

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

Title (Provisional)

The knowledge and attitude toward stroke and prehospital delay among patients and their family members under high prehospital delay in Zhejiang, China: A cross-sectional study

Authors

Lin, Feng; Wu, Gang; Liang, Junbo; Chen, Jiya; Pang, Xiaozhen

VERSION 1 - REVIEW

Reviewer	1
Name	Eltayib, Eyman
Affiliation	Jouf University, Sakaka, Al Jowf, Saudi Arabia.,
Pharmaceutics	
Date	13-Nov-2024
COI	None

Review Report

Review: **bmjopen-2024-094240**

Title: The knowledge and attitude toward stroke and prehospital delay among patients and their family members under high prehospital delay in Zhejiang, China: A cross-sectional study

Author: Feng Lin^{1#}, Gang Wu^{2#}, Junbo Liang³, Jiya Chen^{4*}, Xiaozhen Pang^{5*}

The paper:

This study explored the level of stroke knowledge and attitudes toward stroke and prehospital delay among acute ischemic stroke (AIS) patients and their family members. Conducted at a Grade-A tertiary hospital in Zhejiang, China, from July to November 2023, this cross-sectional study involved 521 respondents—367 AIS patients and 154 family

members—who completed self-administered questionnaires.

Participants provided demographic details and answered questions assessing their understanding of stroke, attitudes toward stroke, and perspectives on prehospital delay. Primary outcomes measured included scores for stroke knowledge, stroke attitudes, and attitudes toward prehospital delay, while secondary outcomes aimed to identify factors associated with prehospital delay.

Results indicated that patients had lower average scores in stroke knowledge (8.74 ± 6.16) compared to family members (12.66 ± 6.85), with both groups scoring similarly in stroke attitude (patients: 23.52 ± 2.73 , family members: 23.60 ± 2.57) and prehospital delay attitude (patients: 38.65 ± 7.68 , family members: 40.02 ± 7.45). These findings underscore potential areas for educational intervention to improve stroke awareness and reduce delays in seeking treatment.

General comments:

The manuscript presents a well-researched and contribution to the field knowledge, awareness and attitudes toward stroke and prehospital delay among acute ischemic stroke among patients and their family members.

The topic is interesting and methodology and statistics are simple and clear. Nevertheless, I suggest a careful review of certain sections structure in order to enhance the flow and readability. For example, some sentences are overly shortened, and extending them may improve their clarity and

coherence to other sentences. If these minor corrections are amended the manuscript will be significantly improved, and become suitable for publishing.

Specific comments:

- The discussion section must include an introductory paragraph about the research and its objectives, before starting the discussion of the research findings.
- Some concepts were repeated many times through the text.
- Nothing was mentioned about the sample size and Its calculations.

Other than the previous comments, this manuscript is a high-quality, well-prepared

submission. The study is methodologically sound, with a clear and logical structure, and the data is presented in a compelling and accurate manner. The authors have provided thorough and relevant references, and their discussion was well-supported by previous studies. The authors demonstrate a deep understanding of the topic, and their analysis is both comprehensive and clear. As a reviewer, I found no errors in the data analysis, or interpretation of the findings. The language is precise and professional, further enhancing the manuscript's readability and impact.

Given the quality of the work and its contribution to the field, I strongly recommend this manuscript for acceptance without revisions. It is my opinion that it will be a valuable addition to the journal and will resonate well with its readership

Reviewer	2
Name	SHEIKH HASSAN, MOHAMED
Affiliation	Mogadishu Somali Turkish Training and Research Hospital,
Neurology	
Date	08-Jan-2025
COI	None

Review Points

The manuscript provides valuable insights into stroke-related knowledge and attitudes in Zhejiang, China. While there are limitations inherent to the design and scope, the findings highlight critical areas for public health interventions. With minor revisions, this study has the potential to significantly contribute to the literature on stroke care and prehospital delay.

