Impact of Media on Mental Health during COVID-19 Period: A Bangladesh Perspective

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Abstract

Background: The COVID-19 outbreak has provided an opportunity to examine the psychological impact of media coverage during a pandemic. This study aimed to understand the media's role in such a situation, especially in the context of a developing country like Bangladesh.

Materials and methods: This descriptive, cross-sectional, web-based survey was conducted in June and July 2020 among the Bangladeshi people. The Google form included sociodemographic, media consumption, and mental status questions from the Bangla Validated Depression, Anxiety and Stress Scale-21 (DASS-21 scale). The results were analyzed with SPSS 26.

Results: Among 536 responses, younger demographics scored higher in all domains of the DASS-21 scale. Social media was more preferred for obtaining information (43.0%) or for recreational purposes(43.8%). 81.3% of respondents believed that media campaign had a significant negative or mixed effect on their mental health. Whereas 56.1% of respondents reported that they were almost always exposed to information about COVID-19. Responders with increased screen time also displayed comparatively higher DASS-21 scores.

Conclusion: Exposure to COVID-19-related information in the media may have a distressing effect on mental health, especially among the younger population. Necessary interventions are required to minimize this negative impact in the future public health crisis.

Key words: COVID-19; Media Use; Mental Health.

Introduction

Media is a socially realized structure or a way to establish communication.[1] It can be divided into two broad sections; traditional media and digital media. The traditional media includes television, radio, FM radio, newspaper (Printed) etc. Digital media comprises online news portals, blogs, YouTube, and social media, like Facebook, Twitter, Instagram, WhatsApp, etc.[2] Among these, social media is the most popular form at the current time with a 64% user increase from 2005 to 2013.[3] Due to the total physical isolation and disruption of social connection caused by the precautionary quarantine measures enforced by many countries during the Coronavirus Disease (COVID-19) pandemic, reliance on the media intensified, resulting in negative health and psychological impacts.[4] Media exposure during a public health crisis can contribute to increased anxiety levels, even symptoms of post-traumatic stress disorder symptoms.[5-12] In a study conducted in China, it was shown that people's reliance on digital media, particularly social media, to obtain information about COVID-19 has increased dramatically and is related to a greater degree of anxiety and depression.[13] Bangladesh has a higher action index than the United States among organizations that use social media.[14] It is plausible to deduce that media exposure during the COVID-19 epidemic may also impact the mental health of the Bangladeshi populace. In the context of COVID-19, however, no research has been conducted in Bangladesh to establish the impact of media on the mental health of the general population. According to a study by Siddika et al., the people of Bangladesh continue to fear the outbreak and are dissatisfied with the preventative measures in place.[15] Consequently, it is essential to appreciate the psyche of the general people during this devastating pandemic. Based on this, this study was conducted to explore the impact of media exposure on mental health in this scenario, especially in the context of a third-world country like Bangladesh.

Materials and methods

It was a descriptive, cross-sectional, web-based study. The protocol was approved by the Ethical Review Committee of Chittagong Medical College. People above 18 years, residing in

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Bangladesh and using any format of media regularly were included after providing their informed online consent. The respondents were selected through convenience sampling. Total responses were collected from June 2020 to July 2020. A total of 536 respondents' data was collected. A Google form of five pages was provided to the participants. The first page contained a detailed description of the purpose and ethical issues of the study. Whenever a person clicked "Yes" to the question regarding consent; only then the next pages were available. The second, third and fourth pages contained a socio-demographic questionnaire, Bangla validated DASS-21 questionnaire and questions regarding media use accordingly. DASS-21 is an excellent tool to evaluate the mental health status of the population and has previously been used to determine the mental health status during the COVID-19 pandemic.[16] The survey consisted of (Yes/No) issues as well as multiple-choice questions. Absolute discretion was maintained during the collection of the data. The aggregated data was integrated into an Excel spreadsheet. Then the data was clarified and analyzed by SPSS (Version 26) using descriptive and graphical presentation.

