Reviewer’s report

Title: The Price of Personal Mobility: Burden of Injury and Mortality from Personal Mobility Devices in Singapore - a Nationwide Cohort Study

Version: 0 Date: 21 Feb 2019

Reviewer: Reviewer 2

Reviewer’s report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?

No - there are minor issues

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?

No - there are minor issues

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?

Yes - experiments and analyses were performed appropriately

Statistics - Is the use of statistics in the manuscript appropriate?

Yes - appropriate statistical analyses have been used in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?

No - there are minor issues

OVERALL MANUSCRIPT POTENTIAL - Is the current version of this work technically sound? If not, can revisions be made to make the work technically sound?

Probably - with minor revisions
GENERAL COMMENTS: There is growing interest in the road safety impacts of the increase in use of PMDs, so this paper has value simply by being one of the first studies in the area. This is important, as most of the findings are not really surprising.

From a reader's perspective, the acronym PMD is very easy to see, but it is much harder to pick out the motorised vs non-motorised labels, so I suggest that you label them MPMD and NMPMD (or something like MotPMD and NonPMD).

Introduction

L7 "Reasons for increasing risk of injury" - the previous para is about the growth in numbers of injuries, not the risk of injury, and would be explained by greater uptake (exposure). This para also starts to talk about PMDs as if they are all motorised, whereas a key part of the analysis is to distinguish between motorised and non-motorised PMDs. Really the first sentence (L7-8) doesn't make much sense in the context of the paper, and the next only makes sense if you introduce the implications of the distinction between motorised and non-motorised PMDs. I don't think this is done at all, it just appears without comment under "Covariates" in the Methods section.

Overall the Intro is very short and has little scene-setting information.

Methods

As a reviewer I want to know why I would think NTR was a good data source - is there evidence of its completeness, and the quality of its data? Reference to "seven public hospital trauma units" also doesn't make sense - taking too much for granted.

Also you mention ISS>9 and give a 1976 paper as the reference - which I assume is for the ISS, not the justification for 9 as a cut-off point. Why 9?

Results

In the Descriptive Analysis, it states that there were 618 patients considered, then says 4 pedestrians were excluded; two issues here - first, as they were not users of PMD they should have been excluded along with pedal cyclists, roller bladers and the motorised wheelchair user; second, it should also be stated that 42 patients whose PMD type was undocumented were excluded from the motorised vs non-motorised PMD comparisons (of 572 patients), but included in the overall descriptive analysis (of 614 patients).

"Multivariate" is typically used rather than "Multivariable"
Discussion

Proportion requiring surgical intervention - significant compared to what?

I found it very strange that the association of age with severity of injury was attributed to slower reflexes. It is well-established that ageing is associated with loss of bone density and slower healing, and this increase in injury severity with age is routinely seen in road crash victims, whereas the involvement of slower reflexes is rather speculative.

Tables

As per my comments above, Table 1 will need amendment, which will change the figures. Tables 2 and 3 are presented without mentioning any sample sizes - it would help in interpretation to include them.

REQUESTED REVISIONS:

The changes needed are outlined in my earlier comments

ADDITIONAL REQUESTS/SUGGESTIONS:

Please see earlier comments

Note: This reviewer report can be downloaded - see attached pdf file.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

**Declaration of competing interests**
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

This reviewer has been recruited by a partner organization, Research Square. Reviewers with declared or apparent competing interests are not utilized for these reviews. This reviewer has agreed to publication of their comments online under a Creative Commons Attribution License attributed to Research Square and was paid a small honorarium for completing the review within a specified timeframe. Honoraria for reviews such as this are paid regardless of the reviewer recommendation.

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license ([http://creativecommons.org/licenses/by/4.0/](http://creativecommons.org/licenses/by/4.0/)). I understand that any comments
which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal