

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Study Protocol: Building an evidence base for epidemiology emergency response, a mixed methods study
AUTHORS	Parry, Amy; Kirk, Martyn; Durrheim, David; Olowokure, Babatunde; Housen, Tambri

VERSION 1 – REVIEW

REVIEWER	Kevin Mackway-Jones Manchester Metropolitan University UK
REVIEW RETURNED	08-Feb-2020

GENERAL COMMENTS	This is a study protocol paper that sets out the methodologies to be used to address an important and, as it happens, very topical area. The mixed methods approach is appropriate and the design is clear. Limitations have been identified and appropriate mitigating steps are included in the study design
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REVIEWER	Sakiko Kanbara University of Kochi, Japan
REVIEW RETURNED	22-Feb-2020

GENERAL COMMENTS	I'm looking forward to the result of this study. Informant selection could be most crucial. I hope you can find best informant who understand responder that are required culturally and clontexuxally appropriate. And you may make the clear the expected competency and role deferences between local responder and International responders if confuse.
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REVIEWER	Lawrence Palinkas University of Southern California United States
REVIEW RETURNED	09-Apr-2020

GENERAL COMMENTS	The protocol calls for a mixed method design that seeks to integrate the findings of information collected from key informant and semi-structured interviews with information collected from an on-line survey. The design itself is adequate and appropriate for a study of this nature. However, the lack of detail on features of sampling, numbers of participants, and analysis raise several important questions. First, the investigators propose to use snowball sampling to identify key informants, based on initial nominations from emergency response organizations. However, it is noted on p. 12 that these organizations lack accurate emergency response workforce databases. If that is the case, how will they be able to identify candidates for the key informant
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	<p>interviews? The application provides no rationale for recruitment of 10 individuals, with twice as many from WHO as from the other organizations. A purposive and snowballing sampling strategy is proposed for the epidemiology responder survey. It isn't clear why this strategy was selected, especially if these networks have lists of members who could be randomly sampled. For the semi-structured interviews, sampling will continue until saturation is reached, but some minimum estimate of anticipated numbers of people interviewed should be provided. Second, with respect to data collection, the authors state on p. 15 that the survey will be available in French and English. However, on p. 20 (line 29), they indicate it will be available in multiple languages. Will all of the semi-structured interviews be conducted by only one interviewer? Will participants be compensated? Third, with respect to data analysis, it isn't clear who will be involved in coding and analyzing the data. Will multiple coders be used? If so, how will consensus in coding be established and reliability of coding between coders be assessed? The weakest part of the proposed study is the lack of detail in how the survey data will be analyzed. No information is provided on what comparisons will be made, if any, and the rationale for making them. No information is provided on what statistics will be used. Importantly, the manuscript does not make clear how themes will be identified from the quantitative data. Finally, with respect to data interpretation, it isn't clear what the authors mean by converging and diverging themes. Are they referring to themes identified from the semi-structured interviews and the survey? The manuscript lacks detail on how the themes identified will be used to identify training needs and develop a workforce framework.</p> <p>Apart from the methodology, the absence of funding to conduct the proposed study raises serious questions as to the feasibility of completing specified data collection and analysis activities.</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1 Kevin Mackway-Jones, Manchester Metropolitan University, UK	
<p>This is a study protocol paper that sets out the methodologies to be used to address an important and, as it happens, very topical area. The mixed methods approach is appropriate and the design is clear. Limitations have been identified and appropriate mitigating steps are included in the study design.</p>	<p>Comment only</p>
Reviewer: 2 Sakiko Kanbara, University of Kochi, Japan	
<p>I'm looking forward to the result of this study. Informant selection could be most crucial. I hope you can find best informant who understand responder that are required culturally and contextually appropriate.</p>	<p>Comment only</p>

