A TWITTER BASED ANALYSIS OF COVID-19 VACCINE IN INDIA DURING THE SECOND CORONAVIRUS WAVE USING N VIVO

RAJAT SHARMA[1] AND DR. RITA DEVI[2]

[1] Research Scholar, School of Commerce and Management Studies, Central University of Himachal Pradesh, Dharamshala.

[2] Assistant Professor, School of Commerce and Management Studies, Central University of Himachal Pradesh, Dharamshala

Abstract

Background After a fair win over the coronavirus in the first wave, the things were not in control in the second wave of Covid-19 in India. Although, India started to vaccinate people from January 16, 2021 with two made in India vaccines- Covishield and Covaxin, but abrupt increase in the Covid-19 cases were seen in the month of March and April. India felt the shortages of Covid-19 vaccine along with the shortages of oxygen, medicines and beds in hospitals. Exports of Covid-19 vaccine, lack of manufacturing plants, are some of the primary factors that lead to coronavirus vaccine shortages in India.

Research Methodology A qualitative type of research paper deals with the tweets using the hashtag #VaccineShortage that were posted on Twitter extracted through NCapture and then analysed on NVivo 12 (Trial version). Various themes have been extracted, the sentiments of the Twitter users are noted down and word cloud and word map are also generated.

Findings The top five themes under the #VaccineShortage are related to the improper supply of vaccine. Lot of people struggle to find the vaccine slot in the registered application and people are also seems to be confused related to the gap between first dose and second dose of Covid-19 vaccine. That's why; dose, struggling, supply were the main themes extracted out. Twitter users are more on negative side as seen in sentiment analysis and Twitter users from North America also took part on #VaccineShortage along with Indians.

Conclusion India started the world's largest vaccination drive but the second coronavirus wave swept away all plans. There was shortage of vaccine, lack of oxygen, lack of hospitals beds for patients that put a disappointment in the minds of Indian people towards government.

Key words: Covid -19, Vaccine Shortage, Second Wave, N.Vivo, Coronavirus. Twitter.

INTRODUCTION

After taking millions of lives in the first wave, Covid-19's second wave hit the India hard. India appeared to be recovering from the first wave as cases was start dipping in the month of November and December. However, in March there has been a sudden resurgence in the number of cases and the primary factor for this is the new coronavirus variant that has been found from samples in the state of Maharashtra. The new variant is spreading faster than the previous one and also damaging the immune system more easily and rapidly. It has also seen that the variant of Sars-Cov-2 *B.1.1.7,* that was identified first in United Kingdom is also dominant in Punjab. The variant

B.1.617 has become dominant in Maharashtra and contains two mutations that have been linked to increase transmissibility and an ability to evade the immune protection. Researchers analyses that the crystal structure of the 10-virus spike protein mutation is likely to bind ACE (Angiotensin Converting Enzyme -2 and further accessed the effect of mutation on biding to neutralizing the antibodies using structures. Only a small amount of proportion of the sequences showed the *B.1.1.7* variant that was there in December, 2020 (Supriya, 2021; Mallapaty, 2021). World Health Organization designated *B.1.617* a "variant of concern". This also raised the question of the vaccine effectiveness and there are more than 6 vaccines are available and different countries are using them (Vidyanathan, 2021).

The second wave of coronavirus has ripped up the Indian health system. Many people left helpless with no bed availability, no oxygen and no plasma for treatment. People were only reliable on social media platforms as a medium of communication, as they struggle to find the medical resources (FICCI, 2021). The two-basic difference between the coronavirus first and second wave, first- a sharp increase in cases from 10,000 to 80,000 in just 40 days, whether the same number took 83 days in September 2020; and secondly- most of the cases are asymptomatic or mildly symptomatic and are hard to detect. Two loopholes behind raising the number of cases in the second wave are 1. The spread rate of variant *B.1.617* is high and 2. The loss of fear of coronavirus as government claims that the pandemic is its end-game (Thomas, 2021).

