

# Review of: "HIV/HBV Coinfections Among People Living With HIV/AIDS in Yenagoa, Bayelsa, Nigeria"

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**Potential competing interests:** No potential competing interests to declare.

I appreciate the opportunity to review the manuscript titled "HIV/HBV Coinfections Among People Living With HIV/AIDS in Yenagoa, Bayelsa, Nigeria" that was submitted to Qeios. The paper aims to investigate the HIV/HBV coinfection prevalence among people living with HIV/AIDS in Yenagoa, Nigeria.

## Major Comments

Although the study investigated an important topic, there are issues in the study design and writing.

One major issue is the study design and sample size. The study used a cross-sectional study design and a convenient sample from a local HIV hospital in Yenagoa, Nigeria. The authors need to calculate the sample size first to ensure good statistical power for the study design. The current results showed a sample size of 104 with a 2% HIV/HBV coinfection rate, and with only 2 people having HIV/HBV co-infections. The sample size may not be large enough to conduct the analyses and detect an effect. With only 2 people in the HIV/HBV coinfection group, the comparisons with the HIV-only group could be biased due to the small cell number. I would suggest the authors calculate the expected sample size for the study and try to recruit more participants.

Authors need to pay careful attention to clarity and logical flow in writing. Some sentences are hard to understand. The logical flow between sentences is not always smooth. Please carefully review and improve the writing of the paper. Please try to avoid having multiple statements in one sentence.

## Comments by Section

### Introduction

For the first sentence in the first paragraph, "coinfection is another major challenge...", when you say, "another major challenge", please specify what is the first major challenge that contrasts with "another".

"The frequency of HIV...." This sentence needs to be revised.

The first paragraph included data from the world, Nigeria, and other countries or regions, please follow a logical flow from one place to another so that readers could follow it more easily, for example, world-Nigeria-others.

In the last sentence of the first paragraph, there are multiple statements in one sentence, and it included data from

different regions and countries. For clarity consideration, I would suggest the authors divide this sentence into multiple sentences with one statement in one sentence.

For the first sentence of the second paragraph, please specify what are “both viral hepatitis infections”.

The second sentence of the third paragraph needs to be revised, for example, “The prevalence of HIV/HBV coinfection in children is 2.6% in the United States of America [USA] and 4.9% in China (Toussi et al., 2007; Zhou et al., 2010).” Please also specify the year for the prevalence.

For all the prevalence mentioned in the introduction section, please specify the year.

The third sentence in the third paragraph, “...as many countries in sub-Saharan Africa are typically classified as endemic, high, or intermediate countries with HBV infections”, is hard to understand, please revise.

## **Materials and Method**

### **Study Area**

In the first paragraph, “The state borders River State...”, should it be “borders”?

In the first paragraph, please provide information about the HIV epidemic in the region, such as the estimated proportion of HIV cases in the hospital among all HIV cases in the region if possible. For patients who access HIV care from this hospital, where did they come from?

### **Study Population**

There are other variables and information that are also important and could be collected, such as years since HIV was diagnosed, years on ART, and HIV/AIDS disease stage using WHO clinical staging system before ART initiation.

What is the data collection period (month, year)?

Did the study finally exclude any participants with missing data? Please provide the exact number and proportion.

What were all the blood tests that were conducted in the study? Were they all free of charge?

### **Data Analysis**

In the second sentence, please specify what are the groups that were compared for these variables.

Why was a multivariable regression not considered to test the factors associated with HIV/HBV coinfection?

## **Results**

The current HIV/HBV group has a very small sample size, otherwise, if you have enough sample size, I would suggest you add demographic descriptions of two groups (HIV-only and HIV/HBV) into Table 1 and provide a column with p-values to show the results of difference between the two groups.

If you have enough sample size, I suggest you conduct a multivariable regression to test the factors associated with HIV/HBV coinfection and develop a table to show the results.

With only 2 participants in the HIV/HBV coinfection group, the results are not compelling to make comparisons for sections 3.3 to 3.9. The sample size and statistical power issues called the results into question.

## **Discussion**

Please discuss the limitations of the study.