

Explosion of Social Media during the Pandemic of COVID-19: A Cross-Sectional Study

Md. Belal Hossain*
Kazi Sonia Rahman**

Abstract: *The present study aims to explain how people in Bangladesh, especially students and professionals, have used social media and how it has influenced them during the COVID-19 pandemic. A total of 342 respondents participated from the seven divisions of Bangladesh during the COVID-19 pandemic. An online questionnaire was surveyed through purposive sampling techniques and analyzed using SPSS 23.0. A 25-item tool for collecting responses on different aspects of social media usage during the pandemic times was administered to observe the role of social media usage, including demographic factors, a trend of usage, intentions of usage, and its influences were recorded. The key findings showed that during the COVID-19 pandemic crisis there was a flow of social media use such as 82 percent of respondents used only Facebook, another 60 percent of respondents used various social media to get updated coronavirus news across the country. On the other hand, almost 58 percent of respondents received fake news through social media during the COVID-19 era. The study results confirmed that there was a significant impact of using social media that conscious the citizens positively about the COVID-19 pandemic during the lockdown period. Finally, the study can be confirmed that the effective usage of the internet and social media has been played a significant role to keep peoples protected and engaged in a positive mindset during the lockdown imposed by the government of Bangladesh. This study also offers new directions for future studies of using social media effectively.*

Keywords: *Social Media, COVID-19, Pandemic, Online Connectivity, Bangladesh.*

Introduction

A new coronavirus, COVID-19 is a disease caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The virus was originally detected in Wuhan, China's capital, in December 2019 and has since spread throughout the world, resulting in the coronavirus pandemic of 2019–20 (Hui, D. S et al, 2020). The COVID-19 was declared a global pandemic by the World Health Organization (WHO) on March 11, 2020, after it was declared a world health emergency on

* Assistant Professor, Department of Mass Communication and Journalism, Comilla University, Cumilla.

** Deputy Director, Bangladesh Academy for Rural Development (BARD), Cumilla.

January 30, 2020. (WHO, 2020). The virus spread more than 179,259,564 cases in eighteen months, with 38,82,107 deaths and 163,827,464 recovered around the world (as of 21 June 2021, worldometers.info, 2021).

The Institute of Epidemiology, Disease Control, and Research (IEDCR) identified the first three COVID-19 impacted individuals in Bangladesh on March 8, 2020, 252 days after the first COVID-19 afflicted person was discovered in China (IEDCR, 2020). Followed by a national lockdown of all educational institutions as well as government and private offices to eliminate human transmission from 26 March and until 24 April 2020. As of 24 March 2020, the government deployed armed forces to promote disease prevention, as well as emergency healthcare and law enforcement services were exempted from this notice (Tareq et al., 2020).

However, just after the announcement of lockdown, social media usage has increased remarkably during the COVID-19 pandemic like never before. Internet usage has dramatically risen in Bangladesh during the last decade (Arens, 2020). With the advent of Information and Communication Technology, the young generation has been unprecedentedly accustomed to the usage of the Internet and smartphones in their daily life. Innovative mobile applications have made things accessible, efficient, and easy to use. The excessive usage of the Internet and smartphone by the young generation is very much a concern addiction. Moreover, social media usage is already increasing for varied reasons day by day.

WhatsApp, Instagram, Facebook, and Messenger have become an inseparable part of the individual's daily routine today and extreme dependability is observed on these social media (Zhong, 2015). A study by Massaad et al. (2020) explained that social media has been used by many users for conducting their day-to-day activities and professional responsibilities. Studies have tried to understand the impact of social media while adopting it in different ways like the flexible working hours and work from home policies (Buttigieg, 2015); (Vega-Castaneda, 2019); (Zhong, 2015). Researchers have also identified the impacts of the misuse of the internet and social media like insomnia, eye strain, daytime sleepiness, and lack of concentration in the study among the students and children in their daily life. Sometimes it also affects their social life. They are fall addicted to drugs and devoted to various crimes in society. (Balhara, 2018); (Bhatt et al. 2019); (Lackovic, 2020); (Paul, Bobby, et al., 2015). Social media usage for teaching and learning in classrooms is gaining popularity more so during the pandemic and under lockdown in the country and has its implications for the faculty using it due to the enhanced capability of communication, content delivery, collaborations, and interaction (Roebuck et al., 2013); (Skinner, 2019); (Milakovich & Wise, 2019).