The delay in lockdown during the second Covid-19 wave results in super spreader of Covid-19 to rural areas as workers were migrated from urban to rural areas without being tested. Local lockdown was imposed in mid-April, when the daily cases were around two lakhs. Along with this, Mahakumbh, Kisaan Andolan (Farmers's protest) and election in some states were the factors behind super spread of Covid-19 (Kumar, 2021). Country's health care system faces shortages of hospitals beds, oxygen, medicines and vaccines. Central government faced a lot of criticism related to health services and for allowing mass gatherings for festivals, rallies, and others. During this, other countries also supported India, including $100 million support in medical aid from the United States of America (Choudhury, 2021).

Fig. 1: Daily Covid-19 Deaths in India

Source: John Hopkins University, as of April, 2021.

Fig. 2. Daily Covid-19 Cases in India.
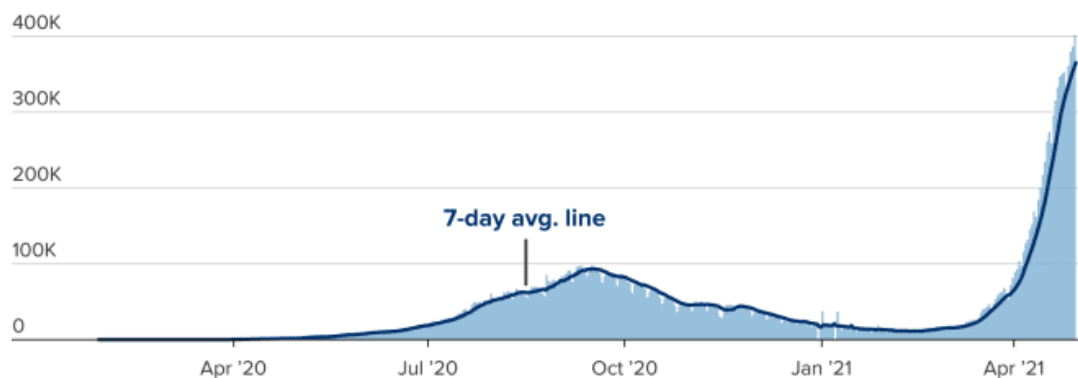
Source: John Hopkins University, as of April, 2021

To fight against this deadly coronavirus, vaccine is the only and only possible solution. It is not possible to any country to impose lockdown throughout, especially in a country of population more than 136 crore which is further distributed in 41.49% in agriculture sector and 26.18% in industry sector and these two sectors were affected badly by Covid-19 (World Bank, 2021; US Census Bureau, 2021; Statista, 2021). India started the world's largest vaccination drive on 16th January, 2021 with two made in India vaccines- Covishield and Covaxin. India aimed at vaccinated 300 million people by August, 2021 including- 30 million health workers, frontline workers (police and soldiers), 270 million elderly people (over 50 years of age). In past, India successfully carried out large vaccination campaigns against measles,

tetanus; which targets 26.7 million newborn and 29 million pregnant women every year (Bagcchi, 2021).

On 1st March 2021, Prime Minister Narendra Modi received first dose of Covaxin, Indian indigenously made Covid-19 vaccine. India also exports vaccines to low income- developing countries under the *Vaccine Matri* (Vaccine Friendship) initiative. India is 3rd largest producer of pharmaceutical and produces nearly 60% of world's vaccine for Diphtheria, Measles, Tetanus (DPT), Tuberculosis and others. India Serum Institute is the world's largest producer by volume that is producing the Covishield Vaccine for Covid-19 (Surie, 2021).

THEORETICAL BACKGROUND

Vaccine is actually a substance that boosts the immune system, prevents infection and control the disease due to certain pathogen, virus, bacteria or parasite when introduced into the body. Combination vaccines are used against different diseases such as Diphtheria, Tetanus, Hepatitis B, Polio and others. Vaccines are capable of preventing the replication of pathogens by inactivating their toxic components and about 85% of children are vaccinated worldwide against these (Vaccine fact book, 2012).

