International Journal of Statistics and Applied Mathematics 2020; 5(6): 138-141

ISSN: 2456-1452
Maths 2020; 5(6): 138-141

www.mathsjournal.com
Received: 19-09-2020
Accepted: 25-10-2020

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Mental health burden during COVID-19 pandemic: A survey on university students of Bangladesh

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Abstract
The purpose of the study was to access the mental health burden and anxiety of University Students in Bangladesh. An online survey was conducted among students from different universities in Bangladesh. There were 558 students from different universities who completed the online survey on different social media from 5 July to 20 July 2020. The descriptive results display that, 49.3% of students were female and 50.7% of students were male. The chi-square test was performed to explore the association between demographic and COVID-19 related variables with the anxiety level of the students. The results demonstrate that the association between the gender of the students and their anxiety level on COVID-19 is significant (p-value<0.00). The results also show a significant association between the time used by students for getting COVID-19 information anxiety level (p-value<0.01). The anxiety level is more likely to relate student's day to day routine-based tasks and their online activities.

Keywords: Pandemic, COVID-19, mental health, university students

1. Introduction
On March 8, with three confirmed cases, Bangladesh became a part of the worldwide pandemic of coronavirus disease 2019(COVID-19) caused by severe acute respiratory syndrome coronavirus-2(SARS-CoV-2) (WIKIPEDIA, 2020). People of 213 countries have already affected by the COVID-19 pandemic with an acute number of confirmed cases and deaths and have instigated public panic and mental stress (Huang & Zhao, 2020). By August 10, 2020, a total of 260,507cases were confirmed in mainland Bangladesh, and 3438 patients have died. Around the world, 213 countries and territories have reported a total of 20,072,673 confirmed cases of coronavirus COVID-19 with 734,812 death cases originated from Wuhan, China (Worldometer, 2020) [4].
In South Asia, After India and Pakistan, Bangladesh has become the third most affected country and 15 most affected countries in the world. Yet there are no approved antiviral drugs to control the existence of this virus. Though Russia has announced they have finished clinical trials of vaccine (Sputnik- V) on human bodies and the results have proven the effectiveness of the medications but we exactly don't know when they will officially sell it (Aljazeera, 2020) [6]. Moreover, Bangladesh is a third grade developing and densely populated country so several times precautions against this novel virus like social distance, home office, lockdown procedures etc. can't be possible to maintain. It has also impacted on the mental health of the people of Bangladesh. This web-based research will help to know the potential influencing factors of the mental stress of the people of Bangladesh during this pandemic and probable suggestion for stress management.

1.1 Causes of stress due to pandemic
After reading several articles, newspaper, web – based news and watching television news we marked 5 powerful force, leading to stress in the interim period of this pandemic. Unknown stressor: Undoubtedly, we are passing a very stressful time, particularly since we are not aware of stressor. It is totally new, we didn't get minimum time for preparation and adaption, there is no available antidotes or vaccine, and we don't know how to deal with it (Vinkers, *et al*., 2020) [19].

Government has decreed some actions of social distancing, lockdown,business shutdown but we are not used to with it. Moreover, it hampers our regular life and generates additional psychological stress (Kloet, Holsber, & Joels, 2005) [15].

Job insecurity: Approximately 3.6 million people of Bangladesh working in garments industry (The Asia Foundation, 2012) [1]. After a few days of lock-down period Bangladesh government has allowed garments factories to start their production by ensuring social distancing measure with 50% workforce. So, other 50% workers have already lost their job. Again, RMG owners didn't fulfil their commitment to provide workers, 60% of their gross wages (Haque & Uddin, 2020) [12]. Rubana Huq, president of Bangladesh Garments Manufacturers and Exporters Association (BGMEA) has warned that as a large amount of orders were cancelled due to COVID-19 so there is a possible to lose job more than 2 million RMG workers. This is a common scene for most of the private industries in Bangladesh who deals in foreign countries (Hossain, 2020) [13].

Medical inability: In Bangladesh there is a shortage of appropriate number of medical facilities – doctors, nurses, and medical staff. As per WHO, the ratio between doctor and patient is 5.26: 10,000 that is only before Bhutan in South Asia. After 2 months suffering from corona virus only 25% doctors and 60% medical staff got PPE (Personal Protective Equipment) (team, 2020) [17]. In Bangladesh maximum number of confirmed cases are from Narayanganj and Dhaka. But on 8 April Dr. Samsuddoha Sanchay of Narayanganj 300 bed Hospital said they are still not prepared to fight corona virus and they will need 20 more days to establish 10 bed ICU at the hospital (Badal, 2020) [9]. This is not only happening in Narayanganj but also all over the country.

Stress to maintain precaution: 27.09% people here totally illiterate (macrotrends, 2018) [1]. The other 73.91% are not properly manifested by education even they still aiding prejudice. In rural areas and little amount in urban, maximum people don't maintain precaution measures and people who are trying to maintain it they have to suffer from comedic words.