As a result of the lockdown, Bangladesh has been impacted by various epidemics, such as a lack of healthcare facilities for primary and life-threatening care patients.

Private hospitals and clinics are refusing to provide treatment due to the risk of contact transmission. Healthcare personnel who have got infected while treating patients have been socially chastised and suffered social shame from the community. Protests against the installation of quarantine facilities, COVID-19 care hospitals, and clinics were seen in several localities. The use of social humiliation by police enforcement and government personnel was commonplace. Family members have frequently abandoned the diseased and deceased in hospitals. Even burials in local cemeteries were denied to the deceased. Furthermore, those who receive daily salaries, as well as poor and middle-income persons, were particularly hard struck by the lockdown, as they lost their jobs and revenue source. Several people committed suicide as a result of their worry and dread of dying from starvation or sickness (Shammi et al., 2020).

Surgical masks, hand gloves, hand sanitizers, liquids for disinfectants, chloroquine tablets, and general cold medicines were out of the market and due to low availability, the price rise of everyday necessities was observed. The COVID-19 patients, their family members, the foreign returnees who were the source of the initial chain of transmission, and the healthcare personnel were all met with hostility. Despite the current state of anxiety and dread in society, the risk of natural disasters such as tropical cyclone preparedness, the rise of dengue fevers, and seasonal influenza infections are possibly ignored in the light of social anxiety and fear. Besides, further disease transmission and environmental hazards will only result from the disposal of used PPE without proper treatment in the landfill or the dumps unconventionally, leaving the nation at risk (Shammi et al., 2020). During the COVID-19 pandemic, social media use increased dramatically. People have increased the use of social media for a variety of reasons such as socialization, entertainment, networking, online teaching, virtual meetings, work from home, health improvement, and so on, (Gupta et al., 2020).

Social networking sites are commonly used by individuals during outbreaks of COVID-19 to report, view, and exchange information. Although government organizations and healthcare organizations in affluent countries are increasingly using social media to construct epidemic forecasts and outbreak response plans little is known about how people in poorer countries use social media during the pandemic. In Bangladesh, there are many significant public health challenges, including inconsistencies in dengue diagnosis and treatment, a scarcity of blood for Rh-negative blood groups, and high local transmission of dengue fever, all of which have an impact on disease awareness and epidemic response (Shahid et al., 2020).

Coronaviruses are a wide-ranging family of viruses in animals or humans that may cause illness. The history of human coronaviruses started in 1965, and many coronaviruses have been known to cause respiratory infections in humans since

then, ranging from the common cold to more serious illnesses such as the Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS) (WHO, 2020). The COVID-19 virus is unlike any other human coronavirus in that it is highly transmissible, causes uncontrollable fatalities in very much risky age groups, and has the potential to cause widespread social and economic disruption. The current situation, which shows an increase in COVID-19 patients and deaths every day, indicates that the global population is vulnerable to this virus. Since the COVID-19 virus's animal origin is unknown, the possibility of re-establishment into formerly infested areas is also high (Sharma et al., 2020). After America, Britain, Brazil, and India, Bangladesh is the most vulnerable nation in the world for COVID-19. The socioeconomic, health, education, and banking sectors all have a major impact on the region. People are becoming increasingly worried about this incurable disease. Total 63,27,734 samples tested in 117 labs across the country among them 8,51,668 cases were confirmed, 1,57,486 persons isolated, 13,548 persons died and another 7,82,655 persons have so far been recovered from COVID-19 till 21 June 2021 (DGHS, 2021). This deadly virus is impacting people every day. The severity of the pandemic has not been faced by the human race since the 1918 H1N1 influenza Pandemic. There have been a few studies about the impact of social media during the COVID-19 pandemic in Bangladesh. From those studies, we tried to find out the research gap over the impact of social media during COVID-19. In this context, this study aims to explain how people in Bangladesh, especially students and professionals, have used social media and how it influenced them during the COVID-19 outbreak. In addition, the study also found out the socio-demographic profiles of the participants, the trend of social media use per day during the COVID-19 pandemic; the intent of social media use during the crisis of infectious disease; the opinions on the usage of social media during the COVID-19 pandemic and the influence of social media during the COVID-19 pandemic.

