Research Publishing Academy (RPA)
London, United Kingdom (UK)

Social Media and Human Well-being during COVID-19 Pandemic

Md. Atiqur Rahman
Department of Mass Communication & Journalism
University of Rajshahi, Bangladesh

Abstract

The COVID-19 pandemic modified social interaction patterns, which hampered daily living. Social media sites have shown to be incredibly helpful throughout the COVID-19 era, even though their overuse can have certain negative repercussions. This paper focuses on the duration of time people spent on social media while they stayed at home during the outbreak and the reasons for their use in Bangladesh perspective. The research is based on original data from survey along with the help of some secondary sources. The result shows that social media became a part and parcel of everyday life for a major portion of people during COVID-19. The most important finding is that 38.25% of people are heavy user of social media, who spent two to ten hours per day on it. Another interesting finding is 56.75% people didn't use it at all. Findings also shows that Staying in touch with family and friends, office-business work, news update, entertainment, online shopping, income source hunting were the most browsing reason of social media then. The popular social media platforms in Bangladesh are also discussed briefly in this paper with its' negative effects.
Keywords: Social media, COVID-19, Pandemic, Facebook, Negative Effects

Introduction

The COVID-19 epidemic was wreaking devastation across the globe, with people willingly quarantining themselves to avoid spreading the infection. Individuals wanted a way to communicate with loved ones, exchange information, and pass the time when they were alone at the time. Eventually, as time passed on, social media became an important platform for interaction. Because of isolation, lockdown, and closed borders, people had no choice but to turn to social media and these communication platforms were created to bring people together and keep the world connected, and their use increased throughout the pandemic.

In 2021, globally there were 4.48 billion people actively used social media, and this was a climbed rate of 13.13% from 3.69 billion in 2020. Pakistan, like other South Asian countries, had a nine-million-plus surge in subscribers between 2020 and 2021. Between 2020 and 2021, 47 million Indians started using social media. This figure is seven million in Myanmar at this time (Dhakatribune.com). Between 2020 and 2021, the number of internet users in Bangladesh climbed by 7.7 million. In these twelve months, more than nine million (mn) people joined social media platform, indicating that the country's social media is booming.

As of December 27, 2020 (WHO 2021), there were 509,148 Covid-19 reported cases in Bangladesh, with 7,452 (1.46%) deaths and 49,735 (9.77 %) active cases. On March 8, 2020, the country's first Covid-19 case was discovered (Worldometer 2020). To lower infection rates, the authorities of the country mandated social distance, isolation and house quarantine (Islam et al. 2020). In particular, the pandemic presents a significant upheaval and challenge for mental health because it is a long-term, widespread, overwhelming, and multi-dimensional threat [Gruber et al., 2020]. Bangladesh government imposed a nationwide lockdown on May 25, 2020, following the discovery of 367 infected cases in just two months (Islam, 2020).

Many people have been isolated in hospitals and clinics or while being quarantined at home. Major pandemic and epidemic outbreaks have a number of detrimental effects on both the individual and societal mental health (Duan & Zhu, 2020). During the COVID-19 epidemic, about 52.1% of persons reported feeling anxious, and 57.8%–77.9% of these individuals required psychosocial assistance from their family and friends (Zhang Y, 2020). According to a UK research, 36% of respondents said the COVID-19 outbreak made them feel more alone than ever before (Li LZ & Wang, 2020). Roy et al. (2020) further mention that the protection of mental health is vital during the COVID-19 pandemic.

Failure to manage this additional mental weight resulted in some persons having suicidal thoughts (10–12). Social media was the only provider of information in this scenario. Social media could be utilized to raise public awareness of emergencies, while governments could employ integrated and well-planned communication to build trust with individuals and encourage information sharing and searching on social networks (Wu et al., 2018). Rovetta and Bhagavathula (2020) advise health agencies to use Google Trends to predict user behaviours and prevent panic-related as what panic users are more likely to search for the keywords related to COVID-19.

As a result of the COVID-19 pandemic, millions of individuals throughout the world were using videoconferencing to work and learn from home, among other things. The number of Zoom users increased from 10 million (Dec. 2019) to 300 mn in April 2020. (DE-CIX, 2020) Within three months Cisco's Webex had 324 million (March, 2020) users, up from 192 million in January 2020. (Florance, Ken. 2020) In April 2020, Microsoft Teams had 75 million daily users (GSMA 2020). Being confined to individual 's home increased social media usage by 25% (OECD, 2020).

