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Immediate Psychological Responses & Associated Demographic Factors during the Lockdown Period of the COVID-19 Outbreak among the Bangladeshi University Students

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The massive spread of COVID-19 has put people's standard of living in jeopardy. The mental health status of the students has been a matter of concern throughout the lockdown. The study aims to identify university students' immediate psychological responses as an index of mental health outcomes during the COVID-19 outbreak lockdown period and to investigate demographic predictors of their mental health outcomes. 167 students responded to a web-based cross-sectional survey that included the IES-R and DASS-21BV in addition to demographic data and relevant COVID-19 questions. 49.2% of the respondents reported stress, 54.6% reported anxiety, 64.2% reported depression ranging from mild to extremely severe, based on DASS-21, and 68.9% of respondents rated having a mild to severe psychological impact from the lockdown on the IES-R. Age was significantly associated with the DASS stress subscale (B = -.159, AR ^{2} =.019, 95% CI: -1.023 to -.021). The study ascertains the commonness of the psychological impact of the lockdown period of the COVID-19 outbreak on university students, necessitating immediate intervention to cope with the unprecedented situation and minimize future mental health problems.

Keywords: Lockdown, Covid-19, Crisis, Depression, Anxiety, Stress, Impact of Event

Introduction

COVID-19, a transferable disease, was first identified in December 2019 in Wuhan, China (Nishiura et al., 2020; Wang et al., 2020). Within a month, the outbreak became a pandemic, and WHO declared it a public health emergency of international concern (WHO, 2020a). Because of uncertainty about the pandemic's trajectory and the large number of infected cases and deaths, social isolation has become the only option for protection, disrupting daily life (Zandifar & Badrfam, 2020).In addition, the pandemic is causing psychological distress not only for Coronavirus-affected people but also for healthy people as well (Duan & Zhu, 2020). A significant degree of stress and anxiety are common psychological responses to such unnatural circumstances where life is in crisis and death is around the corner (Roy et al., 2020). Bangladesh is no exception. From March 2020, all educational institutions and both public and private workplaces were closed by the government of Bangladesh. Public social occasions were likewise prohibited, and travelling was restricted to put a check on high transmission possibilities. Notwithstanding these endeavors, COVID-19 was uncontrollable and spread to all 64 districts in Bangladesh within a few months (IEDCR, 2020).

Mental health is an indispensable and fundamental part of well-being to function beneficially both at the individual and community level (WHO, 2020b). The unprecedented COVID-19 stress and strain essentially tested our collective and individual psychological capacity as humans to function effectively in life.The

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ambiguity and unpredictability of the pandemic generated extra toil for the natural psychological adaptive system. The extreme measure of lockdown for health safety put a halt to the academic, social, economic, and work lives of common people, which had an inescapable adverse impact on mental well-being. On top of it, after the complete shutdown of the educational institution, the ambiguity and indecisiveness in continuing academic pursuit as before had its natural bearing on the university students looking for a beneficial and steadfast future (IEDCR, 2020).

Several worldwide studies on the psychological effects of the corona outbreak were conducted with the general population as well as people in specific professions (Chen et al., 2020; Li et al., 2020; Yang et al., 2020).Previous research conducted during the SARS outbreak revealed that a significant proportion of quarantined people were distressed and displayed symptoms of PTSD and depression (Chen et al., 2006; Hawryluck et al., 2004).A study conducted with university students in China showed that students were at the highest risk of developing symptoms of PTSD and depression during the Corona outbreak (Tang et al., 2020). There is a lack of exploration that assesses the psychological condition during this unusual yet crucial pandemic lockdown, particularly among university students in Bangladesh. The high prevalence of negative mental consequences was frequently found in various investigations directed at Bangladeshi students (Anjum et al., 2019; Hossain et al., 2019; Mamun et al., 2019). This investigation will fill that gap by providing suitable data about the psychological conditions of university students during the COVID-19 lockdown period. This would guide educators and policymakers to have a holistic assessment of the situation to make appropriate decisions beneficial to the student population and for handling any future health crisis of a pandemic nature. The findings of the study will be helpful in formulating psychological interventions that will be effective in improving the psychological well-being of the students.

Objectives of the study

The present study aims to observe the immediate psychological response as a mental health status as well as identify demographic factors associated with the extent of the psychological impact of the lockdown during the COVID-19 outbreak among university students.

