

MEDIA LITERACY AMID COVID-19: ANALYSIS OF FACEBOOK AND TWITTER POSTS DURING LOCKDOWN PERIODS IN INDIA

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Abstract

Recent cases of misinformation and fake claims spread on social media during the crisis of COVID-19 resulted in use of term 'Infodemics' while addressing the kind of role social media users across the world played in health communication. Thus, it becomes pertinent to introspect the pattern in which information is accessed, evaluated and shared on these platforms, especially during a public health crisis. The current study tried to analyse the level of media literacy of 100 Facebook users and 102 Twitter users in India by evaluating and comparing their posts during two lockdown periods with reference to credibility of information and sources, myths about COVID-19 and the manner of presenting their point. It was found that while both of these social media platforms provide a scope for diverse opinion and information, Facebook, more than Twitter contains the risk of propagating conflict-oriented manipulated information from unverified sources that is sufficient to create hinderance in the communication policy of health makers.

Keywords: *Media Literacy, COVID-19, Infodemics, Social Media, Information*

Introduction

In the last month of 2019 and early few months (January-June) of 2020, information and news reports about the coronavirus disease (COVID-19) were rapidly published and shared on various media platforms. The World Health Organisation describes COVID-19 as an infectious disease caused by the SARS-CoV-2 virus. While there were conflicting statements about the origin and transmission of virus, its effects and treatment was a new area of research for this leading organization as well. After few initial months of spread of virus around the world, UN Secreatry General António Guterres used the word 'infodemic' while addressing the manner in which news and information about COVID-19 disease got circulated, shared and consumed on social media platforms across the countries. Merriam Webster dictionary describes this term in the category of 'words we are watching' as "*a blend of "information" and "epidemic" that typically refers to a rapid and far-reaching spread of both accurate and inaccurate information about something, such as a disease. As facts, rumors, and fears mix and disperse, it becomes difficult to learn essential information about an issue. Infodemic was coined in 2003, and has seen renewed usage in the time of COVID-19.*"

The risk of misinformation surrounding the pandemic has motivated the World Health Organization (WHO) to launch a “Myth buster” page WHO (2020 (accessed March 20, 2020), however, these counter measures face challenges with the fast-paced evolution and spread of news on social media. As a result, it is extremely important to identify and potentially curb the spread of misinformation as close as possible to its point of origin. The ongoing Corona virus Disease (COVID-19) pandemic highlights the interconnectedness of our present-day globalized world. With social distancing policies in place, virtual communication has become an important source of information as well as misinformation. In their study titled ‘The Impact of Social Media on Panic During the COVID-19 Pandemic in Iraqi Kurdistan: online Questionnaire Study’, Araz Ramazan Ahmad and Hersh Rasool Murad (2020) tried to investigate how social media affects self-reporting of mental health and panic during COVID-19 in Kurdistan area of Iraq. An online questionnaire was administered to the sampled 516 social media users. The self-reported social media issues were significantly positively correlated to the panic during COVID-19. It was found that Facebook was the most used social media network for spreading panic and a majority of young respondents between 18-35 years felt anxiety. Thus, it was concluded that social media has a negative effect on mental health of social media users. Cynthia Chew and Gunther Eyesenbach (2009) conducted a study about Twitter as a tool of communication during pandemics. The study titled ‘Pandemics in the Age of Twitter: Content Analysis of Tweets during the 2009 H1N1 Outbreak’, the authors did a content analysis of Twitter posts related to H1N1 between 1st May-31st December (8 months) 2009. More than 2 million tweets were considered with keywords of ‘H1N1’ or ‘Swine Flu’ and a random sample of 5,395 tweets was selected for study.

In her article published on The London School of Economics and Political Science online research platform, Sonia Livingstone (2004) defines media literacy as *“the ability to access, analyse, evaluate and create messages across a variety of contexts”*. She gives a four-component model that applies to every kind of medium, from print to online. The components include Access, Analysis, Evaluation and Content Creation. Media Literacy Leadership Institute defines media literacy as *‘the ability to access, analyze, evaluate and create media in a variety of forms.’* It is seen as 21st century approach to education and gives a framework to access, analyse, evaluate and create messages in a variety of forms. This phenomenon includes a variety of elements:

a. Digital Literacy: It requires the ability to make informed decisions about what we do and encounter online, to recognize how networked technology affects our behaviour and perceptions, create and communicate effectively with digital media tools.

