del Sacro Cuore, Rome, Italy

Please state any competing interests or state 'None declared':
None declared

Please leave your comments for the authors below

The authors partially modified the article according to the indications received. However, the manuscript is still roughly written. References are inaccurate

My response: Thank you very much for reading this manuscript with patience and giving crucial caution. I am very sorry for the collapse of the "document library" in my personal literature reference software, which led to the reference errors in this article. In this revision, I have rechecked carefully and added the necessary references and corrected the mistake literature.

1. Gómezgarcía T, Ruzafamartínez M, Fuentelsazgallego C, et al. Nurses' sleep quality, work environment and quality of care in the Spanish National Health System: observational study among different shifts. *Bmj Open* 2016;6(8):e012073.
2. Magnavita N. The exploding spark: workplace violence in an infectious disease hospital--a longitudinal study. *BioMed Research International*,2013,(2013-7-11) 2013;2013(3):247-61.
8. Zampieron A, Galeazzo M, Turra S, et al. Perceived aggression towards nurses: study in two Italian health institutions. *Journal of Clinical Nursing* 2010;19(15-16):2329-41.
9. Magnavita N. Workplace violence and occupational stress in healthcare workers: a chicken-and-egg situation-results of a 6-year follow-up study. *Journal of Nursing Scholarship* 2014;46(5):366–76.
16. Lin SH, Liao WC, Chen MY, et al. The impact of shift work on nurses' job stress, sleep quality and self-perceived health status. *J Nurs Manag* 2012;22(5):604-12.
18. Magnavita N. Mutual relationship between workplace violence and stress: Nicola Magnavita. *European Journal of Public Health* 2016;26(suppl_1)
19. Nicola Magnavita MD, Heponiemi T. Workplace Violence Against Nursing Students and Nurses: An Italian Experience. *Journal of Nursing Scholarship* 2011;43(2):203–10.
23. Magnavita N, Garbarino S. Sleep, Health and Wellness at Work: A Scoping Review. *International Journal of Environmental Research & Public Health* 2017;14(11):1347.
26. Sun T, Gao L, Li F, et al. Workplace violence, psychological stress, sleep quality and subjective health in Chinese doctors: a large cross-sectional study. *Bmj Open* 2017;7(12):e017182.
34. Baron RM, Kenny DA. The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *J Pers Soc Psychol* 1986;51(6):1173-82.