Study claims, Facebook users accounted for 22.2 percent of the population as of March 2020. The most frequent users were those between the ages of 18 and 24. As the educational paradigm has evolved online, youths had greater opportunities to spend increased time on social media in the midst of the COVID-19 problem. According to a Kepios study, the people use social media in Bangladesh jumped by 4.6 million (+10.1%) from 2021 to 2022. (datareportal.com)

The COVID-19 pandemic in 2020-'21 affected people's lives in a variety of ways, one of which is, without a doubt, how they use the internet. During the pandemic, Bangladeshi users spent significantly more time on social media than usual. In 2020, the number of mobile subscriptions in Bangladesh was 170.14 million [1] whether the number was 165.572 mn in Dec, 2019 and internet subscribers has reached 123.82 million at the end of December, 2021 (Bangladesh Telecommunication Regulatory Commission-BTRC). According to Bangladesh Demographic Profile, about 65.45% of the population is between 15 and 59 years of age (Statisticstimes.com). This is a large portion of people who are the possible heavy internet and social media user. While social networking technology has grown greatly in all sectors in Bangladesh, we cannot overlook the negative impacts of it.

Media theorist Marshall McLuhan suggested that each media-related extension of man comes at the expense of another organ (McLuhan, 1994). For example, by increasing reliance on visual media, we for lose touch with oral communication. Hence, it is very much important to find out carefully

• How much time people used social media home during the epidemic?
• What are the purposes of using social media?

Methodology

The focus of this study is on primary data from survey studies. Secondary sources were also utilized in the investigation, including online sources, several research articles, and survey studies conducted by a well-known daily newspaper institution. To acquire information regarding general internet usage, we used surveys and interviews. Because The goal of the interview is to investigate entities' or persons' experiences, viewpoints, opinions, ideas, beliefs, or motivations towards particular things, problems, or phenomena. Interviews in this sense primarily offer "deeper" concepts or understandings of social concerns or phenomena. Therefore, when researchers are unfamiliar with one or more of the studied phenomena or issues, the interview approach is the most suitable. Additionally, interview techniques are appropriate for researchers when the subjects are delicate and participants or respondents wish to convey their thoughts or opinions verbally (Islam & Aldaihani, 2022; Islam, Igwe, Rahman, & Saif, 2021).

The researcher used Google Form to collect primary data using a quantitative way. The respondents who utilized social media were asked about their present predicament in the questionnaire. The 465 sample are randomly collected that includes male-female, university teachers, officers, students, businessmen, worker of various professions, homemakers and others. We categorized social media user according to their daily using duration. People who use social media for less than one hour were regarded as low users; those who used the social media for 1 to 2 hours were classified as moderate users, and who were on the social media for more than two hours a day were considered as high users (Panahi, 2015). Because a substantial portion (65.45%) of the population is between the ages of 15 and 59, this sampling was carefully picked among those aged 15 to 59.

3. Popular social media in Bangladesh

People's interactions with one another have evolved as a result of social media. Email was the precursor to social networking which was invented in 1975. Following that, now social networking entails posting images, videos and stories as well as communicating with others through applications and messaging. Social media has revolutionized communication, saving both time and money. Social media network is a strong substitute of face-to-face social interaction which are thought to result in decreased relations with others. These new media are often a huge waste of time and distracting for students, which are vulnerable to social alienation that can also lead to loneliness and reduced social skills (Mikami et al., 2010). Crimes, cyber bullying is being taken place as well in facebook and using other platforms. All revolutionary technologies have their pros and cons. Social networking sites are no exception. During Covid-19 the restriction of physical mobility has simultaneously caused a previously upwardly mobile, ambitious generation of homebound people to rediscover social media platforms (SMPs) with an even greater vengeance in this extraordinary once-in-a-generation situation of a global lockdown that has redefined and obfuscated international borders (Goel and Gupta, 2020). Numerous research have already employed social media data to aid in the identification and detection of infectious disease

epidemics as well as the interpretation of public attitudes, behaviors, and perceptions (Tsao et al., 2021).