Results

The proportion of participants represented young adult males aged between 18-24 years (54.9%), with a mean age (± SD) of 27.6 (±8.7). The majority of respondents were students, urban and with family income between 10,000 to 30,000 BDT monthly (1 USD = 110 BDT Approx.) (Table I).

Table I Socio-demographic status of the respondents (n=536)

Variables	n	%	M	SD
Age group (In years)				
≤25	294	54.9		
26-35	156	29.1	27.6	8.7
36-45	55	10.3		
46-55	23	4.3		
>55	8	1.5		
Sex				
Male	310	57.8		
Female	226	42.2		
Habitat				
Rural	37	6.9		

Variables	n	%	M	SD
Semi-Urban	54	10.1		
Urban	445	83.0		
Occupation				
Banker	7	1.3		
Business	16	3.0		
Engineer	17	3.2		
Government Service	7	1.3		
House Wife	14	2.6		
Physician	96	17.9		
Private Service	47	8.8		
Student	314	58.6		
Teacher	16	3.0		
Unemployed	2	0.4		
Monthly income (BDT)*				
<10,000	36	6.7		
10,000- 30,000	172	32.1		
31,000-50,000	167	31.2		
51,000-1,00,000	109	20.3		
>1,00,000	52	9.7		

The distribution of respondents according to their DASS score is shown in Figure 1. The cut-off point is 9 for depression, 7 for anxiety and 14 for stress, as suggested by Lovibond and Lovibond.[17,18] The total instances of depression, anxiety, and stress were found to be 64.9%, 32.6% and 77.1% respectively. Respondents of 18-24 years reported the highest scores in all three subscales of depression (35.3%), anxiety (18.1%) and stress (43.5%). (Figure I)
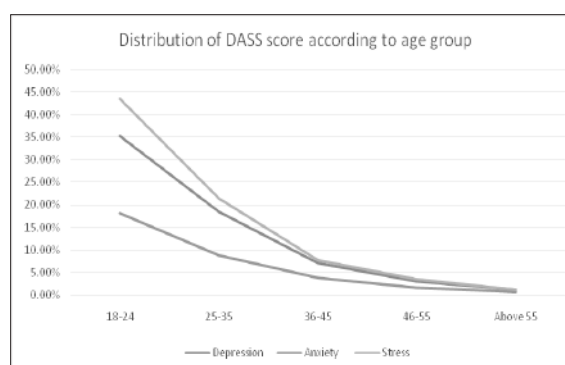
Figure I Distribution of DASS score according to age group (n=536)

The distribution of respondents according to the amount of time they spent consuming various forms of media is shown in Table II. More than half (53.9%) of individuals spent approximately one-sixth of their time consuming various forms of media (Table II).

Table II Time expenditure on consuming media according to age (n=536)

		The age group of the respondents					Total
		<25	25-35	36-45	46-55	> 55	
	≤1hr	5.8%	3.9%	1.9%	0.7%	1.1%	13.4%
Time spent	>1 to <5 hrs	24.1%	18.3%	8.0%	3.2%	0.4%	53.9%
consuming	>5 to <10 hrs	18.7%	5.4%	0.4%	0.2%	0.0%	24.6%
media every	≥10 hrs	6.3%	1.5%	0.0%	0.2%	0.0%	8.0%
day	Total	54.9%	29.1%	10.3%	4.3%	1.5%	100.0%

The source of active COVID-seeking information was observed in Table III. Considering individual sources, television was the most sought-after media of information (41.3%). However, digital media (Online newspapers and and social media) comprised the major source of information when combined (56.5%). Most of the respondents used media for connecting with the latest news (31.9%), while regular government COVID update was the second most (21.9%). Facebook was the most popular form of social media (43.4%) followed by WhatsApp (29.2%) and Instagram (19.2%).