Methodology

This cross-sectional study was carried out on professionals and students from different areas across Bangladesh, above the age group of 18 consisting of a variant demographic background. The respondents in this study were students, business persons, working professionals, etc. Since it was a period of partial lockdown, the Google form online questionnaire was circulated through email, Facebook, Messenger, and data were collected and recorded. The responses were self-reported and voluntary. A total of 342 respondents were finally included in the study. Of the studied sample, 100 (29%) were females and 242 (71%) males from the seven divisions of Bangladesh. The respondents have been taken as follows:

Information of the Divisions and Respondents

SL No.	Name of Division	No. of Respondents
01	Barishal	5
02	Chittagong	225
03	Dhaka	68
04	Khulna	12
05	Mymensingh	10
06	Rajshahi	10
07	Rangpur	4
08	Sylhet	8
Grand Total		342

The collected data were coded and analyzed through SPSS 23.0 version. The demographic variables and patterns are presented through the frequency tables. The different relationships and associations are studied by using descriptive statistics.

Results And Discussion

Results And Analysis

The socio-demographic profile of the study participants along with the usage patterns of social media apps and the trend and intent of usage are depicted in tables 1, 2, 3, and 4.

Table 1. Socio-demographic Characteristics of the Respondents (n=342)

Variable type	Background Characteristics	Frequency	Percentage
Division	Barishal	5	1.4
	Chittagong	225	65.8
	Dhaka	68	19.9
	Khulna	12	3.5
	Mymensingh	10	2.9
	Rajshahi	10	2.9
	Rangpur	4	1.3
	Sylhet	8	2.3
Residing Locality	Rural	104	30.1
	Urban	173	50.9
	Semi-Urban	65	19
Gender	Male	242	71
	Female	100	29
Occupation	Students	137	40
	Business	6	1
	Working Professionals	180	53
	Other	20	6

Source: Primary data collected through questionnaire, 2020

Table-01 depicts the socio-demographic profile of the respondents. It is found that the majority of the respondents 225 (65.8%) were from the Chittagong division and a significant number of the respondents 68 (19.9%) were from the Dhaka division. Around (3%) of respondents were from Rajshahi, Khulna, and Mymensingh divisions. On the other hand, about (2%) respondents were from Sylhet, Barishal, and Rangpur divisions.

The majority of the respondents 173 (50.9%) were from the urban area, which was followed by the respondents from the rural area 104 (30.1%). And a small number of the respondents 65 (19%) were from the semi-urban area. These results represent that urban residents are very familiar with cell phones and social media applications during the COVID-19 pandemic crisis.

The study also indicates that, of 342 study participants, 242 (71%) were male and 100 (29%) were female. Since the majority of the sample were working professionals 183 (53%) and students 137 (40%) and who are actual users of social media in the population also, the results of this study are indicative and can be used for benefit of the society by coming up with innovative and useful social media apps. It is also indicated that male's participation was more than females in the study during the lockdown period.

Table 2. Trend of Social Media use Every Day (n=342)

Category	Frequency	Percentage
Facebook	280	81.8
Google meet	6	1.8
Instagram	3	.9
Other	1	.3
Skype	6	1.8
Twitter	2	.6
You tube	36	10.5
Zoom	8	2.3
Total	342	100.0

Source: Primary data collected through questionnaire, 2020

Table-02 depicts the Trend of usage of Social Media every day during the COVID-19 pandemic crisis. Of the 342 respondents, the majority of participants 81.8% (280) used Facebook to obtain information about COVID-19. Then a good number of participants 10.5% (36) used YouTube to acquire information about COVID-19. On the other hand, Skype, Twitter, Zoom, Google meet, and Instagram was very much slightly used as social media. The findings show that Facebook is at the highest level of usage since it is the most popular social media platform used in

Bangladesh during the COVID pandemic. Then, a large number of respondents 33.3% (114) use social media for an online meeting through ZOOM, Google Meet, etc. globally. Besides, very few respondents around 16.4% (56) use social media for the different live programs, 43 (12.6%) for online training, and 5% (17) for online research through ZOOM, Google Meet, etc.