Facebook
Facebook is the most popular social networking platform in Bangladesh. The unique feature is the main reason behind its huge acceptance. It has now become a tool for learning, making income, showing talents, ecommerce, self-branding, gaming, financial services, technology, media, education, business sectors, and so on. Facebook may appear to be a fascinating and fun website, but abuse can lead to addictions that can lead to severe consequences such as sleep deprivation, melancholy, and putting oneself in a risky situation. As information on social media is generated by users, such information can be subjective or inaccurate, and frequently includes misinformation and conspiracy theories (A Bridgman, 2020). With so much personal information flying about Facebook these days, fraudsters have found it quite easy to steal people's identities. Hackers frequently access users' e-mail accounts and create false Facebook accounts. Offenders have posted pre-crime admissions, videos of themselves conducting crimes, and post-crime footage carrying evidence and boasting about their illegal deeds on Facebook. Reseach paper shows that Facebook users do not exchange COVID-19 information to obtain information; rather, they do it for social, status, and entertainment purposes. In times of crisis, they are less able to understand their moral and social obligation to provide reliable information (Malik et al., 2021). There were 53824400 Facebook users in Bangladesh in April 2022 (napoleoncat.com/2022), which accounted for 31% of its entire population. The majority of them are men, 67.7%.

Facebook Messenger
It's an app developed by Facebook. Here, people can do group audio-video calls, send messages, do marketing, business, branding, advertisements, and so on. During lockdown, WQpeople become more dependent on messengers like Facebook. There is also a feature called "message lite," which uses less internet. During a lockdown, people keep in touch with their close ones by phone, text or video chat. Statistics show that more than 20 billion messages are exchanged between businesses and users each month on messenger. Messenger adds another source of distraction to life, and it quickly depletes the battery. Users are compelled to use Messenger in conjunction with the Facebook app, which takes up a lot of storage space on the device.

WhatsApp
Here in this country, it is actively used as a primary communication platform to send personal messages, video call, share ideas and so on as an alternative of email. It's unique feature "WhatsApp Business App," which is mainly used for connecting customers. Through WhatsApp, anyone can send you a message at any time. This app has a huge detrimental impact on youth, negatively affecting their education, conduct and daily lives. It wastes a lot of kids' study time and messes up their spelling and sentence constructing skills (Bhatt & Arshad, 2016). It's addictive, and it can cause students to lose focus in class. Research found that short-term effects of the global COVID-19 lockdowns in March and April 2020 on the communication behavior compared to the same time span in the previous year 2019 and show that the communication behavior in WhatsApp significantly changed during the COVID-19 lockdown. It was found that message frequency severely increased in the first lockdown months, reaching up to 2.58 times the average number of messages per day compared to the previous period (Seufert et. al., 2022).

ZOOM

During the COVID-19 pandemic, Zoom, the worlds' most used video calling platform, became a household brand in many areas of the world, including Bangladesh. People and organizations in Bangladesh have been organizing online meetings through Zoom for professional, educational, and even personal communication purposes since so many people have been operating from home mainly due to the lockdown.

Zoom is simple, easy, highly convenient and technically superior to other accessible platforms with HD video, and most significantly, it has the potential to fit everyone into a single frame, since it can accommodate to more people instantly on both smartphone and computer. Apart from distant and online class activities at educational institutions, government and non-government personnel had video conferencing using Zoom meetings during the COVID-19 shutdown in Bangladesh.

Imo

Imo is a free audio/video calling and instant messaging software service. It allows sending music, video, PDFs and other files, along with various free stickers. It supports encrypted group video and voice calls with up to 20 participants. Imo is much more popular with Bangladeshi migrant workers and their family members working in different countries. The number of messages sent to Bangladeshis using their app has increased by more than 6 percent compared to 2019 (shampratikdeshkal.com). According to a study in Nigeria, it is obvious that social media messages have raised Imo State residents' awareness of Covid-19 prevention measures. The public were not positively affected despite being well aware of the government's Covid-19 prevention initiatives (Okwudiri et.al., 2021).

Skype

Skype is a voice-over-IP service and internet-based telecommunication software that allows millions of individuals and businesses to make video calls, voice calls, or group calls, send messages instantly, and share files with other people on Skype from their PCs, mobile phones, and tablets. Sound qualities on Skype are based on bandwidth. Bangladesh has a low level of acceptance for it.

Viber

Viber was a very popular cross-platform voice over IP (VoIP) and instant messaging (IM) software application few years ago. In addition to instant messaging it allows users to exchange media such as images and video records, and also provides a paid international landline and mobile calling service called Viber Out. Now there are very few users of Viber.

