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The Impact of COVID-19 on the Mental Health among the Medical Students at Dhaka City

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Abstract **Original Research Article**

Objective*:** In this study our main goal is to evaluate the impact of Covid-19 on the mental health among the medical students at Dhaka city. ***Method: This cross-sectional study was carried out at Tertiary Medical college and hospital from July 2020 to May 2021. A total of 100 who were the Medical college students in Dhaka participated in the survey. The survey targeted active (current) students. ***Results:*** During the study, majority of the study group belong to 18 to 24 years and 52% were female. 80% were from nuclear family members, 28% cases economic condition were middle, 60% cases didn't do any physical exercise and 35% cases sleep patterns were changed. Most of the study group had suffer mid-level of symptoms (depression; 45%, anxiety; 40% and stress; 42%). Followed by extreme severe cases were noted in depression; 8%, anxiety; 12% and stress; 13%. ***Conclusion:*** Our results, can help to detect mental health problems and those at high risk and treatment. Future longitudinal research is needed for closer studying and translating this knowledge to enhance student health correlations between mental illness and COVID–19 variables. As many students spend time on the Internet (including social media) during the quarantine, online counseling, campaigns and other awareness efforts are useful for reducing the impact of COVID-19 in the population on mental health.

Keywords: COVID-19, mental health, depression.

INTRODUCTION

The COVID-19 (Coronavirus Disease 2019) epidemic has affected several jurisdictions. The SARS-CoV-2 virus causes COVID-19 to be very contaminated by respiratory illnesses, which may be symptomatic or asymptomatic [1].

As from May 03, 2020, 215 nations, places and territories were afflicted by the virus, initially reported in China, Wuhan, in December 2019 [2]. As a result, the virus impacted globally 3,272,202 positive cases.

In Dhaka, Bangladesh on 8 March 2020 a pandemic was proclaimed by the World Health Organization on 11 March 2020 [3-6] and three initial cases of COVID-19 were identified. Due to Bangladesh's dense population and other conditions, COVID-19 is, like in other nations, a serious risk to public health in Bangladesh. According to the Epidemiology Disease Control and Research Institute, 8,790 Bangladeshi cases, including 175 deaths and 177 recovery from COVID-19, had been confirmed through May 03 2020 [7].

In keeping with stress and perceived risk theories, public health crises may produce large unpleasant feelings [8, 9].

For pupils, the pressures of COVID-19 may be caused by increasing instances, distance / isolation methods, and commencing class disorders or tests [10]. These might lead to despondency, dread of mortality and dissatisfaction among quarantine students [11].

Objective

- To evaluate the impact of Covid-19 on the mental health among the medical students at Dhaka

METHODOLOGY

Types of study:

- It was a cross-sectional study.

Place and period of the study:

- The study place was carried out at Tertiary medical College Hospital, Bangladesh. Where data were collected from July 2020 to May 2021.

Study population:

- A total of 100 who were the Medical college students in Bangladesh participated in the survey. The survey targeted active (current) students. Sample were collected through purposive sampling as per inclusion criteria.

Method:

- Both qualitative and quantitative (Mixed Method) data were collected by using a pre designed questionnaire. The questionnaire was prepared reviewing literature and consulting with medical research experts.

Data Analysis:

- All collected data were coding and input in SPSS-25 for further analysis. Both descriptive and inferential statistics done. Descriptive statistics included frequency distribution, percent, mean, standard deviation; graph, tables, figures and inferential statistics.

RESULTS

In table-1 shows age distribution of the study group where 58% cases belong to 18 to 24 years. The following table is given below in detail:

Table-1: Age distribution of the study group

Age group	%
18 to 24 years	58%
25 to > 29 years	42%

In figure-1 shows gender distribution where 48% were male and 52% were female. The following figure is given below in detail:

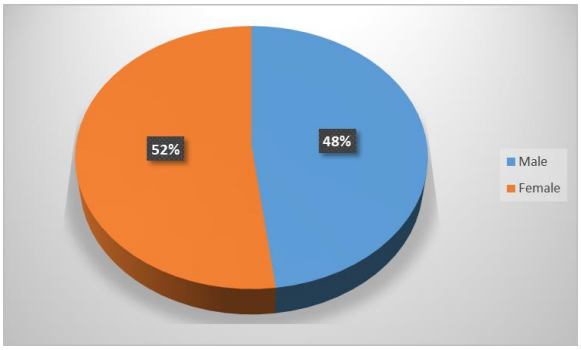

Figure-1: Gender distribution

In table-2 shows demographic status of the study group where 80% were from nuclear family members, 28% cases economic condition were middle, 60% cases didn't do any physical exercise and 35% cases sleep patterns were changed. The following table is given below in detail**:**

