

RESEARCH ARTICLE

Home Quarantine Challenges and Psychological Status of Bangladeshi University Students during COVID-19

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Abstract

The study determined the home quarantine challenges and psychological status of Bangladeshi University students in the COVID-19 pandemic break-out. The study also looked into the impact of home quarantine challenges on the psychological status of the student. A well-structured questionnaire was created and circulated to respondents through various social media platforms and utilized the snowball sampling technique. A total of 250 graduate and undergraduate students were taken as respondents of this study. Statistical Packages for Social Science (SPSS) software was used to complete the data analysis procedure. The findings of the study show that the most noteworthy home quarantine challenges for Bangladeshi University students are the lack of awareness of home quarantine advantages (82%), insufficient financial support from their families (78%), and unsatisfactory medical support (77%). Also, home quarantine challenges are positively connected to psychological status ($r = .364^{**}$) and it had a significant impact ($\beta = .287, p < 0.00$) on psychological status in the pandemic period. The study also aided the policymakers in the better understanding of home quarantine challenges and the psychological status of Bangladeshi students. However, out of seven divisions in Bangladesh only students of Dhaka and Sylhet were selected to be the respondents. This caused difficulty in generalizing the findings of the study.

KEYWORDS:

Bangladesh, COVID-19, Challenge, Home Quarantine, Psychological Status, Student

1 | INTRODUCTION

The existence of the Coronavirus (COVID-19) virus was unfamiliar to the world (Wang, 2020). As the pandemic continues to spread, the virus and its effects to human is noticeable. (Shereen et al., 2020). The first covid variant was discovered in Wuhan China, Province of Hubei (Nishiura, 2020; Cascella et al., 2020; Xiang et al., 2019). Through adapting to the home quarantine strategy, the infected countries including Bangladesh have been combatting against the circumstances. The concept of home quarantine is keeping isolated and detached from people. A COVID-19 patient contact was strongly advised to comply with the 14-day quarantine period. The government of Bangladesh recorded its first COVID-19 case on March 04, 2020. The Institute of Epidemiology, Disease Control, and Research (IEDCR) reported three infected cases on March 07, 2020 (IEDCR, 2020). Due to that event, directives to comply with the home quarantine period were agreed upon by the Government of Bangladesh. As the pandemic continues to strike globally, Bangladesh has recorded a total caseload of 966,406 people infected with the

virus (<https://bangla.bdnews24.com/>). The educational institutions across the country were temporarily closed to prevent the widespread of the virus, students also decided to move to their residence (www.dhakatribune.com). It was new and convenient to stay at home with relatives free from academic stress (Rahaman et al, 2020). The unusual situation and negative ideas appeared. The school reopening and graduation rites were questionable. Alumni and fresh graduates are struggling to find a professional career (Wang et al., 2020).

According to studies, psychological disorders may occur due to the sudden change of lifestyle, anxiety (Dhar et al., 2020), and being uncertain about the future (Aleta et al., 2020). The educational institution's temporary closure and lack of funds may also affect the psychological status of an individual (Rahaman et al, 2020). The United Nations data shows that on the current crisis, seventy-seven (77%) percent of children in Italy and Spain were inattentive, thirty-nine (39%) were restless and irritable. Meanwhile, a survey in the United Kingdom stated that thirty-two (32%) percent of students in the country had suffered mental health weakening (World Health Organization, 2020).

Public health specialists reported that the infected numbers are alarmingly increasing as Bangladeshi people are overlooking the home quarantine period and government guidelines. The World Health Organization's former regional advisor, Professor Muzaherul Huq reported that the people of Bangladesh are unconscious of the pandemic, therefore the government of Bangladesh strictly implemented the home quarantine protocols (New age, 2020). It has become a concern for the general public, including children, adults, professionals and front-line careers, and COVID-19 patients that the pandemic continues to spread across the country (Chen et al., 2020; Yang et al., 2020).

The outbreak appears to worsen the physiological and psychological aspects of an individual (American Psychiatric Association, 2020). Patients who suffer natural cold, fever and shortness of breath were diagnosed with COVID-19. In this situation, researchers stated that the existence of the COVID-19 pandemic has caused panic among people (Bao et al., 2020). Thus, a panic attack causes palpitations, shortness of breath, trembling of limbs, and physical weakness of human beings (Burke et al, 2020). Also, coronavirus endangers psychological conditions, this includes fear of infection (Chen, 2020), death of relatives and family members, uncertainty about livelihood (Xiao, 2020), and financial crisis. In addition, the difficulty in adapting to the quarantine period and notions on the COVID-19 pandemic creates tremendous stress on the mind (Tsai, 2019).

