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Role of Mass Media as Changing Agent in Behavioral Change Amid Coronavirus Crisis: A Study on Bangladesh Perspective

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Role of Mass Media as Changing Agent in Behavioral Change Amid Coronavirus Crisis: A Study on Bangladesh Perspective

Hasib Shah Aman ^α & Nusrat Jahan ^ο

Abstract- The Covid-19 pandemic has caused the biggest humanitarian crisis of the 21st century. In an overpopulated country like Bangladesh, it is even tougher to fight the situation. The government and different stakeholders are relentlessly encouraging people to maintain the necessary health care measures where the mass media is playing the supporting role. The research examines how mass media has been influencing in the behavioral change during this pandemic and played the role of "changing agent". The research is designed on mixed method, including content analysis and survey. This study analyses 191 health awareness-based news from three different print newspapers and two television channels' prime hour bulletins within the timeline of 1st March to 31st March. Also, a survey questionnaire was set with close-ended questions to accumulate people's feedback. Using the "The Behaviorism Theory", this study explains, how all behaviors are acquired through conditioning. Throughout this theoretical lens, this research finds out how media worked as an external stimulus in changing people's behavior pattern. The findings suggest that media had positive impact over its audience which inspired people to practice safety measurements in such crisis.

Keywords: coronavirus crisis, behavioral change, changing agent, mass media, bangladesh.

I. INTRODUCTION

Covid-19 crisis has just put a pause button on the world in the year 2020. The World Health Organization announced Corona Virus crisis as global pandemic on March 11, 2020 (The Washington Post, 2020). Bangladesh confirmed the first case of corona virus on March 8, 2020 (The Business Standard, 2020). Immediately after 10 days Bangladesh reported her first death case (The Daily Star, 2020). In the meantime, the community transmission had already begun, making the crisis running quite ugly. As a result, Bangladesh imposed total lockdown from March 26, 2020. (Anadolu Agency, 2020). Corona crisis brought psychological and socio-economical pressure as people were losing lives and livelihood (Bodrud-Doza, et al. 2020). To save the country from corona virus only lockdown was not enough. People needed to bring urgent changes in the behavior pattern towards

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preparedness. Corona virus crisis required safety measures; generally mass people were not fond of those. So, this was quite challenging for Bangladesh to adapt these changes. Different stakeholders like government, health agencies and mainstream media played important roles here. Media not only transmitted values but also worked like a bridge between government and people of Bangladesh. When online platforms were accused with untruthfulness (The Business Standard, 2020), Bangladeshi mainstream media tried to put their best forward. News like "Fact vs. Fear" gave mass people idea about what to believe and what not in this infodemic (The Daily Star, 2020). Bangladesh witnessed a massive change in her people's behavior in this pandemic. People are now tending to follow safety routine more than ever. For example, the garments factories are now maintaining proper safety guideline (The Business Standard, 2020).

The inspiration of this paper came from this rapid change in people's behavior. As government has shut down various online news portals for spreading rumors (The Business Standard, 2020), this study finds how mainstream media played the role of changing agent towards people's behavior shift in preparedness. "Change Agent" refers to, "a person or thing that encourages people to change their behavior or opinions" (The Cambridge English Dictionary, n.d).

II. LITERATURE REVIEW

A study (Jesus, 2012) suggests that the ample amount of health-related information promulgated by the mass media has an imperative connection with building health awareness among people. Irrespective of the health literacy and language barrier, mass media generated health communication is influential to the media-consumers. Both the audiences who are actively seeking health-advice and who are passively receiving the information are getting benefitted from such communication. The study also says that, mass media can be an auxiliary force to reduce health inequalities.

(Tahir, 2018) "HIV/AIDS Awareness and Electronic Media" was a study conducted in Pakistan, where the relation among HIV awareness and education, ethnicity and electronic media was investigated. The study suggests that, the educated are more aware of

HIV but there was no findings of proper connection with ethnicity. Also, the people who had more exposure to the electronic media, precisely television and radio, had more knowledge on this issue than the people of less or no exposure to the electronic media. The study indicates a positive association between electronic media message and growing the health awareness.

(Kaur, Ghosh, Bhatia, 2014) the study gives analysis on SIRS epidemic model incorporating the effects of the awareness programs by media. Here the targeted population is assigned to compartments with labels S, I, R, and S. They were investigated along with the impact of the media coverage on the spread and control of infectious diseases. The study suggests, mass media awareness programs have a positive impact towards reducing epidemic risks. The study also showed if mass media increases the coverage of awareness programs, there is a significant decline in the number of infective in the population.

(Karasneh et al. 2020) did a study that evaluated the role of media in shaping perception of knowledge, awareness risk perceptions and communication practices in COVID-19 among pharmacists. The researchers set a questionnaire to identify the targeted pharmacists' knowledge level about disease awareness and media consumption. They suggest that there are effects which media creates on mental wellbeing during this pandemic. It is found pharmacists had good level of Covid-19 knowledge and high-risk perception which was influenced by the media.

