Newspapers Online Portals in India: Coverage of COVID-19 Vaccination Awareness

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Abstract

It is a well-known fact that the media have power to change public opinion significantly during the periods of instability. It is especially important during the pandemic. This research analyzes and compares two major daily national newspapers' news portals: The *Times of India* (English) and *Dainik Jagran* (Hindi). The aim of the study is to measure the coverage of COVID-19 vaccination awareness on the online news portals of India. This study is based on the method of content analysis. The purpose of this content analysis is to offer light on the adversarial framing maintained by the online portal of two major national dailies. It examines daily coverage of COVID-19 vaccination awareness news published during the period between 01 March 2021 and 30 April 2021. This research was carried out over a set period when the vaccination campaign for people aged 45 and up began in India, and the second wave of the COVID-19 was at its peak. Keywords like "COVID-19 vaccine", "awareness", "campaign", "India", and "vaccination" have been analyzed for frequency, content, and impact of news. The data is analyzed using the Framing theory. It was found that there is considerable difference between the coverage of COVID-19 vaccine awareness of the *Times of India* and *Dainik Jagran* online portal.

Keywords: digital media, COVID-19, vaccination, online portals, newspapers, India, content analysis.

1. Introduction

According to the Edelman Trust Barometer-2021 (Edelman, 2021: 45), Indians are loyal to the media, unlike a number of European countries as well as Japan and Russia. In India, people primarily rely on the media for getting updates and information regarding the medical issues. At the same time in most cases, recipients do not check the information obtained from media sources, with medical issues especially falling into the zone of weak verification (Shevchenko et al., 2021: 228). However, the way in which information is presented will affect their understanding and perception of vaccination problems.

The first COVID-19 positive case in India was reported in Kerala on January 30, 2020 (Mankar et al., 2021). Subsequently, the number of instances skyrocketed. Relative to the population, India's numbers are still low, but the rapid increase in sheer numbers threatens to overwhelm the healthcare infrastructure (Lal et al., 2021). Concerns over vaccination safety and efficacy, as well as rushed vaccine testing before launch and a lack of faith in government authorities, were foreseen. The COVID-19 pandemic hastened the development of COVID-19 vaccinations because of considerable publicity in the news and on social media. Recent studies have highlighted concerns about adverse effects, extremely rapid vaccine development, and

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insufficient immunization efficacy as some of the likely reasons for vaccine hesitancy among medical students (Ernste, 2014). The government can instill and maintain public faith in the vaccines' effectiveness and safety by providing honest and consistent public communication. By raising public knowledge of the vaccination campaign, Indian media played an important role in debunking myths regarding vaccine reluctance and establishing it as a valuable stakeholder.

2. Materials and methods

This study proposes to analyze the coverage of the COVID-19 vaccine awareness on the online news portals of India's two major national dailies. The online news portals *Times of India* (English language) and *Dainik Jagran* (Hindi Language) are to be analyzed for the period beginning on March 1, 2021 and ending on April 30, 2021.

These well-reputed and top circulated publications, especially their print versions, often serve as shaping the public opinion in the discourse of India. Hindi and English are the most popular languages of India. With the rise of the COVID-19 pandemic, the amount of subscriptions to online news websites has increased tremendously. The broad objective of the study is to measure the coverage of COVID-19 vaccination awareness on the online news portals of the *Times of India* and *Dainik Jagran*. In this study, researchers used the content analysis method to complete the fulfillment of the objectives (Krippendorff, 2018; Stemler, 2001; Weber, 1990). The purpose of this content analysis is to offer light on the adversarial framing maintained by the online portal of two major national dailies.