Table III Media sources used for COVID-related information (n=1007)

	Purpose of the media usage (%) n = 1007			
Preferred media for seeking information	Connecting with the latest news (31.9%) n1 = 321	COVID update from government (21.9%) n2 = 221	Recreational use (20.9%) n3 = 210	Passing time without doing anything particular (25.3%) n4 = 255
Newspaper (Print)	8 (2.5%)	5 (2.3%)	1(0.5%)	6 (2.4%)
Television	128 (39.9%)	82 (37.1%)	83 (39.5%)	104 (41.2%)
Newspaper (Online)	44 (13.7%)	37 (16.7%)	33(15.7%)	38 (14.9%)
Social Media	138 (43.0%)	95 (43.0%)	92 (43.8%)	104 (40.8%)
Others	3 (0.9%)	2 (0.9%)	1 (0.5%)	2 (0.8%)
Total	321 (100%)	221 (100%)	210 (100%)	225 (100%)

Approximately 81.3% of the respondents felt as if their attitudes toward media use were negative or mixed, the majority spending 1-5 hours consuming media (Table IV).

Table IV Time spent on media and its subjective effects on mental status (n=536)

	The subjective effect of media use on mental status				Total
Time spent on media	Doesn't affect my mind	Quite negative (Feeling of unease)	Mixed (Both content and unease)	Quite positively (Feeling of content)	
<1hr	2.8%	6.0%	2.4%	2.2%	13.4%
1 to <5 hrs	5.4%	34.0%	10.8%	3.7%	53.9%
5 to <10 hrs	1.3%	15.7%	5.4%	2.2%	24.6%
≥10 hrs	0.2%	5.0%	2.1%	0.7%	8.0%
Total	9.7%	60.6%	20.7%	9.0%	100.0%

Of the 536 responses, 32.8% (n = 176) were classified as "Missing Not At Random" and were excluded from the results for Table V. The majority of the remainder were almost always exposed to COVID-related information (56.1%).

Table V Duration of media use and frequency of COVID-related information (n=360)

Time spent on media	Frequency of COVID-related information				Total
	Never	Sometimes	Often	Almost always	
<1 hr	3.1%	6.1%	0.0%	5.6%	14.7%
1 to <5hrs	11.1%	8.1%	2.8%	30.6%	52.5%
5 to <10hrs	5.0%	4.2%	0.8%	14.7%	24.7%
≥ 10 hrs	2.2%	0.3%	0.3%	5.3%	8.1%
Total	21.4%	18.6%	3.9%	56.1%	100.0%

176 (32.8 %) of the 536 participants did not respond and were excluded from Table VI. The majority of the remainder (33.6%) who had quite negative emotions regarding media use were almost always exposed to COVID-related information through the media (Table VI).

Table VI The effect of COVID information frequency in media on the subjective mental status (n=536)

The subjective effect of media use on mental status	COVID information frequency				Total
	Never	Sometimes	Often	Almost always	
Doesn't affect my mind	0.8%	3.9%	0.3%	3.9%	8.9%
Quite negative (Feeling of unease)	14.2%	9.7%	3.1%	33.6%	60.6%
Mixed (Both content and unease)	5.8%	1.9%	0.6%	13.3%	21.7%
Quite positively (Feeling of content)	0.6%	3.1%	0.0%	5.3%	8.9%
Total	21.4%	18.6%	3.9%	56.1%	100.0%

Discussion

This was one of the first studies to look at the effect of media on mental health from a Bangladeshi perspective during the COVID pandemic as per researchers' knowledge. The majority (54.9 %) of respondents were young adults aged 18 to 24, with a mean age of 27.61 which is relatively the same as several other online studies conducted during COVID.[19-21] This might be because of having a higher frequency of a younger demographic in online studies. It is noteworthy that age is a strong predictor of mental discomfort, with an increased risk of depression, anxiety, and stress 3 to 4.5 times among less than or equal 22-year-old students.[22]

A high prevalence of depression (64.90%), anxiety (32.60%), and stress (77.10%) among the respondents was discovered during the study period compared to some other similar studies in Bangladesh; where the prevalence of depression, anxiety, and stress during COVID period ranged from 46.92 to 82.4%, 26.6 to 96.82 %, and 28.5 to 70.1 %, respectively.[22-24] The main factor behind this variability might be the use of different scales in different studies. Moreover, this might be multifactorial, including differences in socio-demographic differences, social isolation, and financial difficulties during lockdown, perception, and fear of COVID-19 infection, lack of or misleading COVID-related information among others.[21,24,25]

