Reviewer’s report

Title: Prevalence and Determinants of Gestational Diabetes Mellitus in Africa Based on the Updated International Diagnostic Criteria: A systematic review and meta-analysis

Version: 1 Date: 16 May 2019

Reviewer: Charlotte Beaudart

Reviewer's report:

Authors responded well to mainly of my previous comments. However, I still a few comments and still recommend major revisions.

Abstract: please do not report all the OR and 95% CI in the abstract. Abstract is too long.

Methods:

- Authors searched in Pubmed and Medline database. Authors should be aware that Medline is a bibliographic database that can be accessed via PubMed interface. There are not two distinct databases.

- Authors did not use MeSH terms in their search strategy. This should be reported as a limit of this study.

- Authors did not investigate grey literature. This should also be reported as a limit of this study.

- Authors reported to have used JBI tool to extract data. This is confusing. Authors should be clearer by explaining that data were extracted on an excel sheet (by the way, did the authors performed a pre-test for this extraction sheet?) and that they assessed for study quality using the JBI tool. JBI tool has been developed to assess risk of bias. Is it not a tool designed for data extraction. Moreover, how did the authors categorize the studies as "low, moderate or high" risk of bias? The cut-offs used should be reported in the methods section.

- Authors concluded about heterogeneity in their MA by using the I². The I² is a value that quantifies heterogeneity, but the presence of a significant heterogeneity should be done with Q test and its respective p-value. Moreover, table 2 reports Q-value but Q-value is not explained in the methods section.
- The choice of using a random effect model should not be based on the results of heterogeneity. It should be done in the protocol based on an estimate of a potential heterogeneity across results.

- The protocol in PROSPERO did not specify the subgroup analyses that authors have performed on year of study, quality of study and study design. Are these analyses post-hoc analyses? This should be reported in the discussion section.

- For each trim and fill analyses, authors should explain that results have been influenced or not by publication bias and explain that, by adding x studies, the pooled estimate varied to … (95 % CI …). Moreover, results of the trim and fill analyses should be discussed in the discussion section.

- Page 10, line 14, authors reported that for figure 3, the sensitivity analyses showed no influential study that caused variation. What about the study of Sagheer and Hamd that reported an OR of 67? For more transparency, we encourage the authors to add a column to table 3 and report the range of results obtained with the one-study removed sensitivity analysis.

- Table 2. Authors are encouraged to add in this table a p-value for interaction between groups.

- Figure 3 should be formatted to be more readable.

Discussion:

- In the prevalence MA, a very large heterogeneity is still present in the subgroup analyses. This should be discussed.

- Some studies in figure 2 report a very large prevalence of gestational diabetes mellitus. These findings deserve to be discussed.

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Please indicate how interesting you found the manuscript:

An article of importance in its field

**Quality of written English**

Please indicate the quality of language in the manuscript:

Acceptable

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