

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)	Exploring the key anthropological drivers of and barriers to zoonotic malaria preventative behavior in a community exposed to Plasmodium knowlesi infection in Malaysia: protocol for a qualitative study with a participatory research design
AUTHORS	Naserrudin, Nurul Athirah; Culleton, Richard; Hod, Rozita; Saffree Jeffree, Mohammad; Ahmed, Kamruddin; Hassan, Mohd Rohaizat

VERSION 1 – REVIEW

REVIEWER	Olapeju, Bolanle Johns Hopkins University Bloomberg School of Public Health
REVIEW RETURNED	14-Mar-2022

GENERAL COMMENTS	<p>The authors have written a protocol article that proposes a qualitative study employing participatory approaches to understand the social context and malaria preventive behavior of communities exposed to P. knowlesi malaria. Here are some suggested comments to bolster the manuscript.</p> <p>Line 54-67: Include study limitations including generalizability and other limitations of qualitative research</p> <p>Line 68-77: Include the documented prevalence of P.knowlesi malaria in the nation versus relevant key populations related to the study as applicable in the first paragraph. This would help show the rationale for the study</p> <p>Line 79-81: Consider deleting or revising to be relevant to community members as the study is not specific to forest workers but people exposed to P.knowlesi based on residence and not occupation.</p> <p>Line 83-84. Please include relevant literature that demonstrates that access to relevant interventions is not an issue in this context. This would justify the study's focus on behavioral factors. For example, are the ITNs and protective clothing widely available? for free? when was the last distribution campaign?</p> <p>Line 96: Consider including more detail on the sentence: Furthermore, ITNs are not effective when communities do not use them properly. Are the authors referring to misuse or non-use?</p> <p>Line 96: Clarify the cultural and economic activities mentioned.</p> <p>Line 198: Specify which zoonotic malaria prevention behaviors you are interested in: related to protective clothing, use of ITN, or others.</p> <p>Methods</p> <p>Line 206-207: Clarify the prevalence of P.Knowlesi in Sabah with any regional differences as available</p> <p>Line 224: Study authors should acknowledge limitations of preferring participants with access to electronic communication tools- likely to be more educated, exposed to relevant interventions, and engaging in the desired behavior.</p> <p>Line 241-243: Clarify the tentative age-specific groups of interest to</p>
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	<p>the study- <18 versus >65 is too wide.</p> <p>Line 251-253: Confirm whether the authors will actively involve or solicit feedback from the study population in the design of and before administering study tools respectively (this is also included as participatory approaches)</p> <p>Line 258: Confirm if the research questions were co-designed with the study population as part of participatory approaches</p> <p>Line 277-294: It is unclear if the preparatory phase has been completed. Perhaps highlight key findings as applicable</p> <p>Line 338-347: Kindly clarify how you would involve the study population in dissemination efforts as part of participatory approaches</p> <p>Line 436-442: Summarize the aim and importance of the study specifically not participatory research in general. What are some potential research, programmatic and policy uses of such a study?</p>
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REVIEWER	Taek, Maximus Universitas Katolik Widya Mandira Kupang, Chemistry
REVIEW RETURNED	31-Mar-2022

GENERAL COMMENTS	<p>General comments on this manuscript:</p> <p>In this manuscript, there are many repetitions of citations to a particular article, even though there are still several articles that talk about similar things, which can actually be citation themselves without repeating the citation of the previous article.</p> <p>This is felt when the reader carefully looks at the progress of the cited article numbers. For example: in one page the cited article numbers are 1, 2, 3, 4, 5, 20; but on the following pages, apart from citations to articles number 21-25, it turns out that there are often repeated citations to articles number 2 or 3 or 5 etc which should have been left out on the previous pages.</p> <p>I hope that the editor will pass this note on to the authors for their attention, and it would be nice if improvement could be done. Thank you.</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer 1:

Dr. Bolanle Olapeju, Johns Hopkins University Bloomberg School of Public Health

Comments to the Author:

The authors have written a protocol article that proposes a qualitative study employing participatory approaches to understand the social context and malaria preventive behavior of communities exposed to P. knowlesi malaria. Here are some suggested comments to bolster the manuscript:

Response from authors: Thank you for reviewing the manuscript. We greatly appreciated your comments/suggestions to help in improving the manuscript.

