Author's response to reviews

Title: Bio-psychosocial determinants of time lost from work following non life threatening acute orthopaedic trauma.

Authors:

Fiona J Clay (FIONA.CLAY@MUARC.MONASH.EDU.AU)
Stuart V Newstead (stuart.newstead@muarc.monash.edu.au)
Wendy L Watson (W.Watson@unsw.edu.au)
Joan Ozanne-Smith (Joan.Ozanne-smith@med.monash.edu.au)
Rod J McClure (Rod.McClure@muarc.monash.edu.au)

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Author's response to reviews: see over
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Dear Editor

Re: Manuscript: 1984710025292378

The authors thank the reviewers for their helpful feedback on the manuscript entitled “Bio-psychosocial determinants of time lost from work following non life threatening acute orthopaedic trauma”.

We acknowledge the validity of the reviewers comments made by the reviewers and have amended the manuscript accordingly. Attached is a detailed explanation of the changes made. Reviewer’s comments are indicated in blue font, our response is indicated in black. We have used italics to indicate the inclusion of text in the revised manuscript. A copy of the revised manuscript has been uploaded.

Yours Sincerely

Fiona Clay
Accident Research Centre
Monash University
Clayton, VIC, 3800
Australia.
Reviewer 1

Point 3: Yes it seems that the data represents people of working age but only 33% of them are women?

As the reviewer notes, the sample cohort comprised mainly of men. This is in keeping with other studies of RTW following acute orthopaedic trauma and reflects that the large proportion of acute orthopaedic trauma requiring hospitalization (and not secondary to illness) result from transport collisions involving males.

We have updated the text of the discussion. Page 15, Paragraph 3. This comment has been referenced.(References 8 and 9 in the revised manuscript).

“In common with other studies, gender was not a significant predictor of time to RTW. Our study sample included a similar proportion of males to these studies”.

Reviewer 2

1. This is an interesting study. The main outcome measure used, return to work, is well chosen but limited by the fact that the data of first return to work was unknown for some of the patients. Were any efforts made to validate the patients own statement of return to work?

The authors agree that the validation of return to work by patients who returned to work during the study would have added weight to our findings. We noted in the discussion of the original manuscript that we were not in a position to validate the date of first return to work from other sources due to requirements placed upon us by the ethics process.

We have clarified the methods section (Page 8, Assessment of Return to Work Outcomes, 2nd Paragraph) to indicate that the patients own statement on return to work was not validated from other sources.

_Ninety-two of the 104 participants who returned to work provided the exact date of return; the remaining participants were only able to indicate the month that they returned. The participants own statement of return to work was not validated from other sources_
2. This is a multi-centre study, which is strength. It is stated that the study hospitals were selected to achieve a representative sample. It would be important to know what the selection criteria were.

We have updated the methods section (Page 4, Patients and Procedures, Paragraph 1) to reflect the selection criteria for the choice of study hospitals.

_Hospitals were selected in different geographical regions that broadly reflected a range of socioeconomic status in patients admitted to hospitals. The choice of hospitals was also based on their trauma status under the Victorian State trauma system in order to facilitate the recruitment of patients with a range of orthopaedic injuries. They included a regional hospital, two metropolitan hospitals and a level 1 major trauma hospital. The Level 1 trauma hospital receives more serious injuries or concerning presentations._

3. The sample size is rather small. It would be important to know the total population of eligible patients that the study sample was taken from. And how many patients were included at each hospital? How many were not reached and how many refused to participate? A flow chart regarding the patient inclusion criteria would be helpful.

The study base comprised all adults of working age (aged 18–64 years) admitted to hospital in Victoria as a result of sustaining an unintentional orthopaedic injury in which the main injury was not an intracranial or an injury to the nerves or spinal cord (exclusion criteria). For 2005, the year in which recruitment for the study commenced, there were 29,945 admissions in which the main injury was a fracture, open wound, dislocation, sprain or strain, injury to the muscle and tendon, traumatic amputation or crush injury; following an examination of the Victorian Admitted Episodes Dataset (VAED).