Twitter

Twitter is an emerging social media site that serves as a microblogging service that allows users to send and read text-based messages. It is commonly used by people to keep in touch with friends, musicians, and celebrities on this site so that they can feel connected. It's difficult to walk away once you begin tweets and seeing what your followers and individuals you're tracking are saying. It's easy to get sidetracked and spend several hours on a single conversation. It's especially troublesome for students. The ongoing pandemic has heightened the need for developing tools to flag COVID-19-related misinformation on the internet, specifically on social media such as Twitter (Hossain et al., 2020). Another study examined 15 million tweets from the Philippines and 12 million from the USA between March 5 and

March 19, 2020. Both countries revealed a positive correlation between bot activity and the prevalence of hate speech in neighborhoods that are more isolated and densely populated than others (Uyheng & Carley, 2020) .

Results and Discussions

The presentation and analysis of the collected data was prepared using frequency and percentage to explain and analyze to draw conclusions. Respondents' demographic profile in this survey such as gender, marital status, age, and education level are displayed here. This section contains specific information about 465 respondents obtained from the researcher's questionnaire, which was given via Google Form.

Table-1: Distribution of respondents by gender

Gender	Frequency	Percent%
Male	284	61
Female	181	39
Total	465	100.0

Table-1 suggests that 61% (284) of the respondents (n=465) have been male, and 39% (181) had been female.
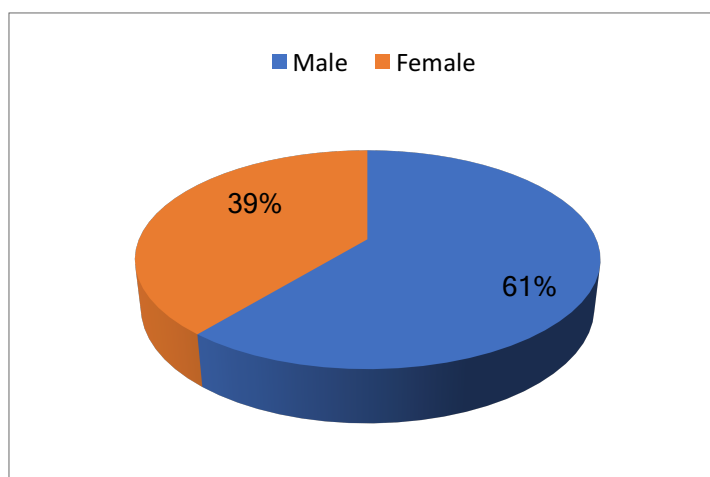

Figure-1: Gender of Respondents

Figure-1 shows that the blue-colored male respondents (n=465) account for 61 % (284) of the total, while the red-colored female respondents (181) account for 39 % (181).

Table 2: Distribution of respondents by age

Age	Frequency	Percent%
15-24	66	14.2
25-30	219	47.1
31-39	121	36.8
40+	9	1.9
Total	465	100.0

Table 2 shows that 47.1 % (219) of respondents were between the ages of 25 and 30, 36.8% (121) were between the ages of 31 and 39, 14.2 % (66) were between the ages of 15 and 24, and 1.9 % (9) were between the ages of 40 and 50. Most social media users are young people, it could be concluded.
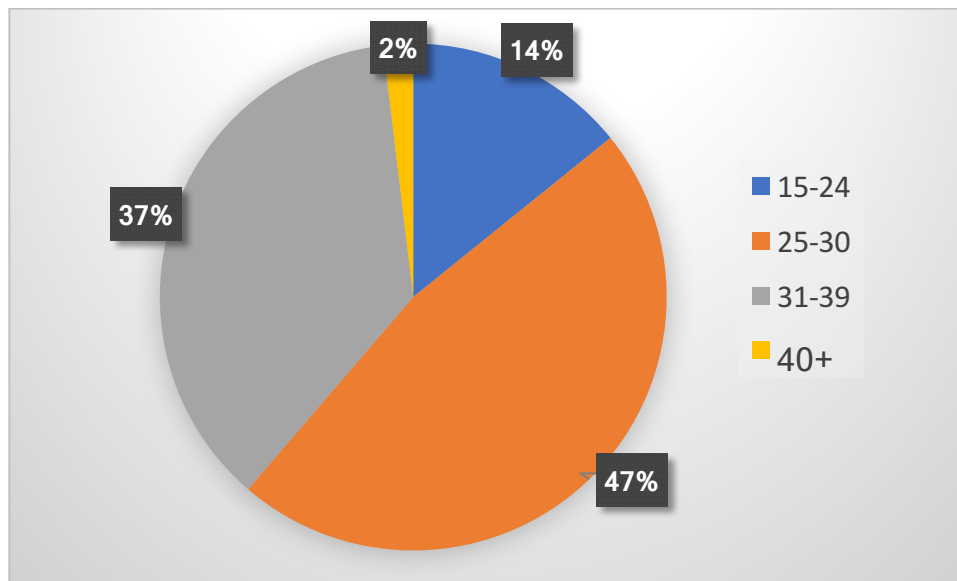

Figure 2: Age of Respondents

Figure 2 illustrates that the blue-colored group, which ranges in age from 15 to 24, accounts for 14.2 % of all social media users. 47.1 % of red-colored users are between the ages of 25 and 30, 36.8% of green-colored users are between the ages of 31 and 39, in the purple color, 1.9 percent of users are 40+ years old.