Table 1: Details of Vaccines

Vaccines Names	Form of Vaccine		
Live/Attenuated	Contain a version of living virus/bacteria that has been weakened. Examples are Measles, Mumps, and Rubella.		
Inactivated	Made by inactivating or killing the germ during the process of making the vaccine. Example- Polio vaccine.		
Toxoid	Made up of weakens toxins produced by bacteria called toxoids. Examples are Diphtheria and Tetanus.		
Subunit	Include only a part of bacteria/virus or only an essential antigen but not the entire. Example is Pertussis.		
Conjugate	Made up of Polysaccharides coating that is able to disguise the antigen. Example is H. Influenzae Type B.		
Vaccine		**Country**	**Month**
Biotech N Tech-Pfizer		United Kingdom	8 Dec. 2020.
Sputnik V		Russia	9 Dec. 2020
Biotech N Tech-Pfizer		United States	14 Dec. 2020
Biotech N Tech-Pfizer		Canada	14 Dec. 2020
Covishield/Covaxin		India	16 Jan. 2021

Source: Pandey, 2021

Around 70 million doses of Covishield production were there in the month of March which is expected to rise to 100 million by the end of May. India shipped around 66 million of vaccine to 95 countries from January to April and on 24th of April India

slapped a temporary ban in exports of vaccines (Roche, 2021). As of 25th May, only 140 million doses of vaccine administered in India which is only 10% of total population and out of these, 118 million have only got their first shot (Roy & Bose, 2021). Like Spanish flu in 1918-1920, the second wave was much more devastating than the first and same is the case with coronavirus. This results in collapse of the Indian health system as oxygen demand raised to 13.4% overall (Sheriff, 2021). The climate change, environmental racism and poverty are also the leading factors behind lack of availability of oxygen. Poor air quality index caused childhood asthma and lung disease in adults due to overcrowding, inadequate ventilation and excessive inflammation contribute to fine particulate matter raising the risk of Covid-19 cases. By the beginning of May, daily oxygen demand surge to 976 metric tons in Delhi, more than double its current capacity (Hardy, Weru & Sadaf, 2021).

Fig. 3: Vaccine Administered (in million)
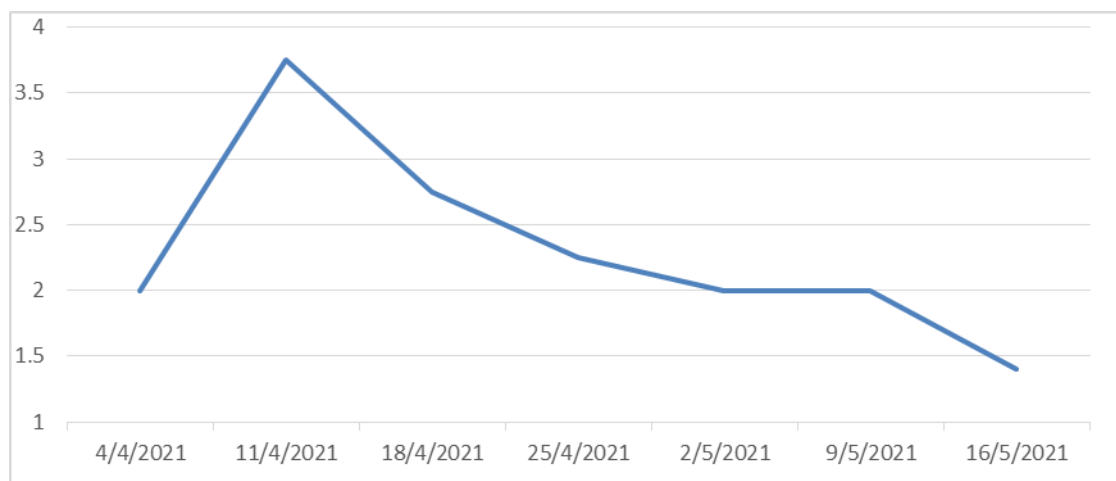
Source: BBC World Data