To understand the public perception about the measures taken in Bangladesh, a study was conduct (Siddiqa and Islam, 2020). The data from the study shows that the responses from government were relatively late and there was a lack of communication among the ministries. The study suggests several solutions to those problems, where they urged for all the stakeholders to work in cooperation, where media could play an important role.

Since Bangladesh is a densely populated country, it is important to have adequate knowledge, positive attitude and to practice the preventive behaviors to prevent the transmission of Corona Virus. The study (Hossain et al. 2020) shows that all three of the KAP were found sufficient. The study also measured the level of fear. Although the fear score from the majority was high, more precisely among the women and elderly adults, the feared ones were more likely to maintain the preventive steps more.

(Boberg et al. 2020) have done research on the role play of alternative media in corona crisis. They examined German news media pages on Facebook and took data from beginning of January to mid-March 2020. Findings suggests, though alternative media featured rumors about Covid-19 but did not spread direct lies. These media represented news in pandemic populism

structure. The newspapers published overly critical and anti-systematic messages, which contributed a distrusting worldview.

(Islam et al. 2020) here the researchers examined covid-19 related rumors circulating on online platforms. They collected data from December 31, 2019 to April 04, 2020 and through content analysis, they identified 2,311 reports carrying misinformation around the world. They found this misinformation has severe implication on public health and suggested government and other agencies to publish correct and context-appropriate information. This study is only focused on online platforms; it did not examine the offline channels.

(Hoque and Siddique, 2020) the research is about media response on corona crisis in Bangladesh. Researchers analyzed 744 articles from two prominent Bangladeshi newspapers to identify news coverage pattern. The study finds both newspapers focused on "fear and threat" and attributed covid-19 as "national crisis". People's fear on livelihood and health were shaped when two of this prominent newspaper frequently mentioned about the "death rate" and "economic crisis" in their news.

According to a study (Hossain et al. 2020), the anxiety rate in Bangladesh has seen a spike during the COVID-19 pandemic. The rate is 10 times higher than that of in 2019. The study suggests that social media exposure is the key factor for this increased rate of anxiety. The study recommended the government to monitor actively to contain misinformation, the authorities to broadcast positive information in both social and electronic media, and finally the well-being of mental health should be paid more attention.

The literature review shows, research on media impact on health crisis and contagious diseases had already done in the past. In Corona pandemic many researchers have focused on alternative media impact over mass people. Researches even proved that people adapted changes in their knowledge, practice, and attitude. But there have been no studies on Bangladeshi mainstream/offline media impact on people's behavior shift. As it is clear that mass people have changed their behavior pattern, in this study researchers will see, if mainstream/offline media had played the role of changing agent here.

III. THEORETICAL FRAMEWORK

Researchers find 'Behaviorism' theory best suited for the nature of this study. This study investigates how mass media changed people's behavior. Behaviorism theory refers to psychological approach which states that all behaviors are learnt or acquired through conditioning. According to McLeod (2017), "The approach is only concerned with observable stimulus-response behaviors, and states all behaviors are learned through interaction with the environment".

The changes in people's behavior during this pandemic are quite evident and observable, such as, people wearing mask, maintaining three-meter distance with one another, home quarantine, frequently using disinfectants etc.

The idea of Behaviorism came in 1913 after John Watson published the article, 'Psychology as the behaviorist views it'.

The theory says there is external stimulus that does the conditioning. Behaviorism comprises different forms of conditioning, among which the operant conditioning is relatable in this study. Operant conditioning basically focuses on the relationship between behaviors and their consequences. Behaviors have consequences. These consequences in return influence behaviors. There are reinforcements in this process that increase desired behaviors. The reinforcements are either positive or negative. According to McLeod (2018), "Operant conditioning is a method of learning that occurs through rewards and punishments for behavior".

In this study, the way how mass media changed people's behaviors stems entirely from the ideas of Behaviorism. The key findings of the study will be discussed under the framework of this theory and will answer how media was the changing agent in context of Bangladesh.

IV. RESEARCH OBJECTIVE AND QUESTION

The objective of this research is to explore the media role which brought changes in people's behavior during corona pandemic.

To establish the research objective, considerable research question is:

How has Mass Media played the role of changing agent in the behavioral shift during corona crisis in Bangladesh?

To find the answer, researchers investigated three more sub-questions. These are:

- i. Are the people practicing necessary healthcare measures?
- ii. How mass media was the external stimuli?
- iii. How media has done the conditioning?

V. METHODOLOGY

Containing a mixed method, this research conducted both content analysis and survey analysis method. In content analysis, the data collected from the sample-contents were analyzed in both quantitative and qualitative approaches.