The study aims to comprehend the viewpoints of the publications and the positioning of COVID-19 vaccination awareness news inside a favorable adversarial framework maintained by the web portals of these media. The sample of the study is the COVID-19 vaccination awareness news published on the online news portals of the *Times of India* and *Dainik Jagran* newspapers from 1 March to 30 April 2021. This study is based on the secondary data entirely, which was gathered from the news portals websites. The news portals were chosen based on their print edition circulation and overall ranking among all Indian publications. The reason behind the selection of Hindi and English newspapers online portals is to know which language web portal spreads maximum awareness about the vaccination. Researchers selected the stories of the news portals through purposive sampling. Purposive sampling was conducted in order to choose the only COVID-19 vaccination awareness stories that appeared on both news portals throughout a specific period. The unit of analysis of this study is the number of stories in a whole day, the Number of the words in the story, Positioning of the story, Tone of story/Impact of the story, and keywords in the story. Based on the unit of the analysis, researchers do the analysis of the published stories on the news portal from 1 March to 30 April. The total period is 61 days. It means that researchers examined the 61 days of published COVID-19 vaccine awareness stories on both news portals and derived qualitative and quantitative statistics from the stories' analysis. Researchers used Ms-Excel and Ms-Word to create graphs and tables to portray qualitative and quantitative data effectively.

3. Discussion

The task of gatekeepers (agenda controllers) is inherent to the media. A story can be relevant or not, a story can be accepted or rejected, it can be told once or many times, such is the gatekeeper function of the media (McCombs, Shaw, 1972; Shoemaker, Reese, 1996; White, 1950). The formation of public opinion on a particular issue depends on the gatekeeper. If the story is told often, the audience understands that the problem is important. If the media ignores a story, the public ignores the issue, following the media's example. This is particularly evident in the countries that trust the media (including India).

But the situation is changing with the development of digitalization. New media have made it more difficult to shape the agenda for traditional media (Urazova et al., 2021: 18-19). Also, gatekeeping has ceased to be important for the digital generation of social networks (Volkova, 2018: 125). Now the media are fighting for the audience's attention in a competitive market and often use the tactics of following the leader, so the problem of the intermedia agenda has become urgent, gatekeepers of different media are watching each other's "gatewatching" work (Bruns, 2011; Weaver et al., 2004). In doing so, global newspaper brands are still the masters of thought and influence the agenda in the digital world (Meraz, 2009). The number of publications is a very important point, but no less important are the psychological aspects of perceiving a specific story,

integrating media priming (Domke et al., 1998; Jazutova, Volkova, 2020) and media framing in media stories (Scheufele, Tewksbury, 2007).

Media plays a significant role in telling people that COVID-19 is not an illusion, it is a reality. Be in print media, electronic media, or social media, every Media organization daily covers the story, which informs and updates the people about the new virus that has changed the lifestyle of every individual. The mainstream media, which is highly uni-polar, market-driven, and with the practice of setting its own media agenda, which is clearly away from the public agenda, serves the nation with their social responsibility at the time of this global crisis. The COVID-19 pandemic has changed the priority of media from media agenda to public agenda. Media has its own peculiar method and approach towards the reporting of issues related to COVID-19. Media helps the government in achieving its initiatives by spreading mass awareness by doing exceptional service against COVID-19.

The world is rapidly changing after the pandemic COVID-19. The number of internet users increased significantly. According to a study released in 2021 by Digital-2021 India, there are 624 million internet users in India, and the internet penetration stood at 45.0 % in India in January 2021. The number of internet users in India has increased by 47 million between 2020 and 2021.

The demand for information grows during times of uncertainty and catastrophe. As a result, the importance of technology and media grows. COVID-19 related news has been prominent issues in India's local and national dailies for the past 15 months. To meet the needs of the public, most newspapers have online news portal services. Media plays a significant role in awareness and educating people towards the COVID-19 vaccine drive. Research has highlighted the importance of legacy and new media in times of crisis (David, Sommerlad, 2021), such as natural disasters (Sood et al., 1987), wars (Powell et al., 2015), and terrorist attacks (Entman, 2003)

