Reviewer's report

Title: Rotating night shifts too fast may cause anxiety, decreased attention performance and may impact prolactin levels during the daytime after night shifts- a case control study

Version: 2 Date: 5 May 2014

Reviewer: Michele L Okun

Reviewer's report:

The authors attempt to investigate the circadian changes and effects on mood and cognitive performance after working consecutive night shifts in a rapidly rotating shift system. The impact that shift work has on circadian function and mood is important for understanding and preventing adverse health outcomes. While the topic is interesting, there are several areas of the manuscript that are incomplete, need revision or clarification.

Major Compulsory Revisions

it is not clear at any time what the differences are regarding the different types of shifts. why do you have them? this would help justify the paper

Introduction:

1. page 1 line 84: not sure what this is. not everyone is familiar with this rotation system. How is it helpful to the circadian rhythm? this section needs more to help the reader understand the distinctions among this system and other systems.

2. the authors mention assaying biomarkers but there is no rationale for them in the intro.

3. Additional material is needed to bolster why this topic is important and the literature to support it.

Methods:

1. page 6 line 110 this does not make sense?

page 9 line 159 The MWT was administered as per the modified

160 MSLT,

need more for the assays. How sensitive, how much could be measured, how was blood taken etc

In the discussion there is no "discussion" about the biomarkers. You restate that they did not differ/or did but there is no talk about why they are important

Minor Essential Revisions

statistical section is weak. Needs to include more about covariates (if any) etc

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

**Quality of written English:** Needs some language corrections before being published

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

**Declaration of competing interests:**

I declare that I have no competing interests'