b. Information Literacy: It comes handy for survival in the Information Age. It related to knowing how to find, evaluate, and use information effectively to solve a particular problem or make a decision.

c. News Literacy: It helps to differentiate verified information from spin, opinion and propaganda, and produce news accurately, fairly and responsibly.

d. Visual Literacy: Images are powerful and a primary source of our information. With new technologies, almost anyone can create and share visual media. Visual literacy is the ability to find, interpret, evaluate, use, and create images and visual media effectively, like photographs, videos, illustrations, drawings, maps, diagrams, and advertisements.

e. Digital Citizenship: Powerful new technologies connect people to the world in new ways that can be both positive and negative. It refers to the norms of safe and responsible use of technology.

Social media communication

The research draws upon the theory of social media communication. Discussing the element of sociality of medium, Christian Fuchs sees it as a model of human social activity. "In order to co-operate, you need to communicate and in order to communicate, you need to cognize....it is knowledge processing of a single individual." (pp.44) He further discusses the social nature of knowledge processing in the sense that the existence and social relationships of humans in society shape human knowledge. Thus, the information technology networks provide information to human beings which "enters into human realms of knowledge as social facts that shape thinking." (Horfkirchner,2013). This leads to the model of social media communication that discusses characteristics of social media in modern times. An example of Facebook shows that creation of a multimedia content like video by an individual (cognition) is shared with other users who can comment (communication) and allows them to make changes to the content which leads to emergence of a new content with multiple authorship (co-operation). He further mentions 'integrated roles' as one of the important features of social media nowadays. Social media sites like Facebook and Twitter are based on creating personal profiles which can be seen as an amalgam of different roles that a human being plays in the society- of an employee, a daughter, a community member, an activist, a friend, a citizen, politician etc. Thus, these different social roles and activities tend to converge on social media. This, in his words, means that "*there are myriad possible purposes that any single platform can serve.*" (pp.51)

Current study

The current research attempted to get an idea of the level of media literacy of users of two social media networks- Facebook and Twitter with reference to their behaviour of accessing information related to COVID-19 during the period of two lockdowns in India. It takes the posts of social media by different users as a reflection of their skills of accessing, evaluating, using and sharing different forms of content. Therefore, an analysis of the content of various posts was undertaken with reference to the concept of information literacy, news literacy and visual literacy. Such kind of analysis provides various insights about the patterns and direction in which social media users act in the times of a major health crisis and its possible impact on effective health communication in a developing country like India. It may also give a picture of the nature of Facebook and Twitter as a tool of communication.

1.6 Objectives of the study

The researcher tries to conduct the study with the following objectives:

- a. To understand the direction of news literacy on Twitter and Facebook.
- b. To analyse the level of credibility of information shared on Facebook and Twitter including multimedia content.
- c. To compare the media literacy level of Facebook users which has been accused of propagating biased information than those on Twitter

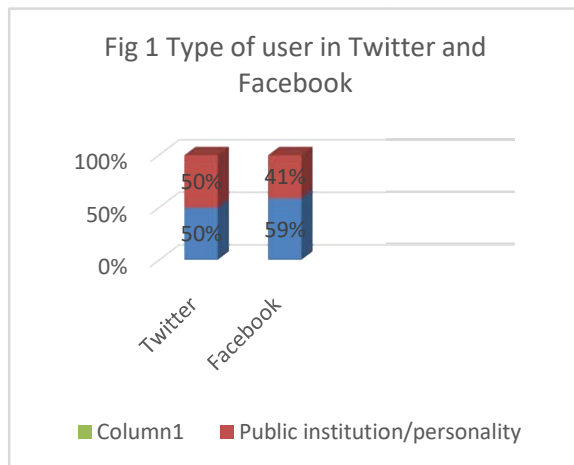
Methodology

In accordance with the objectives set for the study, pragmatic research approach was adopted wherein both stages of data collection as well as data analysis was carried out in a quantitative as well as qualitative manner. Content analysis method was chosen to analyse the posts of social media users through the research tool of a coding sheet. The parameters for analysis were credibility of source and information, presence of myth(s) in the content as well as verification of content on the part of user. Since the study is in reference to COVID-19, the time period of two lockdowns in India – 24th March 2020 to 1st May 2020 and April 2021 to June 2021 because it was the peak time of two waves of COVID-19. The variables for analysis include the types of user, attribution and type of source of information, presence of any incorrect fact and myth, intent of the post, type of multi media content and its attribution. Facebook and Twitter posts were identified through search by using keywords followed by selection of 100 Facebook and 102 Twitter posts in the sample through simple random sampling method.