For the quantitative content analysis, researchers used Statistical analysis Package for the Social Sciences (SPSS) to analyze the data of news timeline, news size, and reporters and news type.

This research studies 10 news through qualitative approach to understand the nature of the

news- samples, as this is the 5% of the sample size (191). Coding sheet has been used which contains the following elements: Headline, Information about Coronavirus, Social Distancing/Lockdown, Sanitization, Mask, Keywords, Remarks. To study the news, the researchers followed the KAP (knowledge, Attitude and Practice) model, which helps to understand the characteristics of the news published.

As the study demands for survey-analysis, the researchers have surveyed and collected data from 204 participants through a close-ended questionnaire made in Google-form. The form was distributed among the people, who are aged in between 16 to 35, as they are more likely to be exposed to different forms of media.

VI. SAMPLING

Researchers have chosen five mainstream media in their sample. Among them, there are three newspapers (printed version): Prothom Alo, Samakal and Daily Star, and two television channels: Somoy Television and Channel I. Prothom Alo is chosen for being the most read vernacular newspaper in Bangladesh (Prothom Alo, 2018). Samakal was taken in the sample as it is a popular newspaper in Bangladesh. The Daily Star is in the sample list as it is the most circulated English daily in the country. Somoy Television is in this study as a dedicated news channel and Channel I was taken as a random television channel which telecasts all sorts of programs.

To conduct the study, researchers followed purposive sampling method, picked up only the news which are related to Coronavirus health care measures and awareness. The timeline of this study was from March 1 to March 31.

In-total 191 news published in that timeline by the five media were taken to analyze. For the validity of the sampling, a table and a bar chart are given below.



Table 1.1: News sample from the media

Media		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Prothom Alo	56	29.3	29.3	29.3
	Samakal	42	22.0	22.0	51.3
	Daily Star	44	23.0	23.0	74.3
	Somoy Television	25	13.1	13.1	87.4
	Channel I	24	12.6	12.6	100.0
Total		191	100.0	100.0	

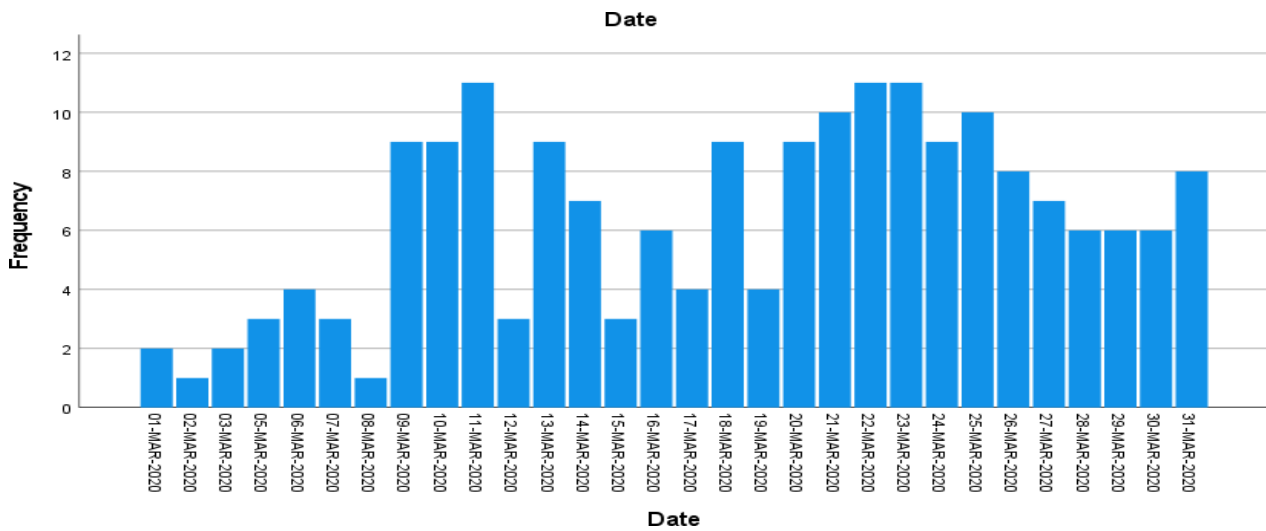


Chart 1.1: Timeline of the publication of the sample-news

VII. DATA REPRESENTATION AND ANALYSIS

Here the data is represented in three different methods: Quality analysis, Quantity analysis, and Survey analysis.

Quantitative Analysis

In the quantitative analysis part, the researchers analyzed the data in 3 steps:

- i. Timeline analysis.
- ii. News size.
- iii. Reporters and News type.

Timeline Analysis: March was divided into 3 periods of time (March 1-10, March 11-20, and March 21-31) to understand the timeline frequency of the news published by the media.

