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Effectiveness of using Social Media to Raise Public Awareness during the COVID-19 Pandemic in Bangladesh

Basudev Paul [α], Beauty Mondol [σ], Nishat Tarannum [σ], Purabi Matin [ρ] & Md Saeem Sajid Haque [ω]

Abstract- Social media has been one of the most effective and influential forms of communication in providing day-to-day information during the COVID-19 pandemic. The study demonstrates the effectiveness of social media platforms in raising public awareness in Bangladesh during the pandemic. The study employs a quantitative method based on 833 (Male 86.8%; Female 13.2%) valid responses from citizens of Bangladesh, disseminated through an online questionnaire using social media channels. Datasets were analyzed through statistical tools using Microsoft Excel and SPSS version 26 (IBM Corp), e.g., Frequency and Percentage, Descriptive Statistics, Principal Component Analysis (PCA), and Pearson's Correlation Matrix (PCM). Based on the findings, Facebook (78.3%) has been the most used social media platform during the pandemic in Bangladesh. However, statistics of the majority (44.1%) indicate that only 37% of awareness (37%) related posts on social media attract their attention. The study indicates that social media has been essential in raising awareness amongst the majority of the citizens (Mean 4.14), providing updates (Mean 4.05) and accurate (Mean 4.05) information to the masses. Awareness through social media has resulted in citizens becoming highly aware of the necessity of washing hands, maintaining social distance, wearing masks, and learning about vaccination, authenticating the influence of changing citizens' behavior. Although there is a risk of spreading incorrect information via social media, its effective utilization can significantly raise public awareness during a global crisis, such as COVID-19, influencing citizen behavior.

Keywords: social media use, public awareness, citizens, covid-19 pandemic, bangladesh.

I. Introduction

Access to internet connectivity and accessibility has led to social media platforms being one of the most effective and widely used communication tools in the world today (Kaya, 2020). Globally, there were 4.2 billion active social media users and 4.54 billion active internet users as of January 2021 (Statista, 2021). Bangladesh's context shows a similar picture. According to the Bangladesh Telecommunication Regulatory Commission (BTRC)'s reports, the country boasts 116.14 million internet subscribers (Bangladesh Telecommunication Regulatory Commission, 2021). Additionally, as of January 2021, there were 45 million active social media users, according to The Digital 2021 Report (The Digital Report, 2021). Communicating with family members, relatives, colleagues, and friends has been the primary reason for the widespread usage of these platforms, significantly changing the lives of citizens in every aspect (Hossain, S. M., Islam, N. M., Prodhan, R. T. M., 2020). The COVID-19 pandemic has emphasized the power of social media in raising public awareness for citizens (Z. Shah, J. Chu, B. Feng, S. Qaisar, U. Ghani, Z. Hassan, 2019). These days, social media has played a significant role in disseminating news, expert opinions, and updates about the spread. With such a broad scope of responsibility and overall power over information distribution, social media is scrambling to assist in every way it can, including donating to relief efforts, taking steps to prevent fake news, and providing an update to the public. Social media is taking its position in the crisis seriously, and it is constantly conducting new creatives to raise awareness about the urgency of the COVID-19 combat pandemic disinformation (Jena et al., 2020). Social media can play a more effective role in creating public awareness during the crisis period, while governments, INGOs, NGOs, and private sectors can provide the necessary information through social media to raise public awareness using integrated and well-planned communication methods (Kaya, T., Sağsan, M., Medeni, T., Medeni, T. and Yıldız, M., 2020). Due to social media, two-way interaction between stakeholders has replaced the traditional one-way communication between citizens and policymakers (B. Gokalp, N. Karkin, and H.S. alhan, 2020). Policymakers used social media heavily during the COVID-19 pandemic. State Minister of ICT Division, Mr. Zunaid Ahmed Palak MP, Minister of Health and Family Welfare, Mr. Zahid Maleque MP, Director General of the Directorate General of Health Services (DGHS), Prof. Dr. Abul Bashar Mohammad Khurshid Alam, are using social media to disseminate information and interact with the public. These are just a few examples

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from Bangladesh's perspective. As a result, social media is assisting governments, INGOs, NGOs, and private sectors in making behavioral changes as well as making fast decisions, which is bringing good results in raising public awareness of the current crisis (A. Abd-Alrazaq, D. Alhuwail, M. Househ, M. Hamdi, Z. Shah. 2020). According to the existing studies, social media is one of the leading factors in the COVID-19 pandemic. Citizens have been actively using social media for updates about COVID-19 symptoms and prevention strategies, and also the availability of basic needs, including food, drink, and medical equipment (Susumu Cato, Takashi Iida, Kenji Ishida, Asei Ito, Hiroto Katsumata, Kenneth Mori McElwain, Masahiro Shoji., 2021 and Rovetta, A., Bhagavathula, AS., 2020). Due to the use of social media, citizens are becoming more aware than in regular times (Kaya, 2020).