On the other hand, Zoom and Google meet are the new examples of social media apps for conducting online education or distance learning, online meeting, etc. during the COVID-19 pandemic crisis as all of the educational institutions remained closed from March 17, 2020. It opens a new dimension of the education sector in Bangladesh during the pandemic time. It is also confirmed that different social media apps like Facebook, YouTube, and other social media platforms are playing a vital role in hosting various live programs, webinars, and online programs during the pandemic period.

Table 3. Intent of using social media during the infectious disease crisis (n=342)

Category	Frequency	Percentage
Online Learning	168	48
Entertainment	151	44.2
Socializing	144	42.1
Work from home	129	37.7
Connecting with long-distance friends and relatives	161	47.1
Online Trading	36	10.5
Online meetings through ZOOM, Google Meet, etc.	114	33.3
Online training through ZOOM, Google Meet, etc.	43	12.6
Online research through ZOOM, Google Meet, etc.	17	5
News updates of coronavirus across the country	199	58.2
Ordering groceries and vegetables	38	11.1
Live program	56	16.4
Other	3	.9

Source: Primary data collected through questionnaire, 2020

Table-03 depicts the intent of using social media during the infectious disease crisis. In this regard, the study found that the highest proportion of participant's 58.2% (199) use social media for the news updates of coronavirus across the country during

the COVID-19 pandemic. A large number of respondent's 48% (168) use social media for online learning. A significant number of respondents 47.1% (161) using social media platforms for connecting with their long-distance friends and relatives during the lockdown period. Besides a good number of respondents, 44.2% (151) use social media during the infectious disease crisis for entertainment, while 42% (144) of the respondents use social media only for socializing and 37.7% (129) of the respondents use social media only for work from home. Then, a large number of respondents 33.3% (114) use social media for the online meeting through ZOOM, Google Meet, etc. globally. Besides, very few respondents around 16.4% (56) use social media for the different live programs, 43 (12.6%) online training, and 5% (17) online research through ZOOM, Google Meet, etc. On the other hand, small numbers of respondents use social media for online trading and ordering for groceries, vegetables, and many other products during the lockdown period as almost all the shops, markets, and shopping mall remained closed during a partial lockdown period from March to June 2020 across the country. Finally, the findings revealed that the respondents found social media to be very useful for a variety of reasons, including keeping up with the latest news about the coronavirus across the country, using various apps for online learning, online training, online meeting, online research, and live programs and webinars to help trainers reach out to more learners during the COVID-19 pandemic crisis.

Table 4. Opinions on Usage of Social Media during COVID-19 Period (n=342)

Item	Variable type	Frequency	Percentage
Do you think the usage of social media has increased during the pandemic crisis?			
	Yes	252	73.7
	No	38	11.1
	May be	52	15.2
Do you trust social media platforms for critical news over National news channels and Government agency websites?			
	Yes	120	35.1
	No	77	22.5
	Sometimes	145	42.4
Do you rely on official announcements forwarded or shared on social media by your family or friends?			
	Yes	151	44.2
	No	60	17.5
	Sometimes	131	38.3

If yes, do you verify it with official websites/channels before sharing it among your family/friends?

Yes	220	64.3
No	47	13.7
Sometimes	75	21.9

Do you think the dissemination on social media of various news related to COVID-19 has spread fear and panic among people?

Yes	178	52.0
No	77	22.5
Neutral	87	25.4

Do you agree that the amount of social media sites, communities, and accounts covering COVID-19 is good?

Yes	141	41.2
No	95	27.8
Neutral	106	31.0

Did you post any COVID-19 related news and information on social media?

Yes	195	57.0
No	136	39.8
Neutral	11	3.2

Do you think the necessity for a specific policy for using social media during the pandemic crisis?

Yes	268	78.4
No	20	5.8
Neutral	54	15.8

Source: Primary data collected through questionnaire, 2020

Table-4 represents the opinions on the usage of social media during this pandemic crisis. The majority of the respondents 73.7% (252) think that the usage of social media has been increased during the pandemic crisis. A few respondents 11.1% (38) think that the usage of social media has not increased during the pandemic crisis. Then a significant number of respondents 35.1% (120) trust social media platforms for critical news over National news channels and Government agency websites. The rest of the respondents 22.5% (77) did not trust social media platforms in this regard. It also represents that the majority of the respondents 44.2% (151) rely on official announcements forwarded or shared on social media by their family or

friends. Then a significant number of respondents 131 (38.3%) sometimes rely on official announcements forwarded or shared on social media by their family or friends. The rest of the respondents 17.5% (60) do not rely on official announcements in this regard.

