

## 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

<b>TITLE (PROVISIONAL)</b>	Needs and rights awareness of stroke survivors and caregivers: a cross-sectional, single-centre questionnaire survey
<b>AUTHORS</b>	Li, Xin; Xia, Xiaoshuang; Wang, Peilu; Zhang, Shuting; Liu, M; Wang, Lin

### VERSION 1 - REVIEW

<b>REVIEWER</b>	Sureshkumar Kamalakannan Public Health Foundation of India Indian Institute of Public Health - Hyderabad India
<b>REVIEW RETURNED</b>	25-Aug-2016

<b>GENERAL COMMENTS</b>	<p>It is indeed an important area for empirical research and firstly I would like to congratulate the authors for stepping into this research. However, I do have few concerns as provided below.</p> <ol style="list-style-type: none"><li>1. Reading the abstract leads us to an impression that this research is for the whole of China whereas the limitations describe the lack of generalizability of the results based on a survey from one hospital.</li><li>2. With respect to the results - the study lacks correlations between core components of stroke like the type of stroke (ischemic / hemorrhagic), Acute, post-acute, recurrent, long-term stroke, Severity of disability (which is not measure at all using any standardized assessment tools). Urban or rural context, Socio-economic status of the participants, especially rehabilitation services obtained by the stroke survivors etc. These are very essential components while assessing the needs of the stroke survivor as the needs are found to be different for the above mentioned subgroups of participants.</li><li>3. In terms of methods - There is no justification on how the authors arrived at a conclusion that 17 questions of the WSO survey would help them understand the needs of the stroke survivors and why have they not used additional methods like in-depth interviews, Focus group discussions behind the reasons for those needs. For example will one or two question related to understanding the psychological needs of stroke survivor sufficient to describe a need? It applies to all the components or needs explored in this study.</li><li>4. Assessment or survey has been conducted by neurologist - whats the reason for this. Why the needs were not explored through health professionals involved in managing disability or providing stroke rehabilitation (like physio's, OTs etc.)</li><li>5. Methods also do not report how the participants were selected for the study. who are these participants and how were they selected for</li></ol>
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	<p>the study (were they hospitalized for secondary complications, during follow-up, what was the pathway for participants coming to the hospital and why the needs of these stroke survivors were not assessed in the actual environment where they experience it?</p> <p>6. Results were not sufficiently explained through a graph or a table. Table one is still insufficient to understand the participant characteristics. Each kinds of needs could have been plotted as a graph together and the correlations with p values could be provided as a table for better understanding.</p> <p>7. Moreover there are lots of repetition of the results throughout the subheadings of the results section and the discussion.</p> <p>8. Discussion section requires substantial revision since the reasons for the results were not explained through the study results rather it was based on assumptions mostly- why is this? (For example the authors talk about young stroke survivors seeking more information or having more needs compared to the elderly stroke survivors and the traditional medicine / cultural practices behind it as a reason - How did they arrive at this conclusion? there was no reference for such kinds of statements too. But the table or the results does not explain this for sure.</p> <p>9. Also discussion compared only to two other studies conducted in the U.K and Ireland. why is this? are there no other studies related to needs assessment conducted in LMICs like India, Srilanka, Brazil etc. Just discussion the results with two studies conducted in a high income country may not provide the accurate explanation and justification about the study results.</p> <p>10. No where in the manuscript, the authors have explained the context of stroke rehabilitation in China or their study area. What is available, is that affordable, does everyone with stroke have access to stroke services. How are these services funded etc. So when the rehabilitation needs are more - is it due to lack of availability of services or the participants were not able to afford these services - Just as a case example. Hence this leads to lack of clarity in the study.</p> <p>10. Overall, the study appears to be viewing the problem from a medical model. There is no explanation about the aspects of disability following stroke and its relationship to the needs of the stroke survivors objectively. The authors have to include much more details of what was done in the study in a very clear and objective way.</p>
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<b>REVIEWER</b>	Danni Zheng Neurological and mental health division, The George Institute for Global Health, Australia
<b>REVIEW RETURNED</b>	13-Oct-2016