The country and its community are responsible for giving much attention to psychological matters. Otherwise, it will cause social and economic damage to society for a long time to come. However, it is noticeable that researchers and academes are unconscious about the issue. (Rahaman et al, 2020).

The researchers concluded based on the findings of the study that there is no existing study undertaking the psychological status of university students in Bangladesh. Thus, the researchers aims to determine the Home Quarantine (HQ) Challenges and Psychological Status (PS) of Bangladeshi University Students during COVID-19, show the relationship between Home Quarantine (HQ) Challenges and Psychological Status (PS), and measure the impact of HQ challenges on PS of Bangladeshi university students during COVID-19.

In this study, the researchers addressed the conflicts encountered by the students at Bangladeshi University. Also, this study discussed the home quarantine challenges and student's psychological status. The researchers also identified the research gap and set three objectives.

2 | METHODOLOGY

2.1 | Study design and subjects' selection

In this study, the researchers used the snowball sampling technique to distribute the questionnaire. Google Form was used by the researchers for the questionnaire. The researchers also used various social media platforms to send the form. The questionnaire was forwarded to a group of people to collect data. The target respondent of the study was two hundred fifty (250) students from Dhaka and Sylhet division, aged eighteen (18) and above. A total of two hundred sixty-nine (269) students responded to the research questionnaire. The researchers selected two hundred fifty (250) (92.93%) respondents as a sample.

2.2 | Pattern of the questionnaire and pilot study

The researchers categorized the questionnaire into three dimensions. Five (5) questions based on the demographic information were included. The respondents were required to answer under the first category. The question includes a) do you have any idea about home quarantine?" If yes, you are requested to fill out the next section. Under the second category, five (5) questions

based on the challenges experienced by the respondents during the home quarantine period were asked. Also, another five (5) questions were asked based on the respondents' psychological status. The data were collected through the 5 Likert Type Scale, excluding the demographic information. Upon collecting responses from thirty (30) students, the researcher conducted a pilot study to check the reliability of the studied variables. The pilot study shows the reliability value of home quarantine-related items (.735) and psychological status-related items (.755) this shows a good consistency of data.

2.3 | Participants

In this study, the researchers used demographic statistics to identify the respondent's demographic characteristics: a) gender; b) age; c) level of education; and d) marital status. The following Table 1 presents the demographical statistics of the respondents.

TABLE 1 Demographic Information of the Respondents

Respondents' Characteristics	Frequency	Percentage
Gender		
Male	178	71.20
Female	72	28.80
Age (Years)		
18-30	187	74.80
31-40	38	15.20
41-above	25	10.00
Marital Status		
Married	68	27.20
Unmarried	182	78.80
Level of Education		
Bachelor	136	54.40
Masters	68	27.20
Others	46	18.40

Source: Online survey, 2020

As can be seen from the data, 70.85% of the respondents are male, and 29.15% are female, 27.15% are married respondents and 72.85% are unmarried. 74.28% of the students are between the ages of 18 and 30. It can be gleaned from the data that 54.28% of the students have a Bachelor's degree.

2.4 | Measures

2.4.1 | Psychological status

The researchers selected five (5) items based on the study of Brooks et al, (2020) considering the Bangladeshi university students. In addition, 5 Likert Type Scale: 1= Strongly Disagree, 5=Strongly Agree were adopted in this study. Table 2 shows the item selection with relevant literature and reliability value.

2.4.2 | Home Quarantine Challenges

The researchers used the home quarantine challenges as an independent variable and five (5) items were used from a study (Brooks et al. 2020). Table 2 shows the item selection with relevant literature and with reliability value.

2.5 | Ethical consideration

The director of Metropolitan University Sylhet, Bangladesh's Center for Teaching, Research, and Publication (CTRP) submitted the ethical letter to the university registrar and approved the conduct of research.

3 | ANALYSES AND FINDINGS

In analyzing this study, the researchers used preliminary and inferential analyses. The accuracy of the data, reliability, normality, and multicollinearity, was analyzed. Demographic analysis was carried out to identify the demographic information of the respondents. The researchers used percentile calculation, correlation, and multiple regression analysis under the inferential section.

3.1 | Preliminary analyses

3.1.1 | Reliability analyses

The researchers conducted a reliability analysis to find the consistency of the set data used in the study. Table 2 shows the reliability value on the conducted pilot study (30 respondents) and the reliability value on the actual set data (250 respondents).