The COVID-19 pandemic is a health crisis, but it is also an information crisis — one that has resulted in an oversupply of knowledge and misinformation as well as manipulation (Fedorov, Mikhaleva, 2020; Levitskaya, Fedorov, 2020), resulting in a global Infodemic. Actions, emotions, and attitudes are all influenced by social constructions. Media and information, on the other hand, have a reinforcing or moderating effect on the consequences of these many factors. Because of the emergence of digital technology and new digital places, new routes of information flow have emerged (David, Sommerlad, 2021). The Indian consumer is rapidly consuming material on digital platforms, in line with worldwide trends. This pattern can be seen in all types of information, such as news (written), music (audio), and video. The major drivers of this trend are increasing internet penetration and mobile device proliferation, as well as the convenience of consuming information at any time and from any location.
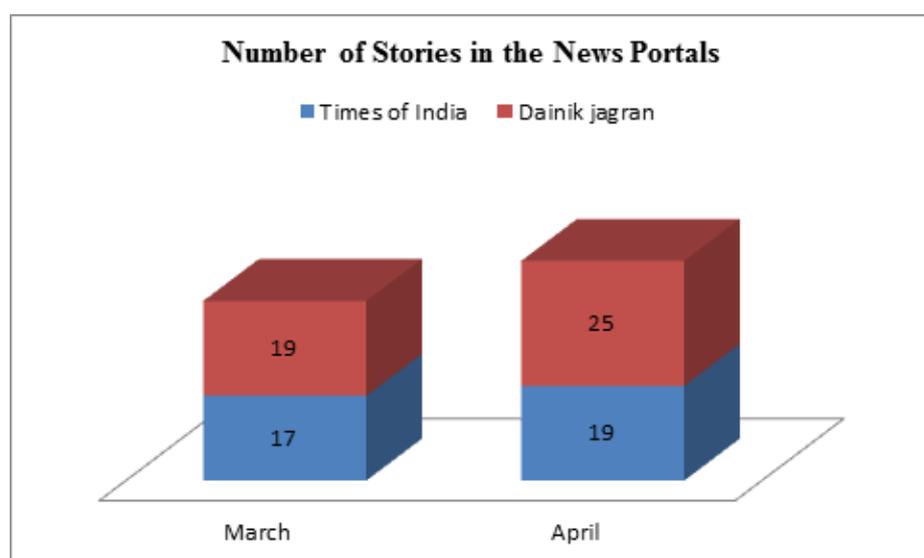
4. Results

Fig. 1. How many news stories are published on the News Portals in the months of March and April (2021)

The first bar of the graph reveals that in the month of March, the Times of India news portal published 17 stories and the Dainik Jagran news portal produced 19 stories about COVID-19 vaccine awareness. Compared to Times of India News Portals, *Dainik Jagran* published more stories. The second bar of the graph displays the stories published in April. The Times of India News Portal produced 19 items and the *Dainik Jagran* News Portal published 25 stories linked to COVID-19 vaccine awareness in April. According to the data, *Dainik Jagran* published more stories than *Hindustan Times*.
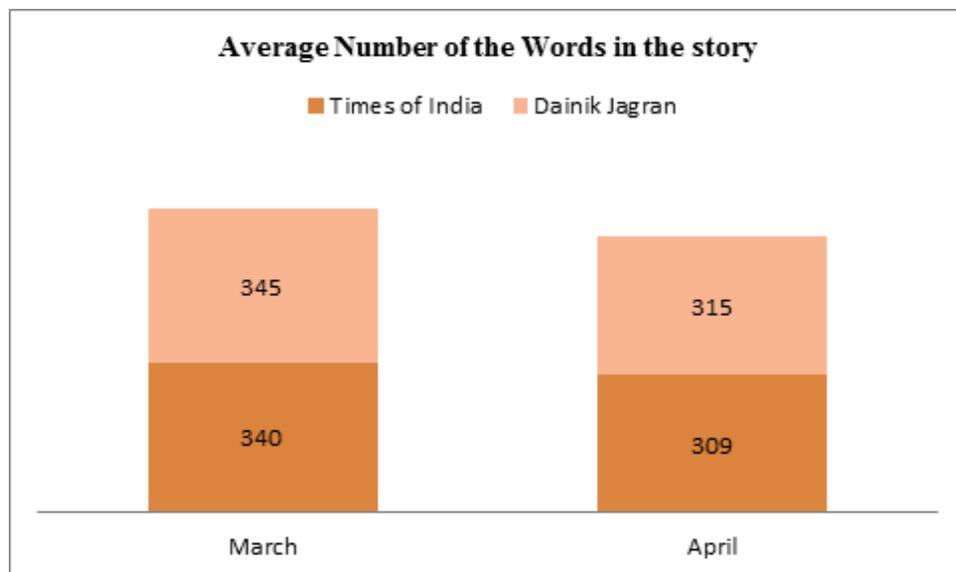