Table 2.1: News published in the three-phases

Date		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	March (1-10)	34	17.8	17.8	17.8
	March (11-20)	65	34.0	34.0	51.8
	March (21-31)	92	48.2	48.2	100.0
Total		191	100.0	100.0	

The data says, in the first 10 days (March 1-10), there were 34 news published by the 5 media houses, focusing on Coronavirus health-related issues, which is 17.8% of the total sample size. There was an increase of publishing news from the middle of the March. As a

result, the total number of news published by the media was 65, during the period of March 11-20, which is 34% of the sample size, and almost double to that of March 1-10.

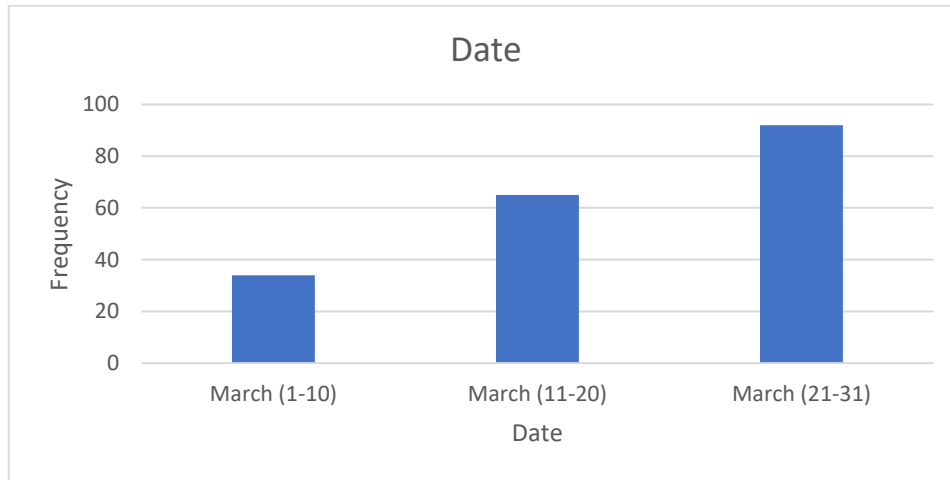


Chart 2.1: Timeline of the news publication

The hike of the publication of news did not stop, rather increased even more in the third phase of March 21-31. In-total 92 news was published, which was 48.2% of total.

In March, the first case of Coronavirus was detected, and the number of cases was also increasing. As it was new in Bangladesh, people were not much aware of the necessary measures. And health-related issues were one of the biggest concerns at that time.

These data presented here indicates that 'health-related' news was getting more coverage with time, and the numbers of the publications of that news increased significantly. This was a continuous effort by mass media to make people aware and provide the proper knowledge related to health issues and safety measures.

News Type Analysis: The study analyses the news size for newspaper and television individually to understand the profundness of the news.

There was a total of 142 healthcare related news published in the three newspapers, and 49 news telecast on the two television channels throughout the month.

In newspaper, most of news was 'more than 500 words', which was 37.3% of the newspaper news sample size. The second most number of news was of '401-500 words', and this was 20.4%. There were only 2 news (1.4%) less than 100 words and 13 news (9.2%) in between (101-200) words.

Table 2.2: Newspaper news size

		words			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 100 words	2	1.4	1.4	1.4
	101-200 words	13	9.2	9.2	10.6
	201-300 words	25	17.6	17.6	28.2
	301-400 words	20	14.1	14.1	42.3
	401-500 words	29	20.4	20.4	62.7
	more than 500 words	53	37.3	37.3	100.0
Total		142	100.0	100.0	

In the television, in total 49 healthcare-based news was telecast by the two channels in March. The size of the television news was measured by counting seconds.

Total 36.7% of the television news was in between 120-150 seconds, which is 2 to 2:30 minutes. Then, the second most numbers of news were in 151-180 seconds category (2:30 to 3 minutes) with 24.5% of

the total number of television news. On the other hand, only 4.1% of the news was less than 60 seconds or one minute.

Table 2.3: Television news size

		seconds			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 60 seconds	2	4.1	4.1	4.1
	61-90 seconds	3	6.1	6.1	10.2
	91-120 seconds	8	16.3	16.3	26.5
	121- 150 seconds	18	36.7	36.7	63.3
	151-180 seconds	12	24.5	24.5	87.8
	more than 180 seconds	6	12.2	12.2	100.0
	Total	49	100.0	100.0	

These data suggest that the news, whether published on newspaper or telecast on television, were written, and explained carefully as their lengths are quite high. It also indicates that, news was not left by only explaining the surface level and they had been given proper attention while writing or reporting.

Reporters and News type: This study, in the quantitative analysis section, finally analyses the reporters' background for newspapers and news type for television to understand, how much importance was given while creating news content.

Among the 142 news from newspapers, 40.1% (total 57) of the news were written by experts or found in the editorial section. Doctors, health experts, researchers, analysts and the people with expertise on their respective fields were regarded as experts. The news reported by the staff correspondents stands next to it with 21.8% (total 31), while 21.1% (total 30) were byline news.