Method

Study design and participants

A cross-sectional survey design was adapted to assess the immediate psychological burden of lockdown for the COVID-19 outbreak among public university students. A convenience sampling technique, focused on engaging the targeted students, was utilised to collect data. A total of 167 participated in the survey. About an equal number of males (51.5%) and females (48.5%) across the undergrad to postgrad levels were finally included, with ages ranging from 17 years to 26 years.

Procedure

An online survey link with psychological indexes along with the purpose and risk of the study was circulated between May 31st and June 8th, 2020, through social media with an open invitation for voluntary participation. Respondents were encouraged to pass it on to their classmates from the same university to maintain health and safety. Informed consent was a required section for accessing the self-reporting questionnaire. To ensure respondents' confidentiality, anonymity was maintained, with the option to leave the survey at any time.

Measures

The Bangla version of the Depression Anxiety and Stress Scale-21 (DASS-21BV) and the Impact of Event Scale-Revised (IES-R) were selected to measure the psychological burden based on previous research on the psychological effects of viral disease outbreaks (Leung et al., 2003; Leung et al., 2009; Rubin et al., 2010). Demographic data were collected to determine the associated factors, i.e., age, gender, education level, marital status, and university residential status. In addition, a question about whether or not someone has been infected with the coronavirus in the immediate vicinity of the respondent's current living area was also included. The Impact of Event Scale-Revised (IES-R) is a 22-item self-report instrument that measures the amount of distress associated with particular life-threatening events and has a reliable Cronbach's alpha of 0.96 (Creamer et al., 2003; Weiss &Marmar, 1996). It is a 5-point Likert scale with a scoring range of 0 to 88. The IES-R total score has been divided into four levels of psychological impact:

0–23 (normal), 24–32 (mild), 33–36 (moderate), and >37 (severe). The translated Bangla version of the IES-R has been a widely used measure in crisis studies in Bangladesh (Hossain et al., 2021; Lipy et al., 2017). The Bangla version of the Depression Anxiety and Stress Scale-21 (DASS-21) assesses the presence of stress, anxiety, and depression (Lovibond & Lovibond, 1995). The Bangla DASS-21 was shown to be a reliable and valid tool for evaluating mental health in Bangladeshi people (Alim et al., 2017). 21 items of the DASS-21 have three subscales: stress, anxiety, and depression. The total score from each sub-scale can range in five categories: normal, mild, moderate, severe, and extremely severe. It is a 4-point Likert scale, and each of the three sub-scales of the DASS-21 has a scoring range of 0 to 42. DASS was previously used in measuring mental health status during the COVID-19 outbreak in China as well as in the SARS outbreak (Hawryluck et al., 2004; McAlonan et al., 2007; Tang et al., 2020) in Canada. Both scales fit as indicators of the respondents' mental health status.

Statistical Analysis

Descriptive statistics were used to determine the extent of the psychological impact on the respondents. The use of linear regression was also done to see whether there would be any association between the psychological measurements and the specified sociodemographic characteristics. SPSS Statistics 20.0 (IBM SPSS Statistics, New York, United States) was used for statistical analysis.

Results

Table 1 shows that the average scores of the respondents on all psychological measures were above the cutoff point. Although there was a wide variation in responses at the given point in time, above 50% of respondents experienced psychological distress at the clinical level (the cut-off point) for all the measures except stress, which was also almost 50%.

Table 1

Descriptive statistics of IES-R and DASS subscale scores (stress, anxiety, and depression) of the university students during the COVID-19 lockdown period (N = 167)

Scale	Mean (SD)	Range		Participants at the Cut-off point N (%)
		Minimum	Maximum	
Impact of event	31.87 (13.40)	4	62	115 (68.9)
Stress	15.71 (9.90)	0	42	82 (49.2)
Anxiety	10.25 (8.93)	0	38	91 (54.6)
Depression	14.39 (11.45)	0	40	107 (64.2)

