Author’s response to reviews

Title: Five years after the accident, whiplash casualties still have poorer quality of life in the physical domain than other mildly injured casualties: analysis of the ESPARR cohort.

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Author’s response to reviews:

To the “BMC Public Health” journal

December 9th, 2015

Dear Sir or Madam,

Please would you find enclosed a new version of our paper entitled “Five years after the accident, whiplash casualties still have poorer quality of life in the physical domain than other mildly injured casualties: analysis of the ESPARR cohort” numbered PUBH-D-15-00721.

We are very grateful to the reviewers and the editors for their useful comments. We corrected the text as requested by the reviewers and controlled all required recommendations for edition. We hope having satisfactorily responded to all of the reviewers’ questions and that our study will be definitively accepted for publication by your journal.

We added to this letter a complete list of responses to each question. You will find a version of our paper with our corrections in red and lines’ numbers, and a final version with the same text without lines number.

Thank you for taking time to reconsider this manuscript.

Yours faithfully,

Charlène TOURNIER        Martine HOURS        Pierrette CHARNAY

Laetitia CHOSSEGROS        Hélène Tardy
Reviewer 1: The paper is well-structured using an Introduction, Method and Result (IMR) approach. It has not explicitly mentioned the objectives of the study,

Response: We changed the presentation of the objectives of the study at the end of the Introduction; we hope that they are currently more explicit. See lines 87-91

knowledge gap has not been articulated well at the outset but has covered considerable amount of literature.

Response: The knowledge gap is reported in the Introduction, lines 74-81: we added a further sentence (lines 77-80) to better explain this gap.

In the discussion part it has compared with other identical studies and findings have been compared.

Under the methodology it has covered considerable number of samples, used a scientific method for data collection and analysis, taken into account the risk of bias responses.

Nevertheless, the study is to a considerable extent a perceptive view of the respondents where the researchers heavily depended on reported data.

Response: We agree with the reviewer: the study is based on the subjective views of the casualties; but the information was obtained in the same way for whiplash and non-whiplash casualties, so no bias was introduced here, and it is possible to compare their subjective points of view about their health status. Furthermore, measurement of quality of life gives a good idea of the impact of the accident.

Non-response was also there which have been mentioned in the paper.

The study does not contain the period of the survey but followed the required ethical standard.

Response: We added the period of the survey (line 126).

Considered all basic explanatory variables for collection and analyses of data. For statistical analysis some basic important techniques have been used.

The paper also contains the limitation of the study. However, it has not considered the natural deterioration of the health which likely to occur after 5 years of accidents what the respondents might have considered spuriously as caused by the whiplash.

Response: We agree that health could deteriorate during 5 years, but this is true for both groups (whiplash and non-whiplash). Moreover, Qol improved between one and five years: a the lesser degree of improvement in whiplash (group 2) is unlikely to be due to
normal deterioration, which would be identical for all three groups, but might be due to the initial lesion.

The paper may be accepted after incorporation of the clarification of observations made by the reviewer.

Reviewer #2: The cohort study examines the long term outcomes of whiplash injury, compared to non-whiplash injury, 5 years after a road accident. This is an important area of research as few studies have examined the long-term quality of life of Mild road injuries. The methods are well described and are generally appropriate and the results are discussed within the context of previous research in this area. However, the paper is not well written, in some instances difficult to read and follow and is full of grammatical and other errors some of which are listed below.

The following issues need to be addressed:

Background

Page 4.

Line 7. "The number of casualties suffering from whiplash seems to be of the same order of magnitude in most countries (annual incidence between 0.04 and 3.2/1,000". First of all 0.04 and 3.2/1,000 provided is a rate and not a number. Secondly 1000 what? Accidents? People? Km driven?

Response: The reviewer is right: we replaced “the number of casualties” by “the annual incidence rate”. See line 59. We added the unit for the denominator of the rate. See line 61

Line 12. Change "2-car collisions" to collisions involving two cars. I am assuming that this is what the authors mean!

Response: We changed the words as requested by the reviewer; see line 62

Line 38. Not sure what the authors mean by "Psychological factors are often related to WAD" they need to elaborate.

We added (such as psychological antecedents …), line 71

Line 56. First time ESPARR cohort is mentioned in the article. It needs to be spelled out.

Line 56. No need for "Étude et Suivi d'une Population d'Accidentés de la Route dans le Rhône: follow-up study of road-accident casualties in the Rhône administrative département of France". Just refer to the study like it is done with others!

See lines 83-85 ("ESPARR" spelled out and explained succinctly)
Page 5, Line 4. Generally the objectives of the study are not very clear. The authors said that "The present study focuses on the consequences of whiplash injury in the ESPARR cohort 5 years after the accident, in terms of pain, sequelae and QoL" what about the comparisons with other mild injuries which was stated as an objective in the abstract? Later on in the discussion, the authors also stated that a further objective was to explore risk factors for impaired QoL. The authors need to specifically define the objectives of the study at the onset, at the end of the background section.

