


# Mass Media Influence on Changing Healthy Lifestyle of Community People During COVID-19 Pandemic in Bangladesh: A Cross-Sectional Survey

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## Introduction

According to the World Health Organization, the coronavirus disease 2019 (COVID-19) pandemic has infected more than 100 million people worldwide and has triggered over 2 302 302 deaths.<sup>1</sup> The first confirmed case in Bangladesh was reported on March 8, 2020,<sup>2</sup> and an increase in the positive cases of COVID-19 was identified in late April and early June 2020, respectively.<sup>3,4</sup> Therefore, some healthy lifestyle was imposed by experts to combat COVID-19.

However, healthy lifestyle behavior changes are a process that takes time and requires support; thus, mass media intervention is a must to address the challenges of changing health behavior. Mass media reported that infectious diseases will have substantial psychological effects on the community's beliefs, knowledge, behaviors, and perspectives.<sup>5</sup> To the best of the authors' knowledge, so far, no study has been undertaken on this issue. This article intends to assess the association of knowledge level (CK), media use (MU), media check-in capability (MCH), and media credibility (MC) in influencing the changing healthy lifestyle behavior of the respondents.

## Methodology

### Study Design and Technique

A total of 24 statements were used in the drafted questionnaires to obtain the changing lifestyle of community people influenced by mass media during COVID-19 in Bangladesh. Besides, a panel of expert opinions was considered to set and validate these 24 statements.

Questionnaires were administered based on the snowball-sampling technique in this cross-sectional survey.

Total 1890 respondents responded correctly through Google Docs and 190 through a face-to-face interview. So, the whole sample sizes were 2080. A 5-point (1-5) Likert-type

scale was used where respondents respond from strongly agree to strongly disagree with the statements.

### Data Analyses

Principal component analysis is employed to identify the factors influencing communities' healthy lifestyle change by media intervention. Moreover, a stepwise multiple regression model was used to measure the statistically significant relationship among the variables that significantly contributed to the prediction. Cronbach's  $\alpha$  was computed to evaluate the internal reliability and consistency of the questionnaire.

### Ethical Statement

Informed consent was acquired, and anonymity was ensured electronically before data acquisition. Survey content and procedure were adequately reviewed and approved by the proposal evaluation and ethical committee of Begum Rokeya University, Rangpur, Bangladesh.

## Results and Discussion

### Relationship Between Healthy Lifestyle Behavior and Mass Media Influences

Among 24 statements, variables with low corrected item-total correlations are removed from CTT (classical test theory)

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**Table 1.** Factor Analysis of Changing Lifestyle Behaviors of the Respondents.

Statements	Mean	SD	Factors	
			1	2
Wash hands repeatedly after every 20 minutes (MLS1)	4.63	0.654	0.47	
Wash hands before taking meal (MLS2)	4.43	0.842	0.63	
Drink plenty of water (MLS3)	4.23	0.835	0.49	
Take vitamin C from food (MLS4)	3.92	0.903	0.40	0.54
Wash cloths regularly (MLS5)	4.56	0.649	0.47	
Stock food (MLS6)	3.14	1.254		0.42
Avoid shaking hands (MLS7)	4.5	0.761	0.48	
Avoid touching mouth, eye, and nose (MLS8)	3.79	1.063	0.75	0.56
Avoid large crowds (MLS9)	4.33	0.868	0.54	
Avoid coughing, sneezing or spitting here and there (MLS10)	4.06	1.166	0.79	0.54
Scale: 1 = totally ignore, 2 = ignore, 3 = neither follow nor ignore, 4 = follow, 5 = properly follow				
Initial eigenvalues			4.478	1.128
% of variance			52.879	13.32
Cumulative %			52.879	66.198

**Table 2.** Summary of the Stepwise Multiple Regression Analysis Showing the Contribution of Selected Independent Variables to Lifestyle Score of Respondents During the COVID-19 Pandemic.

	Unstandardized coefficients		Standardized coefficients		t	Significance	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Increase in R <sup>2</sup>	Variance explained in %
	B	SE	$\beta$								
No drugs proven to help treat coronavirus disease (CK9)	2.027	0.356	0.339	5.697	.000	.567a	0.322	0.319	0.319	31.9	
Online media is trustworthy during COVID-19 pandemic (MC4)	0.977	0.327	0.186	2.986	.003	.650b	0.422	0.416	0.097	9.7	
Social distancing to prevent spreading COVID-19 (CK5)	1.522	0.494	0.190	3.083	.002	.677c	0.459	0.451	0.035	3.5	
Daily check in TV in COVID-19 period (MCH1)	0.623	0.220	0.144	2.840	.005	.694d	0.482	0.471	0.02	2	
Social media is trustworthy during COVID-19 pandemic (MC5)	0.963	0.379	0.165	2.541	.012	.706e	0.498	0.485	0.014	1.4	
Total										48.5	

analysis (ie, what is corona,  $-0.054$ ; age,  $-0.36$ ; daily newspaper use,  $-0.08$ ; etc). The remaining 21 statements in the scale had a suitable corrected item-total correlation (0.31-0.82), and the Cronbach's  $\alpha$  (.88) was satisfactory.

The scores of the 10 items were loaded fit on 5 components that are outlined in Table 1. The F1 (first) explained 52.87% of the total variance as it covers a significance level of moderate to strong positive loadings, indicating avoid coughing, sneezing, or spitting here and there (MLS10: 0.79 with mean:  $4.06 \pm 1.16$ ); avoid touching the mouth, eye, and nose (MLS8: 0.75 with mean:  $3.79 \pm 1.06$ ); wash hands before taking meal (MLS2: 0.63 with mean:  $4.43 \pm 0.84$ ); and avoid large crowds (MLS9: 0.54 with mean:  $4.33 \pm 0.86$ ). All these items showed moderate to strong positive loading score disclosing the healthy lifestyle behavior change of the respondents.

Subsequently, the F2 (second) explained 13.19% of the variance, and it was low to moderate loaded with the lifestyle score change including taking vitamin C from food (MLS4: 0.54 with mean:  $3.92 \pm 0.90$ ) and stock food (MLS6: 0.42 with mean:  $3.14 \pm 1.25$ ). However, moderate but positively loaded healthy lifestyle issues are avoided coughing, sneezing, or spitting here and there (MLS10: 0.54); avoid touching the mouth, eye, and nose (MLS8: 0.56).

### Predicting Contribution of Mass Media Influences on Healthy Lifestyle Changes

Table 2 indicates that only 5 independent variables accounted for 48.5% of the total variance, including "no drugs proven to help treat coronavirus disease (CK9)" contributed 31.9%, "online media platforms are trustworthy during COVID-19

pandemic (MC4)” contributed 9.7% in predicting the healthy lifestyle and so on. The other 14 variables were omitted as their F values or tolerance was too small to continue. The remaining variables contributed near about 1%, which may be considered less critical. Many earlier studies suggested staying at home and maintain social distance<sup>6,7</sup> to hinder community transmission. In this case, new media contributed more to creating awareness of coronavirus among the respondents. However, further qualitative studies will require to get more in-depth knowledge.

## Conclusion

Media credibility and media check-in were significantly associated with high adoption of changing healthy lifestyles ( $P < .01$ ). Findings showed that mass media contributed a lot to adopting a healthy lifestyle.

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## Author Contributions

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