The researcher presented many questions on how people check in and out of their social media accounts in order to better understand their behavioral patterns during pandemic. The opinions of participants on how they check in and out of their social media accounts are divided into two categories: those who check in on a daily basis and those who do not.

According to the data, 89.25% of participants (n=465) check in on their personal social media accounts on a daily basis during COVID-19, while 10.75% do not. This demonstrates how social media has become an integral part of today's generation, with users checking in on a regular basis to stay up to date on what's going on, as well as for communication and other uses. The data show that a majority of users visit their social media profiles on a daily basis for a variety of reasons, including communication.

According to the survey results, 3.25% do not utilize social media on a regular basis. With that, 56.75% spend less than two hours per day on social media, 32.25% spend two to five hours per day, 3.75% spend five to nine hours per day, and 2.25% spend more than ten hours a day. And 1.75% use social media in their spare time; these users do not have a time constraint, but they spend less time online. 38.25% of social media user use more than 2 hours daily in these sites. So we can call these portions as heavy users of social media as well as 56.75% are low users of social media.
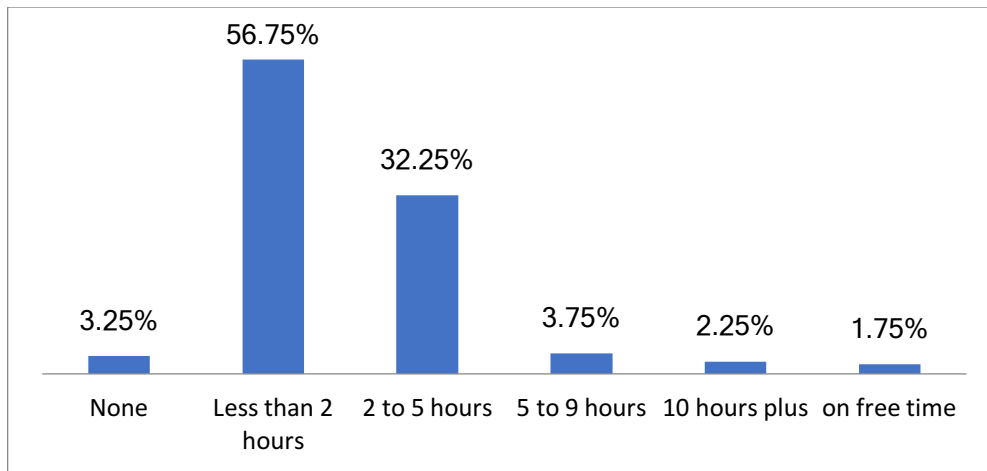
Fig-3 Daily time used on social media during the COVID-19 pandemic

From Fig-3 we can see the volume or level of social media use of users. The table shows that 3.25% of users do not use it regularly, 56.75% less than 2 hours, 32.25% 2 to 5 hours, 3.75% 5 to 9 hours, 2.25% more than 10 hours daily and 1 .75% of users use social media in their spare time.

Analyzing the data we have obtained from the survey, what stands out can be mentioned or described as follows-
Family connections are cited by two-thirds of all social media users, with no significant differences in age, education, income, race/ethnicity, family status, or location of residence. As the pandemic of COVID-19 grows across Bangladesh, crucial discussions concerning the epidemic are taking place on social media channels. For real-time information updates, users are turning to social media. Though more than 40% of Users on facebook had begun to forsake the social network prior to the outbreak (pewresearch.org), pandemic and lockdown situation forced Bangladesh to adopt a different strategy.

Survey indicates that 62% had increased their usage throughout the pandemic. Video calls, social networking sites use, and internet video watching have all increased as a result of social distancing regulations. For example, the ratio of female mobile phone owners who watch free movies on a weekly basis increased by 9 percentage points between 2010 and 2020 in Bangladesh (GSMA Mobile Gender Gap Report 2021).