Data Analysis

The analysis of collected data reflected the following trends:

Type of user

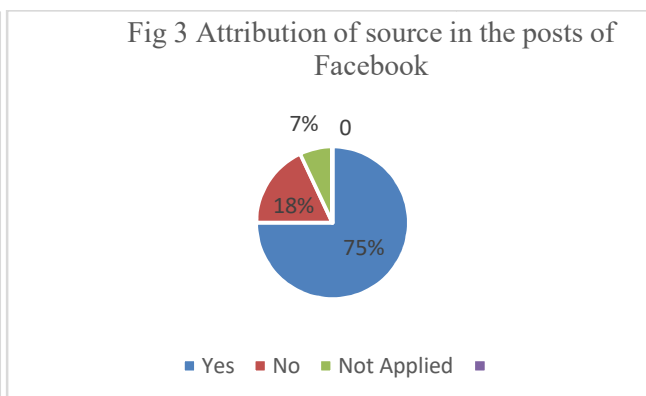
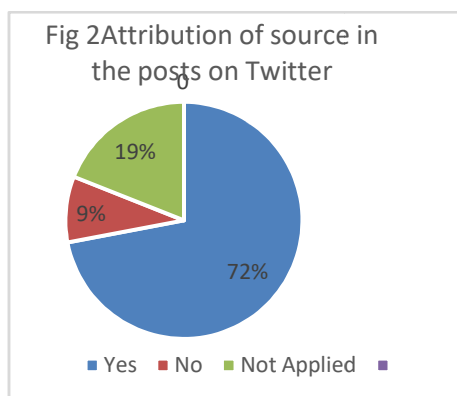


It can be seen in figure1 that out of 102 sample posts taken in Twitter, 50% were common users, i.e. common people who do not belong to any public institution or hold any status of being a public personality like leaders of political party or influence group or celebrity. The remaining 50% Tweets in the sample belonged to public institutions. This distribution is almost similar in the case of Facebook as seen in the chart. While 59% of total 100 sample posts belonged to common

users, 41% were the ones written or shared by users of public institutions or personalities.

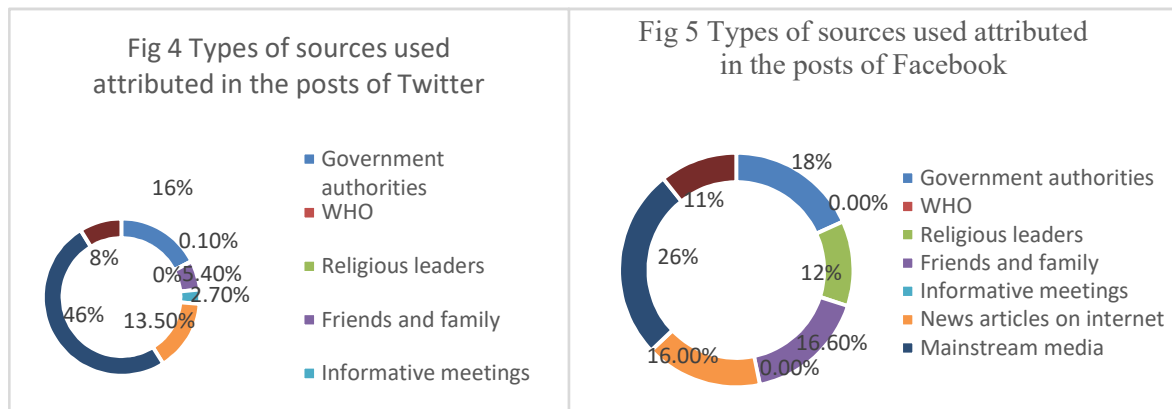
Attribution to sources

It was found that 72% of Twitter users mentioned the source of the information in their textual post. A similar number (75%) of Facebook users were found attributing their posts to source of information. There were 19% and 7% posts of Twitter and



Facebook respectively which were about some personal experience or response over a general topic and did not require mentioning any source. As visible in Figure 2 and Figure 3, number of users not attributing their post is twice in Facebook (18%) than Twitter (9%).