Table 2.4: Reporters type in newspaper

		Reporter_type			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Staff Correspondent	31	21.8	21.8	21.8
	Desk Reporter	24	16.9	16.9	38.7
	Byline	30	21.1	21.1	59.9
	Expert and Editorial	57	40.1	40.1	100.0
	Total	142	100.0	100.0	

Analyzing the television news type, the researchers found that, 79.8% of the news telecast on television was package news. In-total 8 news (16.3%) was IV+ OOV+ SOT news and only 2 were from other sections.

Table 2.5: Television news type

		News_type			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Package	39	79.6	79.6	79.6
	IV+ OOV+ SOT	8	16.3	16.3	95.9
	IV+ OOV	1	2.0	2.0	98.0
	IV+ SOT	1	2.0	2.0	100.0
	Total	49	100.0	100.0	

Analyzing the reporters' type, over 60% (61.2% to be exact) of the news from newspaper were written by the experts, editors, and byline reporters, while on television 79.6% news had the elements what makes them package news. These data showed here, suggest that the news contents were mostly fact-based and carries the amount of credibility they need in this critical situation.

Qualitative analysis

In qualitative analysis, researchers have chosen 10 news which explains how the necessary knowledge was built through the news contents, representation of

people's attitude in the news, and news contents which demonstrate if people are practicing the preventive behavior.

In the coding sheet, the variables were headlines, what information about corona virus was given, what was mentioned about social distancing and lockdown, sanitization process, encouragement of using mask and the keywords of those news. Remarks were added to describe, to which step of KAP the news belonged to, and an in-depth analysis to understand the whole idea of the news.

Knowledge

Table 3.1

Measurements	News- 01	Media &Date
Headline	ভয় যমেন আশা ও য়ে মন (There is hope as much as fear)	Samakal March 05, 2020
Information about Coronavirus	The news started with idea on Mers and Sars, and precisely the virus Sars-Cov-02 responsible for Covid-19. Also gave the idea about the animals which are responsible for the contagion.	
Social Distancing/ Lockdown	Strictly advising for maintaining social distancing and home isolation.	
Sanitization	Discussed, how proper sanitization can save from getting infected.	
Mask	Encouraging for using mask and using tissue while sneezing or coughing.	
Keywords	Coronavirus, symptoms, preventive behaviors.	
Remarks	Providing information which leads the readers to enhance their knowledge on Coronavirus.	

What is Coronavirus or Covid-19? - was the starting line of the news which clearly indicated to which direction the news is going to. In the following paragraph the whereabouts of Coronavirus and the

responsible virus and animals were revealed. Then the news discussed the contagion and mortality rate with its severity. The rest of the news conveyed the behaviors that could be fatal, along with the solutions to them.

Table 3.2

Measurements	News- 02	Media & Date
Headline	Covid-19: Facts vs fear	Daily Star March 06, 2020
Information about Corona Virus	Introduction with a large family of similar viruses (MERS, SARS), how it transmits, symptoms, treatments.	
Social distance/Lockdown	Maintain a distance of at least three feet from someone who is coughing or sneezing, stay home if feel unwell.	
Sanitization	Wash hands frequently and regularly	
Mask	Cover face during coughing or sneezing	
Keywords	Covid-19, symptoms, treatments, prevent	
Remarks	Gave readers knowledge about Covid-19 and guidance to deal this critical situation.	

The news focused to introduce the readers with the new virus named Covid-19. It starts with giving primary knowledge about Covid-19 and later focused on telling people how to be safe from this. The news gave

details about the necessary health measurements. All together this report was enough to enhance knowledge about Corona Virus itself and about prevention.

Table 3.3

Measurements	News- 03	Media & Date
Headline	কোয়ারেন্টাইনে থাকার পরামর্শ অমান্য করলে আইনের কঠোর প্রয়োগ, হোমকোয়ারেন্টাইনের উপর জোর দিচ্ছেন বিশেষজ্ঞরা (Strict laws to be applied for violation of quarantine, experts emphasizing on home quarantine)	Channel I March 13, 2020
Information about Coronavirus	The director of IEDCR suggested to call IEDCR hotline for proper information on Corona virus.	
Social Distancing/ Lockdown	Suggesting strong home quarantine for those who returned to Bangladesh from corona-affected countries.	
Sanitization	No specific information was given about sanitization.	
Mask	No specific direction was given about using mask.	
Keywords	IEDCR, government laws, infectious diseases, home quarantine, returnee immigrants.	
Remarks	The focus of this news was enhancing knowledge about home quarantine and the punishment if not maintained properly.	

