Archives of Clinical Infectious Diseases
Volume 19 · Issue 1 · e143913

OPEN PEER REVIEW

Comprehensive Evaluation of COVID-19 Vaccines Antibody Response Among Healthcare Professionals: A Multi-Center Study in Iran

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SUBMITTED	REVISED	ACCEPTED	DOI
12 Dec 2023	20 Dec 2023	24 Dec 2023	10.5812/archcid-143913

About this report

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1 Original submission

1 comment · 15 Dec 2023

Referee 1 Reviewer

MAJOR REVISION 15 Dec 2023

Dear authors,
I appreciate the time and effort you put into this study. You investigated antibody responses to common vaccines injected to prevent COVID-19. The topic is novel, interesting, and within the journal's scope. In my opinion, your manuscript can be accepted for publication after major revision. Please address my comments:
Title and abstract
1-Based on the description of the methods, your study had a cross-sectional design. It is not an experimental or descriptive-analytical study. Please edit this in the abstract and main text. Furthermore, please mention when the study was conducted in the methods section of the abstract.
Introduction
2-Please add a sentence stating your study objective at the end of the introduction section, as stated in the abstract.
Method
3- Please describe how the sample size was estimated and the sampling method in the method section.
4-Please clarify that the samples received identical vaccine types for the first and second doses.
Results
5-In Table 2, please report the percentages of positive and negative antibody responses for each vaccine type separately in each row. For example, anti-RBD IgG Ab level for Sputnik, positive 304/392 (77.55%)- negative 88/382 (22.45%).
6- There are some mistakes in reporting the findings of the logistic regression model. Please rewrite this section. For example, in line 130, based on Table 3, age was not associated with antibody response because P=0.769>0.05. In this section, you should mention the OR, 95% CI, and P-value in the main text. Findings should be interpreted using both the OR and P-value. Why was it not applicable to evaluate some associations, as mentioned in the table? Please clarify this in a footnote to the table.
Discussion
7-The discussion section should be strengthened. Please compare your findings with previous studies published on the same topic. Furthermore, please discuss vaccine side effects, which are a vital issue alongside vaccine effectiveness. There are some publications from Iran reporting side effects and efficacy of different vaccines among health-care workers. You can use them to elaborate on the discussion section.
Language
8-The manuscript requires language editing. I strongly recommend consulting an English editor to improve grammar, punctuation, fluency, and general style.
Best regards

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Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear Editor,

we hope this email finds you well. Thank you for your prompt and thorough review of our manuscript titled "Comprehensive Evaluation of COVID-19 Vaccine Efficacy and Antibody Responses Among Healthcare Professionals: A Multi-Center Study in Iran". We appreciate the time and effort you and the reviewer have dedicated to evaluating our work. Your insightful comments and suggestions have been invaluable in refining the manuscript.

After careful consideration of the feedback provided, we have implemented several changes to address the concerns raised during the review process. We would like to outline the key revisions made in response to the reviewers' comments:

1. In response to your insightful comment 1, the study's design was modified to a cross-sectional approach in both the method and abstract parts.
2. In response to the comment 2, objective of present study has been added at last paragraph of introduction section.
3. According to reviewer consideration at comment 3:
    - Regarding your inquiry about the sample size calculation, while we recognize the importance of sample size considerations in research studies, particularly in clinical research, we would like to clarify that we referred to methodologically rigorous published studies (1-3) to determine an appropriate sample size for our study, and we ultimately decided on 1200 samples.
    - participants gathered to study voluntarily after announcement and this matter mentioned in method part.
4. To the comment 4, importance of similarity of vaccine type received in vaccination for each individual was mentioned in method section.
5. All the reported percentages in Table 2 were corrected.
6. In response to comment 6:
    - The error in the age-related logistic regression has been corrected.
    - All relevant paragraphs have been completed by include CI and p-value inside the context.
    - In explaining why not applicable to evaluate some associations, we should consider that to evaluate the variables, we first carried out a chi-square test for each parameter and only included the results that showed a correlation in the model; This information has also been mentioned in the results section.
7. In answer to comment 7, in this study, we evaluate the effectiveness of the most common COVID-19 vaccine in Iran via antibody level assessments; this aspect has not been addressed in previous Iranian studies. Our study did not investigate differences in side effects caused by the COVID-19 vaccine. However, we will acknowledge this important limitation in the discussion section and provide references (14 to 16) to relevant articles.
8. According to comment 8, all manuscript grammatically has been revised.

The revised manuscript is attached for your review. We believe these changes address the concerns raised during the review and contribute to the overall quality of the manuscript. We are confident that the revised version aligns more closely with the standards of Archives of Clinical Infectious Diseases and will be well-received by the readership.

Thank you once again for your time and guidance throughout this process. We look forward to your feedback and the possibility of having our work considered for publication in Archives of Clinical Infectious Diseases.

Best regards,

Authors

References:

1. Ella R, Reddy S, Blackwelder W, et al. Efficacy, safety, and lot-to-lot immunogenicity of an inactivated SARS-CoV-2 vaccine (BBV152): interim results of a randomised, double-blind, controlled, phase 3 trial. Lancet 2021; 398: 2173–84
2. Fadlyana E, Rusmil K, Tarigan R, et al. A phase III, observer-blind, randomized, placebo-controlled study of the efficacy, safety, and immunogenicity of SARS-CoV-2 inactivated vaccine in healthy adults aged 18-59 years: an interim analysis in Indonesia. Vaccine 2021; 39: 6520–28.
3. Kulkarni PS, Padmapriyadarsini C, Vekemans J, et al. A phase 2/3, participant-blind, observer-blind, randomised, controlled study to assess the safety and immunogenicity of SII-ChAdOx1 nCoV-19 (COVID-19 vaccine) in adults in India. EClinicalMedicine 2021; 42: 101218

2 Revision 1

1 comment · 22 Dec 2023

Referee 1 Reviewer

ACCEPT 22 Dec 2023

Dear EIC,
The authors addressed all my concerns. I think the manuscript is suitable for publication in its current form.
Bests