

# Review of: "Exploring the Relationship Between Dietary Practices and Academic Performance of High School Students in Tamale Metropolis, Ghana"

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Potential competing interests: No potential competing interests to declare.

## General

The manuscript in general seems good and well organized, but there are some issues that need to be addressed before being disseminated to the scientific community.

The manuscript has no line numbers, which might make our communications a bit difficult.

The overall readability of the manuscript by readers (language, grammar, conjunctions, punctuations, prepositions) is better to be improved. Maybe you can let your colleagues from the linguistics department have reviewed it.

## Methods

### Sampling

Why did you take 5 schools from 8 schools? What was your ground to do so? Conventionally, it is advised to take 20-30% of clusters, which would make it a maximum of 3 schools!

### Sample size

You calculated and obtained that a minimum of 375 students was sufficient for this study. You might be expected to add for non-response and design effect, if any, but why did you make it 800 then? If it was so, what was the need for calculating sample size?

### Instrumentation

Were the students who were supposed to respond the dietary consumption practices? Which consumption was your focus (consumption at home or outside home or both; I didn't see these details)? Similar concern for the food security assessment; were the students appropriate for these questions?

You used 13 food groups (though I couldn't see the lists), but (FAO, 2012) recommended 12 food groups for the HHDS. Could you explain why it is different in your context?

Your time reference for HHDS was 7 days, while FAO recommends 24 hours for many reasons. Why was that so?

How did you manage social desirability bias, because questions seem direct (yes/no) so that they are prone to positively perceived responses?

Ethical considerations

From whom did you obtain consent to participate? You reported that the mean age of respondents was 16 years (ranged 13-23).

## Results and discussion

It would be good if you corrected table formats (rather than simply taking the software outputs).

I couldn't see the total respondents from your frequency tables. I don't know why? (Tables 3 & 5)

*"Concerning food security, females received a considerably higher mean score (7.2) than males (5.1), which suggests that females experience greater food insecurity than men. This might be explained by the fact that men are less concerned with their nutritional demands than women are. Waweru [30] asserts that female adolescents may be more concerned with weight-controlling behaviors than male adolescents."* (page 11: 1<sup>st</sup> paragraph). I am not clear about this argument. I was thinking that food security is about their households and hence how it is explained by gender disparity?

You reported that most of the students were from moderate and mild food-insecure households, but diet diversity was high (83% consumed six or more different groups of foods within 7 days). Is it not contradicting?

## Conclusion

You reported that the dietary diversity of the students was significantly and positively correlated with the students' academic scores in English language and social studies, but not in mathematics and science scores. So, can it be plausible to conclude that dietary diversity is associated with overall academic performance?