Types of sources of posts Figure 4 displayed the types of sources that were mentioned by the users while writing the textual part of the posts on Twitter. It shows that 46% of the posts mentioned the mainstream media organizations as source of their information. While religious leaders did find a mention as source in 0.10% posts, not a single post quoted the World Health Organization of United Nations- the leading body for generating, publishing and

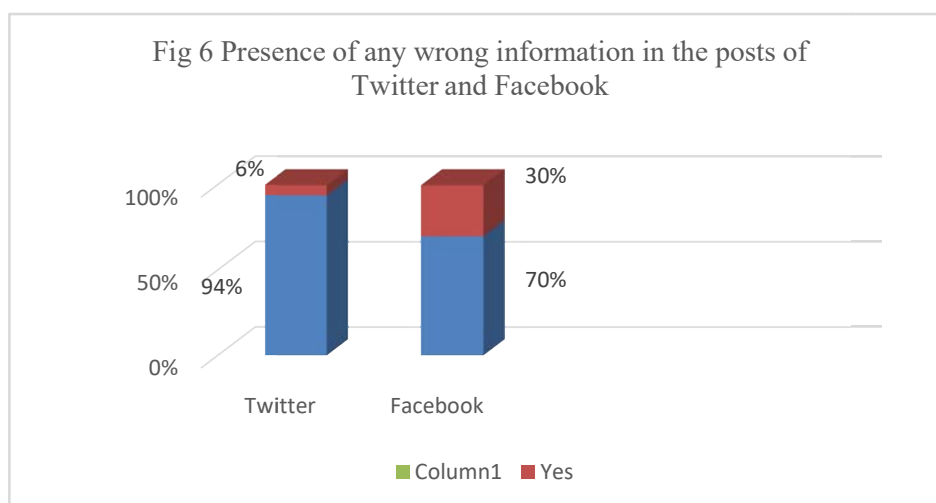


verifying different aspects of infection caused by Corona virus. The next major source of information for the users were government authorities (24.30%). It was followed by 13.5% sources from online media platforms. These include those media organizations as well having their presence on online medium only. 5.40% sources of information were from the family and friends of users followed by 2.70% posts having their source of information from informative meetings. The category of ‘other’ sources includes self-shot videos and photos by the users. These comprised of 8% of all the sources.

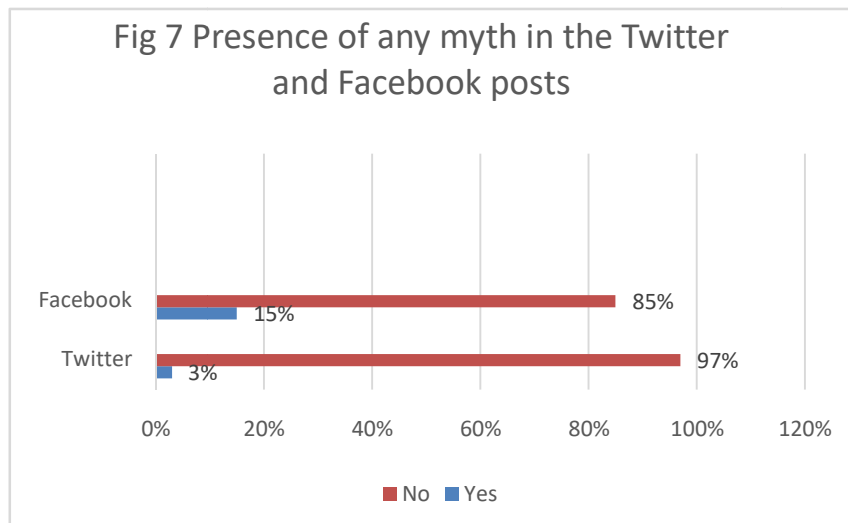
The distribution of data in Figure 5 reveals that 26% of the sample posts on Facebook have mainstream media organizations as their source of information. It is followed by informative meetings (18%) and news articles accessed on internet (16%). A considerable percentage (16.60%) of Facebook users got their information of posts from their circle of family and friends. It is three times more than the number in Twitter (5.40%). Further, an inclination of the Facebook users towards religious leaders (12%) as their source of information is visible from the figure.

Presence of any wrong information in the posts

Figure 6 reflects the data about presence of wrong information in the sample posts on Twitter as well as Facebook. While only 6% posts on Twitter contain incorrect information, the data for Facebook is five times more on this aspect. That is, 30% (almost one-third) of the posts on Facebook has an element of wrong information. Figure 5.12 indicates that out of 102 Twitter posts, 3% had some misinformation in them while this data is 15% in the case of Facebook. Thus, it contains more scope of spreading half-truth, wrong and fake information which later become fake news.



