

### ملخص البحث الثالث

(بحث فردي منشور دولي – غير مشتق من رسالة علمية)

## Effect of pulmonary rehabilitation program on post hospitalization severe COVID-19 patients (Experimental study)

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**Background:** COVID-19 infection was discovered to be the major global cause of a serious respiratory illness toward the end of 2019. The majority of COVID-19 patients experience mild disease, while about 14% go on to have severe disease and 6% end up in critical condition. An evidence-based standard of therapy called pulmonary rehabilitation includes exercise-training, education, and behavior modification to help people had a lung illness feel better physically and mentally.

**Aim:** current study aimed to evaluate the effect of pulmonary rehabilitation program on severe post covid19 patients (post hospitalization) regarding pulmonary function tests and dyspnea score.

**Methods:** Randomized control experimental study design enrolled 100 patients of post hospitalization due to severe COVID 19 infection. Dyspnea score, Spirometry and 6-minute walk test were performed upon discharge. Pulmonary rehabilitation program in the form of respiratory exercises and walking exercise was done to 50 patients. Follow up assessment of the same parameters was done 6 weeks after the program. Other 50 patients had no pulmonary rehabilitation program to them.

**Results:** Post COVID -19 cases in the experimental group show much improvement in percentage of normal breathing score (mMRC) 30% versus no cases in control group. In addition, the experimental group showed a significant higher percentage of normal spirometry findings (66% versus 28% in control group). As regards oxygen saturation, 6MWT score and distance, it showed a higher mean after practicing the exercise program.

**Conclusion:** pulmonary rehabilitation program was effective in achieving much improvement in recovery of severe cases of COVID 19 infection.

**Key words:** Pulmonary, Rehabilitation, Hospitalization, COVID-19

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