Review of: "Medical students' disease status of COVID-19: A multicenter study"

Essra Mohamed Abdullah Jaber Elameen[1]

1 Ajman University of Science & Technology

Critical review on manuscript titled ' Medical students' disease status of COVID-19: A multicenter study'

Abstract

The abstract of the study "Medical students' disease status of COVID-19: A multicenter study" effectively outlines the research focus and key findings. It introduces the study's objective of assessing the COVID-19 status among medical students in Khyber Pakhtunkhwa. The cross-sectional design and the use of both open-ended and close-ended questions to gather information on demographics, symptoms, hospitalization, and vaccination rates are mentioned. The abstract highlights that 31.4% of the 605 medical students responded with a history of COVID-19, with clinical year students being 1.31 times more susceptible. Notably, the abstract concludes that the overall COVID-19 status among KPK medical students aligns with global trends, suggesting effective safety measures implemented by authorities and healthcare sectors.

While the abstract provides a concise overview of the study, it could benefit from further context on the significance of understanding COVID-19 prevalence among medical students. Additionally, expanding on specific findings or trends within the results could enhance the abstract's informative value. Furthermore, discussing the implications of these findings for both medical education and public health measures would add depth to the conclusion.

Introduction

The introduction provides context for the study on COVID-19 among medical students in Pakistan. It mentions the emergence of SARS-CoV-2 in late 2019, its global spread, and the declaration of COVID-19 as a pandemic. The discussion of transmission modes, wave patterns, and Pakistan's current COVID-19 status adds relevance. However, the introduction could be more concise by focusing on the specific objectives and gaps in knowledge addressed by the study.

Additionally, while the introduction touches on the severity and symptoms of COVID-19, it could elaborate on the significance of studying infection status among medical students. Mentioning the potential impact on medical education and healthcare systems would enhance the reader's understanding of the study's importance. Lastly, incorporating a clear and concise research objective at the end would provide a stronger foundation for the subsequent sections of the

manuscript.

Methods and materials

The methods and materials section presents the study's design, data collection, and analysis methods. To enhance clarity and rigor, the following improvements could be made:

Informed Consent: Detail the informed consent process for both in-person and online responses, outlining its voluntary nature and data privacy measures.

Questionnaire: Discuss how the questionnaire was developed and validated to ensure reliability and validity.

Data Collection: Explain the rationale for using both Google Forms and in-person methods, addressing any potential biases.

Data Analysis: Specify the statistical tests employed in SPSS v. 26.0 for demographic analysis, diagnosis frequency, and relative risk calculation.

Relative Risk: Provide the formula or approach used to calculate relative risk and explain the rationale for this choice.

These improvements will strengthen the study's methodology by enhancing transparency and clarity.

Results

The results section provides an overview of participant demographics, COVID-19 frequency, vaccination rate, and relative risk. To enhance clarity and precision, consider the following suggestions:

Participant Demographics: Clarify whether the percentages provided under "Gender" and "Age" refer to the total respondents or only those who tested positive for COVID-19. Specify the response rate for each demographic category.

COVID-19 Frequency: Provide a more detailed breakdown of the COVID-19 frequency data, including the total number of positive cases, the number of cases per year of study, and a clearer presentation of the COVID-19 history.

Relative Risk Calculation: Offer more context or an explanation for the relative risk calculation, discussing why clinical year students might be more susceptible to COVID-19 compared to preclinical students.

Data Presentation: Consider formatting the table of variables (S No., Variable, N (%)) in a more reader-friendly manner, such as using columns for "Variable," "N," and "Percentage."

Missing Data: Address the issue of "No response" entries in the COVID-19 PCR, RAT, and antibody columns. Explain the implications of this missing data on the study's findings.

By addressing these points, the results section can become more informative and transparent, facilitating a clearer understanding of the findings.

Discussion

The conclusion section provides insights into the implications and findings of the study, but it could benefit from more structured organization and clarity:

Key Findings and Implications: Begin by summarizing the key findings concisely. Highlight the main implications of the study's results for medical students' susceptibility to COVID-19, symptom prevalence, vaccination rates, and the clinical vs. preclinical risk disparity.

Discussion of Relevance: Provide a discussion about how these findings contribute to the existing knowledge about COVID-19 among medical students and its implications for medical education and healthcare settings.

Limitations and Future Research: Address the limitations of the study in more detail, such as the constraints of the survey methodology and the potential for unexplored factors. Suggest areas for future research that could delve deeper into aspects that were not thoroughly explored in the current study.

Practical Implications: Consider discussing the practical implications of the study's findings. For example, how could these findings inform strategies for reducing COVID-19 transmission among medical students, or what steps could educational institutions take to enhance safety?

Closing Statement: Sum up the overall contribution of the study and its relevance in the broader context of managing COVID-19 in educational and healthcare settings.

By structuring the conclusion in a more organized and comprehensive manner, readers will gain a clearer understanding of the study's significance and potential implications.

Overall comment

Overall, "Medical Students' Disease Status of COVID-19: A Multicenter Study" contributes valuable insights into the impact of COVID-19 on medical students. Addressing the aforementioned points for improvement will enhance the manuscript's clarity, readability, and impact, making it a more effective contribution to the field of medical research and education