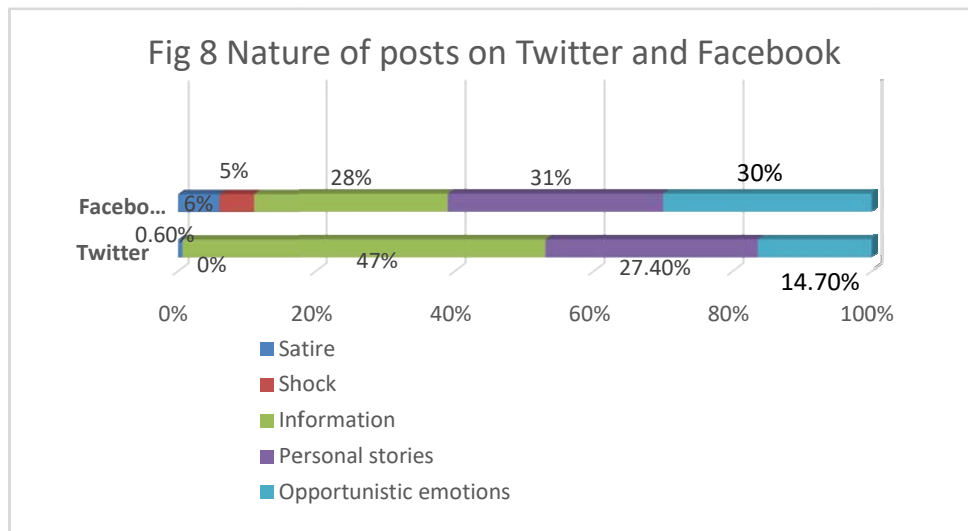
Presence of myths in the posts To check the facts of social media posts on both the platforms, the researchers studied the presence of any false belief or notion about COVID-19 as posted by the users in the light of guidelines issued by health agencies like World Health Organization and government health departments. The analysis revealed presence of such information in the post which is not real and got generated by the perceptions or application of half knowledge about COVID – its symptoms, treatment, conducive conditions, vaccination along with government and public attitude towards pandemic crisis .



Such statements fall under the category of myths. As evident from figure 7, 3% out of 102 Tweets contained myths about aspects of pandemic while it exists five times more in the posts being written and shared on Facebook (15%). Further, it was found that not more than one such myth was present in a post. An analysis of such posts that were found against the facts present in news stories about Supreme Court's decisions and guidelines issued by health organizations like AIIMS(newspaper ads) and Sacred Heart Foundation (official YouTube

videos) revealed the mythsthat Migration results in spread of COVID, Staying alone will prevent COVID, Herbal water cures COVID, Homeopathy restores oxygen level, Animals don't cause covid, Tablighi congregation was called even after announcement of lockdown, Covid is over, so no need of masks now and many others.

Nature of posts



The bar graph as shown in figure 8 displays the information about the nature of posts on Twitter and Facebook with reference to their way of presentation. It can be seen that Twitter posts (47%) are more information-oriented than Facebook (28%). While personal stories of users can be found in almost same proportion on both the platforms (31% and 27.4% respectively), Facebook posts contain twice as many opportunistic emotions as Twitter. This is visible in light blue colour with Facebook containing 30% posts wherein the deliberate purpose behind posting or sharing information is to persuade or instigate or get appreciation or promotion of one's own benefit a compared to 14.7% in Twitter. While Facebook (5%) has a greater number of posts with emotions of being shocked, no single post in Twitter deals with it. Satire exists in 6% posts on Facebook as opposed to 0.60% in Twitter.

Use of multimedia content

The multimedia content shared by users on Facebook and Twitter was also analysed to analyse their visual literacy. As evident from the figure 9, 80.3% Twitter posts uploaded multimedia content along with the post and 19.7% posts contained only textual content. The multimedia was further categorized into audio, video, still photograph and graphic presentation.