TABLE 2 Reliability values

List of the Items		Sources	Reliability	
			Pilot study	Actual
Psychological status during Home Quarantine (PS)	Fear of infection	Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020)	.755	.824
	I am perpetually downcast and anxious.			
	I cannot concentrate my regular activities.			
	My routine distracts my attention.			
Challenges of Home Quarantine (CH)	I'm fed up and bored.	Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020).	.735	.821
	Insufficient financial support from family			
	Not getting proper support from the government			
	We are not aware about HQ			
	Insufficient medical support			
	Inadequate information about HQ			

*Missing data, normality, outliers and multicollinearity

The researchers analyzed the missing information on the datasheet and found eleven (11) respondents failed to answer the questionnaire completely. The Skewness and Kurtosis values for home quarantine and psychological status is less than (+- 3), which indicates that the data was normally distributed. The researchers also used Malhanobis and Cook's distance to identify either the data is free from outliers or not, thus, as seen on the data eight (8) responses fell in outlier boundary. To identify the multicollinearity problem, Variance Inflation Factor (VIF) and tolerance values were also used, result finds no multicollinearity problem. The VIF value and tolerance are presented in the regression table. The researchers deleted nine-teen (19) responses (11+8=19) due to missing information and outliers. The rest of the analyses were done based on the two hundred fifty (250) responses (269-19=250)

3.2 | Inferential analyses

Based on the percentile values (see Table 3), the most significant challenges of home quarantine for Bangladeshi University students are lack of awareness of its advantages (82%), insufficient financial support from family (78%), and unsatisfactory medical support (77%). However, in psychological status, 73.6% of students fear infection. In addition, 71% of students are distracted by their regular activities, and 70% of students experienced boredom and fed up during the home quarantine period in Bangladesh.

TABLE 3 Respondents' opinion (percentage)

	List of the Items	1	2	3	4	5	4+5	Rank
Psychological status during Home Quarantine (PS)	Fear of infection	4.5	7.9	14	45	28.6	73.6	1
	I am perpetually downcast and anxious.	5.0	10.3	15.8	47.0	21.9	68.9	4
	I cannot concentrate my regular activities.	6.5	7.5	15	41.5	29.5	71	2
Challenges of Home Quarantine (CH)	My routine distracts my attention.	12.5	15.9	14.4	30	27.6	57.2	5
	I'm fed up and bored.	2.0	11.4	16.3	49.0	21.3	70.3	3
	Insufficient financial support from family	5.0	5.0	12	49	29	78	3
	Not getting proper support from the government	7.0	8.0	10	48	27	75	4
	People are not aware about HQ	8.0	2.5	7.5	32	50.0	82	1
	Insufficient medical support	7.0	8	8.0	50	27	77	2
	Inadequate information about HQ	3.0	7.4	21.3	40.1	30.2	70.3	5

1 - Strongly Disagree (%)

2 - Disagree (%)

3 - Neutral (%)

4 - Agree (%)

5 - Strongly agree (%)

4+5 - Total Agreement (%)

3.2.1 | Correlations

TABLE 4 Correlation values

		Psychological status	HQ challenges
Psychological status	Pearson Correlation	1	.112
HQ challenges	Pearson Correlation	.364**	1

**Correlation is significant at the 0.01 level (2-tailed).

The Table 4 above shows the home quarantine challenge is positively ($r = .364^{**}$) related to the psychological status of the students on the COVID-19 pandemic period and the value is significant.

3.2.2 | Multiple Regression

The pattern of relationship between home quarantine challenges and psychological status, as well as its effect, was studied using an Ordinary Least Square (OLS) multiple regression model shown in Table 5 .

The overall regression model is significant ($F = 1.74, P = .00$), and the independent variable (HQ challenges) accounting for 38.1 percent of variance for the dependent variable (psychological status). Adj. R^2 is close to R^2 , indicating that adding more independent variables has a slight effect on prediction ability. Further, home quarantine challenges positively affect ($\beta = .287, p = .00$) the psychological status of the Bangladeshi students during the COVID-19 pandemic outbreak. It represents the increase in home quarantine challenges, the level of psychological statuses such as stress, fear, stigma, depression, and frustration.

TABLE 5 OLS Regression analysis

<i>Coefficients</i>								
Model	Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics			
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF	
1	(Constant)	2.670		5.79	.000			
	HQ challenges	.287	.132	.121	1.957	.000	.945	1.065
<i>Dependent Variable: Psychological status</i>								
Model	R	R^2	Adjusted R^2	SEE	DW	F	Sig.	
1	.381 ^a	.292	.261	.937	1.68	1.74	.000 ^b	

SEE - Standard Error of Estimate

DW - Durbin-Watson

4 | DISCUSSION OF THE FINDINGS

The aim of this study, therefore, is to find the effect of home quarantine, its challenges, and the psychological status of university students in Bangladesh. Based on the findings of this study, the researchers only identified the perception of home quarantine challenges. In addition, this study also focused on the current situation of the Bangladeshi University students as well as their psychological status.

