Reviewer’s report

Title: Associations between dietary micronutrient intake and molecular-Bacterial Vaginosis

Version: 0 Date: 30 Jul 2019

Reviewer: T Phillips

Reviewer's report:

Thank you very much for the opportunity to review this manuscript. Please consider the following suggestions:

Background

1. Line 18 has an orphaned parenthesis and is a bit lengthy. Rewording might enhance the flow.
2. Line 24: Consider explaining Nugent score in its own sentence as run-on sentences are difficult to follow.
3. Page 2, Lines 9-16: Save the questionnaire name for the Methods section and you probably don't need to reiterate rRNA sequencing method here.

Results

1. Line 20: Report the percent as well for n=4 and n=5
2. Line 24: Delete "young" as it is subjective
3. Line 31-36: Include p values
4. Table 2 Caption: Consider rewording the caption for clarity; I understand you created a binary variable and categorised the nutrient intake as lowest quartile or top three quartiles, perhaps just reiterate this instead of using "vs the rest". I would also spell out "ref" in its first use.
5. Page 3, Line 51, why only mention zinc and selenium? Vitamin A appears significant in bivariate analysis and both vitamin A and lutein have higher significance in the multivariate analysis.
Discussion

1. Line 9-13: It is confusing to mention the CSTIII microbiota research here. I would save the opening paragraph of the discussion for your main findings (i.e. that CSTIII was not associated with lowest quartile micronutrient intake) and bring in how your findings fit with the literature in subsequent paragraphs.

2. Page 2, Lines 40-47: This long sentence should be reworded for clarity and to remove the need for three sets of parentheses and "/".

3. Page 3, Line 49: Do you have any potential explanations for why betaine supplementation decreased Lactobacillus given your findings?

4. Page 3, Line 54: You say your study is innovative because you utilized 16S rRNA sequencing to define BV however Molecular-BV has been defined previously (McKinnon et al 2019). You should specify how this study is unique (which is the micronutrient intake association with Molecular-BV).

5. Page 3, Line 60: Again, be more precise than "vs. the rest". Also, are there any limitations in examining only Molecular-BV vs Amsel-BV or Nugent-BV? These should be mentioned clearly here.

6. Page 4, Lines 6-13: These sentences need to be reworded as the "Secondly, the study was cross-sectional in design" is a fragment. The natural fluctuations in vaginal microbiota over time seem like an important limitation, however, you do not phrase this limitation clearly. You say that vaginal microbiota fluctuates but then you say a one time sample "represents a typical fluctuation pattern" which does not make sense. Please revise this paragraph and explain how your sample accounts for the fluctuations in microbiota and nutrition over time.

7. What should future studies focus on in light of these results?

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**Quality of written English**
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