

Review of: "Covid-19 vaccine prevalence and its associated factors among rural households in The Gambia: a community-based cross-sectional study"

Oladapo Rasaq Kayode¹

¹ University of Bristol

Potential competing interests: No potential competing interests to declare.

Introduction:

Overall, a well-written piece. However, the authors should highlight in detail the need for the study and the gap the study will fill in the existing landscape of COVID-19 vaccination in The Gambia. Authors should modify the introduction as some paragraphs do not follow on. Authors should review existing literature on the same subject for an up-to-date discussion on the prevalence of COVID-19 vaccination.

1. The author should consider updating the data on global and Gambian COVID-19 cases, deaths, and doses of vaccines administered to reflect current realities such as 2022/2023.
2. A reference is needed for this statement: *"The outcomes of Covid-19 vaccination have made countries and partners in vaccination set achievable goals in scaling up the approval, manufacturing, providing, and vaccinating more people to ensure herd immunity against the coronavirus."*
3. The below sentences do not follow on. Authors should not jump to a global discussion; rather, the focus should be on The Gambia. If there is a need to bring in a global perspective, it should reflect a link with The Gambia.

"Evidence revealed that less than half of the global population had received at least a single dose of Covid-19 vaccines; more than 721 million doses of vaccine were administered, with nearly 32 million doses administered daily; and nearly 2 percent of people in low-income countries have received at least one dose of Covid-19. Furthermore, The Gambia has administered a total of more than 350 thousand doses of Covid-19 vaccines, more than 150 people are fully vaccinated, and less than 7 percent of the population is fully vaccinated".
4. The below does not fit into the current position. It should be structured with the next paragraph where vaccine hesitancy was fully discussed within the context of The Gambia.

"The WHO has listed vaccine hesitancy and resistance among the top ten health risks for 2019^[14]. This effect of hesitancy has created myths and misinformation that affect the uptake of Covid-19 vaccination among some people".

Methods

Under the population subsection, the below could have read, “who were residents in the region as at the time of the survey.”

“The participants in the study were people aged 18 years and above living in the region”

Study variables

The author should expatiate on how age was expressed/categorised, as well as gender (e.g., male or female), marital status (married, divorced, etc).

*“The study's **independent variables** were socio-demographic factors such as age, gender, religion, marital status, and educational level attained. Covid-19 positivity status ranges from contact with an infected person, travelling to a high-risk zone, a relative infected with Covid-19, information about Covid-19 vaccination, vaccination, and vaccine hesitancy”.*

Data analysis:

How were variables selected? Was it based solely on statistical significance? What about a priori, literature review, e.t.c.?

Results

The below could have read *“variables with p -values <0.05 are considered statistically significant”.*

“ = Statistical significance $p <0.05$ ”*

Discussion

1. The author should provide a brief about the study objective as part of the introductory part of the discussion. Thereafter, briefly summarize the results before buttressing these against what has been observed.
2. There is a need to compare the prevalence of the COVID-19 vaccination with what has been reported in other settings comparable to the Gambia, such as low- and middle-income countries.
3. Need to add a reference to this: *“The prevalence among females may be attributed to the long-standing phenomenon that health-related matters in The Gambia were seen as women's preoccupation”.*
4. This appears not logical enough. *“The acceptance of vaccination may be associated with regulations regarding vaccination status being a requirement in some public offices and schools. The vaccination strategy of the EPI has deployed vaccination teams to institutions and communities to vaccinate people voluntarily”.* If there are regulations in place to ensure professionals in public offices and schools were vaccinated, then we should have more of the respondents within this category to have been vaccinated. However, the reverse was the case, as those with little or no formal education were more vaccinated in the study. Authors may want to examine the influence of gatekeepers to the community/advocates/youth-led groups/ in addressing vaccine hesitancy and improving uptake in this context.
5. The authors have only presented the results of the association of vaccine uptake with monthly income. This is an

important area for discussion as it may explain the influence of socioeconomic factors (income) as key health determinants.

6. Authors should assess the association of vaccine uptake and travel history accordingly.

Strengths and limitations

1. A clear distinction should be made between the study strengths and limitations. For instance, limitations may first be presented in the format, *"The study had several limitations. First,...., Secondly..."*.
2. The author could have expressed that the study was sufficiently powered rather than *"The large sample size ensured statistical sufficiency"*
3. The study leveraged an interviewer-administered approach. The argument that this strategy *"provides a reduced tendency of avoiding ambiguity"* should be sufficiently referenced.
4. *"However, the study could not claim a causal relationship across study variables owing to the study design"* While this is commendable, it could be expanded further with recommendations on the specific type of study design that could strengthen the observation. E.g., *"However, the authors expressed caution in interpreting our study results as evidence of a causal relationship. A well-designed prospective cohort study or RCT could provide a strong evidence of a causal relationship"*.

Conclusion

1. The author drew conclusions without providing justification in the discussion section. This is highly disjointed and did not follow on. Authors should provide the relevant recommendations when discussing each result.
2. Authors to revisit the conclusion as it lacks a logical flow of thoughts in its current form.

References

This *"Ritchie H, Mathieu E, Rodés-Guirao L, Appel C, Giattino C, Ortiz-Ospina E, et al. (2021). A global database of COVID-19 vaccinations. Nat Hum Behav (2021). Our World Data. 2021"*

Rather than this *"Ritchie H, Mathieu E, Rodés-Guirao L, Appel C, Giattino C, Ortiz-Ospina E, et al. A global database of COVID-19 vaccinations. Nat Hum Behav (2021). Our World Data. 2021"*