The majority of the respondents 64.3% (220) opined that they are verifying their information into the official websites/channels before sharing it with their family/friends. Then a significant number of respondents 21.9% (75) sometimes verify it. The rest of the respondents 13.7% (47) do not verify in this regard. 52% (178) respondents opined that publishing different news related to COVID-19 on social media has spread fear and panic among the people. On the other hand, a large number of respondents 22.5% (77) replied that publishing different news related to COVID-19 on social media hasn't spread fear and panic among the people during the pandemic. The rest of the respondents 25.4% (87) have given a neutral opinion about publishing different news related to COVID-19 on social media spreading fear and panic among the people during the pandemic crisis. 41.2% (141) respondents replied that the level of pages, groups and accounts on social media covering COVID-19 are good. On the other hand, a large number of respondents 27.8% (95) opined that the level of pages, groups, and accounts on social media covering COVID-19 is not good. Another 31% (106) respondents have given a neutral opinion about that. 57% (195) respondents replied that they have published information and news related to COVID-19 on social media during the pandemic crisis. On the other hand, a large number of respondents 39.8% (136) opined that they did not publish any information and news related to COVID-19 on social media. But only 3% (11) of the respondents have given a neutral opinion about that. The majority of the respondents 78.4% (268) think that a specific policy is very much necessary for the appropriate usage of social media platforms during the COVID-19 period. On the other hand, a very small number of the respondents 5.8% (20) opined that there is no necessity of any specific policy for the proper usage of social media applications. But only 15.8% (54) of respondents have given a neutral opinion about a specific policy for the usage of social media during the COVID-19 period

Table 5. Usage of Social Media per day during the lockdown period (n=342)

Item	Variable type	Frequency	Percentage
How much time do you spend on social media per day during a lockdown?	Less than 30 minutes	52	15.2
	30-60 minutes	43	12.6
	1-2 hours	44	12.9
	2-3 hours	69	20.2
	3-4 hours	49	14.2
	4 hours +	66	19.3
	Unlimited time	52	15.2
How often do you check in your social media accounts per day during a lockdown?	Once a day	13	3.8
	2-5 times a day	66	19.3
	5-10 times a day	60	17.5
	10+times	81	23.7
	Unlimited time	121	35.4
	Didn't check	1	.3
Which problems can happen due to using social media?	Psychological	163	48
	Physical	25	7.9
	Physical mental	105	29.8
	No problem	49	14.3

Source: Primary data collected through questionnaire, 2020

Table-5 depicts the usage of social media per day during the lockdown period. The study found that the majority of the respondents 20.2% (69) spend time on social media for 2-3 hours per day. Then some respondents 19.3% (66) spend on social media more than 4 hours per day. Beyond that, a significant number of respondents, 15.2% (52) spend on social media for unlimited time per day. The study represents that the highest number of respondents 35.4% (121) use social media for an unlimited time. Then several respondents 81 (23.7%) use social media more than 10 times per day. Around 19.3% (66) of respondents use social media 2-3 times a day during the lockdown period. The study also reveals that

the majority of the respondents 48% (163) suffered from psychological problems due to the use of social media. Then a large number of respondents 29.8% (105) suffered both physical and mental problems from using social media. But a small number of respondents 7.9% (25) faced physical problems by using social media. Besides, 14.3% (49) respondents did not face any problem with using social media during the lockdown period in Bangladesh.

