Reviewer's report

Title: What are the effects of having an illness or injury whilst deployed on post deployment mental health? A population based record linkage study of UK Army personnel who have served in Iraq or Afghanistan.

Version: 1  Date: 8 March 2012

Reviewer: Alexander McFarlane

Reviewer's report:

This paper presents an interesting body of data relating to the impact of physical injury and illness on post-deployment outcomes. This is an important issue because it identifies sub-groups at potential risk following deployment. However, there are several important confounds and issues which are not adequately addressed in the manuscript in its current form.

Firstly, having a physical illness appears to be a proxy marker for age. From the description it is not clear how this potential confound was dealt with in subsequence analyses. Furthermore, both those who had injuries and illness were associated with an increasing number of traumatic deployment experiences. Again the possible confound exists that injury and illness are proxy markers for the number of traumatic experiences.

Whilst there is a logic to why to those who suffer from physical injuries may have had more traumatic experiences, this finding is an unexpected one in relation to illnesses. Hence, whilst reported this finding should not be left without further exploration because of the potential for mis-attributing outcomes to illness rather than the number of traumatic experiences. One possibility for example, is that the illnesses experienced whilst on deployment may have been psychosomatic manifestations of the stress response.

The interpretation in the text related to the issue of social support. Given the potential confounds in the manuscript apparent in the reporting of the data, this association or exploration is not supported.

Given that the records are available, some exploration of the nature of the physical illnesses suffered on deployment and the required evacuation should be reported as primary data.

Another potential confound is the issue of those who suffered head injuries or concussion whilst on deployment.

Finally, there is a broader literature about disasters and the impact of injury on mental health outcomes in contrast to other exposures. Some reference to that general literature would be a further valuable contribution to this paper. The findings of this study have relevance above and beyond the post-deployment literature.
**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.