

Review of: "Side effects of COVID-19 vaccination in Pakistani population: A cross sectional study"

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Potential competing interests: No potential competing interests to declare.

Comments to the manuscript titled "Side effects of COVID-19 vaccination in Pakistani population: A cross sectional study."

It is a very interesting study focused on assessing adverse reactions and comparing side effects and severity of COVID-19 before and after the vaccination in Pakistani population. During the reading of the manuscript several doubts arose. It is necessary to solve them before its definitive publication.

Introduction. Ok

Material and methods.

- Criteria selection (inclusion, exclusion) is missing.
- Where did the data collection occur? Households? Medical units? By phone? Who collected the data?
- Were side effects self-reported? This should be mentioned here.
- Was BMI self-reported? How weight and height were measured?
- How much time elapsed between the vaccination date and the interview date (to assess memory recall bias)
- How was severity of the infection defined? Did "difficulties" mean severity? Did hospitalization, emergency, or intensive care use mean severity?
- Binary logistic regression statistical analysis: please mention which variable was the dependent variable and which one(s) the independent variable(s). Was there a model for each side effect for each vaccine?
- You should include the multinomial logistic regression as part of the statistical analysis. Mention the categories of the dependent variable and name the independent variable(s).
- I did not understand Tables 4-8 (Supplementary material). Could you explain how did you perform the multinomial regression analysis? Which was the category of reference? Mention the categories of the dependent variable.
- Why pre-existing illnesses were not considered in the models where age, sex and BMI were present?

RESULTS

- Figure 4: day 2 overlaps in the "category 1-2 days" and "category 2-7 days". Also, week 2 in "category 1-2 weeks" and "2-4 weeks". Furthermore, "7 days" and "1 week" also overlaps. Please correct the mistake.
- Table 14 post-symptoms go-off time differs from categories of Figure 3. Table 14 says "more than 1 week" and Figure 4 says "1-2 weeks". Categories must match.

Limitations

- The authors must acknowledge that they did not control for medication use to mitigate side effects. They also should comment on memory recall bias.