<p>And you may make the clear the expected competency and role differences between local responder and International responders if confuse.</p>	<p>Have added definitions to box 1 <i>“Local responder: A responder who is a citizen of the country in which the response is occurring. International responder: A responder who is not a citizen of the country in which the response is occurring.”</i></p>
<p>Reviewer: 3 Lawrence Palinkas University of Southern California, United States</p>	
<p>The protocol calls for a mixed method design that seeks to integrate the findings of information collected from key informant and semi-structured interviews with information collected from an on-line survey. The design itself is adequate and appropriate for a study of this nature.</p>	<p>Comment only</p>
<p>However, the lack of detail on features of sampling, numbers of participants, and analysis raise several important questions. First, the investigators propose to use snowball sampling to identify key informants, based on initial nominations from emergency response organizations. However, it is noted on p. 12 that these organizations lack accurate emergency response workforce databases. If that is the case, how will they be able to identify candidates for the key informant interviews?</p>	<p>Key informant selection is initially based on staff of the organisations – organisations select then from this base we will snowball. The lack of databases is more for who is deployed to emergencies – which are often consultants. Snowball sampling has been selected for this very reason, as there is no database we relied on key informants to identify other key informants who could contribute to answering the research question.</p>
<p>The application provides no rationale for recruitment of 10 individuals, with twice as many from WHO as from the other organizations.</p>	<p>Added rationale: <i>“We aim to interview at least 10 people and ensure there is a range of perspectives from different organisations by using minimum organisational quotas based on organizational emergency epidemiology response size; WHO (n=4), GOARN (n=2), MSF (n=2), US CDC (n=2).”</i></p>
<p>A purposive and snowballing sampling strategy is proposed for the epidemiology responder survey. It isn't clear why this strategy was selected, especially if these networks have lists of members who could be randomly sampled.</p>	<p>Access to organizational lists for emergency response databases was not approved by organisations – therefore we decided on purposive sampling. This text has been added to the paper: <i>“Access to organizational lists of emergency responders was not approved by participating organizations, therefore we were unable to construct a sampling frame. For this reason purposive sampling and snowballing was selected to identify</i></p>

	<i>participants for the epidemiology responder survey."</i>
For the semi-structured interviews, sampling will continue until saturation is reached, but some minimum estimate of anticipated numbers of people interviewed should be provided.	Added estimation of survey sample size to text along with additional references. <i>"We anticipate to interview 20-30 people."</i>
Second, with respect to data collection, the authors state on p. 15 that the survey will be available in French and English. However, on p. 20 (line 29), they indicate it will be available in multiple languages. Will all of the semi-structured interviews be conducted by only one interviewer?	Added that the same interviewer will conduct all interviews in English. We will provide translation in any language requested. <i>"The same interviewer will conduct all interviews."</i>
Will participants be compensated?	No. This has been added to text. <i>"Participants will not be directly compensated for participation."</i>
Third, with respect to data analysis, it isn't clear who will be involved in coding and analyzing the data. Will multiple coders be used? If so, how will consensus in coding be established and reliability of coding between coders be assessed?	Have added to text that two people will code, and will use a code book with clear definitions for coding. Add reference also. <i>"Key informant interview and semi-structured interview data will be coded by two people. A code book will be used with clear definitions for each code. Discrepancies will be discussed between coders and clarified in the code book if necessary."</i>
The weakest part of the proposed study is the lack of detail in how the survey data will be analyzed. No information is provided on what comparisons will be made, if any, and the rationale for making them.	I have added more detail however as this study is taking an iterative approach, it's too soon to say what will be analysed and how. Significant issues will be explored as they arise.
No information is provided on what statistics will be used.	The paper mentioned descriptive analysis will be used. However, as above, the study design is iterative, appropriate statistical methods will developed based on what needs to be analysed. This information will be detailed in future publications outlining the results.
Importantly, the manuscript does not make clear how themes will be identified from the quantitative data.	The manuscript outlines an iterative approach to identifying themes and relationships. This process will be used both for qualitative and quantitative data. Additional text has been added to clarify this issue. <i>"Triangulation and a mixed methods matrix will be used to combine qualitative and</i>

	<i>quantitative themes. (49) This will be conducted throughout the research, as outlined in the study model (Figure 1)."</i>
Finally, with respect to data interpretation, it isn't clear what the authors mean by converging and diverging themes. Are they referring to themes identified from the semi-structured interviews and the survey?	The analysis will be a combined analysis. I've added some text to improve clarity on this. <i>"The data from all of these activities will be integrated and patterns, themes, and relationships formed and examined."</i>
The manuscript lacks detail on how the themes identified will be used to identify training needs and develop a workforce framework.	Once we have the results we will share with stakeholders, together we will decide ways forward in framework development. For any framework to be useful, both national and international stakeholders will need to be involved. This text has been added to the manuscript: <i>"Workshops will be conducted with stakeholders to ensure the results are interpreted according to local settings. The theory of change model will be used to support the process of taking the themes identified in the research through to stakeholder consultation and then framework development and implementation."</i>
Apart from the methodology, the absence of funding to conduct the proposed study raises serious questions as to the feasibility of completing specified data collection and analysis activities.	All data collection and analysis is online therefore funding, although useful, if not essential at this point. The findings of this study will help support development of funding applications for further work in this area.

VERSION 2 – REVIEW

REVIEWER	Lawrence Palinkas University of Southern California
REVIEW RETURNED	11-May-2020
GENERAL COMMENTS	The paper still does not make clear what insights may be gain from descriptive statistics and how this information will be triangulated with the information from semi-structured interviews. Protocol calls for a review of the literature. In most studies, the literature review is conducted prior to protocol design.