1. it would be beneficial to include references from studies conducted in other parts of the world, particularly Africa, to provide a broader perspective on stroke knowledge, attitudes, prehospital delay, and factors associated with the delay. Here are specific recommendations for studies that could be cited:

Sheikh Hassan M, Yucel Y. Factors influencing early hospital arrival of patients with acute ischemic stroke, cross-sectional study at teaching hospital in Mogadishu Somalia. Journal of Multidisciplinary Healthcare. 2022 Dec 31:2891-9. as well as

TeuschI Y, Brainin M. Stroke education: discrepancies among factors influencing prehospital delay and stroke knowledge. International Journal of Stroke. 2010 Jun;5(3):187-208.

Incorporating these references will:

- a. Broaden the geographic scope of the literature review, providing a global perspective on stroke-related knowledge and prehospital delays.
 - b. Highlight similarities and differences between regions, emphasizing the universal need for education and intervention in stroke care.
 - c. Strengthen the manuscript's argument by showing that similar challenges and solutions are observed in diverse healthcare settings, including Africa where the knowledge about prehospital delay is very low as suggested by certain studies.
2. The manuscript would benefit from general language improvements to enhance clarity, coherence, and readability. Thorough proofreading to address minor grammatical errors and awkward phrasing will ensure a polished and professional presentation of the research.

Reviewer	3
Name	Soto-Camara, Raul
Affiliation	University of Burgos, Health Sciences
Date	15-Feb-2025
COI	None

Dear Editors and Authors,

First of all, thank you for the opportunity to review the manuscript titled “The knowledge and attitude toward stroke and prehospital delay among patients and their family members under high prehospital delay in Zhejiang, China: A cross-sectional study.”

Below is my detailed feedback along with suggestions for improvement:

-Title: It is descriptive; however, it is lengthy and complex. Authors should consider simplifying or restructuring it to enhance clarity and reader engagement.

-Abstract: It is well-structured, presenting the objectives, design, participants, measures, and results. It could be improved by emphasizing the clinical relevance of the findings and practical implications.

-Introduction: It introduction provides a comprehensive epidemiological context and underscores the importance of early stroke treatment. Authors should focus more directly on the existing gap in knowledge, which justifies evaluating both patients and their family

members. Authors should consider reducing extraneous background details to better concentrate on the specific issue of prehospital delay.

- Methodology: The description of the design and use of a self-administered questionnaire is detailed, and the internal consistency (Cronbach's α) is well documented. Authors should expand on the sampling method and justification for the chosen data collection period.

to provide greater clarity to the study. Specifying additional details on the cultural adaptation of the questionnaire and discussion of possible selection or response biases would strengthen this section. Authors should explain why there are no exclusion criteria for family members. Authors should indicate what type of family members could answer the questionnaire. Authors should indicate the criteria used to include variables in the multivariate logistic regression model, as well as whether this model has been adjusted or not.

VERSION 1 - AUTHOR RESPONSE

Reviewer 1

Comment 1: *The discussion section must include an introductory paragraph about the research and its objectives, before starting the discussion of the research findings.*

Response: We thank the Reviewer for the comment. We have now added an introductory paragraph at the beginning of the Discussion section to summarize the research and its objectives before presenting the study findings.

Comment 2: *Some concepts were repeated many times through the text.*

Response: We thank the Reviewer for the insightful comment. We have carefully reviewed the text and revised repetitive occurrences of key concepts such as KAP and its components (knowledge, attitude, practice) to improve clarity and conciseness.

Comment 3: *Nothing was mentioned about the sample size and Its calculations*

Response: We thank the Reviewer for the comment. We have now provided details on the sample size calculation in the Methods section, specifying the use of Cochran's formula¹ and considerations for non-response rates.

Reviewer 2

Comment 1: 1. it would be beneficial to include references from studies conducted in other parts of the world, particularly Africa, to provide a broader perspective on stroke knowledge, attitudes, prehospital delay, and factors associated with the delay. Here are specific recommendations for studies that could be cited:

Sheikh Hassan M, Yucel Y. Factors influencing early hospital arrival of patients with acute ischemic stroke, cross-sectional study at teaching hospital in Mogadishu Somalia. *Journal of Multidisciplinary Healthcare*. 2022 Dec 31;2891-9. as well as

Teuschl Y, Brainin M. Stroke education: discrepancies among factors influencing prehospital delay and stroke knowledge. *International Journal of Stroke*. 2010 Jun;5(3):187-208.