<b>GENERAL COMMENTS</b>	<p>The authors conducted a survey study on stroke patients and their care-givers in Tianjin, China and showed a need for emotional support, individual treatment, social support and information. There were some variations in the level of needs by age and gender.</p> <p>1. Could the authors please provide a copy of the questionnaire as a supplementary material</p>
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	<p>2. Language expression needs to be checked by a native speaker of English</p> <p>3. The Results mention of a 'total score', can you please elucidate how this 'total score' was calculated and also what it actually means.</p> <p>4. Please display other obtained data regarding "demands of treatment and information about stroke, psychological and social support" as one of the main table/s in the manuscript with P-values.</p> <p>5. In the statistics analysis, what were the potential effect factors investigated? Can you please list them in the Methods.</p>
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### VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Reviewer Name: Sureshkumar Kamalakannan

Institution and Country: Public Health Foundation of India Indian Institute of Public Health - Hyderabad India

Competing Interests: None Declared

It is indeed an important area for empirical research and firstly I would like to congratulate the authors for stepping into this research. However, I do have few concerns as provided below.

1. Reading the abstract leads us to an impression that this research is for the whole of China whereas the limitations describe the lack of generalizability of the results based on a survey from one hospital.

Response:

We would like to thank the Reviewer for his insightful comment on our manuscript. We have re-written this part of the abstract according to the Reviewer's suggestion by mentioning the specific city in which the study was conducted (page 2, lines 4 and 6).

2. With respect to the results - the study lacks correlations between core components of stroke like the type of stroke (ischemic / hemorrhagic), Acute, post-acute, recurrent, long-term stroke, Severity of disability (which is not measure at all using any standardized assessment tools). Urban or rural context, Socio-economic status of the participants, especially rehabilitation services obtained by the stroke survivors etc. These are very essential components while assessing the needs of the stroke survivor as the needs are found to be different for the above mentioned subgroups of participants.

Response:

We have added more information about the components we collected in this study by adding a table that covers the patients' demographics (Table 1, page 6, line 14-page 7, line 1).

3. In terms of methods - There is no justification on how the authors arrived at a conclusion that 17 questions of the WSO survey would help them understand the needs of the stroke survivors and why have they not used additional methods like in-depth interviews, Focus group discussions behind the reasons for those needs. For example will one or two question related to understanding the psychological needs of stroke survivor sufficient to describe a need? It applies to all the components or needs explored in this study.

Response:

Thank you for this insightful comment on this aspect of our paper. One of the limitations to this study is that we did not consider conducting in-depth interviews or focus groups to explore the reasons behind the patients' needs. Further study examining the needs of stroke survivors using these techniques might be needed. We have edited the limitations section to address this issue (page 15, lines 16-18).

4. Assessment or survey has been conducted by neurologist - what's the reason for this. Why the needs were not explored through health professionals involved in managing disability or providing stroke rehabilitation (like physio's, OTs etc.)

Response:

Thank you for your comment. The Global Stroke Bill of Rights Survey was developed by the World Stroke Organization. While they have received significant feedback from many English-speaking stroke survivors and caregivers, they have received very little from Chinese speakers, and they invited us to join the survey. Therefore, our data were only from neurologists, and care from physiotherapists and occupational therapists was not included in this study.

5. Methods also do not report how the participants were selected for the study. who are these participants and how were they selected for the study (were they hospitalized for secondary complications, during follow-up, what was the pathway for participants coming to the hospital and why the needs of these stroke survivors were not assessed in the actual environment where they experience it?

Response:

The patients were from the Stroke Clinical Registry and Follow-up Database of our hospital. Stroke survivors were invited to participate if they were over 18 years old, had suffered a stroke and agreed to participate in the study. Exclusion criteria were patients who had disorders of consciousness, significant cognitive impairment, aphasia, communication difficulties or psychiatric disorders. We mentioned our inclusion and exclusion criteria in the Methods section (page 5, lines 3-9).

6. Results were not sufficiently explained through a graph or a table. Table one is still insufficient to understand the participant characteristics. Each kind of needs could have been plotted as a graph together and the correlations with p values could be provided as a table for better understanding.

Response:

Thank you for your valuable suggestion about this table, which we agree needs to be revised to better address the patients' characteristics. We have edited table 2,3,4, according to this suggestion (page 8, line 9; page 9, line 1, and page 9, line 3).

7. Moreover there are lots of repetition of the results throughout the subheadings of the results section and the discussion.

Response:

According to the Reviewer's suggestion, we have deleted the repetitive content throughout the Results and Discussion sections.