RESEARCH METHODOLOGY

Twitter is a social media platform developed by Jack Dorsey, Noah Glass, Biz Stone and Evan Williams in the year 2006. It has around 200 million users worldwide. United States of America has the leading numbers of Twitter users around 70 million followed by Japan and India with 50.9 million and 17.5 million users respectively (Statista, 2021). The research paper is of qualitative type that analyses the sentiments and themes related to Covid -19 vaccines in India. The tweets were extracted using the hashtag *#VaccineShortage;* from 1 April to May 31, 2021. The tweets were extracted using an extension of Google *N.Capture* on 3rd of May, 2021, at 06:39 PM. Around six thousand tweets were extracted and then analysed using the qualitative

software *N Vivo 12* (Trial Version). The major themes related to #VaccineShortage identifies, sentiments of people towards Covid-19 vaccine are noted down. Along with sentiment and thematic analysis, word map, word cloud also extracted.

DATA ANALYSIS

Data analysis is a system that involves goals, relationships, decision making, and ideas and guides the analyst to a conclusion on the basis of which recommendations are made (Data Analysis Handbook, 2006). Thematic analysis, Sentiment analysis, word cloud and word map are noted down in this research paper that are includes in three different parts.

THEMES IDENTIFIED

A type of qualitative analysis and is used to analyse the classification and pattern in terms of themes present across the data set. It is a way to identify numerous patterns and analyse those patterns to answer a particular research question (Ibrahim, 2012; Clark, 2012).

Figure 4: Various themes identified under #VaccineShortage

	1 : Files\\#Vaccineshortage until~2021-05-25 since~2021-04-01 - Twitter Search ~ Twitter
A: dose	255
B: govt	233
C: phenomenon	526
D: struggling	526
E: supplies	348
F: vaccine	1142
G: vaccine supplies	318

These are the major themes identified and it is clearly seen that most of the tweets are related to vaccine supply and struggling and Indian phenomenon; as Indian government was struggling a bit to distribute the vaccine properly to states. a confusion was also there in the minds of people related to the gap between first and second dose of vaccine as indicated in the table. Some states including Delhi and Maharashtra regularly complaint to central government related to the distribution of vaccines as most of the cases in the second wave were from these two states.
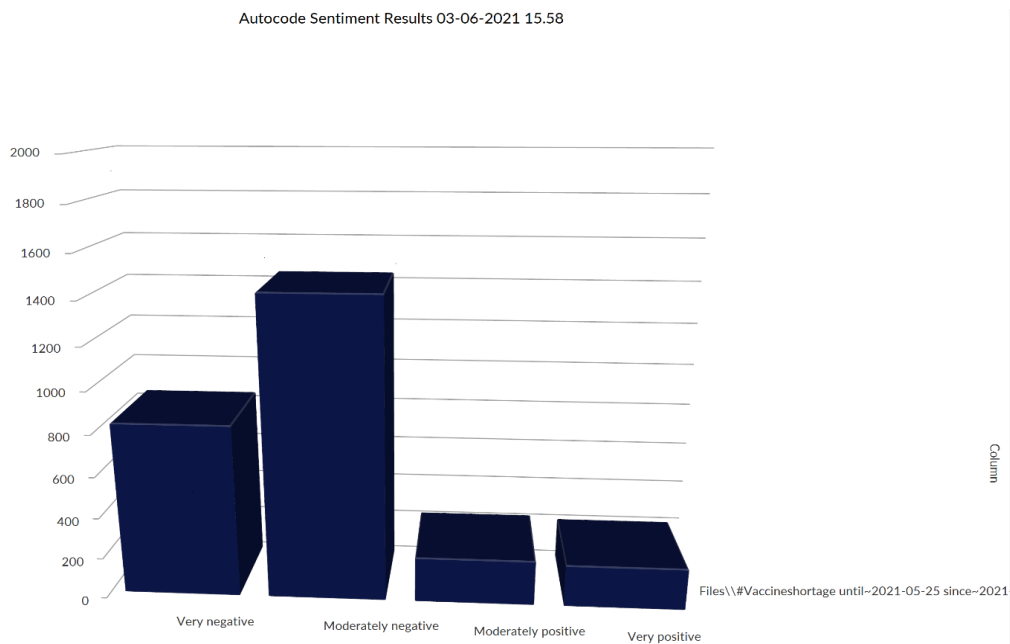
SENTIMENT ANALYSIS

