Staten Island University Hospital
Northwell Health℠

The Relationship Between Mood, Cognition, and Functional Impairment in Recovered COVID-19 Patients

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INTRODUCTION

- Research suggests that COVID-19 is associated with neurological and psychological sequelae.
- Evidence from recent studies indicates that decline in memory, language, and executive functioning, as well as symptoms of depression and anxiety are common in recovered COVID-19 patients.

OBJECTIVE

- The aim of this study was to explore the relationship between acute COVID-19 symptom load (CSL) and cognitive, psychological, and functional outcomes after recovery.

METHOD

- Sample included 65 adults over the age of 18, who were treated at Staten Island University Hospital for COVID-19.
- 61.8% females (n = 40), 38.2% males (n = 25).
- A brief phone battery was administered 2-6 months after discharge.
- Screening measures assessed for anxiety (Generalized Anxiety Disorder 2 item; GAD-2), depression (Patient Health Questionnaire; PHQ-2), traumatic stress symptoms (Primary Care PTSD Screen for DSM-5; PC-PTSD-5), and functional impairment (World Health Organization Disability Assessment Survey; WHODAS 2.0).
- CSL was assessed by "yes/no" endorsement of 11 common symptoms experienced during acute COVID-19 illness.
- Current cognitive symptoms were assessed by "yes/no" endorsement of memory, concentration, and word finding problems.

DATA ANALYSIS

- Pearson's correlation was utilized to investigate associations between variables.

RESULTS

- There was no significant correlation between the CSL and total WHODAS score.
- CSL was weakly correlated with the Self-care (r=0.27, p=0.03) and Life Activities (r=0.24, p=0.05) domains of the WHODAS.
- There was a moderate significant correlation between current cognitive symptom load and many WHODAS domains.
- The WHODAS domain of Understanding and Communication had the strongest association with current cognitive symptom load (r=0.36, p<0.001).
- There was a significant correlation between psychological symptoms and WHODAS impairment (r=0.40, p<0.001).
- Depressive symptoms had the strongest association with WHODAS impairment (r=0.43, p< 0.000).

WHODAS DOMAIN	COVID-19 SYMPTOM LOAD	CURRENT COGNITIVE SYMPTOMS	CURRENT PSYCHOLOGICAL SYMPTOMS
UNDERSTANDING & COMMUNICATION	r = 0.03, p = 0.81	r = 0.36, p < 0.001	r = 0.35, p < 0.001
GETTING AROUND ALONE	r = 0.16, p = 0.20	r = 0.34, p = 0.005	r = 0.39, p < 0.001
SELF-CARE	r = 0.27, p = 0.03	r = 0.32, p < 0.001	r = 0.31, p = 0.02
GETTING ALONG WITH OTHERS	r = 0.03, p = 0.82	r = 0.27, p = 0.029	r= 0.40, p < 0.001
LIFE ACTIVITIES	r = 0.24, p = 0.05	r = 0.32, p < 0.001	r = 0.39, p < 0.001
PARTICIPATION IN SOCIETY	r = 0.14, p = 0.26	r = 0.26, p = 0.038	r = 0.30, p = 0.02

CONCLUSIONS

- CSL may be a poor proxy for the functional impact of COVID-19.
- Psychological factors, particularly dysphoric symptoms, appear to be more associated with functional impairment than cognitive symptoms.
- Results of this study highlight the importance of targeting interventions for current cognitive and psychological symptoms in recovered COVID-19 patients, regardless of CSL.
- Limitations of our study include small sample size and the use of self-report measures.
- Future studies should investigate the relationship between cognitive and psychological symptoms in a larger sample of recovered COVID-19 patients, perhaps by incorporating objective measures of cognitions.

Acknowlegment

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REFERENCES

Please contact us at ykeren@northwell.edu with further questions or for a copy of our full reference list.