II. Objective

The paper's objective was driven by the problem statement and the significance of the studies. The study's main objective was to discover the effectiveness of using social media to raise public awareness during the COVID-19 pandemic in Bangladesh.

III. Research Questions

A research question is a specific question to which the research aims to respond. It is at the core of systematic examination and assists in defining a clear route for the research process. The study will also provide answers to the following questions:

- Which social media platform has seen the most usage in Bangladesh during the COVID-19 pandemic?
- How has social media played an influential role in the COVID-19 situation?
- Did citizens get updated and accurate information through the use of social media?
- What impact did social media have in raising public awareness during COVID-19?

IV. Literature Review

Tugberk Kaya explored the effects of social media use during the COVID-19 pandemic. This study applied a quantitative approach, and an online questionnaire was used to collect data. He claimed that because people use social media to monitor the latest news and are aware of fake news, using social media does not cause panic or worry (Kaya, 2020). Shoaei and Dastani Dastani looked into how social media was utilized to share opinions, access to healthcare, and distant studies during the pandemic in Iran. Governments and professionals can use social media as a helpful tool to stop the spread of this disease and even in future emergencies (Shoaei and Dastani, 2020). Araz Ramazan Ahmad and Hersh Rasool Murad discovered that social media, particularly Facebook, had a significant impact on how much concern there was about the COVID-19 outbreak in Iraqi Kurdistan. However, depending on a person's gender, age, and education degree, social media fear can take many forms. Five hundred sixteen social media users were sampled for this study, conducted via an online questionnaire, and content analysis was employed to analyze the data (Ahmad and Murad, 2020). Cato et al. assessed the influence of social media use on individual behavior during the early stages of the COVID-19 pandemic in Japan using data from online surveys and the entropy balancing model. They discovered that there are both positive and negative aspects to knowledge sharing on social media (Cato et al., 2021). Sahni and Sharma investigates social media's effects on healthcare professionals and the general public during coronavirus epidemics. However, social media may be a potent instrument for changing people's behavior and advancing individual and societal health if used carefully and judiciously (Sahni and Sharma, 2020). According to Islam et al., innovative social media use improves COVID-19 precautions online, and this important information helps to stop the COVID-19 outbreak in Bangladesh (Islam et al., 2021). In response to the COVID-19 pandemic, M. Kobiruzzaman investigated the impact of social media on disaster management in Bangladesh. He discovered that using social media for citizen journalism, raising public awareness, preserving communication during an emergency, accelerating recovery efforts, and boosting charitable donations are all positive uses. At the same time, its adverse effects include disseminating false and fabricated information about the coronavirus (Kobiruzzaman, 2021). Using online questionnaires, Jena et al. collected data from 200 students and working people and found that 74.2% of students and 25.3% of working people use online platforms for awareness during COVID-19 in India (Jena et al., 2020). Al-Zaman et al. examined the rumors that are frequently spread on Bangladeshi social media. The collected data was examined using the content analysis method. The content analysis method was used to examine the data that had been gathered. According to the findings, social media rumors fall into seven theme-based categories: political, health and education, criminal and human rights, religion, religiopolitical, entertainment, and others. Most health-related rumors are unfavorable and peak during crises like the COVID-19 outbreak (Al-Zaman et al., 2020). Radwan et al. studied how social media affects the spread of COVID-19 panic among primary and secondary school pupils in Gaza, Palestine. A sample of 1067 school students was collected using an online questionnaire and found that social media has a huge impact on panic spreading, with a potential negative impact on their mental health

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and psychological well-being, and the effect of social media panic depends on a student's age and gender (Radwan et al., 2020).