Sentiment analysis is also called as opinion mining (SAOM), is a systematic study of people's opinion, emotions, and perspective towards a particular individual, issue, event or topic. Social media is one of the platforms where people can openly express their thoughts and opinions (Zhang & Liu, 2012). Sentiment analysis can be further classified in branches like- emotion analysis, trend analysis, and bias analysis etc. and the technique is widely popular from business to social, political and geographical domain (Khan et. al, 2016).

Figure 5: Sentiment identified under #VaccineShortages

	A : Files\\#Vaccineshortage until~2021-05-25 since~2021-04-01 - Twitter Search ~ Twitter
1: Very negative	29.38%
2: Moderately negative	52.77%
3: Moderately positive	9.82%
4: Very positive	8.02%

Figure 6: Graphical representation of sentiment analysis

Autocode Sentiment Results 03-06-2021 15.58

Under sentiment analysis it is clearly seen that most of the tweets are on the negative side. 52.77% of the tweets are moderately negative followed by very negative with 29.38%. Only 9.82% and 8.02% of the tweets are on the positive side. Majority of the tweets are complaining about the mismanagement in the distribution of vaccine to the state governments. Moreover, it all seems good till the health workers, front line workers and people above the age of 45 were under the vaccination process, but as the vaccination process starts for above 18 the things starts complicating.

WORD CLOUD AND WORDMAP

Word cloud is actually is data representation of to visualise language or text data. Application of word clous is increasing day by day and various reseaerch analyst are using this technique rather than graphs especially in qualitative research. Tags are assign to the data and information can decode by visualising the frequency of each keyword (Jin. 2016).

Figure 7: Wordcloud based on Vaccine Shortage.

The word cloud represents that the #vaccineshortage is mostly surrounded by negative impacted words. Most of the words are blaming central government for the shortages of vaccine for Covid-19 in the second wave. The word cloud for #vaccineshortage representing the word frequency in two parts; first, there are some words reated to policy framework of the government for the distribution of the vaccine such as: guidelines, phenomenon, crocodile tears. The other half represents the frequency chart toward the fury in people like: struggling, disaster, business, shortage related to the Covid-19 vaccine distribution. Only a few words are there in the word cloud related to the positivity like: available, vaccine for all. So overall it is clerly seen that the most

of the words in the word cloud are negatively impacted words related to Covid-19 vaccine distribution in India.

Wordmap is the geographical representation of the tweets worldwide related to a topic or activity. It is clearly seen in the wordmap that most of the tweets related to Vaccine shortage are from India and rest of the Tweets are from North America and Europe Continents. As America supplies raw material to India for the manufacture of Covid-19 vaccines, ventilators, personal protective equipment and also send oxygen generation ansd related supplies to India.

