

COVID-19 in Brazil: correlation between publication on Twitter and the rate of cases, deaths and vaccinated

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Abbreviated abstract: This work monitors the use of the Pandemic keywords in Brazilian Twitter users and correlates them with the data provided by the Ministry of Health. In the first wave, correlation (0.80) was between the death rate and the term "pandemic", while the lowest correlation (0.27) was between the death rate and the word "vaccine". In the second wave, correlation (0.87) appears between the rate of cases and deaths with the term "pandemic". In contrast, the lowest correlation (0.04) was between the rate of vaccination and the word "isolation."

Related publications: (up to 2 references)

- BALTAZAR, J, Y *et al*, JMIR public health and surveillance (6), 18444 (2020)
- SHIN, S, Y *et al*, Scientific reports (6), 1-7 (2016)



Research Problem

Is there a correlation between Twitter posts and COVID-19 cases and deaths?

- **Monitor** the use of the keywords: "**covid**", "**vaccine**", "**pandemic**" and "**isolation**" among Brazilian Twitter users.
- **Correlate** them with the number of **cases, deaths and vaccines**, provided by the Ministry of Health.

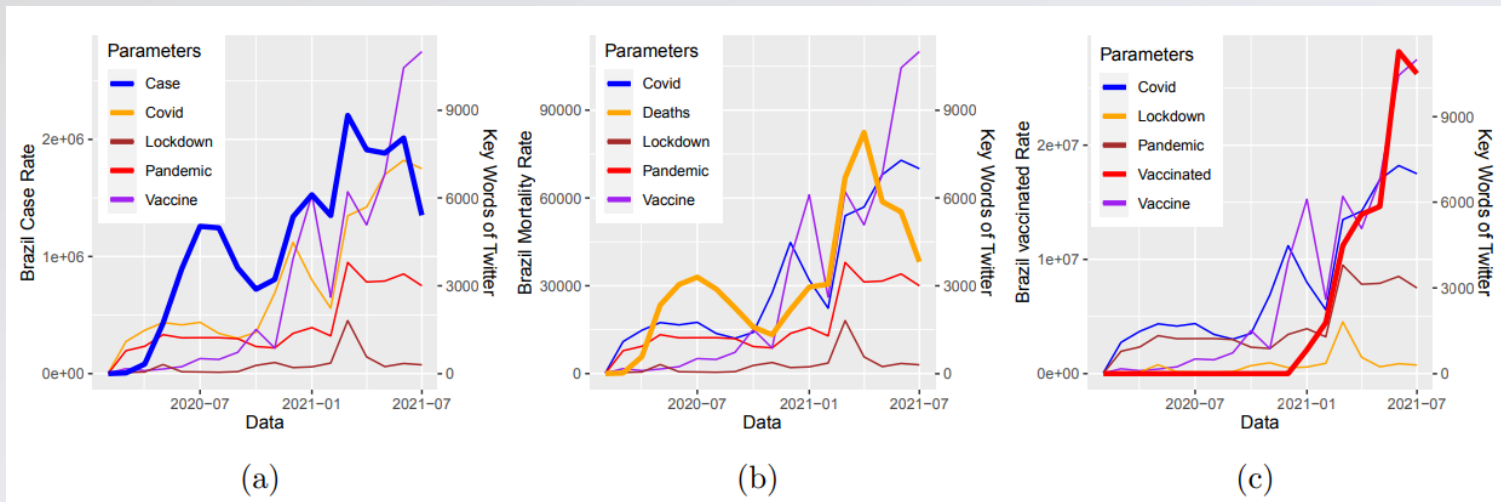


Methods

- For this, a sample of **5 million tweets** was collected from **3000 active Twitter accounts**.
- The R software with the rtweet package, was used.
- The keywords were separated into the **first and second waves** of COVID-19 contagion.



Results and Conclusions



In the first wave, the death rate and the term "pandemic", correlation (0.80).

In the second wave, the rate of cases and deaths with the term "pandemic" correlation (0.87).

In contrast, correlation (0.04) was between the rate of vaccination and the word "lockdown."

Thus, it can be concluded that the terms of the pandemic on Twitter are positively correlated with data from the Ministry of Health in the first and second waves of contagion.