

## **Abstract**

This diploma thesis focuses on the comparison of the measured values of selected spirometric parameters (FVC, FEV1, PEF) and the results of quality of life questionnaires (Karnofsky score and Jones shortbreathness score) in two groups, one of which had a prescribed rehabilitation program and the other was a control group. The theoretical part summarizes knowledge about the disease COVID-19 and its immediate and long-term impact, especially on the respiratory system. It also deals with the use of specific methods of respiratory rehabilitation in patients who have experienced the disease of COVID-19. The main goal of the practical part is to verify the effect of respiratory rehabilitation – a prescribed rehabilitation program on lung functions in patients after pneumonia caused by the disease COVID-19.

**Methodology:** A total of 20 patients (average age  $60 \pm 11,04$  years) after pneumonia caused by the disease COVID-19 were included in the research, of which 10 followed the prescribed rehabilitation program. On the day of the end of hospitalization and a second time with an interval of 2-3 months, the spirometric parameters of the probands of both groups were measured and the quality of life was determined using questionnaires. The S-Index and chest amplitude were also measured in the experimental group probands. The collected data were subsequently evaluated using statistical procedures.

**Results:** In both groups, there was a statistically significant increase in the observed values of spirometric parameters as well as the values obtained through questionnaires on the quality of life. Probands of the experimental group achieved better results compared to the control group.

**Conclusion:** The assumption that the improvement in the results of the experimental group probands with the included rehabilitation program will be significantly higher than the improvement in the results of the control group probands could not be statistically proven. It was also not possible to demonstrate a correlation between the development of spirometric parameters and the development of the subjective assessment of the quality of life of the probands. A statistically significant increase in the values of the S-Index and chest amplitude was demonstrated in the probands of the experimental group.