Response: The reviewer is right; we changed the statement of objectives; see lines 88-91

Methods

Line 11. "...which, since 1995, has recorded all casualties receiving medical care..." do authors mean "... has recruited all casualties..."?

Response: No, the Registry is a database which contains all records concerning each road-accident casualty in the local area. We controlled our recruitment in ESPARR by comparing the subjects who gave consent to the casualties registered in the Road Crash Registry for the same period, in order to look for possible selection bias: in the text, the term "recorded" is the right one.

Line 50. Start a new sentence here " the questionnaire gathered information on the accident and previous familial, occupational and health status"

Response: OK, done. See line 117

Results
Characteristics of the population

Line 51. "Whiplash casualties were more frequently 4-wheel motor-vehicle drivers, with accidents involving another motor vehicle, and with rear impact" do you mean Whiplash casualties were more likely to be among 4-wheel motor-vehicle drivers...? If so, compared to which group?

Response: We have revised the punctuation in this passage, to make things clearer. The first sentence clearly introduces a comparison between the whiplash and non-whiplash groups; the following sentences detail the results of this comparison. In last sentence of the paragraph, we reiterate which groups are being compared. See lines 236-243

Line 59. "There were no significant differences between the 2 groups ..." are we talking whiplash groups? Be specific and use "two groups: instead of "2 groups".

Response: No, it still means ‘whiplash group and non-whiplash group’; we have written "two" in letters (see also below). See line 242
Page 14, line 1. Should be "One in four whiplash casualties". Line 6. It is more proper to use "three groups' rather than "3 groups". Please change throughout the manuscript.

Response: OK, done. See line 266; as requested we replaced figures by words when appropriate throughout the manuscript.

Page 18, Line 1. The authors found no interaction between pain and PTSD in the relation between whiplash and unsatisfactory health. What about interactions between pain and other factors, particularly pain and the whiplash variable (non-whiplash, whiplash group 1 and whiplash group 2). If interaction exists, regression results should be divided into those with pain and those without pain.

Response: There is no significant interaction between pain and whiplash status.

Discussion

Page 20, line 14. "Rebbeck" should be "Rebbeck et al". Check all references throughout the manuscript (example: Schwerla on line 32, same page).

Response: OK, done. See lines 364, 377, 384, 387, 401, 446.

Page 21, line 20. The present results were adjusted "for" the intention to lodge a complaint.

Response: OK, corrected. See line 404.

Page 21, line 48. As mentioned before, I don't think that the role of pain was examined sufficiently in this study. Interactions terms between pain and various independent factors need to be carried out as part of the regression analysis in order to examine the role of pain as an effect modifier.

Response: It is not possible to check all possible interactions. We checked those which were the most important in our opinion (whiplash* SSPT, whiplash*Pain, Pain* SSPT). In view of the large weight of SSPT, while the interaction pain*SSPT is not significant, the probability that others interactions could be significant is very low.

Conclusion

Last sentence. I am not convinced that results showing Grade-2 whiplash casualties to be particularly affected, reinforces the hypothesis of neuropathic pain. The authors need to better explain the rationale for this.

Response: OK, we changed this sentence a little bit so as not to be so affirmative. See lines 470-471 and 50-51 for the summary.
Response to the editor
Editorial Requests

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Please note that all submissions to BMC Public Health must comply with our editorial policies. Please read the following information and revise your manuscript as necessary. If your manuscript does not adhere to our editorial requirements this will cause a delay whilst the issue is addressed. Failure to adhere to our policies may result in rejection of your manuscript.

Ethics:

If your study involves humans, human data or animals, then your article should contain an ethics statement which includes the name of the committee that approved your study.

See lines 208-215

If ethics was not required for your study, then this should be clearly stated and a rationale provided.

Not relevant.

Consent:

If your article is a prospective study involving human participants then your article should include a statement detailing consent for participation.

A sentence was added to complete the information previously provided. See lines 211-213

If individual clinical data is presented in your article, then you must clarify whether consent for publication of these data was obtained.

Not relevant.

Availability of supporting data:

BioMed Central strongly encourages all data sets on which the conclusions of the paper rely be either deposited in publicly available repositories (where available and appropriate) or presented in the main papers or additional supporting files, in machine-readable format whenever possible. Authors must include an Availability of Data and Materials section in their article detailing where the data supporting their findings can be found.

We added a sentence about the possibility of access to the data, through contact with us. Line 215
Authors Contributions:

Your 'Authors Contributions' section must detail the individual contribution for each individual author listed on your manuscript.

See lines: 486-493