V. Methods

In this study, researchers used a quantitative survey method to collect data from Bangladeshi social media users. The data was collected using a questionnaire written in Bengali and surveyed 833 social media users. The findings were analyzed and tested using Microsoft Excel (Ms.) and SPSS version 26 (IBM Corp). The social media participants took part in a random online survey to see how important it was to use social media to raise public awareness during the COVID-19 pandemic.

a) *Study procedure*

Considering the effectiveness of using social media to raise public awareness during the COVID-19 pandemic in Bangladesh, researchers have used Google Form to prepare the questionnaire and conduct the online survey. The prepared questionnaire, which included an introductory paragraph detailing the study's objective, was then shared with related citizens using the random sampling method via email, Facebook, Messenger, LinkedIn, and WhatsApp. Researchers have also requested to share the Google Form on the CORONAinfo Facebook page of the Aspire to innovate (a2i) Programme, Information and Communication Technology Division to increase participation from all occupations and citizens of all ages. A questionnaire survey was conducted from April 13 to April 20, 2021. A five-point (1-5) scenario-based Likert scale was used to determine if each respondent understands the statements mentioned, ranging from strongly disagree to strongly agree.

b) *Research sample and population*

The target population consisted of general Bangladeshi citizens aged 15 and up. Respondents came from various groups, including government officials, private officials, businessmen, entrepreneurs, farmers, students, housewives, and others. The responses to the survey questionnaires were given on a purely voluntary basis. During the survey, a total of 833 responses were collected. According to the survey results, the male to female ratio was 8.7 (n = 723): 1.3 (n = 110). The percentages of respondents in each age group were 31.6% (15-22 years old), 24% (23-29 years old), 14.3% (30-36 years old), 12.7% (37-43 years old), 8% (44-50 years old), 6% (51-57 years old), 2% (58-64 years old), and 1.3% (>64 years).

c) *Data analysis*

The frequency distribution and percentage of the Microsoft Excel system have been used to analyze the gender, age, division, profession, and reasons for using social media in the COVID-19 pandemic situation of respondents in the study. Datasets were analyzed using statistical methods such as Descriptive Statistics, Principal Component Analysis (PCA), and Pearson's Correlation Coefficient analysis using the statistical package for the SPSS version 26 (IBM Corp). The descriptive statistics (e.g. Mean, Standard error of mean, Standard Deviation, Variance, Skewness, Kurtosis, Minimum, and Maximum) were employed to understand the respondent's effectiveness in using social media to raise public awareness. Principal Component Analysis (PCA) is a population data reduction approach that displays each variable's potentiality and significance level in a large sample size. A Pearson Correlation Matrix (PCM) is used to depict the relationship among the variables of using social media to raise public awareness.

d) *Ethics*

Before the questionnaire filled up, the respondent's consent was acquired, and they maintained their anonymity. All participants were informed of the precise goal of the study before beginning to complete the questionnaire. Any participant could stop the survey at any time, and they could only finish it once. The data were treated with confidentiality and secret. While conducting this study, researchers took into account a variety of formal ethical concerns.

VI. Results and Discussion

Table 1 highlights the demographic data of the respondents, who made up the 833 users who took part in the survey. According to Table 1, respondents come from a variety of age groups, places, and occupational backgrounds. Based on the survey outcomes, the ratio of male to female respondents was 8.7: 1.3 (n = 723; n = 110), while the composition of the age categories was 31.6% (15-22 years old), 24% (23-29 years old), 14.3% (30-36 years old), 12.7% (37-43 years old), 8% (44-50 years old), 6% (51-57 years old), 2% (58-64 years old), and 1.3% (>64 years old), respectively (Table 1). Among the respondents, young people use social media more than older people, with 31.6% of 15–22 year old and 24% of 23–29 year old, respectively. However, 29.5% of participants lived in the Dhaka division, 27.1% in the Chittagong division, 10.6% in Khulna, 8.3% in Rajshahi, 6.2% in Sylhet, 5.8% in Rangpur, 6.8% in Barishal, and 5.6% in Mymensingh. Most of the social media users live in the Dhaka and Chittagong Divisions. Nearly 38.9% of the respondents were mainly students, and they are highly active groups in the Bangladeshi communities and on various social media sites. The remaining 46.2% were from different professions, such as government employees (11.5%), private employees (24.7%), businessmen (8.3%), entrepreneurs (3.4%), farmers (0.8%), housewives (2.2%), and others (10.2%).

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Table 1: Demographic information of the respondents.

Statements	Value	Frequency	Percentage
Sex	Male	723	86.8
	Female	110	13.2
Age	15-22 years	263	31.6
	23-29 years	200	24.0
	30-36 years	119	14.3
	37-43 years	106	12.7
	44-50 years	67	8.0
	51-57 years	50	6.0
	58-64 years	17	2.0
	>64 Years	11	1.3
Division	Dhaka	246	29.5
	Chittagong	226	27.1
	Khulna	88	10.6
	Rajshahi	69	8.3
	Sylhet	52	6.2
	Rangpur	48	5.8
	Barishal	57	6.8
	Mymensingh	47	5.6
Profession	Government Employee	96	11.5
	Private Employee	206	24.7
	Businessman	69	8.3
	Entrepreneur	28	3.4
	Farmer	7	0.8
	Student	324	38.9
	Housewife	18	2.2
	Others	85	10.2

