

SOCIAL MEDIA AND ITS IMPACT DURING COVID-19 PANDEMIC: A CROSS-SECTIONAL QUESTIONNAIRE BASED STUDYAnant D. Patil MD^{1*}, Rhea Bahadur² and Vaishali Thakare³¹Assistant Professor, Department of Pharmacology, DY Patil Deemed to be University, School of Medicine, Nerul, Navi Mumbai. 400706.²2nd Year MBBS Student DY Patil Deemed to be University, School of Medicine, Nerul, Navi Mumbai. 400706.³MD Associate Professor, Department of Pharmacology, DY Patil Deemed to be University, School of Medicine, Navi Mumbai.***Corresponding Author: Dr. Anant D. Patil MD**

Assistant Professor, Department of Pharmacology, DY Patil Deemed to be University, School of Medicine, Nerul, Navi Mumbai. 400706.

Article Received on 12/12/2020

Article Revised on 02/01/2021

Article Accepted on 22/01/2021

ABSTRACT

Objective: To study the attitude and practices of general population towards use of social media during COVID-19 pandemic. **Material and Methods:** In this online survey based cross sectional study, people from community were subjected to a questionnaire related attitude and practices towards social media during COVID-19 pandemic. **Results:** A total of 457 [320 (70.02%) male; 219 (47.9%) post-graduates] participants were included. A total of 236 (51.6%) participants used social media for 1-5 hours and 320 (70%) reported increase in use during COVID-19 pandemic. A total of 222 (48.6%) people reported using Aarogya setu. A total of 403 (88.2%) and 231 (50.5%) reported starting use of Zoom and Google Meet respectively. According to 175 (37.74%) and 175 (40.32%) newspapers and news channels respectively are reliable media for information. According to 377 (82.26%), survey participants social media has been useful for spreading awareness about preventive measures related to COVID-19. Headache, eye strain, less interactions, time consumption, unrealistic expectations and negative feelings were reported by 230 (52.75%), 334 (76.61%), 230 (52.75%), 309 (70.87%), 226 (51.83%) and 215 (49.31%) participants respectively. According to 423 (92.56%) participants not all information about COVID-19 in the media is true. A total of 52.5% participants reported that, media is spreading more fear than facts. **Conclusion:** Use of social media has increased during COVID-19 pandemic. Our study provided mixed types of responses related to use of social media. Social media has been useful for spreading awareness about prevention of COVID-19, but many also feel that it can spread fear.

KEYWORDS: Bias, information, reliability.**INTRODUCTION**

The year 2020 has marked its name in history due a pandemic caused due to novel coronavirus disease (COVID-19). The disease has impacted almost everyone in some or the other way, mostly due lockdown and limitations of restrictions imposed by it. The disease has caused significant psychosocial impact.^[1]

In this difficult time, the role of media has also increased. Social media i.e. electronic communication of sharing information is known to help in increasing awareness and knowledge related to public health.^[2] Social media has played a significant role during COVID-19 pandemic.^[3,4]

Social media is important for communication with each other and sharing important updates. Similarly, data generated through mobile and social media may be useful to curb COVID-19.^[5] However, it is also important to understand the limitations and negative

impact of social media in this sensitive time.^[3] Social media can also be misused. Dissemination of fake information, spreading hatred and creating civil unrest are some of the potential problems associated with use of social media.^[12] Spread of misinformation is one of the major challenges with increasing usage of social media during COVID-19 pandemic.^[6] The information can spread quickly from corner to the other corner of country.^[7] Thus social media can be a double edged sword. It can work as a friend or foe.^[8] Considering the benefits and potential problems associated with it, responsible use of social media is critical.

A recent study from Jammu and Kashmir, India reported good knowledge and positive attitude by social media users during COVID-19 pandemic.^[9] However, there is limited information on the perceptions, attitudes and practice related to social media among Indian population during COVID-19 pandemic.

OBJECTIVE

The objective of this study was to analyse the attitude and practices towards use of social media during COVID-19 pandemic.

MATERIAL AND METHODS

In this survey based cross sectional study, people from community who can read and understand English language were included by convenience sampling. A survey questionnaire was prepared referring the literature and inputs from the peers. The questionnaire consisted of demographic information and closed/matrix type of questions related to attitude and practices related to use of social media during COVID-19 pandemic.