Average Number of the Words in the story

Fig. 2. The average number of the word in the Published stories in the month of March and April (2021)

In March, the *Times of India* news portal published stories with an average of 340 words per story, while the Dainik Jagran news portal published stories with an average of 345 words per story. In comparison to English news portals, Hindi news portals employed more words. In the month of April, the Times of India published an average of 309 words per story, while the *Dainik Jagran* news portal produced an average of 315 words each story. It means that the *Dainik Jagran* news portals used more words in their stories, whilst the *Times of India* used fewer words.

Table 1. The *Dainik Jagran* News portal story content that was published in March 2021

S. No.	Date	No. of Stories	Words	Keywords
1.	1 March	1	465	Vaccination, Registration, Corona Phase 3, awareness
2.	4 March	2	279+354	Vaccination, Health Worker, Covidshield, Corona warriors, awareness
3.	6 March	2	448+449	Vaccination, Registration, age 45& 59 Vaccination, Health worker, awareness
4.	12 March	2	325+432	Vaccination, awareness, covid-19, Covishield
5.	13 March	1	446	Covid Vaccination, Age 45 & 59, health worker, Vaccination camp, Vaccination Campaign
6.	16 March	2	485+464	Covid Vaccination, Covid test, Corona, awareness
7.	17 March	1	338	Covid vaccination, Health worker, Age 45 & 59, Vaccination camp, awareness
8.	18 March	1	206	Vaccine, awareness, Covid-19,
9.	21 March	1	153	Covid-19, Vaccination, Village, Corona, awareness, Camp

10.	26 March	1	359	Covid19 Vaccination, Corona, Vaccination Data, Covid test, Covid camp, Villages, awareness
11.	27 March	1	409	Covid Vaccination, vaccination second Dose, Vaccination age 45+, Free vaccination, awareness
12.	28 March	1	135	Covid Vaccination, Vaccination Data, Corona Test, awareness
13.	31 March	3	357+222+352	Covid vaccination, Age 45, awareness, campaign

In the month of March *Dainik Jagran* news portal published 19 stories. The researcher selected those stories with these keywords. As in Hindi portal, it is quite difficult to find the news story with exact keywords "COVID-19 vaccine, awareness, India, and campaign". With these specific keywords, researcher found only seven stories. Hence, keywords need to be added to find more stories related to COVID-19 vaccine awareness in Hindi language portal. The data revealed that *Dainik Jagran* news portal published maximum three stories in a whole day related to Covid vaccination awareness and maximum number of the word in published story contain 485 words in the month of March. Through the Content analysis of these stories researchers find out some major keywords like vaccination, Covid, vaccination Data, Corona test, Covid camp, vaccination first and second phase, free vaccination, Age 45 and 59. These are the keywords which contain the maximum number of stories published in the *Dainik Jagran* news Portal in the month of March. This table data shows that maximum published stories in the *Dainik Jagran* news Portal spread positive stories related to COVID-19 vaccination and aware the society.

Table 2. The Times of *India News* portal story content that was published in March 2021

S. No	Date	No. of Stories	Words	Keywords
1.	4 March	1	400	COVID-19 vaccine, awareness, India, campaign
2.	11 March	1	248	COVID-19 vaccine, awareness, India, campaign
3.	12 March	1	333	COVID-19 vaccine, awareness, India, campaign
4.	13 March	1	561	COVID-19 vaccine, awareness, India, campaign
5.	18 March	1	292	COVID-19 vaccine, awareness, India, campaign
6.	21 March	2	660+602	Covid vaccine, Covishield, India, awareness
7.	23 March	2	108+356	COVID-19 vaccine, awareness, India
8.	24 March	1	380	COVID-19 vaccine, awareness, India, campaign
9.	25 March	2	141+107	COVID-19 vaccine, awareness, India
10.	26 March	1	307	COVID-19 vaccine, awareness, India, campaign
11.	28 March	1	117	COVID-19 vaccine, awareness, India

| 12. | 30 March | 1 | 276 | COVID-19 vaccine, awareness, India, campaign |
| 13. | 31 March | 2 | 459+740 | COVID-19 vaccine, awareness, India |

