

## Prevalence of SARS-CoV-2 Infection and Associated Risk Factors in Selected Health Facilities of Tigray, Ethiopia: Cross-Sectional Study Design, 2023

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**Abstract :** Background: The Coronavirus disease of 2019 (COVID-19) is a catastrophic emerging global health threat caused by the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2). COVID-19 has a wide range of complications and sequels. It is devastating in developing countries, causing serious health and socioeconomic crises as a result of the increasingly overburdened healthcare system. Ethiopia reported the first case of SARS-CoV-2 on 13th March 2020, with community transmission ensuing by mid-May. The aim of this study was conducted to determine the prevalence of SARS-CoV-2 infection in Tigray, Ethiopia. Methods: Facility-based correctional study designs were used on a total of 380 study participants from March 2023 up to May 2023 in two general hospitals and one comprehensive specialized hospital in Tigray, Ethiopia. A pre-structured questionnaire was used to assess information regarding the socio-demographic, clinical data and other risk factors. A nasal swap was taken by trained health professionals, and the laboratory analysis was done by RT-PCR (quant studio 7-flex, applied biosystems) in Tigray Health Research Institute and Mekelle University Medical Microbiology Research Laboratory. Result: The mean age of the study participants was 31 (SD+/-3.5) years, with 65% being male and 35% female. The overall seropositivity of sars-cov-2 among the study participants was 5.5%. The prevalence was higher in males (6.2%) than females which were (4.7%). Sars-cov-2 infection was significantly associated with a history of lack of vaccination (p-value 0.002). There was no significant association between seropositivity and demographic factors ( $P > 0.05$ ). Conclusion: The seroprevalence of SARS-CoV-2 among the study participants is high. Those study participants with a previous history of vaccination have a low probability of developing COVID-19 infection. A low SARS-CoV-2 infection rate was recorded in those who frequently use masks.

**Keywords :** prevalence, SARS-CoV-2, infection, risk factors

**Conference Title :** ICC 2024 : International Conference on COVID-19

**Conference Location :** London, United Kingdom

**Conference Dates :** May 23-24, 2024