Table-2: Demographic status of the study group

Family type	%
Nuclear	80%
Joint	20%
Number of family members	
<5	75%
>5	25%
Monthly family income	
Low	25%
Middle	28%
High	48%
Physical exercise	
Yes	40%
No	60%
Sleep status	
Less than normal	25%
Normal (7 to 9 hours)	65%
More than normal	10%

In table-3 shows distribution of the symptoms according to severity level. Where most of the study group had suffer mid-level of symptoms (depression; 45%, anxiety; 40% and stress; 42%). Followed by extreme severe cases were noted in depression; 8%, anxiety; 12% and stress; 13%. The following table is given below in detail:

Table-3: Distribution of the symptoms according to severity level

Characteristics	**Depression, %**	**Anxiety, %**	**Stress, %**
At least mild	45%	40%	42%
At least moderate	27%	28%	26%
At least severe	20%	20%	19%
Extremely severe	8%	12%	13%

In table-4 shows distribution of risk factors according to DASS-21 scores. The DASS-21 scores were significantly (p<0.05) higher among participants who reported being female, being older (25–29 years), having ≥5 family members, living in urban areas, not engaging in physical exercise, having dissatisfaction with sleep, spending more hours browsing the internet, having dissatisfaction with academic studies under the present COVID-19 circumstances. The following table is given below in detail:

Table-4: Distribution of risk factors according to DASS-21 scores.

Gender	DASS-21 mean score	SD	P value
Male	49.27	28.08	
Female	55.30	26.07	<0.001
Age			
18 to 25 years	55.08	27.08	
25 to >29 years	51.02	25.07	0.045
Family type			
Nuclear	54.00	28.50	
Joint	51.28	30.30	0.398
Number of family members			
<5	51.20	27.60	
>5	52.20	30.31	0.001
Monthly family income			
Low	48.53	25.50	
Middle	51.50	26.70	0.243
High	53.50	30.31	0.623
Physical exercise			
Yes	45.50	26.70	
No	50.51	28.50	<0.001
Sleep status			
Less than normal	61.80	27.50	0.085
Normal (7 to 9 hours)	48.50	28.55	
More than normal	60.16	31.50	0.380
Internet browsing			
< 2hours	41.40	26.50	
2 to 4hours	42.50	24.50	0.650
5 to 6 hours	55.50	29.50	0.001
>6 hours	60.70	31.20	0.001
Satisfaction with academic study under present circumstances			
Yes	40.10	25.20	
No	60.44	22.30	<0.001

DISCUSSION

The results of this study revealed that in women, although different from other studies conducted in Bangladesh using similar and other instruments, the DASS-21, were relative higher in comparison with males, but that significant gender differences were not noted [10, 11]. A similar conclusion was nevertheless observed internationally in a recent research (females are more likely to develop DAS). In addition, during the pandemic, women are more likely to be given extra attention, which might explain for elevated symptom levels [12].

Mental well-being, including economic issues, debt, family issues, evictions, job losses and unemployed unemployment, social disruption and poor quality of life, might have several important issues for the student population [12].

However, our study demonstrated no significant relationship among students between monthly family income and DASS-21, comparable to an earlier research [13]. The results also revealed that the state of the relationship or married status were not related to DASS-21 scores comparable to previous research in Bangladesh [10].

By maintaining the biological cycle of human's sleep contributes significantly to health. Similar findings were found in the current survey of unsatisfactory DAS sleep, as in earlier trials in the same country using other tools [14].

The prevailing DAS estimations in the study, particularly with respect to stress and depression, are greater compared with prior research evaluating DAS in students using the same instrument in the same country. These variations might be secondary to the pandemic condition of COVID-19. In addition, in relation to prior studies, there were some variations in pattern of relationships with demophical and prospective risk factors, which can also be linked to COVID-19.

It is possible that older age in the current COVID-19 circumstances was associated with more responsibilities and financial burden, although this is notion is currently speculative.

Thus, the lack of substantial gender differences in prior studies has now been replaced with a female

majority that suggests that women are more vulnerable to lockouts and social insulation strains. Moreover, it was not possible to achieve the protective impact of being in a relationship discovered in prior studies here, which indicated that the protective impact in a COVID-19 setting may be nullified. During younger and emergent adulthood, the association of DAS was discovered to be older (25–29 years) instead of younger (18–24 years); nevertheless, Bonferroni's adjustment for multiple comparisons did not survive contrary to the prediction.

CONCLUSION

Our results, can help to detect mental health problems and those at high risk and treatment. Future longitudinal research is needed for closer studying and translating this knowledge to enhance student health correlations between mental illness and COVID–19 variables. As many students spend time on the Internet (including social media) during the quarantine, online counseling, campaigns and other awareness efforts are useful for reducing the impact of COVID-19 in the population on mental health.

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