Reviewer’s report

Title: Association of Catechol-O-Methyltransferase Single Nucleotide Polymorphisms, Ethnicity, and Sex in a Large Cohort of Fibromyalgia Patients

Version: 3 Date: 22 Sep 2018

Reviewer: Wei Yang

Reviewer's report:

When I commented on showing "effect sizes" and using "stratified analysis", the authors' reply to my comments seemed to ignore the context where I raised these questions.

I understand that effect sizes have been shown elsewhere like Table 2, but not for Table 3. I suggested adding effect sizes to Table 3 so that even when a comparison is not statically significant probably because of small sample sizes, we would see how the effect size compares to the other groups. This could help making strong conclusions beyond relying solely on small p values. The previously reply to this recommendation stated that "p-value can be used as an indicator of effect size". I wanted to make clear that effects size and statistical significance (p value) are very distinct statistical concepts.

The authors mentioned that "the logistic regression models used in this comparison pools p-values and reports coefficients/effect size across all groups". Using regression models, the confounding effect of ethnicity are generally handled in two ways: inducing ethnicity as a covariate, or using a stratified regression. The latter require fewer statistical assumptions than regressing on the covariate, and is preferred in more cases. I did not mean argue that a simple covariate adjustment could not be used, but the previous version of the manuscript didn't seem to mention the confounding effect of ethnicity has been adjusted.

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

Yes

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.

Yes
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:

Acceptable

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