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An Assessment of Academic Integrity and Trustworthiness in COVID-19 Randomized Controlled Trials

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BACKGROUND

Recently the integrity and trustworthiness of scientific studies have become a rising issue and topic of concern. Potentially due to financial or career gains fraudulent studies are published with fabricated data to the benefit of the authors, publishers, and others with interest. Randomized controlled trials (RCTs) are the gold standard of trial design and are crucial for the development of therapeutic guidelines and clinical decision making. Given that it is entirely possible for fraudulent RCTs to appear in widely-read peer-reviewed journals there is a possibility for these studies to be seen as respectable, used by clinicians, and potentially cause patient harm.

Methods

To gather the studies a search was completed on Pubmed.gov using the Mesh terms “COVID-19” and “Drug Therapy”. That search was then narrowed to only include randomized controlled trials. Studies were excluded if they were not complete, were not in English, had no clinically-focused treatment outcomes (eg. only surrogate outcomes), focused on the treatment of olfactory dysfunctions, focused on vaccinations, and focused on anticoagulants or antiplatelets. The integrity and trustworthiness of the studies were assessed utilizing a modified data extraction tool which included select questions from the Cochrane Pregnancy & Childbirth Trustworthiness Screening Tool (CPC-TST), and The ‘Reappraised’ Checklist For Evaluation of Publication Integrity. Additional questions were added to make the modified data extraction more complete.

RESULTS

From the search, 20 studies were identified and included in the results.

Chart 1: Percentage Of Studies Which Met At Least One HIgh Risk Criteria

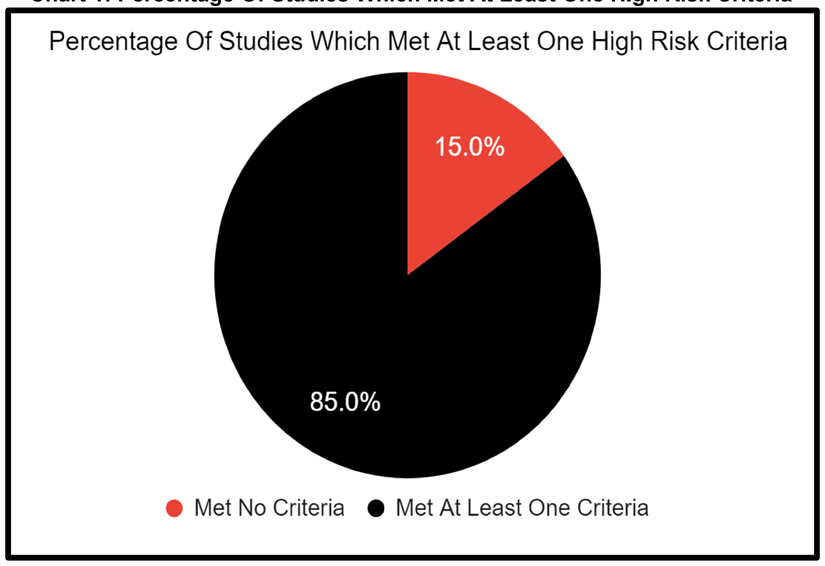
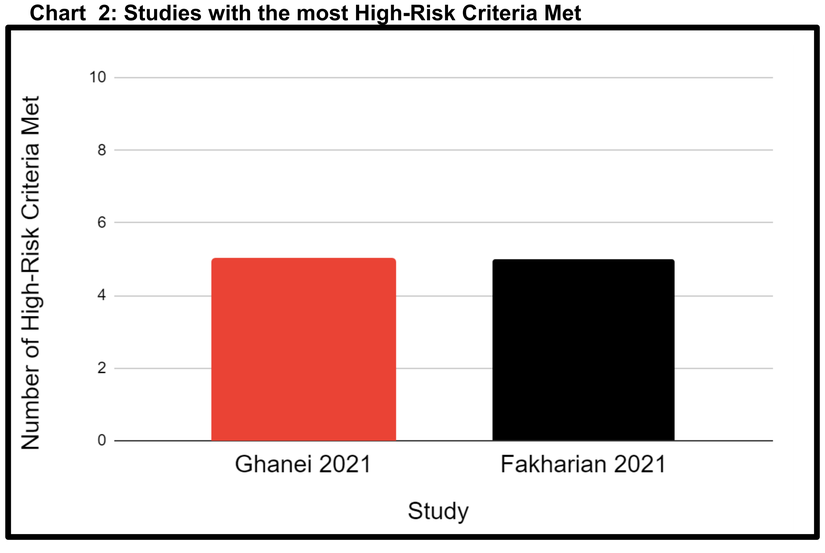


Chart 2: Studies with the most High-Risk Criteria Met



LIMITATIONS

A large limitation to the analysis is that there are many questions in the extraction tool which are subjective. Additionally, the extraction was done in the majority by one person, which is a strength due to providing a consistent response, but a limitation due to the responses only providing one perspective. Strengths of the analysis include the integration of recognized tools such as the CPC-CST and The ‘Reappraised’ Checklist For Evaluation of Publication Integrity.

CONCLUSION

This analysis displayed several peer-reviewed RCTs in prodigious journals which had met at least one criteria for a higher risk of fraud. Additionally, several studies identified in this analysis warrant further investigation and contact to explain irregular results. Due to the current scientific landscape, there are multiple factors that may push researchers to fabricate or alter data. Peer-reviewed RCTs should not be considered automatically free of concern, even if they are published in respected journals, and should be assessed for integrity and trustworthiness regardless.