Biden, Trump, and COVID-19 Infection Rates: Don't be Listening to Trump

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Abstract

We computed the number of COVID-19 infections and deaths per million people for the 50 states and Washington, DC and categorized them as supporting Biden versus Trump in the 2020 U.S. presidential election. There were significantly fewer infections per million, but not deaths per million, in states in which Biden won the majority of the vote than in states that Trump won. The effect held when we ran an analysis of covariance controlling for number of COVID-19 tests per million people, population density, and deaths per million in each state and Washington, DC. Implications are discussed.

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The neglect of recognition of science and overt denial of methods for preventing the spread of coronavirus by Donald Trump, officials within his administration, and the conservative media that supports him appears to have led much of his base to ignore health agencies' advice regarding mask-use and physical distancing and, potentially, have higher infection rates. Trump's base ignored science and, for example, attended an annual rally involving hundreds of thousands of motorcyclists gathered in South Dakota, USA, in which there was little masking or physical distancing. This rally was tied to further outbreaks of COVID-19 (Dave et al., 2020). In, fact, in counties in which Trump had pre-election rallies, which typically involved little mask-use and no physical distancing, increases in COVID-19 infection rates were apparent 14 days after the rallies, whereas adjacent counties did not show an increase (Bernheim et al., 2020). Furthermore, Bernheim et al. (2020) linked Trump rallies to at least 30,000 cases of COVID-19 and at least 700 deaths.

Conversely, Joe Biden encouraged his base to attend to scientific data, use masks, maintain physical distance, and follow science-based strategies for reducing transmission of the virus. There has been no evidence for spikes in infection rates associated with Biden pre-election rallies. Thus, we might expect relatively lower infection rates in Biden's base, and therefore lower infection rates in states that Biden won. In the present study, we computed the number of positive cases per million people (IPM) in all states as well as Washington, DC. We tested for differences between states where Biden won the plurality of votes versus states that Trump won. We expected that Biden states would have lower IPM rates than Trump states.

Methods

We collected our data from *Worldometer* and computed IPM for all states and Washington, DC. We also computed number of tests per million people (TPM) in all states and Washington, DC, as well as population density (PD) and death per million (DPM) rates. All data were collected on November 11, 2020.

Results[1]

An analysis of variance (*ANOVA*) showed no effects on DPM rates; Trump states ($M =$ 721.73, *sem* = .34) did not differ from Biden states ($M =$ 574.00, *sem* = .23), $F(1, 49) = 0.30$, *ns*. As predicted, an *ANOVA* indicated that Trump states ($M =$ 39,743.36, *sem* = 2,438.13) had significantly higher IPM rates than did Biden states ($M =$ 25,792.31, *sem* = 2,183.13), $F(1, 49) =$ 18.24, $p < .001$, *partial η^2* = .27. However, Biden states ($M =$ 699.62, *sem* = .59) were more densely populated than Trump states ($M =$ 92.50, *sem* = .61), $F(1, 49) = 12.34$, $p < .001$, *partial η^2* = .20. Analyses of covariance (*ANCOVA*) controlling for TPM rates, PD rates, and DPM rates per state and Washington, DC showed the same pattern of effects, $F(1, 46) = 11.43$, $p < 0.001$, *partial η^2* = .20. The effect of TPM was nonsignificant in the *ANCOVA*, $F(1, 46) = 0.08$, *ns*. However, PD and DPM were significant covariates, $F(1, 46) = 18.33$, $p < .001$, *partial η^2* = .29 and $F(1, 46) = 43.91$, $p < .001$, *partial η^2* = .49.

Discussion

As expected, these data speak for themselves: Biden's science-based approach to his discussion of the virus as well as his pleas for Americans to engage in mask-use, physical distancing, and hand sanitation seem to have resonated with his base: Biden's base had

1 CPM rates did not violate the assumption of homogeneity of variance. Analyses on all other dependent variables were based on log10 transformations due to violations of the assumption. The transformed variables did not violate the assumption. For ease of interpretation, we report raw means but *sem*s based on the transformed variables.

significantly lower infection rates than did Trump's base.[2] We believe that the misinformation and disinformation campaigns propagated by Trump, his administration, and the conservative news outlets that support Trump have adversely impacted the health of Americans and contributed to the spread of COVID-19, especially among Trump's base. It is interesting that controlling for the number of COVID-19 tests did not change the results. We hypothesize that this covariate would have had an impact during the early stages of the pandemic; however, at this point it has become irrelevant.

One issue that remains relevant is our lack of knowledge regarding true COVID-19 infection rates and the percentage of the population that is asymptomatic and shedding the virus (see, e.g., Sinclair & Kumar, 2020 who suggest a random sample testing approach). Until we have a complete knowledge of infection rates, a vaccine that has been shown to be effective in the long run and that can be easily distributed, we believe that there is no end in sight for the pandemic: Herd immunity cannot be achieved without an effective vaccine that is administered to a significant percentage of the world's population. In the meantime, we argue that we must adopt the behaviors and interventions used in collectivist countries in order to prevent transmission of COVID-19 (see Melton & Sinclair, under review).

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2 This might be as much a reflection of a greater belief in science as a solution to the pandemic on the part of Biden's base versus Trump's base as of the differences in Biden's and Trump's rhetoric about the virus. However, it certainly seems plausible that rhetorical differences had an impact on their respective supporters' approaches to the virus.

References

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