Face validity and content validity of the survey questionnaire was checked by an expert who was not part of this study. The survey questionnaire was pre-tested on ten participants. Final questionnaire was administered online using Google form. The study was approved by the institutional ethics committee.

Statistical analysis

Responses received were collated in Microsoft Excel for analysis. Descriptive statistics is presented for variables collected. Categorical data are presented as frequency and percentages and continuous data are presented as mean and standard deviation.

RESULTS

A total of 457 people responded to the questionnaire. Out of them, 320 (70.02%) were females and 137 (29.98%) were males. In terms of education, a total of 219 (47.9%) people were post-graduates whereas 143 (31.3%) were graduates. A total of 89 (19.5%) studied up to 12th standard.

Students constituted 130 (28.4%) of total respondents. Out of total survey population, 90 (19.7%) were homemakers whereas 91 (19.9%) were working in private sector. A total of 84 (18.4%) were self-employed (Table 1).

A total of 236 (51.6%) participants used social media for one to five hours whereas 151 (33%) used it for less than one hour per day (Figure 1). A total of 320 (70%) respondents reported increase in use of social media during COVID-19 pandemic (Figure 2).

For keeping updated about the information on COVID-19, a total of 222 (48.6%) people reported using Aarogya setu. Referring website of World Health Organization and Indian Council of Medical Research was reported by 68 (14.9%) and 40 (8.8%) participants respectively. A total of 403 (88.2%), 231 (50.5%) and 170 (37.2%) survey participants reported starting use of Zoom, Google Meet and Microsoft team respectively during COVID-19 pandemic for connecting with others.

According to 175 (37.74%), 175 (40.32%) and 61 (16.31%) newspapers, news channels and YouTube respectively are reliable media for information on COVID-19 (Figure 3). A total of 281 (64.75%), 262 (60.37%) and 234 (53.92%) participants, WhatsApp, Facebook and Instagram are not reliable sources for information on COVID-19.

A total of 345 (76%) participants reported that they always feel connected through social media during COVID-19 pandemic whereas 77 (16.8%) reported they sometimes feel connected. According to 33 (7.2%) participants, they never feel connected with people using social media.

According to 377 (82.26%), 243 (55.99%) and 342 (75.66%) survey participants social media has been useful for spreading awareness about preventive measures related to COVID-19, increase knowledge about coronavirus in the local community and to stay connected with family and friends respectively. A total of 26 (5.99%), 59 (13.59%) and 41 (9.07%) survey participants reported no benefit of social media in increasing awareness about preventive measures, increasing knowledge about coronavirus in the local community and to stay connected with family and friends respectively (Figure 4). Others had neutral opinion.

Headache, eye strain, less interactions, time consumption, unrealistic expectations and negative feelings with use of social media were reported by 230 (52.75%), 334 (76.61%), 230 (52.75%), 309 (70.87%), 226 (51.83%) and 215 (49.31%) survey participants respectively (Table 2).

According to 240 (52.52%) survey participants, social media is spreading more fear than facts during COVID-19 pandemic. As per the views of 423 (92.56%) participants not all information about COVID-19 available in the media is true.

A total of 172 (37.6%) survey participants experience feeling of happiness with use of social media whereas 144 (31.5%) feel motivated with its use. Fear of missing out, sense of belonging, rejection and sense of belonging with social media was reported by 116 (25.4%), 100 (24.1%), 46 (10.1%) and 100 (24.1%) survey participants respectively.

A total of 52.5% survey participants reported that, media is spreading more fear than facts whereas 15.5% did not agree to this. A total of 31.9% respondents had mixed opinion.

According to 70% people, use of social media has increased during pandemic. A total of 19.7% participants reported no increase in use of social media during this pandemic whereas 19.7% were not sure about it.

DISCUSSION

During the unprecedented difficult time imposed by COVID-19, social media has been an important source to quickly share the information about pandemic because of increasing use of electronic media and internet.^[10,11] However, use of social media has its own share of problems including creating panic, anxiety, information overload and spread of wrong information.^[11,12]

In this study, we aimed to evaluate the role of media and social networking sites in the COVID-19 pandemic situation. Access to information is easy through social media and it has played an important role in spreading awareness about public health.^[2]

Our study provides some insights regarding use of social media by people in India. Our study reveals increase in social media usage during COVID-19 pandemic. Majority of the participants agreed that social media has been useful for increasing awareness about preventive measure and knowledge about disease in the local area. These benefits of social media can-not be ignored.

