Reviewer’s report

Title: Type D personality is a predictor of prolonged acute brain dysfunction (delirium/coma) after cardiovascular surgery

Version: 0 Date: 11 Sep 2018

Reviewer: Michael Smith

Reviewer's report:

Thank you for giving me the opportunity to review this manuscript (which is part of the results-free peer review pilot study). The manuscript relates to a study which investigates the relationship between Type D (distressed) personality and coma/delirium-free days in the week following cardiac surgery. I have some concerns about the manuscript in its present form, which I detail herein:

1. Page 2, lines 3-4: "The risk of increased depressive symptoms in these patients are based on personality type" - this sentence is unclear, but needs to be clarified as it seems particularly important in establishing the rationale for the study.

2. A clear statement of the hypotheses should be provided.

3. Although a sample size calculation is provided, the final sample size upon which the analyses are based is not included.

4. Were the researchers who conducted the delirium and coma assessments blind to the Type D personality status of the participants?

5. Page 7, line 2: "expected", should read 'observed'.

6. The authors should include (either as an alternative or as an adjunct to the reported analysis) an analysis based upon the continuous conceptualization of Type D personality (see, for example, the approach taken by Stevenson & Williams, 2014, Psychology & Health).

7. The rationale for the analysis which investigated the interaction between Type D personality and depression is unclear (perhaps this is because the sentence I refer to in comment 1 is unclear).

8. Only the first 12 cited references are included in the reference list, which made it difficult for me to determine whether appropriate literature is cited.
9. I identified a number of typographical, syntactic and grammatical errors when reading the manuscript which need to be addressed.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Unable to assess

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

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