The findings of this study show that among the total number of respondents, eighty-two (82%) of the students were unaware of the home quarantine advantages. Likewise, the findings support the report of Professor Muzaherul Huq, ex-advisor of the World Health Organisation (New age, 2020). According to Professor Huq, the people of Bangladesh is unconscious and not complying with the quarantine guidelines. In a nutshell, based on the data lack of financial support from the parents (78%) and lack of medical support (77%) were also included in the challenges of the home quarantine period of the respondents. However, akin to the percentage there are students who shared their opinion concerning the inadequate medical support from the government. These opinions supported the published reports of the renowned newspaper in Bangladesh (New age, 2020). According to the research findings and published report, most of the COVID-19 tests are situated in the capital city where generally, people lacked proper medical support (New age, 2020). The respondents also stated that Bangladesh is a populated country and its government lacked the capacity to provide the basic support for its citizens.

It is noteworthy to mention, too, that based on the psychological status of the respondents, 73.6% of students fear the infection, 71% of students are distracted with their regular activities, and 70.3% of students experience boredom and stress. Further, the findings of this study are comparable to the study undertaken by Mamun et al (2021), this study stated that 33.3% of the citizens in Bangladesh are suffering from depression in the COVID-19 pandemic. Meanwhile, a study conducted by Banna et al, (2020) shows that 59.7% of its citizen are severely stressed. As reflected on the data, the researchers gathered a high percentage of responses on the "fear and stigma" experienced by the Bangladeshi University students.

As shown in the data, there is a positive correlation between quarantine challenges and ($\beta = .287, p < 0.00$) on the COVID-19 pandemic. This represents the increase in quarantine challenges, the level of stress, fear, stigma, depression, and frustration. As the findings of the study are unique, it was difficult to point out the consistency with other results. Moreover, a positive relationship between home quarantine challenges and psychological status was also observed. Meanwhile, it was also shown in

the data that the cases of home quarantine challenges, including the stress, fear, stigma, depression, and frustration experienced by the students were decreasing. The study also proposed suggestions based on the findings of the entire research.

4.1 | Strengths and contributions of this research

According to the research data (4th April 2020), there is no existing study ventured on the home quarantine challenge and psychological status of university students in Bangladesh. The study will support the officials and authorities including the Health Ministry, IEDCR, Education Ministry, universities, educational institutions, and the government of Bangladesh. Based on the research recommendations the Bangladeshi government may use this study to overcome challenges and cope psychologically in times of pandemic.

5 | CONCLUSION AND RECOMMENDATIONS FOR POLICY MAKING

As home quarantine protocol in COVID- 19 pandemic shall be complied, psychological conditions might worsen. The distraction on daily routines brought by the pandemic, the boredom experienced in isolating, frustrations, and distress may also affect the psychological status of an individual (Das et al 2021). It is important to note that in this study, 71% agreed that it has been difficult to keep concentrated. In the quarantine period, technology plays an important role in communicating. (Rahaman et al 2020). Further, the regression model shows that extending the home quarantine period worsens stress, fear, stigma, depression, and frustration. Thus, the researchers suggested the following recommendations:

1. Having less knowledge regarding the home quarantine is one of the crucial challenges for the respondents. Therefore, the government is highly recommended to suggest flexible quarantine rules and regulations promote awareness. A short film may be produced and played presenting the positive outcome of complying with the home quarantine period.
2. Lack of health support is also a challenge during the home quarantine period. The health care units may (Ministry of Health) may identify the issue for the public and raise awareness. Moreover, the government of Bangladesh may provide incentives for doctors, nurses, and front-line workers to bring motivation.
3. In times of pandemic keeping in touch with family members, relatives and friends is an effective strategy to stay psychologically sound (free from stress, fear, stigma, and frustration). In-home quarantine period using gadgets (mobile phones, charger, laptops, adaptor, goggles, pillow, etc.) is also suggested to avoid anxiety attacks, stress, and frustration. The government of Malaysia has been offering 1 Gigabyte of data for one SIM Card user. The government of Bangladesh may collaborate with telecommunication companies to execute this strategy.

5.1 | Limitations and areas for future research

Only two divisions (Dhaka and Sylhet) in Bangladesh were selected for analysis, making it extremely difficult to obtain valuable results. It is strongly recommended to gather more respondents around the country for the study. This study overlooked the relationship between demographic variables, home quarantine, and psychological status. As a result, it has been decided to proposed future studies that would focus on the relationship between demographic variables, challenges of the home quarantine period, and psychological status. Also, only quantitative data analysis was used in this study. Further, future studies are recommended to use qualitative data analysis and various methods for a significant result.

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