Line 54-67: Include study limitations including generalizability and other limitations of qualitative research

Response from authors: Thank you for this valuable comments. We have included the study limitations including the generalizability and other limitations. Please see line 66-69.

Line 68-77: Include the documented prevalence of P.knowlesi malaria in the nation versus relevant

key populations related to the study as applicable in the first paragraph. This would help show the rationale for the study

Response from authors: Thank you for this valuable suggestion. We have included the key epidemiological data; incidence, and fatality rate in the introduction section. Please see line 84-88.

Line 79-81: Consider deleting or revising to be relevant to community members as the study is not specific to forest workers but people exposed to P.knowlesi based on residence and not occupation.

Response from authors: Thank you for these valuable suggestions. We have tried our best to revised the manuscript considering the infection is relevant to community members and not only to forest workers. Please see line 94-95.

Line 83-84. Please include relevant literature that demonstrates that access to relevant interventions is not an issue in this context. This would justify the study's focus on behavioral factors. For example, are the ITNs and protective clothing widely available? for free? when was the last distribution campaign?

Response from authors: Thank you for this suggestion. We have included the relevant literature to provide evidence on malaria prevention, provided by the Malaysia government. The Malaysian government initiated the Malaria Eradication Program in 1961, and the vector control measures such as insecticide residual spray and distribution of bednets were distributed to resident in the affected areas. Please see line 105-107.

Line 96: Consider including more detail on the sentence: Furthermore, ITNs are not effective when communities do not use them properly. Are the authors referring to misuse or non-use?

Response from authors: We have tried to revise the sentence to make it clear to readers. We are referring to ineffective usage of the ITNs due to the Anopheles vector behavior that bite outdoor and at night. Please see line 127-130.

Line 96: Clarify the cultural and economic activities mentioned.

Response from authors: We have included the relevant economics activities as suggested. Please see line 132-135.

Line 198: Specify which zoonotic malaria prevention behaviors you are interested in: related to protective clothing, use of ITN, or others.

Response from authors: Thank you for your valuable comments. Please see line 267-269: "In view of the fact that current vector control measures do not protect against Anopheles mosquito bites, we defined preventive behavior as 'avoidance of mosquito bites'.

Methods

Line 206-207: Clarify the prevalence of P.Knowlesi in Sabah with any regional differences as available

Response from authors: Thank you for your suggestion. We have included the relevant evidence on the incidence of P. knowlesi in Sabah, and specifically to the area of the study site. Please see line 280-287.

Line 224: Study authors should acknowledge limitations of preferring participants with access to electronic communication tools- likely to be more educated, exposed to relevant interventions, and engaging in the desired behavior.

Response from authors: Thank you for your concern on this issue. We have tried our best to revise, considering the current Covid-19 situation in Malaysia. Please see line 294-300.

Line 241-243: Clarify the tentative age-specific groups of interest to the study- <18 versus >65 is too wide.

Response from authors: Thank you for your valuable suggestions. We have tried our best to revised the manuscript, and only adults above 18 years old will be recruited in this study. Please see line 290.

Line 251-253: Confirm whether the authors will actively involve or solicit feedback from the study population in the design of and before administering study tools respectively (this is also included as participatory approaches)

Response from authors: Thank you for your concern on the active participation of the co-researchers (participants). We will be using the ladder of Arstein, and tokenism. Please see line 317-333.

We have also included briefly our preliminary study which involved the healthcare workers and community leaders (in "Current status"), which were done from 30th of December 2021 until 28th of February 2022. Please see line 505-513.

In addition, we have also included Figure 2, to visualize the participation of the participants in the study process.