DISCUSSION AND RECOMMENDATIONS

India was in serious trouble during the Covid-19 second wave. There was shortage of oxygen in hospitals, lack of beds and lack of Covid-19 vaccine. India started the vaccination drive on 16th January, 2021 with two Made in India vaccines Covishield and Covaxin but as the time progresses, India felt the shortages of vaccines. Whole world is fighting against this deadly Coronavirus since 2019 and this virus is responsible for taking millions of lives globally. Lockdowns were imposed, social distancing was there, mask and other preventive measures were taken by countries to save the life of people but these were not the permanent or stable ways to deal with coronavirus. To fight against this deadly virus there are only two proven methods: "*zero Covid strategy*" adopted by New Zealand, based on agrressive testing, tracing, border control and strict enforcement of rules and the second is "*mass vaccination program*" as followed by United Kingdom. The Vaccine was the only hope in highly populous countries and numerous pharmaceutical companies throughout the world were experimenting to develop the vaccine against this virus. Moderna, Cansino Biologics, Sinovac, BoiNTech, Pfizer, University of Oxford, AstraZeneca, Bharat

Biotech, Gamaleya Research Institute, Serum Insititute of India and various others are in a race to develop the vaccine against coronavirus. Out of these the two Indian companies- Bharat Biotech and Serum Institute of India successfully developed the Covishiels and Covaxin got approval by Indian Drug Authority. Along with this India also permitted the Sputnik V of Gamaleya Research Institute for vaccination. Health workers were the first to be vaccinated, after that the frontline workers and at last the vaccination will start to common people, first with the above 60 age. Strict lockdowns were imposed by state governments in order to contain the spread of Covid-19 cases. India's daily vaccination hit high in April, but slumped to almost half of that in the month of May 2021.

In the first week of February, the second coronawave entered in India and after that there was exponential increase in the number of Covid-19 cases in India. Carelessness, mutation the Covid-19, and unreadyness of the government towards the second wave made the situation more devastating. Religious gatherings, reopening of the most public places and election rallies are being blamed for the rise in the coronavirus cases in India. there is also a confusion in the minds of people related to the gap between the first and second dose of vaccine. The central government eariler decieded to put a 28 days gap between the first and second dose but then it was raised to 84 days. Another area of concern has been the wastage of vaccine as in the last week of May the vial found dumped in garbage bin in some states. India exported about 66 million doses of vaccines to Bangladesh, Nepal, Sri Lanka and others which is also a factor for vaccine shortage in India. India banned the export of Covid-19 vaccines in last of April, but now various international organisations are ciritcising India for this, as only a half of the population get only their first dose of Covid-19 vaccine in countries where India exported the vaccine. There was lack of planning related to distribution of vaccines, oxygen supply, information of beds available in hospitals that created a fear and flurry in Indian people. There was a bustle in people to get the *Remdesivir* that was the first drug approved for treating the Sars-CoV-2 while the doctors are constantly saying that it is an antivirul drug and can only be used under medical supervision. Social media also helped people a lot in these tough times. Indian turned social media sites such as Instagram, Facebook, Twitter in search of Covid-19 medicines, beds in hospitals, oxygen supply are for the rest of services. Young professionals across the country, especially those with large followings on social media started to connect with patients and then connect them to relevant groups who could help them. Not only for medicines or for oxygen supply, youngster use social media but also provide moral and emotional support for patients and relatives. Companies, news outlets, inluencers and celebrities came forword to help people and

for this social media paltforms were the best. Even several hospitals were rely on twitter and other social media platforms to inform the public about lack of oxygen and plead to authorities for immidiate action. Twitter created a search bar for Covid-19 resources whereby those in need could quickly find verified Tweets posted by those with availble supplies. However the problem of misinformation is still prevelant.

India need to enhance the vaccine production to deal with this situation. Serum Institute of India has already ramped up the production form 5 crore doses per month to 6.5 crore and it will further boosts up more. Bharat Boitech also starts to increase its monthly production of Covid-19 vaccine from 90 lakh permonth to 2 crore doses and will further expected up to 5.5 crore doses per month by the end of July. Domestic pharma major Panacea Biotech in collaboration with Russian Wealth Fund RDIF (Russian Direct Investment Fund) has begun the production of Sputnik V in India. On 12th April, 2021 India approved the emergency use of Sputnik V.