Having the capacity to communicate with friends and family during lockdowns via group conversations, online birthday celebrations, or enjoying online games with acquaintances, such as Ludo, has benefited these ladies cope up with their isolation. Some women have used social media to know more about health challenges that have arisen as a result of the pandemic, as well as how to live a healthy lifestyle. Women embraced social media to operate their home-based food enterprises, particularly in COVID-19, which allows female entrepreneurs to advertise their products online quickly and affordably. They can compare costs rapidly and use mobile money to make sales easier. A crucial requirement for women was the ability to shop online and learn about cooking through social media.

Due to the COVID-19 pandemic, many individuals have lost their jobs in Bangladesh's private sector, and many small and medium enterprises have closed. People between the ages of 25 to 40, particularly men, have utilized social media to continue their job-business exploration and professional communication, in other words, to look for new sources of earnings.

Loneliness is defined as "a discrepancy between an individual's preferred and actual social relations" which leads to severe negative sensations of social isolation even when surrounded by family and relatives (Peplau & Perlman, 1982). And practically all educated social media users in COVID-19 lockdown have their current friends, former school-college-varsity life friends and childhood friends - they formed various social media groups using facebook messenger, WhatsApp, Zoom etc. and spent time everyday or at specified periods on 2/3 days of the week. They used social media groups audio-visually to try to get rid of loneliness in this way.

Here's a rundown of the information we gleaned from the survey:
Social media has become an integral part of today's generation, with 38.25% reporting that they spend more than 2 hours a day on these sites, and 56.75% reporting that they don't use it at all. Friendship connections, maintaining in touch with family members, and reconnecting with old friends are all mentioned. Women were interested in COVID-19 related real-time information and news, amusement such as internet video, free movie viewing, and online games; online home-made business, learning of healthy living, online shopping, and cuisine training on social networking sites. Job hunting, business exploration and office meetings and discussions were all crucial.

Research Limitations and Future Directions

There are some inherent limitations in this study. First, despite being diverse, our sample of the Bangladeshi population was not accurately representative, with a lean toward the educated. In order to understand how these contexts affect the using behavior of social media we observed here, future researchers should investigate these effects among a representative sample and samples outside of Bangladesh to investigate how these circumstances affect the associations we found here. Future research should include nations where the worst part of the outbreak has passed, as well as those that are battling to contain new breakouts. Second, future studies may use mixed-methods and qualitative research designs to take into account other data collection techniques (such as interviews, observation, etc.). Next researchers might broaden their analysis by taking into account additional variables that might have an impact, such as information overload, social media trust, habitual distraction, etc. Third, this study did not include past activities when gathering its data. To obtain more accurate information on the current scenario, it is advised to take into account prior activities. Finally, rather than delving further into the nature and sorts of information provided about COVID-19, this paper concentrated on how much time participants spent using social media at COVID-19 and their motivations. By examining how users of social media interact with various forms of information during COVID-19, future research may advance this field.

Conclusion

Today's generation depends heavily on social media and 38% of users use social media heavily, spending more than two hours per day on these platforms during COVID-19. Relationships with family and friends and online class, office work- business were prioritized when utilizing social media throughout the pandemic. During the COVID-19 epidemic, social media was used for a variety of purposes, including information collecting and the provision of fun, online shopping, game, cooking and health-related information. According to studies, the majority of users have a slight addiction. They are depending increasingly on mobile communication technology to interact with others.

Now we must determine whether there are any security concerns behind a sizable portion of the populace's lack of social media use. What additional means of communication do they employ then? In addition to these inquiries, it is important to look at how much users trust Facebook's policies and security measures to secure users' data or how much of the settings procedure has been completed.

References

Bhatt, A., & Arshad, M. (2016). Impact of WhatsApp on youth: A sociological study. *IRA-International Journal of Management & Social Sciences*, *4*(2), 376-386.

Bridgman, A., Merkley, E., Loewen, P. J., Owen, T., Ruths, D., Teichmann, L., & Zhilin, O. (2020). The causes and consequences of COVID-19 misperceptions: Understanding the role of news and social media. Harvard Kennedy School Misinformation Review, 1(3).

Connected Women, The Mobile Gender Gap Report 2021.(2021), Retrieved from https://www.gsma.com/r/wp-content/uploads/2021/06/The-Mobile-Gender-Gap-Report-2021.pdf

dhakatribune.com (2018), "Myanmar's Rohingyas: Five years of crisis", 25th August 2018, p.1.