Based on the survey outcomes, Facebook was the most used social media platform in Bangladesh during the COVID-19 pandemic. Table 2 indicates that 78.3% (n: 652) of the respondents frequently use Facebook. However, 4.9% (n: 41) of the respondents use YouTube, 0.1% (n: 1) of the respondents use Twitter, 0.4% (n: 3) of the respondents use Instagram, 2.2% (n: 18) of the respondents use WhatsApp, 0.1% (n: 1) of the respondents use LinkedIn, 0.5% (n: 14) of the respondents use IMO, and 13.6% (n: 113) of the respondents use all of the above social media. In the COVID-19 pandemic situation, the majority of respondents (44.1%, n: 342) indicated that awareness, education, news, service, comics, government instructions, and rumors related to social media posts grab their attention. However, 37% (n: 308) of the respondents noticed awareness posts, 3.6% (n: 30) noticed educational posts, 7.3% (n: 61) noticed news-related posts, 1.9% (n: 16) noticed service-related posts, 0.6% (n: 5) noticed comic-related posts, 7.8% (n: 65) noticed government instructional posts, and 0.7% (n: 6) noticed rumors-related posts. Most (24%, n: 200) of the respondents are spending approximately 2 to 4 hours daily on social media during the COVID-19 pandemic, which is followed by less than 15 minutes (2.6%), 15 to 30 minutes (7.2%), 30 minutes to 1 hour (14.6%), 1 to 2 hours (23.5%), 4 to 6 hours (14.4%), 6 to 8 hours (6.2%), and more than 8 hours (7.3%), as can be seen from the Table 2.

Table 3 indicates the statistics of different statements on the effectiveness of using social media to raise public awareness during the COVID-19 pandemic. The study shows that social media use is important to raise awareness of most of the respondents' lives during the COVID-19 pandemic (S1), with a mean score of 4.14 on the scale of 1-5 (1 indicates strongly disagree to 5 indicates strongly agree). The mean score of the effectiveness of using social media to raise public awareness S2-S7 reaches from 3.90 to 4.00, indicating strongly agree with the statement. Respondents claimed that they used social media in COVID-19 situations and learned about government instructions, vaccination, lockdown, wearing a mask, keeping a social distance from the people, and washing their hands frequently. However, respondents are getting updated and accurate information about COVID-19 using social

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media (S8, S9). The mean score (4.00, 4.05) of the respondents indicates the strength of the states, respectively. In addition, Statement S10 shows that it is difficult for them to get information about COVID-19 in the absence of social media, with a mean score of 3.69 on a scale of 1-5. Fear and panic are spreading among social media users (Rothschild and Fischer, 2020). Similarly, in the discussion on social media, people rely on it to get information and facts regarding COVID-19, but that social media provides some information but not all of the facts (Cellan-Jones, 2020). Statement S11 proves that social media is responsible for the rapid spread of fake information. The respondents' mean score (3.72) reflects the statement's strength. However, social media is playing an effective role in creating public awareness during the COVID-19 pandemic and the mean score is 4.00.

Table 2: Reasons for using social media in COVID-19 pandemic situation and approximately spending time.

Statements	Value	Frequency	Percentage
Most used social media in COVID-19 pandemic situation	Facebook	652	78.3
	YouTube	41	4.9
	Twitter	1	0.1
	Instagram	3	0.4
	WhatsApp	18	2.2
	LinkedIn	1	0.1
	IMO	4	0.5
	All	113	13.6
COVID-19 related social media posts grab attention	Awareness	308	37.0
	Education Related	30	3.6
	News Related	61	7.3
	Service Related	16	1.9
	Comic Related	5	0.6
	Government Instructions	65	7.8
	Rumors	6	0.7
	All	342	41.1
Approximately daily spent time on social media	Less than 15 minutes	22	2.6
	15 to 30 minutes	60	7.2
	30 minutes to 1 hour	122	14.6
	1 to 2 hours	196	23.5
	2 to 4 hours	200	24.0
	4 to 6 hours	120	14.4
	6 to 8 hours	52	6.2
	More than 8 hours	61	7.3

Table 3: Descriptive statistics of different statements of the effectiveness of using social media to raise public awareness.