In the month of March *Times of India* news portal published 17 stories. With the specific keywords "COVID-19 vaccine, awareness, India, and campaign", researcher easily found the awareness stories. Times of India news portal published maximum two stories in a whole day related to Covid vaccination awareness and maximum number of the word in published story contain 740 words in the month of March. This table data shows that maximum published stories in the Times of India news Portal spread positive stories related to Covid and aware the society regarding COVID-19 vaccination. Comparison of the *Times of India* and *Dainik Jagran* News Portal March content table shows at some point *Times of India* did well and at some points *Dainik Jagran* did well. If we compare maximum numbers of word stories in the month of March, Times of India published 740-word stories while *Dainik Jagran* published 485-word stories. It means *Times of India* published maximum word stories in comparison to *Dainik Jagran*. *Dainik Jagran* published daily3 stories while *Times of India* Published daily two stories related to COVID-19 vaccination awareness. Of Course, *Times of India* published the maximum number of word stories but *Dainik Jagran* Published maximum stories in a day. *Dainik Jagran* news portal stories used more keywords related to Covid vaccination awareness while *Times of India* news portal used less keyword in their published stories. The data revealed that *Dainik Jagran* news portal did well during the pandemic time.

Table 3. The *Dainik Jagran* News portal story content that was published in the month of April 2021

S. No	Date	No. of Stories	Words	Keywords
1.	1 April	1	282	Vaccination Centre, Age 45, awareness, campaign, covid-19
2.	2 April	1	338	Vaccination, Age 45, Vaccination center, Village Level, awareness
3.	3 April	1	335	Vaccination, Campaign, First Dose, Age 45, awareness
4.	4 April	1	115	Vaccination camp, First Dose, covid-19, awareness
5.	5 April	1	140	Vaccination, Second Wave, awareness, Covid test
6.	6 April	4	319+263+230+420	Corona vaccination, Covid19, Second Dose, Age 45, awareness
7.	7 April	1	470	Covid vaccination, Covidshield, Covid-19, Age 45 & 59, awareness
8.	9 April	1	338	Covid vaccination, Covidshield, campaign, awareness, Second Dose, covid-19
9.	10 April	2	306+275	Covid vaccination, Covishield, Age 45, awareness

10.	12 April	2	297+281	Corona, Covid vaccination, awareness, Second dose
11.	17 April	2	423+291	Corona, vaccination, vaccination camp, Age 45, awareness, Covid test
12.	20 April	4	244+544+245+371	Coronavirus, COVID-19 , India, awareness
13.	26 April	1	144	Covid vaccine, First Dose, Age 18+, awareness
14.	27 April	1	336	Covid vaccination, vaccination Centre, Corona, campaign, awareness
15.	28 April	1	368	Covid vaccination, Age 18+, vaccination Registration, Corona, awareness
16.	29 April	1	400	Covid vaccine, India, Vaccination, awareness

In the month of April *Dainik Jagran* news portal published a total of 25 stories. Dainik Jagran news portal published maximum four stories in a whole day related to COVID-19 vaccination awareness and maximum number of the word in published story contain 544 words in the month of April. Through the Content analysis of these stories' researchers find out that apart from specific keywords, COVID-19 camp, first phase and second phase, free vaccination, vaccination registration, and Age 45 are the major keywords while finding the targeted stories of awareness. These keywords appeared in the most stories published in the *Dainik Jagran* news portal in April. The data in this table demonstrates that the most stories published in the Dainik Jagran news portal delivered positive news about the COVID-19 vaccination.