The news was telecast when corona virus was very new to Bangladesh but has already spread in other countries drastically. So, many remittance workers were returning to the country. As a result, it was very important to give them the proper knowledge on maintaining home

quarantine, which this news did. Since some returnees were not maintaining home isolation, IEDCR warned that there will be some strict laws applied on them. The news was solely focused on home quarantine issue and the steep consequence if not maintained so.

Attitude

Table 3.4

Measurements	News- 04	Media & Date
Headline	Wash hands frequently, avoid gatherings	Daily Star March 11, 2020
Information about Corona Virus	First corona virus case in Bangladesh	
Social distance/ Lockdown	Avoid mingling with persons infected with the virus	
Sanitization	Clean hands with soap and water	
Mask	While coughing or sneezing cover mouth and nose with a bent elbow or tissue paper.	
Keywords	Government, school-college, advice	
Remarks	Influences toward changing attitudes of students to deal with the virus.	

The news advises school, college students to bring changes in their attitudes in order to be safe from the pandemic. The whole news is written to inform readers how they can keep their hands clean how they will cough or sneeze in public place and why it is important to keep social distance.

As a whole, the news kept pushing the readers to bring some emergency changes in day to day life attitude, to cope up with the uncertain situation.

Table- 3.5

Measurements	News- 05	Media & Date
Headline	করোনা নিয়ে আতঙ্ক নয় (Not to panic about corona)	Prothom Alo March 13, 2020
Information about Corona virus	Rather than spreading fear, the news focused on easing people about corona virus.	
Social Distancing / Lockdown	Suggestions given for avoiding mass-gatherings.	
Sanitization	Focused on sanitizing hand and every materials or daily usage products.	
Mask	Emphasized much on using mask if there are symptoms.	
Keywords	Coronavirus, immunity, preventive measures, diet.	
Remarks	Emphasizing on growing positive attitudes.	

The main focal point of this news was to spreading positivity amid the fearful situation. The doctor who wrote the column, with making people aware, giving hope and suggesting developing positive attitudes and behaviors, which could save people from both mental and physical illness.

Table 3.6

Measurements	News- 06	Media & Date
Headline	খুব জরুরি না হলে বের হবে না (Do not go out unless emergency)	Prothom Alo March 22, 2020
Information about Corona Virus	Describes present situation of corona crisis and potential risks	
Social distance/ Lockdown	Those who came from affected countries have to be in home quarantine; in general, everyone will keep distance at least 3 feet from each other.	
Sanitization	Frequently wash hands	
Mask	Wear mask while going outside	
Keywords	Mask, public transport, fever, hospital	
Remarks	Influences to change attitudes of mass people to deal with the virus.	

The news states our attitude code in this pandemic. It starts with stating the urgency of home quarantine. The news stretches the attitude code by influencing the readers to use masks. It states the necessary measurements those have to take while travelling in public transport. Later it gives explanation how we can follow sanitization rule, what should a person do if he/she has fever. The news discourages to go to hospital for regular checkups. All together the news pushes for the new attitude code.

Table 3.7

Measurements	News- 07	Media & Date
Headline	মহামারিতে আমাদের করণীয় (To do's during pandemic)	Samakal March 27, 2020
Information about Coronavirus	Mentioned the serious conditions arrived due to the pandemic.	
Social Distancing/ Lockdown	Stated the directives given by the Quran and the Prophet Muhammad (SM) during plagues and pandemics.	
Sanitization	The proper hygiene rules suggested by Islam which can be impactful in this pandemic.	

Mask	Discussed about covering mouth what Islam suggested while coughing and sneezing.	
Keywords	Coronavirus, Quran, Islam, healthcare behaviors.	
Remarks	Generating the positive attitudes during the Coronavirus pandemic in content of Islam.	

This news was written from the perspective of the cautionary steps suggested by Islam during plagues and pandemic. Also, the news made a bridge between the steps, the doctors are suggesting to follow and what Islam suggested. Here, all the cautionary steps and

positive attitudes were discussed and tried to be made justified by the messages of Islam. As a country with majority of the followers of Islam, this news, from the context of Islam, suggest the approval of positive attitudes and the behaviors to be adapted.

Practice

Table 3.8

Measurements	News- 08	Media & Date
Headline	সাধারণ মানুষের মাঝে সচেতনতা দেখা যাচ্ছে (Awareness is being seen among mass people)	Somoy Television March 09, 2020.
Information about Corona Virus	Current situation of corona virus	
Social distance/ Lockdown	Less gathering on the roads and public transports	
Sanitization	People said they wash hands every time they go back home	
Mask	People wore masks on the roads, public transports, and construction side.	
Keywords	Avoiding gathering, mask, sanitizer, manipulation in price	
Remarks	Represents mass people's practice of necessary health measurements	

The news showcases people's safety maintaining practice. The audio-visual starts with footage of a random person who accepts corona safety issues and follow those. In the news we see mass people agreeing that they follow the protective measurements, wear masks whenever they go out and

wash hand after coming from outside. The news states that there is less gathering on the road and public transports. This report establishes that people have accepted the health care rules and practicing it in daily life.

