

Review of: "COVID-19 Vaccine Effectiveness Against Long-COVID-19 Condition in Pakistan"

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Potential competing interests: No potential competing interests to declare.

Manuscript Review: COVID-19 Vaccine Effectiveness Against Long-COVID-19 in Pakistan

1. Introduction:

The introduction effectively outlines the global impact of the COVID-19 pandemic and highlights the significance of long-COVID as an emerging health issue. While the topic has been extensively studied, conducting such a study in a developing country like Pakistan is noteworthy. The introduction clearly articulates the importance of the research and its objectives, setting a solid foundation for the study.

2. Methods:

The methods section is comprehensive, detailing the data collection processes, inclusion criteria, and the statistical analysis methods used. However, the retrospective nature of the study and its reliance solely on electronic health records present some methodological limitations. These factors could affect the internal validity of the study. Nonetheless, the clarity of the methods section ensures that the study is replicable by other researchers.

3. Statistical Analysis:

The study employs robust statistical methods, including logistic regression and general linear models, which enhance the reliability of the results. However, some p-values are slightly above the 0.05 threshold, which may raise concerns about the certainty of the findings. While the statistical analyses appear to be conducted appropriately, caution is advised when interpreting the results.

4. Originality:

The subject of COVID-19 and long-COVID has been widely researched. However, the study's focus on data from Pakistan contributes region-specific insights to the broader literature. This adds a degree of originality, as it allows for the examination of regional differences that may influence long-COVID outcomes. The study's contribution to the literature, though somewhat limited by the saturation of the topic, is still valuable from a geographical and demographic perspective.

5. Language:

The language used in the manuscript is generally clear and academically sound. However, there are some grammatical errors and inconsistencies that slightly detract from the overall readability. A thorough language review could improve the



manuscript's quality and make it more polished and professional.

6. Discussion:

The discussion section is well-structured, comparing the findings with existing literature. However, the discrepancies between this study's findings and those of other studies could have been explored more deeply. Particularly, the lack of a significant association between vaccination and long-COVID outcomes should have been discussed in greater detail, considering the conflicting results from other studies. While the study's limitations are acknowledged, their potential impact on the findings could have been elaborated upon more clearly.

Conclusion:

Overall, the manuscript is well-organized and methodologically sound. However, given that the topic has been extensively covered in the literature, its originality may be somewhat limited. The inclusion of data from Pakistan adds value, especially in understanding regional differences in long-COVID outcomes. Improvements in the language and discussion sections could further strengthen the manuscript. Despite these areas for improvement, the study is a valuable addition to the ongoing research on COVID-19 and long-COVID, particularly in the context of a developing country.