Table 4. The *Times of India* News portal story content that was published in April 2021

No	Date	No. of Stories	Words	Keywords
1	1 April	2	142+489	COVID-19 vaccine, awareness, India
2.	3 April	1	102	COVID-19 vaccine, awareness, India, campaign
3.	4 April	1	207	COVID-19 vaccine, awareness, India, campaign
4.	5 April	2	456+299	COVID-19 vaccine, awareness, India, campaign
5.	8 April	1	321	COVID-19 vaccine, awareness, India, campaign
6.	9 April	2	374+144	COVID-19 vaccine, awareness, India, campaign
7.	10 April	1	410	COVID-19 vaccine, awareness, India, campaign
8.	11 April	2	256+545	COVID-19 vaccine, awareness, India, campaign
9.	12 April	1	205	COVID-19 vaccine, awareness, India, campaign
10.	15 April	1	138	COVID-19 vaccine, awareness, India, campaign
11.	16 April	1	224	COVID-19 vaccine, awareness, India, campaign

12.	17 April	1	311	COVID-19 vaccine, awareness, India, campaign
13.	25 April	1	120	COVID-19 vaccine, awareness, India, campaign
14.	26 April	1	423	COVID-19 vaccine, awareness, India, campaign
15.	30 April	1	478	COVID-19 vaccine, awareness, India, campaign

In the month of April *Times of India* news portal published 19 stories. Times of India news portal published maximum two stories in a whole day related to Covid vaccination awareness and maximum number of the word in published story contain 545 words in the month of March. Through these specific key words' researchers find the awareness stories. This table data shows that maximum published stories in the *Times of India* news Portal spread positive stories related to COVID-19 and spreading awareness for the society regarding COVID-19 vaccination. If we do the comparison of the *Times of India* and *Dainik Jagran* News Portal April content table shows at some point Times of India did well and at some points *Dainik Jagran* did well. If we compare maximum numbers of word stories in the month of March, Times of India published 545-word stories while *Dainik Jagran* published 544-word stories. It means *Times of India* published maximum word stories in comparison to *Dainik Jagran*. *Dainik Jagran* published daily four stories while *Times of India* Published daily two stories related to COVID-19 vaccination awareness. Of Course, Times of India published the maximum number of word stories but *Dainik Jagran* Published maximum stories in a whole day. *Dainik Jagran* news portal stories used more keywords related to Covid vaccination awareness while *Times of India* news portal used less keyword in their published stories. In comparison with the *Times of India, Dainik Jagran* news portal did well during the pandemic time. If we compared both month analysis through the content table, most of the people want to read Hindi stories on the news portals may be this reason *Dainik Jagran* news portal do great work during the pandemic in the month of March and April While *Times of India* News portals also published good and positive stories during the pandemic. But after analysis of these content tables *Dainik Jagran* news portal wins against the *Times of India* portal.
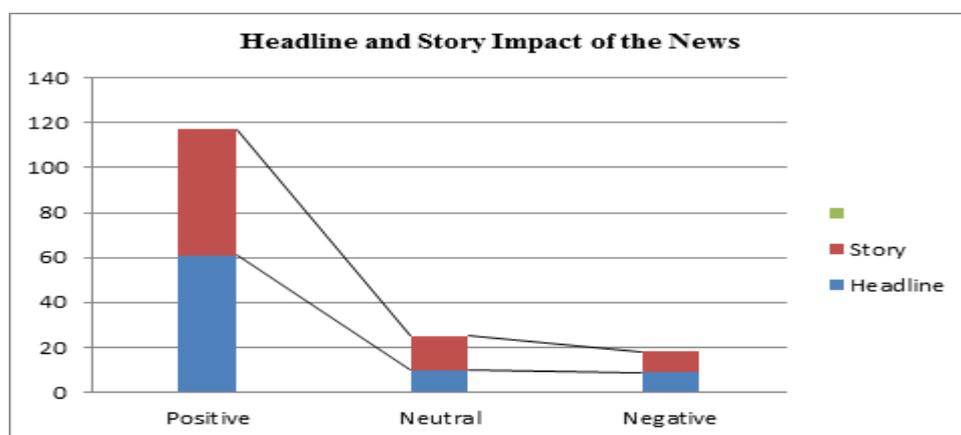

Fig. 3. The impact of the story published in *Times of India* and *Dainik Jagran* news portals in the month of March and April (2021)