Line 258: Confirm if the research questions were co-designed with the study population as part of participatory approaches

Response from authors: The research questions were designed by the researchers. During the preliminary study, the gatekeepers were met and introduction were shared regarding the study and research process. The methodological feasibility was discussed with the gatekeepers to considerate local condition and settings. Please see line 343-344 and 505-512. We have also included Figure 2, for readers to visualize the research protocol.

Line 277-294: It is unclear if the preparatory phase has been completed. Perhaps highlight key findings as applicable

Response from authors: Thank you for your concern on this issue. We have revised the section in 'Phase 1: Preparation' and included information on the relevant articles related with this subsection. Please see line 353-385. We have also included Figure 3, the study framework that were generated during the preparation phase and Figure 4, the pamphlet that were distributed during the preparatory phase at the study sites.

Line 338-347: Kindly clarify how you would involve the study population in dissemination efforts as part of participatory approaches

Response from authors: Thank you for your concern. Considering the participatory approaches of the study, we have revised our manuscript and include the participation of the participants during the dissemination process. Please see line 411-413, 430-439, 450-451.

Line 436-442: Summarize the aim and importance of the study specifically not participatory research in general. What are some potential research, programmatic and policy uses of such a study?

Response from authors: Thank you for this valuable suggestion. We have revised the information throughout the manuscript and include the importance in 'Discussion' section as the conclusion. Please see line 522-543.

Authors' response to Reviewer 2

Reviewer: 2

Dr. Maximus Taek, Universitas Katolik Widya Mandira Kupang [PLEASE SEE ATTACHED COPY OF MANUSCRIPT FOR ANNOTATED COMMENTS FROM REVIEWER #2]

Comments to the Author:

General comments on this manuscript:

1. Please reduce keywords to 5-6 words

Authors response: Thank you for highlighting this concern. We have reduced the keywords to 6: Plasmodium knowlesi malaria, participatory research, photovoice, interview, exploratory study,

preventive behavior. Please see line 26-27.

2. Please separate which is/are strength(s) and limitation(s)

Response from authors: Thank you for this suggestion. However, considering the journal guidelines, we are unable to separate the strength(s) and limitation(s) of the study. But improvements have been made according the Editor(s) suggestion on how to improve the writing on the strengths and limitations of the study. In view of your comments, we have arranged the strength(s) in the first 3 bullet points, and limitation(s) as the last 2 bullet points. Please see line 57-69

3. It is better to write number of cited article because all the sentences only refer to one article. The same comment is for the next part below:

Response from authors: Thank you for this concern. We have written the references based on the guideline by BMJ Open. All the cited articles have been numbered accordingly.

Some sentences referring to the knowledge in the respective literature.

In this manuscript, there are many repetitions of citations to a particular article, even though there are still several articles that talk about similar things, which can actually be citation themselves without repeating the citation of the previous article.

This is felt when the reader carefully looks at the progress of the cited article numbers. For example: in one page the cited article numbers are 1, 2, 3, 4, 5, 20; but on the following pages, apart from citations to articles number 21-25, it turns out that there are often repeated citations to articles number 2 or 3 or 5 etc which should have been left out on the previous pages.

Response from authors: Thank you for this valuable comments. We have tried our best to revise the citations throughout the manuscript. However, some citations were kept at the referred sentences in view of the citation is related to the respective references. This is addressing to the journal guideline that "authors are responsible for the accuracy of cited references". Regarding the repeated citations, the articles were cited accordingly based on the information for the respective studies, and we have ensured, the citations were checked before the manuscript was submitted to the journal.

I hope that the editor will pass this note on to the authors for their attention, and it would be nice if improvement could be done.

Thank you

Response from authors: Thank you for this concern. We greatly appreciated that the editor has passed to us the notes of your comments and suggestions. We have tried our best to response to your comments/suggestions.

VERSION 2 – REVIEW

REVIEWER	Olapeju, Bolanle Johns Hopkins University Bloomberg School of Public Health
REVIEW RETURNED	18-May-2022
GENERAL COMMENTS	It seems two of the figures were inadvertently deleted. Please clarify or revise.