

# Correlation Between Social Capital and COVID-19 Indices: A Global Level Ecological Study

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## Abstract

**Background:** Given that COVID-19 spreads worldwide, it has become a public health priority. This study aims to investigate the correlation between social capital and the epidemiological indicators of COVID-19.

**Methods:** This survey is an ecological study, so all studied variables are aggregated. To collect the variables in the study, a data set was provided, which included the information of each country based on the cumulative deaths, case fatality rate, recovery rate, and the number of performed COVID-19 tests. We drew scatter plots of the social capital for the studied countries based on COVID-19 indices.

**Results:** In all the studied countries, the highest cumulative incidence rate of COVID-19 cases was in Montenegro (60310.56 per million), while the lowest cumulative incidence rate of cases was in Tanzania (8.42 per million). The highest and lowest cumulative incidence rate of death due to COVID-19 was in Belgium (1425.15 per million) and Burundi (0.08 per million), respectively. Also, social capital has a significant direct correlation with the cumulative incidence rate of cases ( $r=0.42$ ,  $P<0.001$ ), the cumulative incidence rate of death ( $r=0.31$ ,  $P<0.001$ ), and the number of performed COVID-19 diagnostic tests per million. Social capital was correlated with recovery and mortality rates ( $r= -0.21$ ,  $P=0.007$ ).

**Conclusion:** Considering that social capital has a statistically significant relationship with the indices of case fatality and recovery rates, it is possible to increase social capital with appropriate interventions by relevant individuals and organizations to improve the pandemic management in different countries.

**Keywords:** Coronavirus, Social capital, Ecologic study