8. Discussion section requires substantial revision since the reasons for the results were not explained through the study results rather it was based on assumptions mostly- why is this? (For example the authors talk about young stroke survivors seeking more information or having more needs compared to the elderly stroke survivors and the traditional medicine / cultural practices behind it as a reason - How did they arrive at this conclusion? there was no reference for such kinds of statements too. But the table or the results does not explain this for sure.

Response:

Thank you for mentioning that we need to clarify our reasons for making certain assumptions in the Discussion section, particularly about age- and culture-related differences that might not be obvious.

We have re-written this part according to the Reviewer's suggestion (page 10, lines 10-22).

9. Also discussion compared only to two other studies conducted in the U.K and Ireland. why is this? are there no other studies related to needs assessment conducted in LMICs like India, Srilanka, Brazil etc. Just discussion the results with two studies conducted in a high income country may not provide the accurate explanation and justification about the study results.

Response:

When we searched the literature, LMIC needs assessments were rare; we found only one study in India, which was added to our article (page 12, lines 12-14). The reason for this may be ignorance of the needs and awareness in LMICs, so we completed this survey in China to draw attention to this population of patients.

10. No where in the manuscript, the authors have explained the context of stroke rehabilitation in China or their study area. What is available, is that affordable, does everyone with stroke have access to stroke services. How are these services funded etc. So when the rehabilitation needs are more - is it due to lack of availability of services or the participants were not able to afford these services - Just as a case example. Hence this leads to lack of clarity in the study.

Response:

Thank you very much for your valuable suggestion. We have added this content to the manuscript according to your suggestion. (page 12, lines 9-12)

10. Overall, the study appears to be viewing the problem from a medical model. There is no explanation about the aspects of disability following stroke and its relationship to the needs of the stroke survivors objectively. The authors have to include much more details of what was done in the study in a very clear and objective way.

Response:

We have added the correlation between NIHSS score and the needs of the stroke survivors, according to the Reviewer's suggestion (page 8, lines 3-5). More details as the Reviewer's suggestion above might be included in further study.

Reviewer: 2

Reviewer Name: Danni Zheng

Institution and Country: Neurological and mental health division, The George Institute for Global Health, Australia

Competing Interests: None declared

The authors conducted a survey study on stroke patients and their care-givers in Tianjin, China and showed a need for emotional support, individual treatment, social support and information. There were some variations in the level of needs by age and gender.

1. Could the authors please provide a copy of the questionnaire as a supplementary material

Response:

We would like to thank the Reviewer for their very valuable suggestion. We have provided a copy of the questionnaire as supplementary material.

2. Language expression needs to be checked by a native speaker of English

Response:

We have consulted the services of an English-language editor for the manuscript.

3. The Results mention of a 'total score', can you please elucidate how this 'total score' was calculated and also what it actually means.

Response:

Thank you for calling this to our attention. We have added this information in the methods section.(page 5, lines 15-18)

4. Please display other obtained data regarding "demands of treatment and information about stroke, psychological and social support" as one of the main table/s in the manuscript with P-values.

Response:

Thank you again for your suggestion. We have added tables to this study to display this information(page 8, line 9; page 9, line 1,and page 9, line 3).

5. In the statistics analysis, what were the potential effect factors investigated? Can you please list them in the Methods.

Response:

We have listed these potential factors in the table we added (Table 2; page 8, lines 9).

Thank you again for your consideration. We look forward to hearing from you.

#### **VERSION 2 – REVIEW**

<b>REVIEWER</b>	Sureshkumar Kamalakannan Public Health Foundation of India India
<b>REVIEW RETURNED</b>	11-Jan-2017

<b>GENERAL COMMENTS</b>	Overall, the authors have substantially revised the manuscript and clarified their views through their responses for reviewers' comments. The revised manuscript could now be accepted for publication.
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<b>REVIEWER</b>	Danni Zheng The George Institute for Global Health
<b>REVIEW RETURNED</b>	26-Jan-2017

<b>GENERAL COMMENTS</b>	The reviewer completed the checklist but made no further comments.
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#### **VERSION 2 – AUTHOR RESPONSE**

We would like to thank BMJ Ope for giving us the opportunity to revise our manuscript.

We thank the reviewers for their careful read and thoughtful comments on previous draft. We have carefully taken their comments into consideration in preparing our revision, which has resulted in a paper that is clearer, more compelling, and broader. The following summarizes how we responded to reviewer comments.

Below is our response to their comments.

Thanks for all the help.