

Is QoL correlated to impairment of respiratory function in post COVID 19 pneumonia patients?

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Introduction

It is admitted that COVID19 pneumonia (C-19P) can impair respiratory function which could impact patient's Quality of Life (QoL). Thus, our objective was to look for eventual correlations between QoL and respiratory function after recovering from C-19P.

Patients and methods

Our prospective study involved 177 C-19P patients, 3 to 6 months after recovery. Respiratory function was assessed by spirometry and DLCO measurement. QoL was evaluated by SF-12 and NHP scales.

Results

Ventilatory defect was revealed by abnormal spirometry in 17% with restrictive profile in 11.9 % and obstructive profile in 5.1%. Gaz exchange Impairment was revealed by DLCO decrease in 40.7%.

QoL was altered as revealed by SF12 and NHP scales.

The mean SF-12 physical score(39% of optimal) was positively correlated to FEV1($p=0.041$; $r = 0.154$) and TLC($p=0.010$; $r=0.199$). The mean SF-12 mental score(50.73% of optimal) was also positively correlated to FEV1($p=0.020$; $r = 0.174$) and TLC($p=0.009$; $r=0.202$).

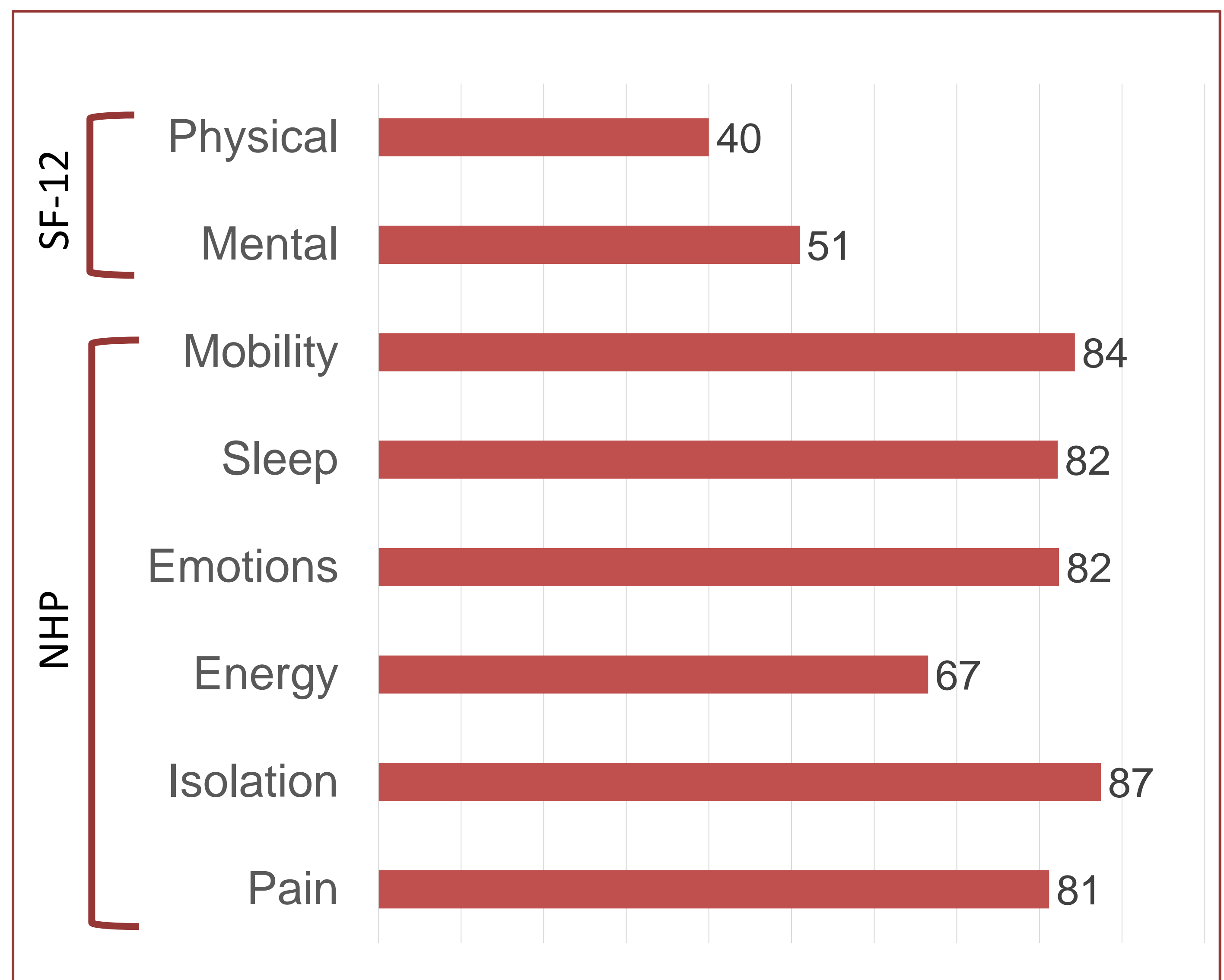


Figure: Percentage SF-12 and NHP scores out of optimal possible scores

NHP mean score out of 100 maximum pathological points was distributed as follows: 34 for lack of energy, 20 for pain, 18 for sleep disturbance, 18 for exaggerated emotional reactions, 17 for mobility limitation and 13 for social isolation. Among these dimensions, pain, lack of energy and mobility limitation were negatively correlated to FEV1 and TLC ($p < 0.005$; $-0.271 < r < -0.189$).

However, no correlations were found between QoL scales and DLCO decrease.

Conclusion

In the light of our results, we can conclude that restrictive ventilatory defect caused by C-19P could have a negative impact on QoL of patients even months after the onset of the disease