Reviewer’s report

Title: The relationship between glucocorticoid receptor polymorphisms, stressful life events, social support, and post-traumatic stress disorder

Version: 2 Date: 30 April 2014

Reviewer: Divya Mehta

Reviewer’s report:

The authors examine effects of GR genotypes, stressful life events, social support and GxE interactions on PTSD etiology.

Major Compulsory Revisions

1) The formatting of this article is a disaster, there are spaces lacking between words and it is almost impossible to read. Please correct this.

2) Major drawback of this study is the lack of replication of the results. It is a golden standard to replicate genetic findings in an independent sample to confirm the results especially for GxE studies, the authors should consider replicating these results in another sample.

3) Page 6 “Trauma exposure” - the TLEQ combines different types of trauma exposure. It is clear from recent seminal studies that the timing and timing of the trauma exposure is essential for etiology of PTSD. The authors should divide the trauma exposure into early/childhood trauma and late/adult trauma. It would be interesting to see if these results remain consistent even after this distinction.

4) Page 7 lines 191-197 - Criteria for selecting these SNPs needs to be better justified. It is not clear to me why these 3 SNPs were used and why not others.

5) Page 10.11 lines 282-289 - the authors have divided the findings into 3 groups with the last group being "all others", however this is a large group with over 600 samples, so it would still be worthwhile further stratifying this group into distinct combinations of risk genotypes and environmental factors and these results are of interest to the reader.

Discretionary Revisions

6) Page 7 line 179-80 - "75% percentile used as a cutoff.." - based on what criteria? Authors should provide appropriate references here.

7) Page 7 line 248 - "It is noteworthy..." - I believe this is not noteworthy but rather expected and has been described in many previous studies.

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests