

ABSTRACT

Aim: The aim of this thesis is to firstly introduce the reader to the theoretical part of Covid-19 disease and in the experimental part to investigate the vaccination rate of the respondents, the prevalence of the disease, the symptoms of the disease, the prevalence of post-Covid syndrome, or the involvement of specific organ systems in post-Covid syndrome. Furthermore, the aim was to investigate the influence of individual factors (age, sex, active smoking, BMI, comorbidities, vaccination, virus variant) on the course of the disease and post-Covid syndrome.

Methods: The questionnaire study included 752 respondents of both genders and of all ages. Data collection was conducted within the Czech Republic between June 2023 and January 2024. MS Excel was used for statistical evaluation and Power BI was used for data visualization.

Results: 84.18% of the respondents were vaccinated. 72.61% of the respondents underwent Covid-19 and most of them became ill in the vaccine-free state (52.20%). The most common symptoms were severe fatigue (62.09%), increased temperature/fever (62.27%), muscle and joint pain (56.96%) and headache (56.04%). Post-Covid syndrome was/is suffered by 62 respondents (11.36%) and the most affected organ systems were lungs (46.77%), nervous system (32.26%), senses (30.65%), muscles (20.97%) and joints (17.74%). Statistical analysis showed the association between vaccination and hospitalization, education and vaccination, hospitalization and virus variant. There was no relationship between vaccination and post-Covid syndrome, between virus variant and post-Covid syndrome. Correlation analysis found that age had the largest (but still weak) positive correlation with disease course and post-Covid syndrome, followed by BMI, followed by smoking status and sex. Post-Covid showed a moderate positive correlation with course of the disease. Comorbidities were also found to be a greater problem than high BMI and smoking.

CONCLUSION: There was an association between vaccination and educational status, vaccination and hospitalization, and virus variant and hospitalization. Furthermore, comorbidities were found to be a greater problem for disease progression than smoking and BMI. The lungs, senses and nervous system were most common structures affected by post-Covid syndrome.

Keywords: Covid-19, post-Covid syndrome, vaccination.