Statements	Mean	Std. error of mean	Std. Dev.	Variance	Skewness	Kurtosis	Min.	Max.
Importance of using social media to raise public awareness during COVID-19 pandemic (S1)	4.14	0.032	0.916	0.839	-1.408	2.407	1	5
Learned about maintaining social distance from social media (S2)	3.95	0.034	0.975	0.952	-1.249	1.387	1	5
Learned about hand washing from social media (S3)	3.96	0.033	0.966	0.933	-1.305	1.623	1	5
Learned about the use of masks from social media (S4)	3.90	0.035	1.013	1.025	-1.136	0.838	1	5

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Learned about the vaccination from social media (S5)	3.96	0.033	0.940	0.884	-1.256	1.579	1	5
Learned about various Govt. instructions from social media (S6)	4.00	0.031	0.894	0.799	-1.394	2.426	1	5
Learned about the lockdown situation from social media (S7)	3.99	0.031	0.903	0.815	-1.392	2.308	1	5
Get accurate information about COVID-19 using social media (S8)	4.00	0.032	0.920	0.846	-1.212	1.677	1	5
Get updated information about COVID-19 using social media (S9)	4.05	0.030	0.872	0.760	-1.321	2.428	1	5
Difficult to get information about COVID-19 in the absence of social media (S10)	3.69	0.038	1.089	1.187	-0.904	0.164	1	5
Social media is responsible for the rapid spread of fake information (S11)	3.72	0.038	1.093	1.194	-0.864	0.106	1	5
Social media is playing an effective role to create public awareness during COVID-19 pandemic (S12)	4.00	0.029	0.849	0.721	-1.223	2.115	1	5

In this study, the Pearson Correlation Coefficient Matrix (PCCM) is used to depict the relationship among the variables (S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, and S12) of using social media to raise public awareness (Table 4). The correlation between respondents' S8 and S9 has the highest score (0.784) among all variables, while the correlation between S11 and S12 has the lowest score (0.090). The statements between S8 and S9 have a strong significant correlation, indicating that respondents get updated and accurate information via social media during the COVID-19 pandemic, which is highly effective for creating public awareness in their daily lives. Besides, there is a strongly significant correlation between statements S3 and S4, illustrating the relationship between hand washing and mask-wearing, which creates public awareness for most of the respondent's life. Again, a significant encouraging correlation is found within the statements S5, S6, and S7, which creates public awareness during the pandemic situation. However, there is a strong positive relationship between all of the factors.

Table 4: Pearson correlation matrix of different statements of using social media to raise public awareness.

Statements	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12
S1	1.											
S2	.423**	1.										
S3	.346**	.704**	1.									
S4	.347**	.643**	.718**	1.								
S5	.376**	.582**	.653**	.604**	1.							
S6	.380**	.586**	.552**	.619**	.620**	1.						
S7	.352**	.518**	.549**	.568**	.614**	.675**	1.					
S8	.443**	.486**	.507**	.543**	.493**	.557**	.559**	1.				
S9	.417**	.462**	.455**	.510**	.496**	.568**	.543**	.784**	1.			
S10	.267**	.337**	.345**	.395**	.366**	.413**	.419**	.515**	.554**	1.		
S11	.05	.01	.05	.06	.06	.087*	.128**	.03	.070*	.100**	1.	
S12	.441**	.447**	.422**	.474**	.480**	.502**	.453**	.506**	.546**	.407**	.090**	1.

*N = 833. * p < .05; **p<.01.*

*Note: **correlation is significant at the 0.01 level (2-tailed) *correlation is significant at the 0.05 level (2-tailed)*

In this analysis, principal component analysis (PCA) was used to examine the correlation between respondent's perceptions and statements responsible for raising public awareness. PCA was conducted with Varimax rotation and Kaiser Normalization to maximize the sum of the variance of the statement's coefficients, which better describes the potential effectiveness of using social media to enhance public awareness (Bodrud-Doza et al., 2019). Table 6 shows the illustrated statement loadings, as well as the cumulative percentage and variance percentages. PCA yielded a total of 2 factors, or principal components (PCs), which

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account for 59.562% of the variance. In general, the loading score is classified into three categories: strong (>0.75), moderate (0.75-0.50), and weak (0.50-0.30), respectively (Wang et al., 2017).

Table 5: Varimax rotated principal components analysis of different statements.