Demographics of Bangladesh (2021), UN (World Population Prospects 2019), Retrieved from https://statisticstimes.com/demographics/country/bangladesh-demographics. 30 October.

DE-CIX (Deutscher Commercial Internet Exchange. (2020). "Internet Exchange Operator DE-CIX Sees a Strong Change in Internet User Behavior". Press Release, 18 March.

Florance, Ken. (2020). "Reducing Netflix Traffic Where It's Needed While Maintaining the Member Experience. *Innovation* (blog)". Retrieved from https://about.netflix.com/en/news/reducing-netflix-traffic-where-its-needed. 22 March.

Goel, Ashish & Gupta, Latika. (2020). Social Media in the Times of COVID-19, National Library of Medicine, Sep;26(6):220-223. doi: 10.1097/RHU.0000000000001508.

GSMA (GSM Association). (2020). "Keeping Everyone and Everything Connected: How Temporary Access to Spectrum Can Ease Congestion during the COVID-19 Crisis". *Newsroom* (blog), 31 March.

Duan L, Zhu G., (2020). Psychological Interventions for People Affected by the COVID-19 Epidemic. Lancet Psychiatry 2020 ;7:300–2.doi:10.1016/S2215-0366(20)30073-0pmid:http://www.ncbi.nlm.nih.gov/pubmed/32085840

Gruber J., Prinstein M. J., Clark L. A., Rottenberg J., Abramowitz, J.S., Albano, A. M, (2020). Mental health and clinical psychological science in the time of COVID-19: Challenges, opportunities, and a call to action. American Psychologist. 76(3):409-426.

Hossain, Tamanna, Logan, IV, Robert, L. Ugarte, Arjuna, Matsubara, Yoshitomo, Young, Sean and Singh, Sameer. (2020). COVIDLies: Detecting COVID-19 Misinformation on Social Media, Proceedings of the 1st Workshop on NLP for COVID-19 (Part 2) at EMNLP 2020. DOI: 10.18653/v1/2020.nlpcovid19-2.11, Association for Computational Linguistics.

Islam, M. A., Igwe, P. A., Rahman, M., & Saif, A. N. M. (2021). Remote working challenges and solutions: Insights from SMEs in Bangladesh during the COVID-19 pandemic. *International Journal of Quality and Innovation*, *5*(2), 119-140.

Islam, M. S., Sujan M. S. H., Tasnim, R., Ferdous, M. Z., Masud, J.H.B., Kundu, S, Mosaddek, A, S, M., Choudhuri, M.S.K., Kircaburun, K., Griffiths, M.D. (2020), Problematic Internet Use Among Young and Adult Population in Bangladesh: Correlates with Lifestyle and Online Activities During the COVID-19 Pandemic. Addict Behav Rep 12:100311

Islam, R., (2020). COVID-19 Resilient Village in Bangladesh. ReliefWeb, UNICEF, Bangladesh. https:// start netwo rk. org/ news- and- blogs/, covid- 19- resil ient-village- Bangladesh

Islam, M. A., & Aldaihani, F. M. F. (2022). Justification for Adopting Qualitative Research Method, Research Approaches, Sampling Strategy, Sample size, Interview Method, Saturation and Data Analysis. Journal of International Business and Management, 5(1), 01-11.

Kemp, Simon, (2022), "DataReportal – Global Digital Insights", DIGITAL 2022: BANGLADESH Retrieved from https://datareportal.com/reports?author=5576cd58e4b0ba7a870b77fc, 15 February

Li, L. Z., Wang, S. (2020). Prevalence and Predictors of General Psychiatric Disorders and Loneliness During COVID-19 in the United Kingdom. Psychiatry Res 2020;291:113267.

OECD (Organisation for Economic Co-operation and Development). (2020). "Tracking and Tracing COVID: Protecting Privacy and Data while Using Apps and Biometrics". OECD Policy Responses to Coronavirus (COVID-19), OECD, Retrived from https://www.oecd.org/regreform/regulatory-policy/Regulatory-Quality-and-Coronavirus-COVID-19.pdf, Paris.

