

## **Associations Between Psychiatric Symptoms and Cognitive Impairment in Post-Acute Sequelae of COVID**

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**Introduction:** Post-acute sequelae of COVID (PASC) is an emerging postviral syndrome affecting patients who have recovered from acute COVID infection. Symptoms can affect many different organ systems, including the CNS. Neuropsychiatric complications are common in PASC, affecting roughly 1 in 3 patients who recover from COVID. The present study aims to investigate relationships between depressive, anxious, somatic, and general psychiatric symptom burden and cognitive impairment in PASC.

**Methods:** Patients were recruited from the Parkview Post-COVID Clinic (PPCC) from April 2021 to March 2022. Patients were deemed eligible if data were available for both Brief Symptomatic Inventory (BSI) and BrainCheck scores. Eligible patients were divided into low or normal cognitive function based on BrainCheck guidelines, and differences in psychiatric symptom severity were assessed via Mann-Whitney U testing. Strength and direction of associations were determined using Pearson's correlation coefficient. A smaller subset of patients was analyzed for differences in PASC symptom severity based on Omicron or Delta infection.

**Results:** Generalized cognitive and mental flexibility complaints were associated with more severe psychiatric symptom burden in all domains measured by BSI ( $p = 0.003$  and  $p = 0.01$ , respectively). Impaired attention was not related to any psychiatric symptom domain ( $p > 0.05$ ). Impaired memory was related to more severe symptom burden in all psychiatric domains except depression (immediate recall  $p = 0.015$ ; delayed recall  $p = 0.015$ ).

**Conclusion:** General cognitive and mental flexibility complaints can be used to prompt clinical suspicion of concurrent psychiatric symptoms. Complaints regarding attention are not linked to any psychiatric symptom domain. Complaints regarding memory can also provide impetus for investigating concurrent psychiatric symptoms, excluding depression. These associations can be used to facilitate earlier diagnosis and treatment of cognitive impairment and psychiatric illness in the context of PASC.