

Effects of a Structured Pulmonary Rehabilitation Program in COVID-19 Pneumonia Patients

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Objective: To evaluate the functional outcome and psychological function among post-COVID-19 patients who joined a structured outpatient Pulmonary Rehabilitation (PR) program.

Methods. This is a retrospective study conducted at the Rehabilitation Department, Hospital Serdang from January until August 2021. Individuals with a diagnosis of COVID-19 infection category 3, 4 and 5 underwent 4 weeks of PR program as outpatients. Outcome measures include 6 Minute Walk Test (6MWT), Duke Activity Status Index (DASI), and Grip Strength (GS) of the dominant hand. Data from pre- and post-program were analysed using Wilcoxon Signed Ranks Test. Depression, Anxiety, Stress Scale (DASS-21 item) pre- and post-program were analysed using the likelihood ratio test.

Results. A total of 20 patients completed the program, with the majority of them had COVID-19 category 5 (47.6%), being male (66.7%) and with a median age of 47 ± 11.9 . There was a significant difference in 6MWT, DASI (both $p < 0.001$) and GS of the dominant hand ($p < 0.05$). Mean difference of the 6MWT pre- and post-program was 73 meters. There was an improvement in the severity level of DASS-21 items.

Conclusion. This study demonstrated that the PR program is beneficial to improve functional outcomes for COVID-19 survivors. With regards to the psychological assessment, there was an improvement in the level of depression, anxiety and stress severity.

Keywords: COVID-19, outpatients; activities of daily living; community participation

DOI: <http://dx.doi.org/10.31344/ijhhs.v6i0.433>

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