India starts importing the vaccines from other countries also, as government approved the Sputnik V and first batch was landed on 1st May with 1.5 lakh doses and second batch landed on 16th May, 2021. With the increase in vaccine production, India should also look forward to import drugs approved by World Health Organisation like Tozinameran by Pfizer-BioNtech, Moderna Covid-19 vaccine and Janssen Covid-19 vaccine developed by Johnson and Johnson.

CONCLUSION

It is not that easy for a country of 140 crore population to beat a virus like Sars-CoV-2. Both central and state governments along with health workers, frontline workers; all are trying their best to prevent the spread of coronavirus. Even India managed to win the first war against Covid-19 in its first wave and the battle is on for the second wave. India started the world'd largest vaccination drive well but some loopholes were also there that created a discontent in the minds of Indian people towards government. Lack of oxygen supply, shortage of vaccine, lack of beds, medicines are some of the factors behind the devastating effect of coronavirus second wave. Moreover, reopening of public places, rallies and permit people gathering are the secondary factors those act as synirgistics to the current scenerio. Vaccination program started initially with two vaccines- Covishiels and Covaxin and latter the third joined the drive Sputnik V. Everything seemed fine in the first month of the vaccination drive when health workers, frontline workers, and people above 45 years of age were there for vaccination but as government permitted the vaccination shot for above 18 years the things started to getting complex. The slots were not available as

the official site- CoWin get crashed most of the time. People were also disappointed with the distribution framework of the Covid-19 vaccine to states. Moreover the guidelines regarding the gap between the first and second shot of coronavirus vaccine also confused the Indian minds. All these factors appeared in the different parts of data analysis. Sentiments are negative related to the vaccine shortages, people are not that much happy with the government as appeared in word cloud. Most of the themes extracted are pointing towards the loopholes and the mismanagement in Covid-19 vaccine distribution.

No doubt, government is trying hard to get the things back on track as pharma companies increased the manufacturing of the vaccine, short lockdowns are also there in states to prevent the further spread of Coronavirus, and permission to import of Covid-19 vaccine also granted. For the past couple of weeks the things seems to be going well as there is some decline is seen the Covid-19 cases due to lockdown. But its not right to be careless now as there might be a chance of third wave of coronavirus predicted by experts.

REFRENCES

Bagcchi, S. (2021, March 24). *The world's largest COVID-19 vaccination campaign.* The Lancet. 21(3). Doi: 10.1016/51473-3099(21)00081-5.

Choudhury, S.R. (2021, May 03). *India accounts for 1 in 3 new Covid cases being recorded. Here is it second wave in 5 charts.* CNBC. https://cnbc.com/2021/05/03/india-covid-crisis-charts-shows-the-severity-of-the-second-wave.

Hardy, L.J., Weru, L., Sadaf, N., Kasper, J., & Decker, F (2021, May 10). *Why India Need Oxygen More Urgently than vaccines.* https://Vox.com/22428619/india-covid-oxygen-shortage-supply-tankers-vaccine.

Infrastructure Development Finance Company. (2021, March 30). *India Covid-19 Vaccination Distribution Report.* https://www.idfcinstitute.org/site/assets/files/16532/tica_distribution_report_web_v1.

Jin, Y. (2017). Development of word cloud generator software based on python. *Procedia Engineering.* 174. 788-790. Doi: 10.1016/j.proeng.2017.01.223.

Kaurav, R.P.S., Suresh, K.G., Narula, S., & Baber, R. (2020). New education policy: Qualitative (contents) analysis and twitter mining (sentiment analysis). *Journal of Content, Community & Communication,* 12(6). Doi: 10.31620/JCCC.12.20/02.

Khan, M.T., Durrani, M., Ali, A., Inayat, I., Khalid, S., & Khan, K.H. (2016). Sentiment analysis and the complex natural language. *Complex Adaptive System Modeling,* 4(2). 2-6. Doi: 10/1186/s40294-016-0016-9.