Table 3.9

Measurements	News- 09	Media & Date
Headline	কর্মীদের জন্য স্বাস্থ্যসুরক্ষার ব্যবস্থা নিয়েছে চ্যানেল আই (Channel I has taken healthcare measures for stuffs)	Channel I March 21, 2020
Information about Coronavirus	Expressing the concern, the news shows the preventive steps.	
Social Distancing / Lockdown	The staffs of Channel I are seen to be maintaining the 'one-meter distance' at their workplace.	
Sanitization	The staffs are getting sanitized at the entrance of their office, and the computer and other logistics are also getting cleaned.	
Mask	All the staffs were provided with masks.	
Keywords	Channel I, coronavirus, PPE, mask, hand sanitizer.	
Remarks	The news is showing how Channel I and its staffs are practicing the preventive behaviors.	

The news content showed, how Channel I is providing their staffs the necessary tools. The office environment is maintained as safe as possible. The staffs are maintaining social distance, wearing masks,

even the logistic tools getting disinfected again and again within a certain time. In sum, this news shows the practice of the preventive behaviors.

Table 3.10

Measurements	News- 10	Media & Date
Headline	সংক্ষিপ্ত জুমার নামাজ (Jumma prayer shortened)	Somoy Television March 27, 2020
Information about Corona Virus	Current situation of corona virus	
Social distance/ Lockdown	Low attendance at mosque, most of them prayed at home	
Sanitization	After prayer Red Crescent Team disinfected the whole mosque area.	
Mask	Visuals shown people wore masks in the mosque	
Keywords	Mosque, praying at home, virus,	
Remarks	Establishes that mass people are practicing safety instructions.	

This report shows how not only the mass people but also the social institutions are practicing the safety maintain rules during the pandemic. The mosque authority made sure of the fact that there is proper safety distance for the people who came for prayer. Mass people said they are also avoiding every possible gathering. They have been represented with masks in the whole footage in news. After prayer, the mosque has been disinfected by volunteers. All together the reports establish that mass people are practicing a safe lifestyle during the pandemic.

Survey data presentation

Among 204 participants in the survey, exactly 50% were men and other 50% were women. Most of their age was middle of 21 to 25 (73%) and profession was students (83%).

The survey questions were asked on several topics in order to find out the people’s acknowledgment of media impact. Mainly the sections included, previous knowledge of any contagious diseases, media consumption rate of corona pandemic (before and after), practice of safety measurements (before and after corona pandemic) and finally media impact in their behavioral change.

Previous knowledge of any contagious diseases:

Before corona virus pandemic (table 01) around 37.3% had some knowledge about how contagious virus spread and 41.3% had some idea about health measures.

Table 4.1: Previous Knowledge on Contagious Diseases

Questions (Before corona virus pandemic)	Previous knowledge of any contagious diseases in %				
	An expert	very much	Somewhat	Not much	Not at all
1. Ideas on how contagious virus spread	3.9%	23.5%	37.3%	29.4%	5.9%
2. Idea on contagious virus health measures	2.9%	19.1%	41.3%	29.9%	4.9%

When Corona Virus hit on China, around 33.3% were very much afraid that it will hit on Bangladesh too, followed by 23% not much, 15.7% maybe, 16.2% somewhat and 11.8% not at all. In Bangladesh, 45.1% population started following the news of corona in March, where 34.3% from February and 20.6% from January.

Media consumption rate of corona pandemic (before and after):

Before Corona Virus was detected in Bangladesh, around 60.8% (highest) was depended on social media for news update where 23.5% used television media, 8.3% used new media and 6.9% (lowest) read newspaper. After Corona pandemic, people went back to trusting tradition form of media for

information (table 02). Only 16.2% people were following traditional media regularly before pandemic. It rose to 27.5% after the pandemic.

Table 4.2: Consumption Rate of Traditional Media

Questions	Consumption rate of traditional media in %			
	Regularly	Most of the times	Some of the times	Never
1. Following traditional media (before Corona virus pandemic)	16.2%	24.5%	55.4%	3.9%
2. Following traditional media (after Corona virus pandemic)	27.5%	39.7%	31.9%	1%

Practice of safety measurements (before and after corona pandemic):

Before Corona crisis, around 32.8% of population regularly followed hygiene routine, followed by 30.4% some of the times, 28.9% most of the times and 7.8% never maintained hygiene routine. Around 37.7% people never wore masks (due to extreme polluted air) before corona virus, followed by 38.7% wore some of the times, 15.2% wore most of the time, leaving only 8.2% of population who wore regularly.

Before corona virus, 26.5% were highly prone to physical contacts, where 27.9% maintained partially, 26% maintained moderately and 19.6% never maintained at all.