Out of 80 stories, 56 stories content tone was positive. Here positive refers to those stories, which spread awareness regarding COVID-19 vaccine. While 15 stories content impact was found negative. Here negative means those stories, which are related with COVID-19 vaccination but instead of reporting vaccination awareness these are mainly linked with side effect, number of deaths after vaccination, and promote vaccine hesitation. The content of 9 stories found neutral. Neutral refer to those stories, which create neither positive impact on the reader nor negative impact on the mass. This data proved that most of the published stories in the *Times of India* and

Dainik Jagran news portal create Positive impact towards COVID-19 vaccination. But *Dainik Jagran* promotes and create more positive than the times of India.
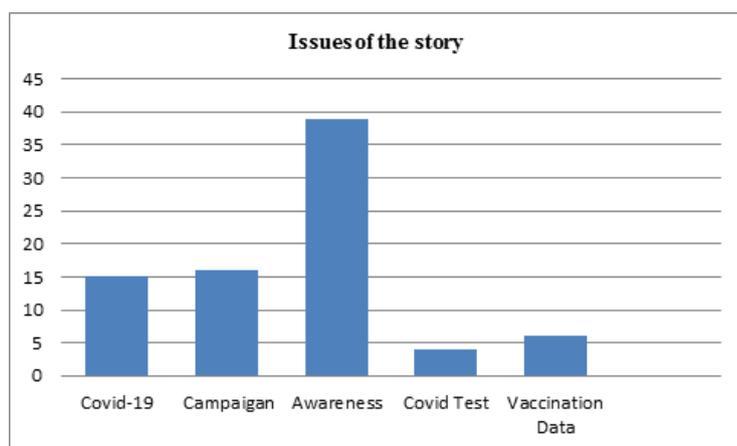

Fig. 4. The issues of the published story in the *Times of India* and *Dainik Jagran* web portals in the month of March and April (2021)

Graph bars show the different stories issue out of 80 stories 39 stories content issue was vaccination awareness while 16 stories content issue was vaccination campaign, 15 stories content Covid-19, 4 stories content based on Covid test, and six stories content based on vaccination data. Overall, maximum story content was based on vaccination awareness. Both news Portal published stories which spreading awareness through the positive content of vaccination awareness.
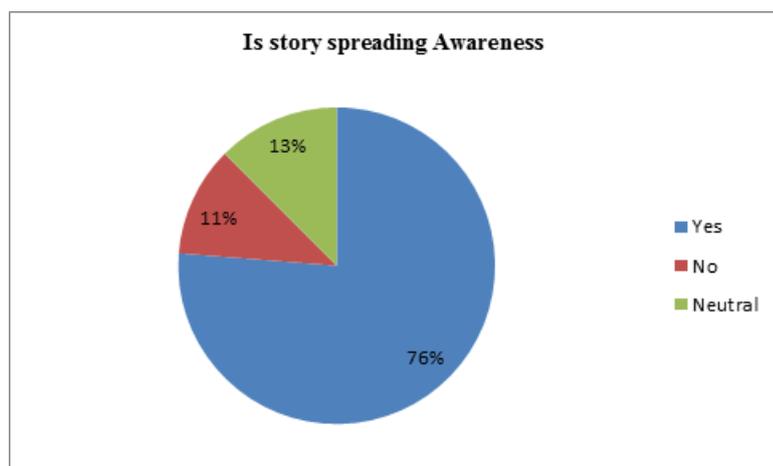

Fig. 5. That the story is spreading awareness among the society

This graph demonstrates that of 80 stories published in both news portals, 76 percent transmitted positive news about the COVID-19 vaccination, while 11 percent spread negative content, implying that they spread content that promotes vaccine reluctance among people. Whereas 13 % of stories were deemed neutral as they solely update the reader about a vaccination program.

Times of India online portal published 36 stories related to COVID-19 vaccination awareness in the both months while *Dainik Jagran* news portal published 44 stories related to COVID-19 vaccination awareness in both months.