Table 6. Impact of creating panic on social media during the pandemic crisis (n=342)

Category	Frequency	Percentage
Dissemination of the number of COVID-19 infections	99	28.9
Dissemination of the death toll about COVID-19	106	31
Dissemination of fear-inducing information about COVID-19	91	26.6
Publication of pictures and videos of the significant number of cases in cities and countries	64	18.7
Fake news about COVID-19	198	57.9
Other	12	3.5

Source: Primary data collected through questionnaire, 2020

Table-6 depicts the Impact of creating panic by social media during the pandemic crisis. The study reveals that the highest number of participants 57.9% (198) opined that fake news about COVID-19 had the most impact of creating panic on social media. Then a large number of respondents 31% (106) opined that dissemination of the death toll had the most impact of creating panic on social media during the COVID-19 pandemic crisis. Besides a good number of respondents, 26.6% (91) opined that dissemination of fear-inducing information about COVID-19 had the most impact of creating panic on social media. Besides, a significant number of respondents 28.9% (99) opined that dissemination of the number of infections about COVID-19 had the most impact of creating panic on social media. On the other hand, a small number of participants 18.7% (64) have given an opinion about the publication of pictures and videos of the significant number of cases in cities and countries of creating panic on social media during the pandemic crisis in Bangladesh.

Discussions

The study was conducted to explain how people in Bangladesh, especially students and professionals, have used social media and how it influenced them during the

COVID-19 outbreak. Table-01 shows the socio-demographic profile of the respondents. 71 percent of the respondents were male, 53% working professional, 40% students, and 50% from urban area representing the young people that are very familiar with the different social media platforms during COVID. The results indicate that social media is very much beneficial for society. According to Sharma and Jhamb (2020), 46 percent of online users during lockdown stated that they utilize social media networks to exchange information and make product purchasing judgments. Table-02 illustrates the trend of usage of social media every day during the COVID-19 pandemic crisis. It is found that Facebook and YouTube have been used by the highest number of respondents in Bangladesh. Beyond that Zoom, Google meets, Skype, Twitter, and other social media platforms were also played a vibrant role in presenting various live programs, webinars, and different online programs during the COVID-19 period. Table-03 portrays the intent of using social media during the COVID-19 crisis. According to the findings, respondents used social media for a variety of reasons like online trading, ordering for groceries, vegetables, and many other products including keeping up with the latest news about the coronavirus across the country used various apps for online learning, online training, online meetings, online research, and live programs and webinars to help trainers reach out to more learners during the COVID-19 pandemic crisis.

The present study represents that people also can have ample knowledge and relevant information regarding coronavirus infection and death toll on Facebook and different social media (Table-06). Different health-related websites, portals, and organizations disseminate information regarding COVID-19 and content in the form of news, article, feature, and health tips through Facebook as it is emerging as the dominant medium for obtaining tailored information quickly in this digital era. Accordingly, the present study found a positive relationship between different social media use and distributing accurate messages about COVID-19 by the respondents. It is also worth noting that the respondents are wary of the fact that social media does fuel a lot of rumors spreading and that users ought to be careful to believe everything that is spread through social media. The study finding is similar to Sulthana and Vasantha (2021) that social media is the world's fastest-growing communication network. The usage of social media platforms surged double during the COVID-19 outbreak compared to regular days. Any pandemic-related information can be found on social media and its networks. During the lockdown, people are more likely to use social media sites to communicate with friends and family. To stay informed, people are more engaged on Facebook, Twitter, and other social media platforms. During the pandemic crisis, people were online for a variety of reasons, including working from home, organizing web meetings, and attending online classes run by education departments utilizing various software.

Conclusion

This research focused on the role of social media during the COVID-19 pandemic. In the context of technology addiction, several previous studies referred to social media as a danger to the success of youth and students, the findings here actually prove to be of significance and stress on the productive use of social media. The study also denotes that creating awareness, spreading positivity, networking, educating, extending help, and sharing opinions are the significant reasons for which people value social media in this time of pandemic crisis. Moreover, people also use social media for the updated news of the coronavirus across the country, using the different social media apps Facebook, YouTube, Messenger, ZOOM, Google Meet, etc. for online education, online training, online meeting, online research, online trading, different live programs, and webinars are helping the trainers to widen the reach to learners during COVID-19 pandemic crisis.

Therefore, it can be suggested that the lockdown imposed by the COVID-19 pandemic has given the way to the constructive use of the internet and social media to keep people safe, secure, involved, and in a positive frame of mind. Further research can be concentrated on how to use this power of social media in many other fields effectively and productively, particularly in social welfare, healthcare, and economic growth.

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