But after Corona Virus hit on Bangladesh, there was severe behavioral change towards safety measurements among people (table 03). Around 51.5% highly maintained health measure to stay safe and 58.8% people brought changes in their existing behavior pattern.

Table 4.3: Behavioral Mobility

Questions	Behavioral mobility in %			
	Highly	Partially	Moderately	Not at all
1. Maintaining health measure to be safe from Corona Virus	51.5%	7.8%	39.7%	1%
2. Bringing changes in behavior pattern (sanitization, hygiene, social distance)	58.3%	37.3%	Same as before	
			4.4%	

Media impact in their behavioral change:

At the end, around 47.5% agrees that media had impact towards such behavior mobility. 39.2% believe they have been moderately influenced by media and 11.3% believe in partial influence. 2% believe there was no impact of media on their behavioral change.

VIII. KEY FINDINGS AND DISCUSSION

This study has been investigating how Bangladeshi mass media has influenced its country people to shift their behavior toward the preventive practices during the Corona virus pandemic. After analyzing in-total 191 news from five different media and conducting a survey among 204 people, the findings are following:

- i. Practice based news from qualitative analysis (Table 3.8, 3.9, 3.10) provide evidence that people over the country have well-accepted the healthcare-related messages and they are acting on those behaviors. The survey (Table: 4.3) points out that 58.3% saw a drastic change in their behavior comparing to the 'pre-pandemic' situation.

Moreover, 51.5% are practicing those health measures highly, while 39.7% are practicing moderately. These data suggest that people in the country have adapted themselves with the preventive behaviors and practicing them to remain safe.

- ii. The study, from quantitative analysis (Table: 2.2, 2.3, 2.4, 2.5) finds that all the news was published with due priority and magnitude. The number of news had been increasing with time (Table: 2.1) which was a constant push to people to grow awareness. In the qualitative analysis, there was knowledge enhancing (Table: 3.1, 3.2, 3.3) news, and representation of people's positive attitude in news (Table: 3.4, 3.5, 3.6, 3.7). This proves mass media's attempt to spread the healthcare-based news and such awareness was reaching to people quite successively. In addition to that, the survey data says, 47.5% of the population saw severe impact of mass media on their behavioral change, while 39.2% saw a moderate impact. Hence, the mass media was the stimuli that influenced people toward practicing the preventive behaviors.

iii. Preventive behaviors were grown and practiced repeatedly by people. This brought the consequence of safety from Coronavirus. The government of Bangladesh was strictly maintaining the lockdown and there were laws for the violators. Police, administration, and the army was deployed to make sure that without proper reason people are not going outside, wearing masks, and maintaining other healthcare measures. These were the negative reinforcements applied. As the fourth estate, mass media performed their duty to make people aware of the rules and laws (Table: 3.3), and that is how the reinforcements properly reached to people in the process of conditioning. People by consuming mass media have developed the necessary understandings of preventive behaviors and practicing those to remain safe. So, it is profound from the analysis that people's behavior was changed through operant conditioning.

Mass media weighing proper attention and with an increasing flow of healthcare-based news, helped people to enhance their knowledge on Coronavirus health issues. Also, a positive attitude toward that information was observed among people. People are now practicing the health- measures because of the reinforcements applied. Being the stimuli, mass media provided necessary knowledge and conditioned people's behavior towards preparedness. Therefore, mass media's endeavor of bringing the behavioral change and preparedness among Bangladeshi citizens was impeccable.

IX. CONCLUSION

Covid-19 pandemic is challenge for a country like Bangladesh which is overpopulated with small geographic area. Bangladesh health infrastructures are not as improved as it had to be. Yet Bangladesh has outdone in minimizing the harm comparing to neighbors like India. Bangladesh has one of the lowest death rates against the whole world (UNB, 2020). Bangladeshi mainstream media has been addressing the corona virus issue even before it came to the country. After corona virus was detected in Bangladesh, mass media increased the flow of information with time. Starting from introducing with Covid-19, safety measurements, lockdown activities, taking care of corona patients, mainstream media focused on every angles of this crisis. Eventually mass media increased people's knowledge, brought changes in attitude, and inspired them to practice. Meanwhile alternative media were accused with spreading rumors; people had nowhere to go except mass media. That is why mass people started consuming traditional media more than before (Table: 4.2). Besides, only mass media has greater access in the whole country, alternative media is still luxury in rural area. So, mostly people had the impact of mass media

among them making Bangladeshi Mass media an external stimulus. This eventually became a change agent by bringing necessary reinforcement among people's behavior during corona crisis. This paper suggests the mainstream media that gained public trust, to focus on their online version's quality. The online media needs to work with more credibility like their offline version. Corona crisis is considered as the greatest test since World War 2 (BBC, 2020). If government, media, and other stakeholders work hand to hand, only then the harms can be minimized.

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