Reliability and trust of information received through social media is an important concern. Misinformation spread through social media can result in negative impact on psychosocial status, economy, health and ethics.^[13] Information received through reliable sources helps in better understanding about the situation in community and make necessary improvements in safety measures. In our study, more participants voted to news channels and newspapers for the reliability of information. It has also been reported that twitter and social media can be useful to understand useful information shared by medical professionals.^[14]

In addition to the increased awareness, feelings of happiness, boosting of self-esteem, motivation and sense of belonging were also reported by some participants in our study. In this context, delivery of evidence based information and reliable recommendations play a major role for maintaining and improving health status of community. Non-governmental scientific organizations can come forward to bridge the gap as original scientific sources in English may not be understood by many people.^[15] Use of advanced technologies is necessary for identification and timely removal of non-trustworthy from all social media platforms.^[16,17]

It is difficult to trace the original source of information in social media platforms. Also, the information can be modified by the sender. Understanding this concern, there have been efforts on this front. In a recent publication Chen E, et al proposed a data set to track COVID-19-related misinformation.^[18]

In addition, negative impact on mental health resulting in depression and anxiety is another serious concern with social media usage.^[19] Another recent study during COVID-19 outbreak in Iraqi Kurdistan reported

significant impact of social media in terms spreading fear and panic. It can have negative effect on mental health and psychological well-being of people.^[11] The impact may differ based on different factors including age and education.^[11] Use of more number of social media platforms and more time spent on social media can increase the risk of mental distress during COVID-19 period.^[20]

In our study also many people agreed that social media usage can result in both physical and psychological problems. Physical problems associated with higher use of social media include headache, eye strain and less personal interactions. It consumes significant amount of time from the personal schedule. Psychological issues related to use of social media include creation of unrealistic expectations, negative feelings such as rejection, jealousy and fear of missing out.

Finally, for many people social media has become primary source of information. Media can play a great role to aware the society and secure the public for its betterment. This could only possible if it is being used with full accountability and surveillance. Otherwise it can create unnecessary health related and social challenges. During a crisis like the COVID-19 pandemic social media should be handled responsibly. While governments is helping to promote digital literacy, there should stringent regulations to combat the negative impact of social media, not just during COVID-19 pandemic, but even after it dissipates.

Non-randomized sampling used in the study results in limitation for generalization of finding. Larger studies are required to confirm our observations.

Table 1: Baseline characteristics of study participants.

Parameter	Result
Mean \pm SD age in years	40.67 \pm 17.02
Male	137 (29.98%)
Female	320 (70.02%)
Secondary school	6 (1.3%)
Up to 12 th Standard	89 (19.5%)
Graduate	143 (31.3%)
Post-graduate	219 (47.9%)
Public sector	30 (6.6%)
Private sector	91 (19.9%)
Self-employed	84 (18.4%)
Homemaker	90 (19.7%)
Student	130 (28.4%)
Other	62 (25.4%)

Table 2: Problems associated with use of social networking sites.

	Agree N (%)	Neutral N (%)	Disagree N (%)
Headache (n=436)	230 (52.75%)	135 (30.96%)	71 (16.28%)
Eye strain (n=436)	334 (76.61%)	72 (16.51%)	30 (6.88%)
Less interactions (n=436)	230 (52.75%)	127 (29.12%)	79 (18.12%)
Time consuming (n=436)	309 (70.87%)	100 (22.94%)	27 (6.19%)
Un-realistic expectations (n=436)	226 (51.83%)	154 (35.32%)	56 (12.84%)
Negative feelings (n=436)	215 (49.31%)	151 (34.63%)	70 (16.05%)

