

# Review of: "Prevalence and Factors Associated With Selected Non-communicable Diseases (Hypertension, Type 2 Diabetes, and Depression) Among People Living With HIV at Kalisizo Hospital in Kyotera District, Uganda: A Cross-Sectional Study"

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Potential competing interests: No potential competing interests to declare.

Overall, this manuscript highlights a very important issue around Non-communicable Diseases (NCDs) and people living with HIV (PLHIV) in Uganda. The authors correctly raise this topic and thoroughly examine NCDs, including depression, hypertension (HT), and type-2 diabetes (T2D), in relation to PLHIV.

The manuscript is well-written, but the following points should be considered by the authors:

-No controls were used in this study to compare NCDs in people with PLHIV and controls of similar age, sex, and dietary background in order to empirically establish a correlation between NCDs and PLHIV. This aspect should be strongly highlighted as a limitation in this study. The authors correctly identified the COVID-19 early stages in 2020 as a major contributor to disrupted networks and an increase in mental health disorders, increasing the importance and need for controls in epidemiological studies such as that presented here.

-The authors were unable to identify contributing factors to depression outside the variables explored here. As the COVID-19 pandemic at the time presented with a significant mortality and hospitalization percentage, it is likely many of the participants experienced the adverse events of the pandemic that would then correlate the most with depression. As such, the authors should briefly highlight variables (such as the COVID-19 pandemic negative events) on specific participants in terms of the health status of some of their immediate relatives. It would be very relevant to capture data regarding potential mortality or hospitalizations of immediate relatives of the participants from COVID-19 to minimize bias.

-Methods: Although it is very appreciated to be provided with that much detail, it is usually not necessary. E.g., no need to analyze all the different health clinics to this extent in the different regions, or the BMI calculation to such an extent, etc.

-As per the Methods, tobacco users over the past year and alcohol consumption within the last 6 months is a vague criterion. It is best to separate participants as current users (alcohol/tobacco) and past users not currently consuming, as it may create bias clustering all these categories together. Also, there is no specific explanation as to the degree of alcohol/tobacco use (e.g., a casual social drinker 5 months ago is still considered in the consumption group?). That can vary significantly between participants and add bias.

-It would be appropriate to identify exactly the type of medication the participants were obtaining in terms of percentages. Different medications have diverse adverse effects, and it is relevant to closely monitor this aspect that may contribute to NCDs independently.

-Page 17, end of first paragraph: The last sentence is incomplete. Please add the relevant text.

-Measurements for NCDs were obtained in August. Hypertension and depression have significant seasonality, exhibiting variations in the summer versus the winter months as recorded by multiple studies. As a result, this seasonality aspect is not at all explored in the discussion versus the other African studies, as the timing when each study was conducted, which may further complicate and explain variations in the percentages of NCDs. It would be relevant for the authors to acknowledge the complexity and extrapolation of such measurements when using one specific summer month only. How does seasonality further explain these findings compared to other African studies?

-Findings in this study were from rural areas. Is that similar to the other African studies compared in the discussion section, as rural vs. urban environments also contribute to differences in NCDs?

Congratulations on your work to deliver these findings. Thank you.