Fig 9 Presence of multimedia content in the posts on Twitter

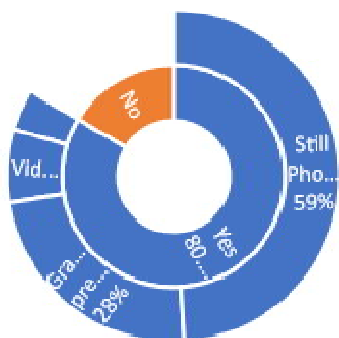
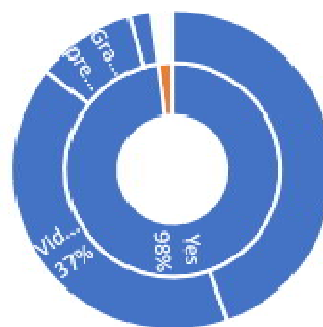


Fig 10 Presence of multimedia content in the posts on Facebook



Out of this 80.3%, more than half (59%) posts contained still photograph followed by 28% posts with graphic presentation. While 9% posts shared video content, only 5% posts had audio content in them. Thus 87% of the posts on Twitter had either a still image of a graphic presentation. Figure 10 reveals that out of all the posts on Facebook, 98% have one or the other multimedia content. This includes the posted as well as shared content. The pie chart shows that 40% had had still photograph as multimedia content. It is followed by 37% video content which is more than four times that on Twitter. While the audio content is 2%, a considerable proportion of the posts contain video content (37%). That is, more than one third posts have video content. 19% Facebook posts contain graphic presentation which includes the use of line drawings, cartoons, sketch, illustrations, posters, pamphlet, slide show, presentation etc. made either by hand or by software.

Sources of multimedia content

Fig 11 Attribution to source of multimedia content in Facebook and Twitter

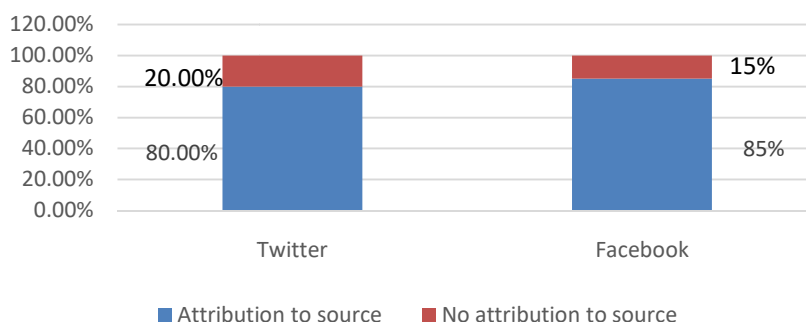
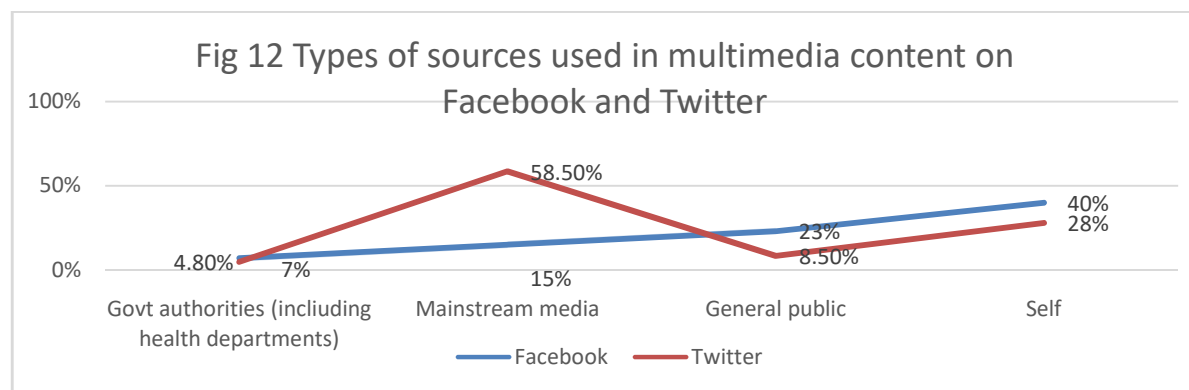


Figure 11 explains that a good majority of users shared the multimedia content with attribution to its source of generation. While this number is 80% in Twitter, Facebook performed a little better with 85% of its users following this practice. It can be seen in the graph of Figure 12 that multimedia content originating from government authorities (including health departments) are less likely to be shared by the users of Twitter (4.8%) and Facebook (7%). While Twitterati seems to be sharing most of the multimedia content coming from mainstream media organizations (58.5%), Facebook has a considerable number of multimedia content originating from the users themselves (40%). This includes self-shot videos and images. The content being sourced from the other people in general public are more likely to be shared by Facebook (23%) than Twitter (8.5%). The source in this content is usually not mentioned.