Regarding exposure to various media outlets, television was the most often used medium (41%). But users predominantly got information including engagement with news and COVID updates via social media. This could be explained by the fact that social media platforms such as Facebook groups enable wider access to homogeneous cyber environments with less accountability for sharing and exposing material, whereas traditional media such as television does not. As a result, people are frequently exposed to a more concentrated set of identical information. This finding may be corroborated by other Bangladeshi studies that revealed a large rise in social media usage and reliance on digital media, namely Facebook, for information during the lockdown.[21,26] This study also found Facebook as the most popular social media site (43.4 %), followed by WhatsApp (29.2%) and Instagram (19.2%) Additionally, these findings corroborate a study conducted by Mustapha et al. on information overload associated with COVID. The study discovered that the majority of respondents (64.2%) learned about COVID through a combination of social and traditional media, with the majority receiving news daily (63.7%).[27] Social media users were found to be more likely to be exposed to COVID-19 information. Taken together, these data demonstrate the increasing reliability of social media as a source of information.

Those aged 18-24 were the most involved and more than half of the respondents (53.9%) spent approximately one-sixth of their day consuming media. The majority of the respondents (81.3%) subjectively stated that media exposure had a mixed to quite a negative effect on their mental state, especially among those who spend 1-5 hours daily consuming media. This is relatable with some studies in the context of Bangladesh where an increase in the frequency of mental distress with media exposure, especially users spending more than 2 hours every day consuming media, was found.[20,22] This might be because of the detrimental effect of exposure to disasters and mass traumatic events on the consumer's mental health, like depression, secondary trauma, and stress, social isolation among others.[20,22,24,28-30]

The frequency of COVID-related news and the amount of time spent in the media were then evaluated to establish the extent of COVID-related information in the media. 56.1% of respondents stated that they were almost always exposed to media coverage regarding COVID. Furthermore, when we matched the frequency of exposure to COVID-related information to the frequency of social media usage at various times of day, the majority of respondents consistently stated that they were often exposed to COVID-related material. The increasing trend of social media use and overflow of COVID-related material may contribute to this high level of exposure.[26,27]

Nearly half of respondents (46.9%) who reported having quite negative and mixed emotions were almost always exposed to COVID-related information. This might be due to the association between negative COVID-related information, like fake news, photos, and videos of high-COVID-infected countries, and infection numbers with a greater negative mental impact, such as depression, stress etc.[19,24] We can infer from these findings that the majority of respondents experience negative to mixed emotions as a result of media exposure, which corresponds to the frequency of exposure. The data suggest that exposure to COVID-related information through media may play a substantial role, though there might be other multiple factors.

Limitations

Despite the measures taken, there are some limitations to the study. Like other web-based studies, the demographics were limited and could not include those without internet access. Again, the study was cross-sectional, examining the psychological impact of media on mental health only during the study period, and thus may not be generalizable.

Conclusion

There were increased instances of higher anxiety, depression, and stress levels among the younger population who were the most frequent users of various forms of media, especially social media during the COVID-19 pandemic. Increased media consumption leads to greater exposure to COVID-related information, which may have subjectively unfavorable effects on the mental status of consumers.

Recommendations

This study highlighted the mental state of the Bangladeshi populace during the pandemic and the nature of their media usage, notably social media. The findings of this study will aid in the development of future longitudinal studies that will further investigate the psychological phenomenon. However, in-depth studies should be undertaken to determine the possible consequences of media usage on mental health among the general population and develop possible interventions to mitigate them

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Contribution of authors

PA-Conception, design, acquisition of data, interpretation of data, data analysis, drafting, and final approval.
SBK-Acquisition of data, data analysis, drafting, and final approval.
FC-Acquisition of data, data analysis, drafting, and final approval.
SS-Acquisition of data, drafting, and final approval.

Disclosure

All the authors declared no competing interest.

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