Statements	Factors	
	1	2
Importance of using social media to raise public awareness during COVID-19 pandemic (S1)	0.434	0.383
Learned about maintaining social distance from social media (S2)	0.833	0.089
Learned about hand washing from social media (S3)	0.855	0.077
Learned about the use of masks from social media (S4)	0.815	0.187
Learned about the vaccination from social media (S5)	0.781	0.207
Learned about various Govt. instructions from social media (S6)	0.723	0.354
Learned about the lockdown situation from social media (S7)	0.670	0.390
Get accurate information about COVID-19 using social media (S8)	0.559	0.602
Get updated information about COVID-19 using social media (S9)	0.506	0.677
Difficult to get information about COVID-19 in the absence of social media (S10)	0.309	0.667
Social media is responsible for the rapid spread of fake information (S11)	-0.191	0.538
Social media is playing an effective role to create public awareness during COVID-19 pandemic (S12)	0.495	0.520
Initial Eigenvalues	6.076	1.072
% of Variance	50.632	8.930
Cumulative %	50.632	59.562
Scale: 1= Strongly disagree, 2= Disagree, 3= Neither agree nor disagree, 4= Agree, 5= Strongly agree		

The first principal component (factor 1) explained 50.632% of the total variance and included a significant level of strong positive loading of the effects of using social media to raise public awareness about hand washing (S3: 0.855), maintaining social distance (S2: 0.833), using masks (S4: 0.815), and learning about vaccination (S5: 0.781); and moderate positive loading of learning about government instructions (S6: 0.723), lockdown situation (S7: 0.670), getting accurate information (S8: 0.559), and getting updated information (S9: 0. 506) (Table 6). From this discussion, it can be said that Bangladeshi citizens are learning about maintaining social distance, hand washing, mask use, lockdown situations, accurate information, and updating information through the use of social media in the current COVID-19 situation, which is playing an effective role in promoting public awareness. However, factor 2 explained 8.930% of the total variance, with moderate positive loading of getting accurate information (S8: 0.602), getting updated information (S9: 0.677), and difficult to get information in the absence of social media (S10: 0.667), the rapid spread of fake information (S11: 0.538), and creating public awareness during the COVID-19 pandemic (S12: 0.520) (Table 4). According to the preceding discussion, citizens have received updated and accurate information on the COVID-19 situation, which has facilitated the creation of public awareness. On the other hand, it has also played a negative role in spreading false information. Based on the socio-economic structure of the country and access to internet facilities, Bangladesh's government, including the DGHS (Directorate General of Health Services), the IEDCR (Institute of Epidemiology, Disease Control and Research), and Aspire to innovate (a2i) Programme, Information, and Communication Technology Division, has issued a national alert and implemented a massive public awareness campaign using traditional media, the internet, and social media to completely engage the citizens in learning about the outbreak's seriousness and their role and duty in reducing COVID-19 severity (Banik et al., 2020).

VII. Conclusions

The current study was conducted when Bangladesh was going through the repulsiveness of the COVID-19 pandemic. The research objective was to determine whether social media plays an effective role in raising public awareness of the COVID-19 situation. Study results show that the level of social media use in the COVID-19 situation is higher than usual. In regular times, when a social media user needs a solid will to like, comment, or share someone else's post, they have constantly acted on someone else's post in COVID-19 situations. Especially in Bangladesh, most citizens have used Facebook at this time. However, they have also used social media like YouTube, Twitter, WhatsApp, IMO, etc. According to the study, the citizens of Dhaka, Chittagong, and Khulna have consistently used social media more. These are the most populated divisions of Bangladesh. In the COVID-19 situation, students have extensively used social media, most of whom are 15–22 years old.

The study results show that social media's use is essential in creating public awareness. In particular,

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social media raises awareness about issues such as hand washing, maintaining physical distance, and wearing a mask, which increases the chances of preventing COVID-19. The Directorate General of Health Services (DGHS), the Aspire to Innovate (a2i) Programme of the Information and Communication Technology Division, and UNICEF, in collaboration with around 35 partner organizations, created the Risk Communication and Community Engagement (RCCE) Pillar, which has played an influential role in providing various types of information through social media. According to the Bangladesh government's far-sighted plan, using social media has encouraged citizens to know about COVID-19 warnings or prohibitions, which can be considered one of the strategies to create public awareness. Social media has also assisted in getting various information about government guidelines and lockdowns, which can effectively deal with any crisis like the COVID-19 epidemic.

According to current research, social media has played an important role in raising public awareness because it's one of the most popular forms for citizens to obtain accurate and up-to-date information about the situation in COVID-19. Citizens have come to know about various immediate issues, such as where to get health care by calling, which hospitals are being tested for COVID-19, where to get treatment for COVID-19, from which center to get the COVID-19 vaccine, and where to get generic medicine, food, or daily necessities, etc. However, excessive use of social media has acted as a catalyst for spreading rumors or fake news in the COVID-19 situation, as evidenced by the study results. In this case, the citizens shared and spread the information on social media without verifying or selecting it. Sometimes they are influenced and spread it on social media, and sometimes they do it out of self-motivation or a sense of well-being, which has created chaos among the citizens across the country. During this crisis, the media has regularly reported various news items to the government and the public, such as diseases, recovery, and deaths. As a result, the general public has been informed about the nature and scale of the pandemic, and policymakers have been given direction (Mondol, B. and Paul, B., 2021). Above all, the creative use of social media in the COVID-19 situation has played a significant role in raising awareness among the citizens of Bangladesh. The study's results suggest that effective use of social media can play an essential role in raising public awareness of any epidemic, such as the COVID-19 situation.

