Author’s response to reviews

Title: Association between migraine and suicidal behavior among Ethiopian adults

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Author’s response to reviews:

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Dear Editor,

BMC Psychiatry

Re: BBPSY-D-17-00589 - Association between Migraine and Suicidal Behaviors in Ethiopian Adults

Dear Editor,

Thank you for your attention to our manuscript.

We have revised our manuscript in light to the comments and suggestions provided by the expert reviewers. We have highlighted all the changes in the text with yellow highlight.

Bellow we provide a point-by-point response to each comment and suggestion provided by the reviewers.

Thank you again for providing us the opportunity to revise and improve our manuscript.
Sincerely,

Hanna Y. Berhane

Reviewer’s comments:

Reviewer #1: The authors reported original research findings from their investigation on the association between migraine and suicidal behaviors in Ethiopian adults. The paper is of interest for the journal. I have however some shortcomings to mention.

First. The paper lacks of proper aims and hypothesis.

We read the reviewer’s concern as relevant and have revised our aim to make sure it is clearly understandable. We have added a statement of the objective of our study in the abstract (line 23-25). The study aims are also included in the introduction section line (66-69).

Second, the assessment of suicidal behavior needs some clarification. Authors should provide a definition of what a suicide attempt is and above all report a reference indicating that nomenclature is clearly define.

We have added a statement explaining suicidal behaviors to include suicidal ideation, plans and attempts (line 57-59). Additionally, as suggested, we have included the operational definition used to assess suicidal behaviors (Page 4, line 93-99)

I would stress a bit more in the discussion the usefulness of the present data for the purpose of clinical practice and cite the following paper: Pompili Psychiatric comorbidity and suicide risk in patients with chronic migraine. Neuropsychiatr Dis Treat. 2010

We thank the reviewer for pointing us to this reference which have been useful in editing the discussion section (page 8).

Reviewer # 2: The present study investigated the association between migraine and suicidal thoughts and behaviors in a sample of 1,060 outpatient adults in Ethiopia. The study is interesting; however it has some major critical issues: the methods are not sufficiently described and discrepant results have not been sufficiently discussed. Some suggestions could improve the manuscript.

Throughout the manuscript (also in the title): I would put "suicidal thoughts and behaviors" and not only "suicidal behaviors".

We thank the reviewer for this suggestion and have updated our manuscript to clarify that suicidal behavior include suicidal ideation, plans, and attempts (introduction 57-59)
Additionally, we cite a previous article that follows this nomenclature when describing suicidal behavior in the same study cohort (Whittier 2016).

Abstract Results are not correctly reported since authors later (in the results) wrote that "When depression was added to the model, the association between migraine and suicidal behaviors was greatly attenuated and became statistically insignificant".

We read the reviewer’s concern; and have amended our manuscript to clearly show that here we are referring to past year depression history. While on the results section we write “When depression was added to the model, the association between migraine and suicidal behaviors was greatly attenuated and became statistically insignificant” we are referring to the life time history of depression.

Background The Background should report a deeper description of the literature. It should firstly focus on suicide and then on migraines. Authors should report estimates for other countries as well and not only Africa. For a better flow, authors should focus before on "daily activities", describing migraines, and then on psychiatric disorders.

We thank the review for the suggestion; accordingly we have edited the background section. (Highlighted on page 3). We have included a global prevalence estimates for migraine. We also have edited the introduction to discuss the effects of migraine on daily activities first and then psychiatric comorbidities.

"Substance abuse, mood and anxiety disorders, depression, and suicidal behaviors" are not "neurological comorbidities" but psychiatric ones.

We thank the reviewer for noting and we have amended. (Page 3, line 56)

Minor remark: put "we sought to evaluate the extent to which migraine headaches are associated with suicidal behaviors" instead of "we sought to evaluate the extent to which migraine headaches are is associated with suicidal behaviors".

We thank the reviewer for noting; we have edit as part of the comment from reviewer #1 (Highlighted on page 3, line 67-68)

Methods Were interviewers experts in psychiatry? Were migraines diagnosed by neurologists? Please, better explain these crucial points. Inclusion and exclusion criteria should be described (e.g., other psychiatric disorders?).

We thank the reviewer for pointing this pertinent information’s were missed. Hence we have included the details in the methods section (page 4, line 75-83). For this study all patients evaluated in the internal medicine, general surgery and gynecological outpatient departments during the study period were included in the study. Inclusion criteria: consented to participate. Exclusion criteria: those who were unable to communicate with the interviewers directly (those with diagnosed mental disabilities and hearing disabilities). And the interviewers were Nurses, with prior training to be able to conduct this interviews.
It is not necessary to describe the diagnosis of depression and all depressive symptoms.

As suggested by the reviewer we have omitted the section describing the details on the diagnosis of depression and all depressive symptoms.

Results Results are not clear because two strategies have been applied in the analyses: Authors considered all the patients and then separately considered patients without migraines and patients with them. At least they have to explain in the discussion how to interpret the discrepant results.

We have amended the statistical analysis section of the manuscript to make our statistical analysis more clear (line 121-128). We first used multivariable logistic regressions to model the association between migraine and suicidal behaviors, controlling for sociodemographic confounders and depression status. Since previous studies have shown that depression is associated with suicidal behaviors and migraine, we also performed a sensitivity analysis stratifying our analysis by current depression status. Given that depression has been noted to be a confounder as well as an effect modifier, we have elected to more rigorously evaluate this and present these two approaches. As such they are not discrepant results. We now make these two approaches more clear.

Discussion Minor remark: please, correct "is significantly association" - Amended

Authors should report the comparison between present results and ones reported in high income countries. Moreover, I think that literature should be better covered.

We thank the reviewer for this suggestion; we have accordingly edited the discussion section to expand on previous studies on the association between migraine and suicidal behaviors (discussion paragraph 2—3; line 176- 197)

Among limitations Authors could add the use of self-report to assess suicidal thoughts and behaviors and discuss it.

Thank you for the suggestion; we have included as per the suggestion (line 216-219)