Kumar, A. (2021, May 18). *What are the costs of a delayed lockdown during 2nd wave of Covid-19?* The Wire. https://thewire.in/economy/costs-economy-delayed-lockdown-second-wave-covid-19.

Kumar, V. M., Perumal, S.R.P., Trakht, I., & Thyagarajan, S.P. (2021). Strategy for Covid-19 vaccination in India: the country with the 2nd highest population and number of cases. *Nature Partner Journals* 6(60), 1-3.

Mallapaty, S. (2021, April 21). *India's massive Covid surge puzzles scientists.* Nature. https://nature.com/articles/d41586-021-01059-y.

Managing India's second Covid-19 wave: Urgent steps. (2021). *The Lancet Covid-19 Commission.* India Task Force. Retrieved from https://static1.squarespace.com /static/5ef3652ab722df11fcb2ba5d/t/6076f57d3b43fb2db4a7c9c9/161840883174 6/India+TF+Policy+Brief+April+2021.pdf.

Money Control. (2021, January 01). *Some 50 countries start Covid-19 vaccinations.* https://moneycontrol.com/news/worls/some-50-countries-start-covid-19-vaccinations-629257.html.

O'Neiell, A. (2021, March 31). *Distribution of the workforce across economic sectors in India 2020.* Statista. https://statista.com/271320/distribution-of-the-workshop-across-economic-sectors-in-india/.

Pandey, K. (2020, December 14). *Covid-19 vaccine: List of countries that have begun vaccination.* Times Now News. https://timesnownews.com/health/article/covid-19-vaccine-list-of-countries-that-have-begun-vaccination/694430.

Roche, E. (2021, May 24). *Why India can't stop export of the vaccination for long.* Mint. https://www.livemint.com/news/india/why-india-can-t-stop-exports-of-the-vaccination-for-long-11621788708044.html.

Roy, S., & Bose, S. (2021, May 25). *Covid-19 second wave: Putting India first.* Down To Earth. https://www.downtoearth.org.in/blog/health/covid-19-second-wave-putting-india-first-77093.

Sheriff, K.M. (2021, May 05). *Explained: What has changed in the 2nd wave of Covid-19 in India?* The Indian Express. https://www.indianexpress.com/article /explained /explained-what-has-changed-in-the-second-wave-7289002/.

Supriya, L. (2021, April 27). Triple mutation in SARS-CoV-2 seen in second wave of Covid-19 in India. *News Medical Life Sciences.* Retrieved from https://www.newsmedical.net/news/20210427/Triple-mutation-in-SARS-CoV-2-seen-in-second-wave-of-Covid-19-in-india.aspx.

Surie, M.D. (2021, March 29). India's vaccine diplomacy: Made in India, shared with the world. *Dev Policy Blog.* https://devpolicy.org/indias-vaccine-diplomacy-made-in-india-shared-with-the-world-20210329/.

The Lancet. (2021, May 25). *India's resurgence of Covid-19: urgent action needed.* https://doi.org/10.1016/50140-6736(21)01202-2.

Thomas, L. (2021, April 26). *Researchers characterise India's devastating second wave of Covid-19.* News Medical Life Sciences. https://news-medical.net/20210426/ researchers-charaterise-indiae28099s-devastating-second-wave-of-Covid-19.

Vaccine Fact Book. (2012). Phrma. https://www.phrma-jp-org/wordpress/wp-content/uploads/old/library/vaccine_factbook_e.

Vaidyanathan, G. (2021, May 20). *Corona variants are spreading in India- What scientists know so far.* Springer Nature, 593. https://www.nature.com/articles/d41586-021-01274-7&sa=U&ved=2ahUKEwj1.-sya1PbwAhXpxzgHavaBu8QFj AAegQI CB AB&usg=AOuVaw3KqCh3-mOF87bpZgKISXf-.