The content analysis of online portals of two major national dailies applied to the sample of total 80 stories indicated that newspapers differ in the type of stories when they published about COVID-19 vaccination awareness. Awareness here means the positive impact of the news on an individual, which provokes him to act and complete the process. "Awareness is the ability to make forced-choice decisions above a chance level of performance" (Merikle, 1984: 449). Whereas Henley defined it as subjective and simply equates awareness with self-reports indicating that an observer "consciously sees a stimulus" (Henley, 1984: 122). Coverage was more in *Dainik Jagran*

online portal, which indicates that it aware of many masses to get vaccinated with its positive number of stories. The online portal of the times of India positioned the COVID-19 stories on the home page. The home page of the portal has a separate segment or title called "COVID-19 vaccine" under which all the updates, information, and awareness regarding COVID-19 vaccines are uploaded. For the study, the researcher selects only the vaccination awareness news for 2 months when the second wave of the corona is at its peak and the government starts a vaccination drive for 45+ in India. *Dainik Jagran* home page also has the title "Corona", under which all the updates, information, awareness regarding Covid-19, and vaccination are uploaded. The only difference found in both the web portal is that while searching for the story in the English web portal, researchers search with the same keywords "COVID-19 vaccine, awareness, India, and campaign". Whereas finding stories regarding awareness in the Hindi web portal is quite a difficult and time-consuming task. Every time researcher must find the story with new keywords like "First Dose, Age 18+, vaccination Centre, age 45+, village, age 45 & 59, second dose", apart from the common keywords "COVID-19 vaccine, awareness, India, and campaign", which are selected for the finding the story. Though each online portal has different section of COVID-19 related news which is very helpful and beneficial for the online users.

Summarizing the results, we highlight following points.

1. *Dainik Jagran* online portals used more average number of words in their published stories in comparison to the *Times of India* portal.

2. On 4, 6, 12, and 16 March, 2021, *Dainik Jagran* published two stories on vaccination awareness. Whereas on 31 march it published three stories in a single day. While in April 2021, on 6 April and 20 April it publishes four stories in a single day and two stories per day on 10, 12, and 17th April.

3. *Times of India* published maximum two story per day on 21, 23, 25, and 31 march while in April also on 1,5 ,9, and 11 it published two stories in a day.

4. On 1, 13, 17, 18, 21, 26, 27 and 28 march there is single story in a day found on *Dainik Jagran* online portal in March. While in April single story per day published on 1, 2,3,4,5,7,9,26,27, 28, and 29 April.

5. *Times of India* web portal published single story on 4,11,12,13,18,24,26,28, and 30 in March 2021 whereas in April it published single story per day on 3,4,8,10,12,15,16, 17,25,26, and 30th for spreading COVID-19 Vaccination awareness among public.

6. *Dainik Jagran* the Hindi language portal used more keywords to find awareness stories regarding COVID-19 vaccination whereas English language portal Times of India used minimum keywords to find the story.

7. Both online portals have different section for COVID-19 on the home page for spreading awareness on COVID-19 Vaccination.

8. Out of total Published stories in *Times of India* and *Dainik Jagran* online portal, 76 % stories spread positive awareness among the society.

9. Coverage was more in *Dainik Jagran* online portal which indicates that it aware of many masses to get vaccinated with its positive number of stories.

5. Conclusion

Following a thorough examination of the data, it can be determined that both portals played a key influence in the present pandemic crisis by raising knowledge about the COVID-19 vaccine. People look to the media for information and news updates during times of crisis to acquire a clear picture of the situation. India's internet penetration rate has risen dramatically because of the continuing pandemic. As a result, online platforms have become a hub for timely and accurate information on COVID-19 and the COVID-19 vaccination. Newspaper web portals are now acting as stakeholders, fulfilling their social obligation to society in a positive way. It was found that there is considerable difference in the coverage of COVID-19 vaccine awareness of the Times of India and Dainik Jagran online portal. While the analysis is based on the framing of news, there is no significant difference in maintaining the adversarial framework. Both the portals are maintaining passive and constructive attitude towards the society by bringing the COVID-19 vaccine awareness.

Future studies in this area may yield more information about how media frame COVID-19 vaccine awareness news, as the pandemic is here to stay. It should be interesting to learn that in the future, online portals will play an important part in spreading vaccine awareness, or it will lapse with the passage of time.

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