Incorporating these references will:

a. Broaden the geographic scope of the literature review, providing a global perspective on stroke-related knowledge and prehospital delays.

b. Highlight similarities and differences between regions, emphasizing the universal need for education and intervention in stroke care.

c. Strengthen the manuscript's argument by showing that similar challenges and solutions are observed in diverse healthcare settings, including Africa where the knowledge about prehospital delay is very low as suggested by certain studies.

Response: We thank the Reviewer for the valuable comment. We have now incorporated references from studies conducted in Africa and an international review to provide a broader perspective on stroke knowledge, attitudes, and prehospital delay.

Comment 2: The manuscript would benefit from general language improvements to enhance clarity, coherence, and readability. Thorough proofreading to address minor grammatical errors and awkward phrasing will ensure a polished and professional presentation of the research.

Response: We thank the Reviewer for the suggestion. We have carefully revised the whole manuscript to improve clarity, coherence, and readability.

Reviewer #3

Comment 1: Title: *It is descriptive; however, it is lengthy and complex. Authors should consider simplifying or restructuring it to enhance clarity and reader engagement.* **Response:** We thank the Reviewer for the suggestion. We have revised the title to make it more concise and reader-friendly while retaining its key descriptive elements. The updated title is now: "Knowledge, Attitudes, and Prehospital Delay in Stroke Patients and Their Families."

Comment 2: Abstract: *It is well-structured, presenting the objectives, design, participants, measures, and results. It could be improved by emphasizing the clinical relevance of the findings and practical implications.*

Response: We thank the Reviewer for the suggestion. We have added a sentence emphasizing the clinical significance of our findings to the conclusion of the abstract.

Comment 3: Introduction: *It introduction provides a comprehensive epidemiological context and underscores the importance of early stroke treatment. Authors should focus more directly on the existing gap in knowledge, which justifies evaluating both patients and their family members. Authors should consider reducing extraneous background details to better concentrate on the specific issue of prehospital delay.*

Response: We thank the Reviewer for the insightful comment. We have revised the Introduction by reducing extraneous background details and emphasizing the knowledge gap, particularly the role of both patients and their family members in influencing prehospital delay.

Comment 4: Methodology: *The description of the design and use of a self-administered questionnaire is detailed, and the internal consistency (Cronbach's α) is well documented. Authors should expand on the sampling method and justification for the chosen data collection period.*

to provide greater clarity to the study. Specifying additional details on the cultural adaptation of the questionnaire and discussion of possible selection or response biases would strengthen this section. Authors should explain why there are no exclusion criteria for family members. Authors should indicate what type of family members could answer the questionnaire. Authors should indicate the criteria used to include variables in the multivariate logistic regression model, as well as whether this model has been adjusted or not.

Response: We sincerely appreciate the Reviewer's insightful comments. In response,

we have expanded on the sampling method, data collection period, questionnaire adaptation, potential biases, inclusion criteria for family members, and multivariate logistic regression model in the Methods section.

This study employed a convenience sampling method, beginning data collection after obtaining ethical approval and ceasing once the estimated target sample size was reached.

Regarding cultural adaptation of the questionnaire, the design was informed by previous studies, particularly those conducted in China and domestic clinical guidelines. To enhance clarity and respondent comprehension, experts reviewed and refined the questionnaire, modifying technical terminology and removing ambiguous wording.

The included family members were those actively involved in the patient's care and medical decision-making during hospitalization, ensuring that respondents had firsthand experience with the patient's condition and management. No exclusion criteria were set for family members, as the study aimed to comprehensively capture the natural perceptions and behaviors of stroke caregivers. The inclusion criteria (adulthood, clear consciousness, and voluntary participation) ensured that all participants could provide meaningful responses. This open approach minimized selection bias and improved the generalizability of findings to real-world caregiving settings. Additionally, potential selection and response biases have now been addressed in the Discussion section.

For the multivariate logistic regression model, variables with statistical significance ($p < 0.05$) in univariate logistic regression were included. The model was not adjusted.

We have incorporated these details into the Methods section and hope our response adequately addresses the Reviewer's concerns.