Economic infeasibility: on 25 march, Bangladesh government has announced 10 days lockdown and it has been continued more than 2 months. So, several new types of incidents have been occurred – lay off workers, providing 60% of gross salary, non-paid vacation and so on (Anwar, Nasrullah, & Hosen, 2020) [7]. Around 13 % of people have become unemployed (The Daily Star, 2020). Middle class, Lower, lower middle class and daily earners are suffering most because either they have no works or limited works especially while nobody knows when the sufferings will end up.

2. Methods

To avoid the blowout of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), this study used a web-based survey based on the Internet through the Facebook, Whats App and Imo social medias and the total respondents were 558. The Bangladeshi people normally use Facebook, Whats App and Imo for communicating with each other. In this internet-based survey, the questionnaires were sent to the respondent's social media account. The questionnaires were written on Google Form. The respondents just clicked on the given link and filled the form. After completing the answers, the respondents submitted the forms which were automatically stored on Google Spread Sheet. The questionnaires were designed with respondent's demographic variables (Age, gender, Education level, Place of residence, marital status) and COVID-19 related variables. Then the collected data was finally analyzed by using Statistical Package for Social Science (SPSS, Version 20.0). The results were processed with Microsoft Office 2013.

3. Results and Discussion

The response rate was 90%. The data collection was held from 5 July to 20 July 2020. The analyzed results are discussed below.

3.1 Demographic Information

The study was conducted to study the demographic characteristics.

Table 1: Frequency distribution according demographic characteristics of the respondents (n=558).

Variables	Categories	Frequency	Percent
Gender	Female	275	49.3
	Male	283	50.7
Age	20-25	391	70.1
	Greater than 25	120	21.5
	Less than 20	47	8.4
Place of Residence	Rural	237	42.5
	Urban	321	57.5
Marital Status	Married	71	12.7
	Single	487	87.3
Education Level	Graduate	169	30.3
	Post Graduate	101	18.1
	Undergraduate	288	51.6

Table 1 is created for the frequency distribution of demographic characteristics which is showing that, among 558 students, 49.3% were female and 50.7% were male. The most (70.1%) of the student's age were between 20to25. The study also describes that, 42.5% students were from rural areas where rest of them were from urban areas. The majority university going students were single. The education level describes that among 558 students, 52% undergraduate students, 18% post graduate students and rest (30%) students were graduate.

3.2 COVID-19 related variables

Table 2: Frequency distribution of the respondents according to COVID-19 related variables (n=558).

COVID-19 related variables	Categories	Frequency	Percent
Can you maintain your daily routine as previous?	No	429	76.9
	Yes	129	23.1
Are you getting sufficient internet service in this pandemic?	No	239	42.8
	Yes	319	57.2
Do you face problem to conduct online activities from home?	No	234	41.9
	Yes	324	58.1
How often do you view report on COVID-19?	Always	173	31.0
	Seldom	87	15.6
	Sometimes	298	53.4
Is anyone from your family or relative affected by COVID-19?	No	412	73.8
	Yes	146	26.2
Your anxiety level about COVID-19	Moderate	253	45.3
	Normal	190	34.1
	Severe	115	20.6

The frequency distribution for COVID-19 related variables in Table 2 is showing that, 78% students agreed that they could maintain their day to day activities during this pandemic. 43% told they were suffering from lack of internet but rest 57% of them denied that. 58% students told that they were able to conduct online activities from home, but other 42% give

negative feedback. The question was designed to know how much time they give to know the news corresponding to the COVID-19. 31% students replied that, they always kept them updated regarding COVID-19. 15% told they rarely give time for report on COVID-19.

The study was designed to know, whether there were affected persons in their family or not. 74% replied negatively and rest of them told there were COVID-19 affected person in their family.

The most important question o this study was about anxiety level about COVID-19. The results are showing that, 21% students were severe anxious about COVID-19. The remaining 34% told they were normal regarding this and rest 45% replied that they were moderate anxious about COVID-19.

3.3 Association between Anxiety level and Demographic variables

Table 3: Association between Anxiety level and demographic variables.

Variables	Categories	Your anxiety level about COVID-19			χ^2	p-value
		Moderate N (%)	Normal N (%)	Severe N (%)		
Gender	Female	137 (49.8)	72(26.2)	66(24.0)	15.28	0.00
	Male	116(41)	118(41.7)	49(17.3)		
Age	Less than 20	17(36.2)	23(48.9)	7(14.9)	5.65	0.23
	20-25	181(46.3)	125(32)	85(21.7)		
	Greater than 25	55(45.8)	42(35)	23(19.2)		
Marital Status	Married	29(40.8)	26(36.6)	16(22.5)	0.667	0.72
	Single	224(46.0)	164(33.7)	99(20.3)		
Place of residence	Rural	107(45.1)	78(32.9)	52(21.9)	0.515	0.74
	Urban	146(45.5)	112(34.9)	63(19.6)		
Education level	Graduate	74(43.8)	67(39.6)	28(16.6)	10.203	.037
	Post Graduate	54(53.5)	22(21.8)	25(24.8)		
	Undergraduate	125(43.4)	101(35.1)	62(21.5)		

The survey was conducted to know the association between the anxiety level of students on COVID-19 and the demographic variables. The Table 3 showed that, the gender and the anxiety level of the students are significantly associated, which implies that, the anxiety level differs by gender.