Figure legends

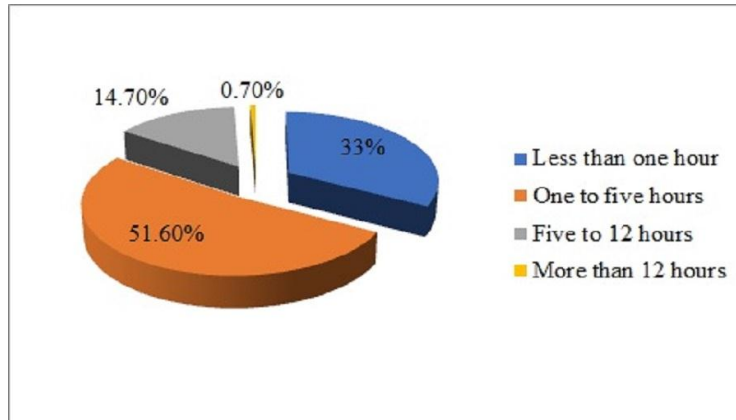


Figure 1: Number of hours spent per day on social media during COVID-19 pandemic.

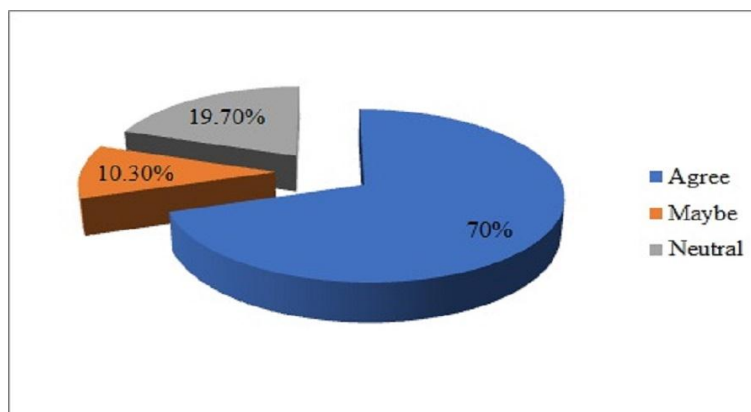


Figure 2: Increase in use of social media during COVID-19 pandemic.

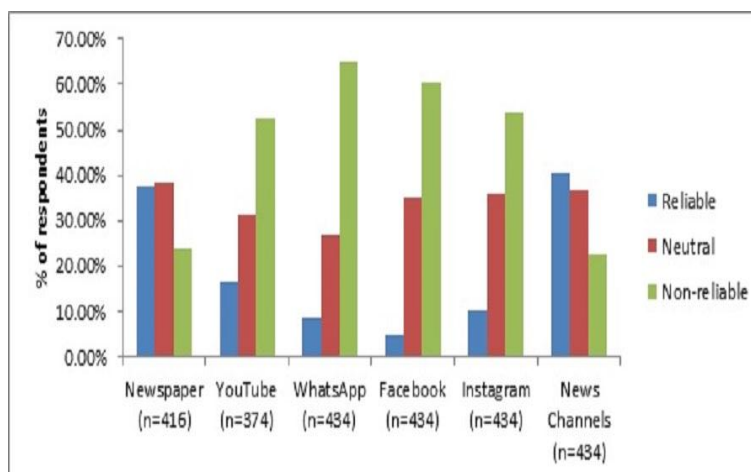


Figure 3: Opinion of survey participants on the reliability of social media during COVID-19 pandemic.

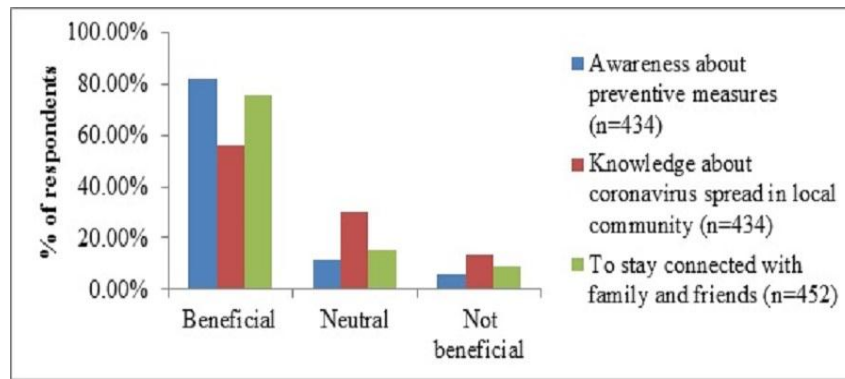


Figure 4: Benefits of social media during COVID-19 pandemic.

