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Letter to the Editor

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Letter to "Investigation of cognitive decline in patients with COVID-19 syndrome within 12 weeks after infection"

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Dear Author,

I had the pleasure of reading and reviewing your study titled "investigation of cognitive decline in patients with COVID-19 syndrome within 12 weeks after infection." This research addresses a critical area of concern, as the cognitive effects of COVID-19 have become increasingly recognized in the medical community.

A substantial amount of literature exists regarding the examination of cognitive functions in patients who have experienced COVID-19. For instance, in a study conducted by Colvin et al.[1] involving 574 patients, the cognitive functions of those recovering from COVID-19 were assessed. The findings highlighted significant differences in cognitive abilities among groups with varying academic performances, suggesting that educational background may play a role in cognitive recovery. The study emphasized the importance of ensuring that patients have similar educational levels to accurately assess cognitive decline.

Similarly, Becker et al.[2] conducted a study with 740 participants, where they evaluated the cognitive functions of COVID-19 patients. Their findings indicated that cognitive decline was less pronounced in patients who experienced mild COVID-19 while receiving outpatient treatment. This suggests that the severity of the infection may be correlated with the extent of cognitive impairment experienced.

In a large-scale randomized study by Tang et al.,[3] which included 32.494 cases of SARS-CoV-2 infection, 8,316 hospitalized COVID-19 patients, and 4.792 severe COVID-19 cases, it was found that cognitive decline was more significant in those who were hospitalized and experienced severe symptoms compared to those with mild infections. This further underscores the need to differentiate between varying severities of COVID-19 when assessing cognitive outcomes.

Additionally, Hampshire et al.[4] conducted research in the UK with 112.964 participants, focusing on cognitive functions associated with COVID-19 infection. Their findings revealed that cognitive decline was more pronounced during the early stages of the pandemic compared to later phases. They also noted that individuals who experienced severe COVID-19 demonstrated greater cognitive decline than those who had mild infections or did not contract the virus at all.

Your study raises an important point regarding the necessity of evaluating cognitive functions prior to COVID-19 infection, as this could help determine whether the observed cognitive decline is indeed attributable to the virus. Many prior studies lack pre-COVID assessments using tools such as the Montreal Cognitive Assessment (MoCA) test, which could provide crucial baseline data.

There are still numerous unknowns associated with COVID-19, and your research contributes significantly to clarifying the cognitive implications of the infection. This study serves as an important piece of work that illuminates the complexities surrounding cognitive effects in COVID-19 patients. Previous studies have established that cognitive function is influenced by academic performance in patients who have contracted COVID-19. Therefore, increasing the patient sample size and conducting the study within a more homogeneous group could enhance the robustness of the findings.

Furthermore, separating the analysis of patients who experienced mild COVID-19 infections from those who

were hospitalized and faced severe illness would provide deeper insights into the cognitive outcomes related to varying severities of the disease.

Thank you for your contribution to this important field of research.

Sincerely yours,

ETHICAL DECLARATIONS

Referee Evaluation Process

Externally peer-reviewed.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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Author Contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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