Author's response to reviews

Title: Understanding the social context of fatal road traffic collisions among young people: a qualitative analysis of coroners' records

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Author's response to reviews: see over
Dear Editor,

Please find attached our revised manuscript: Understanding the social context of fatal road traffic collisions among young people: a qualitative analysis of coroners’ records. We confirm that the study adheres to the RATS guidelines on qualitative research.

We thank the reviewers for their comments, which we feel has resulted in a strengthening of our paper. We now provide a point-by-point response to the comments from Reviewers 1 and 2.

**Response to Reviewer 1: Ellen De Pauw**

Comment 1: It is unclear how the rural county was selected. Was it based on the occurrence of a high number of fatalities? Was it selected randomly?

Response to Comment 1: Thank you for this comment. The text has now been amended on page 4 as follows: “A rural county located in South West England was selected as the setting for this research as the region has been identified as having a significantly high road fatality rate and local authorities wanted to conduct more research into this area [3, 14].” Please click on this link: [http://www.swpho.nhs.uk/resource/item.aspx?RID=33399](http://www.swpho.nhs.uk/resource/item.aspx?RID=33399).

Comment 2: It is not clear why the group aged 16-24 is selected (instead of for example 16-29).

Response to Comment 2: This information is now provided on page 4 of the manuscript as follows: “The age range was selected in response to evidence that drivers aged 16-24 are greatly overrepresented in road death statistics when compared with other, more experienced drivers [15].”

Comment 3: It is unclear what some risk factors include. For example: relationships, physical and mental distraction, road conditions, safety features, travel environment. It would be interesting to know more about these factors, for example through a short description or through some examples of specific elements that were analyzed in relation to these risk factors.

Response to Comment 3: We agree that the data extraction tool required further clarity on the risk factors for RTCs among people so we have amended the text (to include examples) and also provide a reference for readers who would like to know more about such risk factors. The text on page 5 now reads as follows: “Prior to the beginning of the study a qualitative data extraction tool and framework was developed by the research team, following a review of the literature, and tested during a pilot data collection visit to HM Coroner. The tool consisted of a number of headings based on known risk factors identified by Shope [6] during a comprehensive review and synthesis of quantitative and qualitative research findings relating to RTCs among young drivers. Identified risk factors included: personality characteristics (e.g., level of aggression); developmental factors (e.g., sleep patterns); driving ability (e.g., driving skill); demographic factors; perceived environment (e.g., risk perception); and, driving environment (e.g., weather conditions) [6].”
Comment 4: Please use a semicolon instead of a comma in between the number of records and the percentage (for example: (n=17; 57%)). This will improve readability.

Response to Comment 4: Thank you for highlighting this issue. In light of the comments made by Reviewer 2, we have now removed all information on sample size and percentages from the Results section which had accompanied each theme as we agreed that this would not be appropriate for a qualitative study.

Comment 5: It is not clear what is meant by ‘particular groups of young people engage in social driving behaviour’. Are these groups of young people with specific characteristics (for example social status)?

Response to Comment 5: In an attempt to clarify the meaning of the sentence, we have the amended the text on page 14 as follows: “The finding that groups of young people engage in social driving behaviour, and the existence of large social networks of young drivers in and around the rural market towns, lends support to the development of interventions that target these groups and their specific social context.”

Response to Reviewer 2: Cristina Inclan Valadez

Comment 1: The authors are proposing a qualitative analysis but they are using the academic jargon of quantitative / statistical studies. Qualitative analysis implies searching for in-depth, thorough analysis with no generalizations. The authors stated in page 16 that given the small sample size "findings may not be able to be generalised to the wider UK or international audience".

Response to Comment 1: We thank the reviewer for this observation and agree that certain phrases were unfortunate in their use of quantitative jargon. We have amended the manuscript text on page 18 as follows: “The focus on a single UK rural county resulted in a limited number of cases for inclusion in the study, particularly of fatalities in females (although this is characteristic of the global picture [39]). Although the number of cases was relatively small, we did feel that we achieved saturation for identification of themes, and it allowed for a thorough, in-depth analysis of cases in a way that is not routine in road fatality analysis. Comparison with existing theoretical models and literature on risk factors for young people allowed us to locate our findings within a wider UK and international context, adding to the existing evidence base.”