CONCLUSION

Use of social media has increased during COVID-19 pandemic. Our study provided mixed types of responses related to use of social media. Social media has been useful for spreading awareness about prevention of COVID-19, but many also feel that it can spread fear and have other negative impact. Social media can be a double edged sword, hence its responsible usage is critical all the time.

REFERENCES

- Dubey S, Biswas P, Ghosh R, et al. Psychosocial impact of COVID-19. *Diabetes Metab Syndr*, 2020; 14: 779-88.
- Kadam AB, Atre SA. Negative impact of social media panic during the COVID-19 outbreak in India. *J Travel Med*, 2020; 27(3): 057.
- Gottlieb M, Dyer S. Information and disinformation: social media in the COVID-19 crisis. *Acad emerg Med*, 2020; 27: 640-41.
- Goel A, Gupta L. Social media in the times of COVID-19. *J Clinic Rheumatol*, 2020; 8: 10.1097/RHU.0000000000001508.
- McKendry RA, Rees G, Cox IJ, et al. Share mobile and social-media data to curb COVID-19. *Nature*, 2020; 580(7801): 29.
- Siddiqui MYA, Mushtaq K, Mohamed MFH, Al Soub H, Mohamedali MGH, Yousaf Z. "Social Media Misinformation"-An Epidemic within the COVID-19 Pandemic. *Am J Trop Med Hyg*, 2020; 103: 920-21.
- Depoux A, Martin S, Karafillakis E, Preet R, Wilder-Smith A, Larson H. The pandemic of social media panic travels faster than the COVID-19 outbreak. *J Travel Med*, 2020; 27(3): taaa031.
- Lima DL, de Medeiros Lopes MAAA, Brito AM. Social media: friend or foe in the COVID-19 pandemic? *Clinics (Sao Paulo)*, 2020; 75: e1953.
- Dkhar SA, Quansar R, Saleem SM, Khan SMS. Knowledge, attitude, and practices related to COVID-19 pandemic among social media users in J&K, India. *Indian J Public Health*, 2020; 64(1): S205-S210.
- Rathore FA, Farooq F. Information overload and infodemic in the COVID-19 pandemic. *J Pak Med Assoc*, 2020; 70(3)5: S162-S165.
- Ahmad AR, Murad HR. The impact of social media on panic during the COVID-19 pandemic in Iraqi Kurdistan: Online questionnaire study. *J Med Internet Res*, 2020; 22(5): e19556.
- O'Brien M, Moore K, McNicholas F. Social Media Spread During Covid-19: The Pros and Cons of Likes and Shares. *Ir Med J*, 2020; 113: 52.
- Bastani P, Bahrami MA. COVID-19 related misinformation on social media: A qualitative study from Iran. *J Med Internet Res*, 2020. doi: 10.2196/18932.
- Wahbeh A, Nasrallah T, Al-Ramahi M, El-Gavar O. Mining physicians' opinions on social media to obtain insights into COVID-19: Mixed methods analysis. *JMIR Public Health Surveill*, 2020; 6: e19276.
- Abdul-Baki M-N, Dhmesh Y, Alasadi L, Alsuliman T. The substantial awareness role of web-based and social media platforms in developing countries during a pandemic scenario: the example of COVID-19. *J Public Health (Oxf)*, 2020; 42: 642-43.
- Tasnim S, Hossain MM, Mazumder H. Impact of Rumors and Misinformation on COVID-19 in Social Media. *J Prev Med Public Health*, 2020; 53: 171-74.
- Limaye RJ, Sauer M, Ali J, et al. Building trust while influencing online COVID-19 content in the social media world. *The Lancet Digital Health*, 2020; 2: e277-e278.
- Chen E, Lerman K, Ferrara E. Tracking social media discourse about the COVID-19 pandemic: Development of a public coronavirus twitter data set. *JMIR Public Health Surveill*, 2020; 6(2): e19273.
- Hao J, Zheng P, Jia Y, et al. Mental health problems and social media exposure during COVID-19 outbreak. *PLoS One*, 2020; 15: e0231924.
- Riehm KE, Hologue C, Kalb LG, et al. Associations between media exposure and mental distress among U.S. adults at the beginning of the COVID-19 pandemic. *Am J Prev Med*, 2020; S0749-3797(20)30274-9.