

Myth or Fact? An Analysis of COVID-19 Deaths in Red versus Blue States of America

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More and more studies claiming that the personal political leanings may have contributed to excess deaths during the COVID-19 pandemic are being published. Previous studies have shown that right-wing "red" counties had higher death rates during the pandemic than more left-wing "blue" counties.

We primarily focus on Republican and Democratic states to examine the risk of COVID-19-related mortality in states with differing political affiliations. We evaluate COVID-19-related data, including poverty rate, education rate, vaccination rate and demographics, using three different methodologies: Emergent Self-Organizing Map (ESOM), Cluster Analysis and the Random Forest Algorithm.

First, ESOM is used to group states according to COVID-19 properties. In order to assign risk levels to these clusters, the COVID-19 risk patterns are first identified by analyzing the clusters. Second, using COVID-19 characteristics, conventional clustering algorithms are used to separate the states into various groups. These clusters are investigated for COVID-19 risk assessment, similar to ESOM, and risk levels are assigned as necessary. Last but not the least, the Random Forest Algorithm is used.