Reviewer's report

Title: Do adverse childhood experiences increase the risk of postdeployment posttraumatic stress disorder in US Marines?

Version: 1 Date: 10 February 2010

Reviewer: Amy Caia Iversen

Reviewer's report:

Thank you for asking me to review this manuscript and apologies that my comments have been delayed.

The authors have capitalised on a large enlistment screening program dataset which has been designed in conjuction with DoD, research teams, public health etc. Major strengths of the study include the large numbers, the very high response rate, and the use the ACE questions which are well established measures of childhood adversity. Another major strength is the design which has allowed for prospective analysis of the impact of having these vulnerabilities when people deploy. All the existing work out there has relied on cross sectional or retrospective data, so this is a major plus.

Major compulsory revisions

I have no compulsory revisions to suggest.

Minor Essential Revisions

I couldn't see in the manuscript how many individuals had been excluded due to 'missing data', or having a mental health problem prior or during deployment. I think we need to know this when we read it. I can quite see why the authors have chosen to exclude those with a prior mental health problem before they deployed as this makes the analysis much cleaner, but I would still like to know how many people were excluded. It is more problematic for me that they have excluded those who developed mental health problems in theatre, and I would like to understand how many people this removed, and a bit further justification as to why this was done, as it seems to me that this is a potential source of bias. If the numbers were tiny, then it doesn't matter.

Another thing which I feel is worthy of further comment is the fact that the study did not have any measures of combat exposure. They do comment on this briefly but they don't say why it matters. It is well established that having these pre-enlistment vulnerabilities is associated with risk taking behaviour, and it could well be that those who have these prior experiences are more likely to end up with mental health problems because they get themselves into situations during deployment which expose them to more combat. I think this possibility needs to be considered. Using duration of combat as a proxy measure of exposure doesn't deal with this.
Another limitation which is unavoidable and common to most of the work in this area is that the study doesn't include women, and in this case, is all Marines. This should be mentioned, as in the UK at least, Marines are not representative of the rest of the Armed Forces, and I would guess the same is true in the US.

Discretionary Revisions

I think it is interesting that the authors have decided to only examine outcomes in those who deployed, especially as they were looking at mental health outcomes which were not confined to PTSD, and they had the potential to examine outcomes in a much bigger sample of recruits. Another potentially powerful study design would have been to compare mental health outcomes for those who had these vulnerabilities but did not deploy, with those who did, so that the impact of deployment could be untangled somewhat from these other pre-enlistment risk factors. It is not essential that the authors justify why they have chosen not to do this, but I did wonder this as a reader. In the aims, the authors made clear that they are interested in PTSD, and as such, I can understand why they then confined their sample to those deployed, but in fact their remit is somewhat broader than this in that they examine other mental disorders as well. It might be one sentence to justify their approach would satisfy the curiosity of other readers.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests