

The Effect of Revaccination and Reinfection on Symptom Prevalence in a Post Covid-19 Condition Cohort

ABSTRACT

Background

Most studies report no worsening or even an improvement of Post-Covid-19 Condition (PCC) symptoms after revaccination. Additionally, the influence of reinfection on PCC is ambiguous in research. The effect of immunological events on PCC, including vaccinations and reinfection, remains unclear. This observational cohort study assesses the effect of vaccination and reinfection on the prevalence of 13 self-reported PCC-associated symptoms.

Methods

Participants aged 18 and older, who enrolled at the study website and reported with PCC, received a questionnaire and a follow-up every 3 months for up to 21 months. Participants who received an additional dose of vaccination or reported with reinfection were 1:1 matched to participants reporting with PCC, who remained at the initial dose of vaccination or infection. Prevalence of PCC-associated symptoms was compared using the non-parametric permutation test, stratified for sex, age class, BMI class, education level, the amount of comorbidities and SARS-CoV-2 variant.

Findings and interpretation

While a worsening of some symptoms was shown after receiving a second and third dose of vaccination, this worsening was also found in these symptoms in the matched groups. In the analysis for receiving a fourth dose and the analysis for having a reinfection, no significant differences in symptom prevalence were observed within groups. Additionally, no significant differences were observed in symptom prevalence between any of the revaccinated and the matched groups, nor for the reinfected and the matched group. These findings suggest no effect of revaccinations or reinfection on symptom prevalence three to six months later in individuals self-reporting with PCC.