VIII. Study Limitations

This study has several limitations. The study used an online survey method to collect data, and 833 respondents from different Bangladesh districts participated. Because the data is gathered through online survey methods, respondents risk the chance of filling out the forms with whatever they see fit, potentially underestimating the quality of the research. There were also no face-to-face interviews in the study. The field of study would be strengthened even further if qualitative research could be conducted through face-to-face interviews. Despite the current study's limitations, data collected from 833 respondents can be considered pretty standard for a population of social media users.

IX. Declaration of Conflicts of Interest

The authors state that they will have no known competing financial interests or close connections that could appear to have compromised the work described in this article. The authors have given their approval for the final manuscript.

References Références Referencias

1. Kaya, Tugberk. 2020. The changes in the effects of social media use of Cypriots due to COVID-19 pandemic. *Technology in Society*. Volume 63,101380, ISSN 0160-791X. https://doi.org/10.1016/ j.techsoc.2020.101380.
2. Statista. 2021. Global digital population as of January 2021. Retrieved from: https://www.statista.com/statistics/617136/digital-population-worldwide/. Retrieved on: 10 May, 2021.
3. Bangladesh Telecommunication Regulatory Commission. 2021. The total number of Internet Subscribers has reached 116.14 Million at the end of March, 2021. Retrieved from: http://www.btrc.gov.bd/content/internet-subscribers-bangladesh-march-2021. Retrieved on: 10 May, 2021.
4. The Digital Report. (2021, February 11). Retrieved from: https://datareportal.com/reports/digital-2021-bangladesh. Retrieved on: 10 May, 2021.
5. Hossain, S. M., Islam, N. M., Prodhan, R. T. M. 2020. Analyze the Usage of Social Media and Its Effects on Tertiary Level Students Social Life. *Current Research Journal of Social Sciences and Humanities*. 2020 3(2), http://dx.doi.org/10.12944/CRJSSH.3.2.03.
6. Z. Shah, J. Chu, B. Feng, S. Qaisar, U. Ghani, Z. Hassan. 2019. If you care, I care: perceived social support and public engagement via SNSs during crises, *Technology in Society*, Volume 59,101195, ISSN 0160-791X, https://doi.org/10.1016/j.techsoc.2019.101195.
7. Jena, S., Prajapat, S., Madaan, R. 2020 Role of Online Platform in Creating Awareness during COVID-19 (MAY 7, 2020). http://dx.doi.org/10.2139/ssrn.3637378.
8. Kaya, T., Sağsan, M., Medeni, T., Medeni, T. and Yıldız, M. 2020. Qualitative analysis to determine decision-makers' attitudes towards e-government

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services in a De-Facto state. *Journal of Information, Communication and Ethics in Society*, Vol. 18 No. 4, pp. 609-629. https://doi.org/10.1108/JICES-05-2019-0052.