Findings of the study

Attribution to sources in the posts is low to some extent on social media platform. But it is relatively lower in Facebook than Twitter. This applies to all the users be it common people or public institutions/personalities. This indicates less awareness on the part of users about the reason and importance of quoting a source while putting or discussing some information on their posts on social media.

Online news platforms are emerging as source of considerable number of posts on both Twitter as well as Facebook. Though it includes some platforms that are websites of mainstream media organisations, a good number of those platforms are also accessed which have their presence online only.

The attitude of Twitterati seems to be less inclined towards posting information coming from religious leaders and own circle of family and friends. But this is not the case of Facebook where a considerable number of posts are influenced by personal opinion as well as views of religious leaders on matters of health and its management. Thus, the sources of information

used in Twitter posts make them close to being more official, informed and trustworthy and those used in Facebook are more towards personal opinion that may contain biases, emotions, prejudices or liking/disliking for something.

Despite many posts and discussions on health aspects related to new strains of COVID, verified vaccination, symptoms and timeline of treatment by users of these platforms, not a single user quoted or mentioned the World Health Organization – the leading authority which researches, verifies, publishes and guides the whole world about COVID and its upcoming variants. This brings the skills of users for attributing an authentic source in question. It applies to the public personalities/institutions and celebrities as well.

There is a large probability that the users of these social media platforms either do not have idea about the importance of writing correct and verified things publicly or they are casual about this thing and do not bother to either check or quote the information which they are sharing. This can have multiple long-term effects on the thinking and behaviour of their readers and followers on social media.

There is a tendency of Facebook users to post or share anything even if it contains wrong information. Such posts contain half-truths, fake claims about COVID and government's policy related to it. This lowers down the value of such posts that result in further spreading of fake news. Thus, Facebook users seem to be unable to find, evaluate and use information properly, thereby falling on the lower side of information literacy than Twitter.

Since Facebook posts had thrice the number of myths than Twitter, it indicates a clear lack of ability of Facebook users to differentiate between fact and opinion than those on Twitter. The finding that such claims were shared from the accounts of media institutions/personnel as well raises alarm about the dangers of misuse of space on free-to-use fast-speed social media platforms. Thus, Facebook seems to be on the lower side of news literacy than Twitter.

The purpose of posts on Twitter is more information- based and it is lesser inclined towards expression of opportunistic emotions by users than Facebook. This makes it more trusted and objective tool of communication than Facebook

Social media platforms offer a variety of multimedia options for users to express themselves in the best of their manner. While Twitter posts seem to be dominated by still images and graphic presentations, Facebook is getting ruled by videos along with still images. An increased trend of posting and sharing self-shot videos and images is visible across both the platforms. But the users are less inclined towards quoting 'self' as source, neither inside the multimedia content nor in the text. Further, similar audio-video and images being generated by others in general public are shared by a considerable number of users. Such content usually does not have any source marked on them nor the users quote it while sharing. Such a

practice points out to the low level of visual literacy of the users. This tendency is more evident in Facebook than Twitter, thereby placing it at lower position than the latter.

Though the government authorities (including health departments) have their accounts on Facebook and Twitter, but the multimedia content generated by them does not get very much shared by the users on both the platforms. A possible reason might be the low trust of people in them.

Mainstream media organizations (including their social media accounts and platforms) are quite popular for their audio-visual content among the users of Twitter. This position seems to have been taken by self-generated content on Facebook. Since the content from media is considered more authentic and objective, sharing it to convey and support one's point makes Twitter on the higher side of credibility in terms of multimedia content.

Conclusion

With the increasing number of people accessing, posting, sharing and forwarding various messages on social media platform, a debate has got initiated around the world about the new digital online technology being an advantage or disadvantage and to what extent. In this context, Facebook and Twitter pose an example of how activities on social media affects not only public opinion, but effective and transparent communication by health policymakers during a severe health crisis. While both of these social media platforms provide a platform for debate and scope for diversity of opinion and information, Facebook, more than Twitter has contains the risk of propagating conflict-oriented manipulated information from unverified sources in a language that is sufficient to instigate and hurt someone's feelings around an issue, place, phenomenon or thing. This calls for an inclusive policy on educating the users about the right ways of dealing with information as well as news, so that they can act as an a constructive instrument in finding solution to major socio-economic health situations in the country and the world over.

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