Approximately 16 percent of the patients (4870 persons) who had sustained the above mentioned injuries were admitted to the four study hospitals. An unknown
number of these admissions were people in paid employment at the time of their injury or had English language skills sufficient to answer questionnaires (ie the study inclusion criteria). The study sample comprised 168 persons.

A flow chart has been included in the paper (Figure 1). The following sentence has been added to the first paragraph of the results section. (Page 11).

“*The numbers of potentially eligible subjects, refusals, and participants are shown in Figure 1*”.

We have clarified the text of the methods (Patients and Procedures) to provide additional detail on the VAED.

“The VAED is a dataset of acute patient hospital admissions representing 100% coverage of hospital admissions to public hospitals in Victoria. “

4. It would be interesting to have some data about the types of injuries even if heterogeneous in addition to information about the injury severity.

In response to the author’s suggestion, the following paragraph has been added to the start of the results section. (Page 11, Results, Paragraph 1)

“One hundred and sixty eight patients were recruited to the study and completed baseline surveys. Information on RTW status at six months was available for 152 participants (90.4%). The mean age of the sample was 37.7 years and the cohort consisted primarily of men (75%). Using the ISS to classify injuries; 88 patients sustained minor injuries (ISS 1–8), 69 moderate (ISS 9–15) and 11 major injuries (ISS>15). The majority of orthopaedic injuries sustained were isolated or multiple injuries to the lower or upper extremities (73%). Eleven percent of the sample
sustained both orthopaedic and non orthopaedic injuries. For 77% of participants, their injury included a fracture. Other orthopaedic injuries sustained by participants included dislocations, lacerations, tendon tears, and partial or complete amputation of fingers or toes”.

5. The SF36 was used in this study, what was the reason for reporting only some of the items?

Our choice of the SF36 Social functioning dimension was guided by the findings of Soeberg et al. Reference 31 in the original manuscript. We chose to look at individual dimensions of the SF36 that may impact on functioning rather than the broader aspects of quality of life that are reflected in the global SF36 instrument.

6. Were there any differences in the data regarding patients that returned to full duties of modified duties?

Once a participant had provided informed consent to take part in the study, a baseline survey was administered that included questions about occupation, whether or not the person worked full-time or part-time and the average number of hours a week that the participant worked for a salary. This was in order to take into account people with more than one position and persons who worked overtime.

At each follow-up, participants were asked whether they had returned to work since the last interview. If a participant who had returned to work reported that they were doing the same duties and hours as they had been prior to the injury, this was recorded as full duties. If a participant answered that they were working modified hours and/or performing different or a reduced number of tasks as a result of their injury, this was recorded as modified work. Participants were asked how many hours per week they were currently working.
A univariate analysis indicated that there were no significant differences between those who returned to full duties and those who returned to modified work according to injury severity, compensation status, age, gender and education. Due to sample size considerations, a multivariate analysis of the factors considered in models in the current study is not feasible.

In response to the reviewer’s question, we have updated the methods section, (Page 8, assessment of work outcomes)

“If a participant who had returned to work reported that they were doing the same duties and hours as they had been prior to the injury, this was recorded as full duties. If a participant reported that they were working modified hours and/or performing different or a reduced number of tasks as a result of their injury, this was recorded as modified work.”

“There was no significant difference in the duration of time off work between those who returned to modified work and those who returned to full duties”. (Page 12, top 2 lines)

7. It would be good to have a comment in the Discussion about the retrospective ratings used at inclusion.

In response to the reviewer’s suggestion, we have added a section to the discussion to comment on the use of retrospective ratings of pre-injury health as mentioned in the methods section. (Page 19, final para).

“Finally, while the retrospective measurement of pre-injury health is considered important as it allows for comparison by which to assess individual recovery; the potential for recall bias to affect the person’s view of their pre-injury health must be acknowledged. As long as the assessment is made as soon after the injury occurred as practicably possible, this approach is considered reasonable [43]”. 