The association between, age of the students and their anxiety level is insignificant, which may conclude that, age of students do not create any matter to their anxiety level. Similarly, marital status and place of residence showed no association with anxiety level of the students on COVID-19.

The results also showing that, the association between education level of students and their anxiety level on COVID-19 is significant. It refers that, the anxiety level differs by their education level.

3.4 Association between Anxiety level and COVID-19 related variables

Table 4: Association between Anxiety level and COVID-19 related variables.

Variables	Categories	Your anxiety level about COVID-19			χ^2	p-value
		Moderate	Normal	Severe		
Are you living with your family during this pandemic?	No	16(44.4)	17(47.2)	3(8.3)	4.78	0.092
	Yes	237(45.4)	173(33.1)	112(21.5)		
Are you getting sufficient internet service in this pandemic?	No	103(43.1)	72(30.1)	64(26.8)	10.07	0.006
	Yes	150(47)	118(37)	51(16)		
Can you maintain your daily routine as previous?	No	207(48.3)	120(28)	102(23.8)	32.63	0.00
	Yes	46(35.7)	70(54.3)	13(10.1)		
Do you face problem to conduct online activities from home?	No	98(41.9)	101(43.2)	35(15)	17.14	0.00
	Yes	155(47.8)	89(27.5)	80(24.7)		
How often do you view report on COVID-19?	Always	80(46.2)	51(29.5)	42(24.3)	18.05	0.001
	Seldom	24(27.6)	44(50.6)	19(21.8)		
	Sometimes	149(50)	95(31.9)	54(18.1)		
Is anyone from your family or relative affected by COVID-19?	No	184(44.7)	144(35)	84(20.4)	0.574	0.751
	Yes	69(47.3)	46(31.5)	31(21.2)		

The Table 4 showed the association between the COVID-19 related variables and anxiety level of the students. The results imply that, the student's allotment to access internet, performing activities from home and their maintaining their daily routine are significantly associated with their level of anxiety. From the results, it is clear that, the students who get had access to the internet, who could do their daily activities from home and who were able to maintain the daily routine were supposed to have normal a anxiety level on COVID-19.

3.5 Suggestions due to pandemic stress management

First of all, we have to accept that things that are not in our control. Though it is difficult but the most effective way to overcome stress (Blessing Health System, 2020) [10].

Secondly, we must conscious to believe any news on the topic and limit to use media exposure especially social media. Because several types of news are unfurled on social media where a little thing is true (Arruda, 2020) [8]. Yes, off course, it is important to be informed but if we continuously search more and more information about it, there is a possibility to getting mixed information, so source of news must be considered.

Thirdly, we should be mindful as this is an effective way to mitigate anxiety or stress of unknown fear (LAWTON, 2020) [16]. Always be remembered, other people should not be

hampered by us. Make a regular habit to follow the WHO precautions and guidelines.

Fourthly, think positive, we think this is the most powerful weapon to solve any problem. Whatever salutation is, we should pay off the good things.

Fifthly, spend time with family, friends, relatives, neighbors and so on. By all, what is happening with us, it can be said that we are passing the most critical time in our life and the output is anxiety, stress and fear. Talking over phone, Skype or Face Time with family, friends or relatives always relax us and can help to bring out from our fear (University Of lowa Stead Family Children's Hospital, 2020) [1]. We should take benefit of this situation by spending time with family, talking to them, playing games, watching movies, sharing launch in table that were not previously possible.

Sixthly, find time for ourselves so that we can do our favorite things. Maybe it is gardening, reading book, making crafts, sewing cloths, decorate room, cooking, doing art, writing (story, novel, rhyme, dairy etc.) and so on that gives us peace. Peaceful works always reduced our stress.

Finally, doing prayer or medication, as a means of return to spirit. Even, physicians prescribe medications for specific stress problem (Dr. Sabria, 2020) [11].

Truly, there is no specific method to solve stress problem but several techniques can be occupied to lessen it. We are trying to identify the most effective method besides these, numerus methods are available in the website.

4. Conclusion

The aim of this study has been to contact the problems regarding mental health and anxiety levels of university students in Bangladesh. The study has been completed through online so that the students remain safe from all the possibilities of being affected by COVID-19. The study found significant association between different demographic and COVID-19 related variables with anxiety levels of students. The suggestions that are given to the students to stay home and safe so that the COVID-19 does not spread extensively.

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