Comment 2: Please state the objectives of the paper in a comprehensive way, and justify the use of the proposed key themes

Response to Comment 2: In response to the first part of this comment, we have now included a sub-heading within the background section to highlight the study aims (see page 3 of the manuscript). Please see our responses to Comments 3 and 4 for justification of the proposed key themes.

Comment 3: This misconception of what a qualitative study is also expressed in the methodology. There are no references to qualitative literature, meaning by this why do we conduct interviews? why analysing people’s narrative? The advantages or the disadvantages; what do we mean by theoretical saturation (meaning when the researcher has gathered enough information to sustain the study), how did the proposed categories or key themes emerged? Please see the classical
Response to Comment 3: We thank the reviewer for this comment and have now incorporated some discussion of qualitative methodology into the Background and Methods section of the manuscript. For example, on page 5, it now states: “The tool was piloted on seven of the RTCs included in this study. Following the guidelines for inductive qualitative research [15, 16], this process allowed researchers to assess whether the pre-specified headings were applicable to the available data, and to identify any additional areas which may provide in-depth rich descriptions which may aid our understanding of fatal RTCs among young people.” Further, we now include additional information in the Data Analysis section of the methods (page 6) to clarify the analysis process: “Notably, the researcher was careful not to be restricted by these pre-defined concepts, allowing for additional codes to emerge from the data inductively. Following this process, the researcher reflected on the codes and allowed wider themes to emerge, with clear examples of each theme taken from the data to illustrate and support the findings of the analysis. To confirm accuracy and interpretation of the data during the coding process and at theme development, findings were discussed and agreed between two researchers (EB and PP) and also among the project steering group (SG, ET, SW, MM).”

Comment 4: The proposed key themes (social driving, driving experience, interest in motor vehicles, driving behaviour, perception of driving ability, and emotional distress) are not fully sustained by literature review. Page 4 mentioned a literature review but it is not possible to link it to a theoretical model needed to give some background to the research and how are the . Some of the key themes might be better explained if by broader categories: e.g. main risky behaviour: drinking as a social event, perceptions of driving experience and drinking ability, emotional distress. That could reflect more theoretically the individual, social, environmental factors that surround RTI. In page 5, the authors mentioned a tool that was piloted on sever of the TRCs i that helped them to identify headings. However, the reader has no opportunity to see that tool and more importantly, what was taken /adapted from that tool. My assumption is that is is a quantitative tool adapted for qualitative purposes. If that is the case, the authors need to give an explanation on how to extrapolate research tools.

Response to Comment 4: We thank the Reviewer for this comment and have amended the text to clarify some of the missing detail (which was originally excluded to reduce the word count). On page 4/5 we now reference a conceptual framework of influences on youthful driving behaviour which was used to support the development of the tool (see Shope, 2006). The framework identifies six overarching risk factors, which are now detailed in our manuscript text. The framework (and our subsequent tool, which was qualitative) was based on our review and synthesis of quantitative and qualitative research findings relating to RTCs among young drivers. We would be happy to include the data extraction tool in an appendix if it is felt that this would add to the paper.

Comment 5: In summary, the mix of qui-quali data provided in the results (the use of proportions with the use of narrative) suggest that the best way to improve this article is by expanding the sample size of the records and to use the qualitative data as supportive methodology. Expanding the sample size could allow authors to use the statistical jargon of "representativeness and generalizations" "sample size" "%" and to create a statistical model...
without failing into the methodological trap of mixing approaches. It is also recommendable to flesh out the narrative so that the issues of self-perception of risk, or driving ability or distress can add texture to the numbers and a very good article can be published.

Response to Comment 5: We welcome this comment and comments above regarding our inappropriate use of quantitative terminology at some points throughout the manuscript, and have amended our text accordingly. For example, we have now removed the descriptions of sample size and percentages which had accompanied each theme as on reflection, we agree that they were not relevant for a qualitative study. Given these amendments we would argue that the sample size of the study does not need to be increased as we now clarify that we are not attempting to report on the findings from a “representative” sample in order to generalise to a wider population (although as noted earlier, we use the wider literature to set the study findings in context). Furthermore, our study included all cases of fatality among young people in the research area during the period specified by the research funders, and therefore, expansion of the number of cases is not viable or appropriate.