9. B. Gokalp, N. Karkin, H. S. Çalhan. 2020. The political use of social networking sites in Turkey: A systematic literature analysis, in: R. Boateng (Ed.), Handbook of Research on Managing Information Systems in Developing Economies, IGI Global, 2020, pp. 503–521, https://doi.org/10.4018/978-1-7998-2610-1.ch025.
10. Abd-Alrazaq, D. Alhuwail, M. Househ, M. Hamdi, Z. Shah. 2020. Top concerns of tweeters during the COVID-19 pandemic: infoveillance study. J. Med. Internet Res. 22 (4) (2020), e19016, https://doi.org/10.2196/19016.
11. Susumu Cato, Takashi Iida, Kenji Ishida, Asei Ito, Hiroto Katsumata, Kenneth Mori McElwain, Masahiro Shoji. 2021. The bright and dark sides of social media usage during the COVID-19 pandemic: Survey evidence from Japan. *International Journal of Disaster Risk Reduction*. Volume 54, 2021, 102034, ISSN 2212-4209, https://doi.org/10.1016/j.ijdrr.2020.102034.
12. Rovetta, A. and Bhagavathula, AS. 2020. COVID-19-Related Web Search Behaviors and Infodemic Attitudes in Italy: Infodemiological Study. *JMIR Public Health Surveillance.* 20206(2), e19374, doi: 10.2196/19374.
13. Kobiruzzaman, M. 2021. Role of Social Media in Disaster Management in Bangladesh Towards the COVID-19 Pandemic: A Critical Review and Directions. *International Journal of Education and Knowledge Management* (IJEKM) 4(2): 1-14 (2021). Available from: https://www.researchgate.net/publication/350451999_Role_of_Social_Media_in_Disaster_Management_in_Bangladesh_Towards_the_COVID19_Pandemic_A_Critical_Review_and_Directions.
14. Kaya, T. 2020. The changes in the effects of social media use of Cypriots due to COVID-19 pandemic. *Technology in Society* 63 (2020) 101380. Available from: https://www.sciencedirect.com/science/article/pii/S0160791X20303730.
15. Shoaei, M. D. and Dastani, M. 2020. The Role of Social Media During the COVID-19 Crisis: A Narrative Review. *Health Tech Asmnt Act*. 2020 August; 4(1). Available from: file:///C:/Users/hp/Downloads/35-ArticleText-140-2-10-20201010.pdf.
16. Ahmad, A. R. and Murad, H. R. 2020. The Impact of Social Media on Panic During the COVID-19 Pandemic in Iraqi Kurdistan: Online Questionnaire Study. *JOURNAL OF MEDICAL INTERNET RESEARCH*. Res 2020 | vol. 22 | iss. 5 | e19556 | p. 5. Available from: https://www.jmir.org/2020/5/e19556/.
17. Sahni, H. and Sharma, H. 2020. Role of social media during the COVID-19 pandemic: Beneficial, destructive, or reconstructive?. *Int J Acad Med* [serial online] 2020 [cited 2021 May 11]; 6:70-5. Available from: https://www.ijam-web.org/text.asp?2020/6/2/70/287959.
18. Islam, Md M, Islam M. M, Ahmed, F. and Rumana, A. S. 2021. Creative social media use for COVID-19 prevention in Bangladesh: a structural equation modeling approach. *Social Network Analysis and Mining* volume 11, Article number: 38 (2021). Available from: https://link.springer.com/article/10.1007/s13278-021-00744-0.
19. Al-Zaman, M. S., Sultana, M., Ahona, K. T. S., Sife, S. A., Akbar, M. and Sarkar, N. 2020. Social Media Rumors in Bangladesh. Journal of Information Science Theory and Practice. 8(3): 77-90, 2020. Available from: https://www.researchgate.net/publication/342106104_Social_Media_Rumors_in_Bangladesh.
20. Radwan, E, Radwan, A. and Radwan, W. 2020. The role of social media in spreading panic among primary and secondary school students during the COVID-19 pandemic: An online questionnaire study from the Gaza Strip, Palestine. *Heliyon*. Volume 6, Issue 12, December 2020, e05807. Available from: https://www.sciencedirect.com/science/article/pii/S2405844020326505.
21. Rothschild, N. 2020. Coronavirus panic sells as alarmist information flies on social media. 2020. Available from: https://www.axios.com/coronavirus-social-media-b56326b6-ab16-4c8a-bc86-e29b06e5ab2b.html. Retrieved on: 28 June, 2021.
22. Cellan-Jones, R. (14 February, 2020). Tech Tent: Is social media spreading the virus?. 2020. Available from: https://www.bbc.com/news/technology-51510196. Retrieved on: 29 June, 2021.
23. Bodrud-Doza, M., Bhuiyan, M.A.H., Islam, S.M.D., Rahman, M.S., Haque, M.M., Fatema, K.J., Rahman, M.A., 2019. Hydrogeochemical investigation of ground water in Dhaka City of Bangladesh using GIS and multivariate statistical techniques. Groundwater Sustain. Dev. 8, 226–244.
24. Wang, J., Liu, G., Liu, H., Lam, P.K. 2017. Multivariate statistical evaluation of dissolved trace elements and a water quality assessment in the middle reaches of Huaihe River, Anhui, China. Sci. Total Environ. 583, 421-431.
25. Banik, R., Rahman, M., Sikder, T. and Gozal, D. 2020. COVID-19 in Bangladesh: public awareness and insufficient health facilities remain key challenges. *Public Health*. Volume 183, June 2020, Pages 50-51. https://doi.org/10.1016/j.puhe.2020.04.037.
26. Mondol, B. and Paul, B. 2021. Journalism in Bangladesh During the COVID-19 Pandemic: An Overview. *Current Research Journal of Social Sciences and Humanities*. 2021 4(1). Available From: https://bit.ly/39ajLz8.

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