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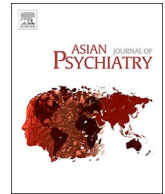
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## Letter to the Editor

## Sentiment analysis of nationwide lockdown due to COVID 19 outbreak: Evidence from India



Corona Virus Disease or COVID 19 is a new virus disease that originated in 2019 (Wang et al., 2020). The virus has now spread across the world and the almost all the countries are battling against this virus and are trying their best to curb the spread as much as possible. The World Health Organisation has declared it as a Pandemic (World Health Organization, 2020) and is leaving no stone unturned to control the pandemic and is awaiting a vaccine to cure it (El Zowalaty and Järhult, 2020). There are not many academic studies (barring a few e.g. Boldog et al., 2020; Goyal et al., 2020; Bhat et al., 2020) that can guide researchers to study the impact this pandemic has on the mental health of the people and also on the economies worldwide.

By the first week of March 2020, several countries like China, Italy, Spain, and Australia were fighting with the COVID19 pandemic by taking strict measures like nationwide lockdown or by cordoning off the areas that were suspected of having risks of community spread. Taking cues from the foreign counterparts, the government of India undertook an important decision of nationwide lockdown on March 25th for 21 days from March 26th to April 14th, 2020 (British Broadcasting Corporation, 2020). India, with a population of 1.3 Billion people, was at a high risk of suffering from irreversible damage, and strict measures were expected to “flatten the curve.” The Prime Minister of India announced the lockdown (COVID-19, 2020), but it did not come as a surprise because Indians were actually given a feel of what it had in store through a one-day curfew named as “Janata Curfew” of 14 h on March 22nd from 7 A.M. to 9 P.M. (The Economic Times, 2020). Thus, Indians were exposed to a lockdown situation partially, and this helped in preparing mentally for the nationwide lockdown, and the announcement did not come as a shocker to them.

Looking at the statistics of COVID19 infected, recovered, and death cases of Italy and other countries, Indians knew that drastic measures were needed in India to stop the numbers from rising exponentially.

This paper deals with the sentiment analysis of Indians after the lockdown announcements were made. We used the social media platform Twitter for our analysis. Tweets were studied to gauge the feelings of Indians towards the lockdown. Tweets were extracted using the two prominent hashtags used namely: #IndiaLockdown and #IndiafightsCorona from March 25th to March 28th 2020. A total of 24,000 tweets were considered for the analysis. Analysis was done

using the software R and a wordcloud was generated that depicts the sentiments of the tweets.

Even though there was negativity, fear, disgust, and sadness about the lockdown, the positive sentiments stood out. Fig. 1 shows that the prominent sentiment was positive. Indians were clear that they had to flatten the curve and were committed to it. The next sentiment that stood out was trust. Seemingly, the Indians trusted their government and were probably sure that government would implement the lockdown successfully and see that no citizens would struggle for basic essentials during the lockdown and the government would make arrangements for the same. Some tweets expressed total surprise about the decision but overall, it seemed like people were expecting such a measure as lockdown to contain the spread of the virus and this was possible only through social distancing and by practicing hygiene measures like washing hands frequently using soap or alcohol based sanitizer.

Fig. 2, clearly shows the intensity of the various sentiments. There was sadness because people were worried what would the daily wage workers do to survive the lockdown period. Also, questions were raised about the unavailability of alcohol during the lockdown and there were concerns about alcohol addicts facing withdrawal symptoms.

Overall, it can be seen that Indians have taken the fight against COVID19 positively and majority are in agreement with the government for announcing the lockdown to flatten the curve. It could be seen from the tweets that several people were angry that the lockdown came a bit late. It should have been announced a week prior. Also, some tweets expressed concerns that the passengers from abroad who flew in should have been quarantined before letting them to reunite with their families. Nevertheless, as of now, the lockdown response seems positive and indicates that India has succeeded in controlling the corona virus spread to a great extent.

Future studies can look in to pre and post lockdown tweets and understand whether there was a change in sentiments from the beginning to the end of the lockdown. Also, future studies can look in to factors that affect mental health during lockdowns and pandemic spreads. Another area for future research could be tackling of fake news that gets circulated through social media, impacting the mental health of the receivers.