Roy, D., Tripathy, S., Kar, S., Sharma, N., Verma, S., Kaushal, V. (2020). Study of Knowledge, Attitude, Anxiety & Perceived Mental Healthcare Need in Indian Population During COVID-19 Pandemic. Asian J. Psych., 51, p. 102083, 10.1016/j.ajp.2020.102083

Rovetta, A., Bhagavathula, A. S., (2020), COVID-19-Related Web Search Behaviors and Infodemic Attitudes in Italy: Infodemiological Study, JMIR Publ. Health Surv., 6 (2) , Article e19374, 0.2196/19374

The Daily Star.(2020). "Man left out of relief net dies by suicide in Chattogram,", Retrieved from https://www.thedailystar.net/coronavirus-deadly-new-threat/news/man-left-out-relief-net-diessuicide-chattogram-1893409, 16 April, p.3

The Kaler Kantho. (2020). "Day labourer commits suicide in Naldanga" (in Bangla), Retrieved from https://www.kalerkantho.com/home/printnews/898402/2020-04-13, 13 April,

The Jugantor, (2020). "The young woman committed suicide after losing her job in corona left Posting on Facebook" (in Bangla), Retrieved from https://rb.gy/pmssav 11 Jul, p.5.

Wu, Y., Xie, L., Huang, S., Li, P., Yuan, Z. , Liu, W. (2018). **Using social media to strengthen public awareness of wildlife conservation,** Ocean Coast Manag., 76-83, 10.1016/j.ocecoaman.2017.12.010

Marshal, M. (1994), Understanding Media : The Extensions of Man.

Panahi, oheila. (2015), Impact of Modernization on Development of Adolescents The Media, Culture, Technology, Unique Journal of Pharmaceutical And Biological Sciences, 03(2), 15-22.

Mikami, A., Szwedo, Y., Allen, D. E., Evans, J. P. & Hare A. L. (2010). Adolescent Peer Relationships and Behavior Problems Predict young adults' communication on social networking websites, Developmental Psychology, 46(1), 46-56.

Malik, A., Mahmood, K., & Islam, T. (2021). Understanding the Facebook Users' Behavior towards COVID-19 Information Sharing by Integrating the Theory of Planned Behavior and Gratifications. Information Development, 0(0).SAGE Journals, https://doi.org/10.1177/02666669211049383

Okwudiri, Ekwe , Olaide, Zainab, Cole, Love, Friday Victoria & Peace, Egbeyon. (2021), Influence Of Ncdc Covid-19 SMS Campaign on the Knowledge And Behaviour Of Undergraduates In Samuel Adegboyega University, Ogwa, Edo State, Nigeria, Pandemic In The 21st Century: Multidimensional Approaches, Published by College of Management and Social Sciences Samuel Adegboyega University, Ogwa, Edo State. Nigeria.

Perlman, D. (1982). *Loneliness: A sourcebook of current theory, research and therapy* (Vol. 36). John Wiley & Sons Incorporated.

Samprotik Deshkal. (2023), "Imo: Reasons Why This Messaging App Is So Popular in Bangladesh", Retrieved from https://en.shampratikdeshkal.com/bibidh/news/210114481/imo-reasons-why-this-messaging-app-is-so-popular-in-bangladesh. 09 March.

Seufert, A., Poignée, F., Hobfeld, T. (2022), Pandemic in the digital age: analyzing WhatsApp communication behavior before, during and after the COVID-19 lockdown. Humanities and Social Sciences Communications, Commun 9, 140, Retrieved from https://doi.org/10.1057/s41599-022-01161-0

Shu-Feng, Tsao, Helen, Chen, Therese Tisseverasinghe, Yang Yang, Lianghua Li, Zahid A Butt. (2021), What social media told us in the time of COVID-19: a scoping review. The Lancet Digital Health, Volume 3(3), Pages e175-e194.

Tsao, S. F., Chen, H., Tisseverasinghe, T., Yang, Y., Li, L., & Butt, Z. A. (2021). What social media told us in the time of COVID-19: a scoping review. *The Lancet Digital Health*, *3*(3), e175-e194.

Uyheng, J., & Carley, K. M. (2020). Bots and online hate during the COVID-19 pandemic: case studies in the United States and the Philippines. *Journal of computational social science*, *3*, 445-468.

XML Sitemap (2018), Retrieved from https://www.pewresearch.org/fact-tank/2018/09/05/americans-are-changing-their-relationship-with-facebook/).

Worldometer. (2022). "COVID-19 CORONAVIRUS PANDEMIC" Retrived July 23 2022,from https://www.worldometers.info/coronavirus/

Zhang, Y., Ma, Z. F. (2020). Impact of the COVID-19 Pandemic on Mental Health and Quality of Life Among Local Residents in Liaoning Province, China: A Cross-sectional Study. *Int J Environ Res Public Health*;17:2381. doi:10.3390/ijerph17072381pmid:http://www.ncbi.nlm.nih.gov/pubmed/32244498