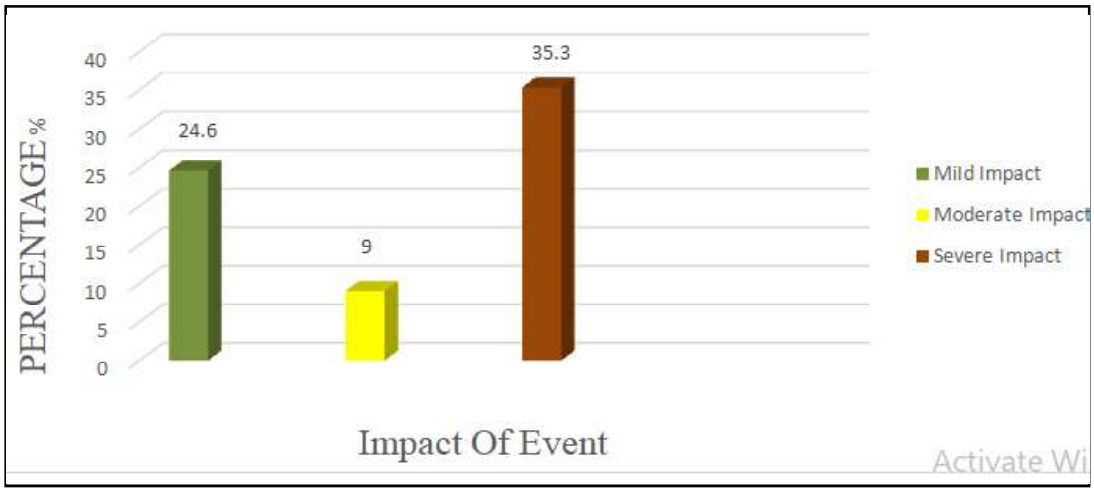

Figure1: Level of Impact of event scale associated with lockdown period of Covid-19 among the University students

Correspondingly severity level of psychological distress of the respondent as measured by DASS-21 (Figure 2) was alarming. 6-18% were experiencing severe to extreme levels of stress, depression and anxiety.

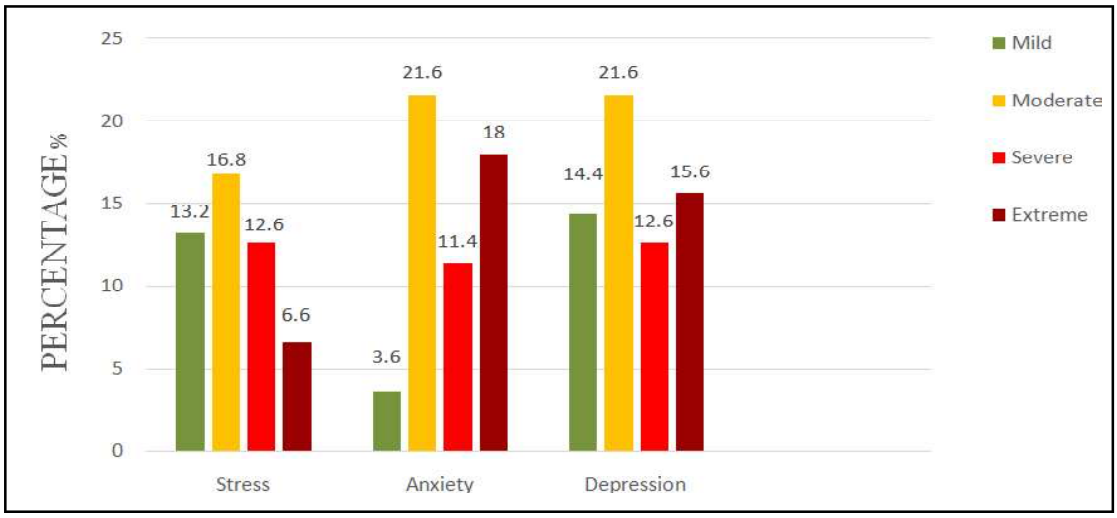

Figure 2: Level of Stress, Anxiety and Depression related to lockdown during the Covid-19 Pandemic among the University students

Table 2

Descriptive statistics of the Impact of event responses, stress, anxiety & depression-related responses of University students during the lockdown period of COVID-19 according to defined demographic variables.

Variables	Sample Size	Impact of event Mean (SD)	Stress Mean (SD)	Anxiety Mean (SD)	Depression Mean(SD)
Age group					
17 – 21	34	33.24 (11.21)	18.35 (11.06)	10.24 (10.31)	15.88 (12.80)
22 – 26	133	31.40 (13.89)	15.15 (9.55)	10.26 (8.58)	14.11 (11.07)
Gender					
Male	86	31.19 (13.47)	14.62 (9.62)	10.55 (9.10)	13.71 (10.89)
Female	81	32.38 (13.33)	17.04 (10.15)	9.95 (8.80)	15.26 (11.98)
Education					
Honors	76	32.16 (12.67)	16.37 (10.13)	10.11 (8.88)	14.77 (11.85)
Masters	91	31.46 (13.99)	15.33 (9.78)	10.38 (9.02)	14.22 (11.12)
Marital status					
Married	12	26.33 (16.44)	13.67 (8.44)	9.67 (7.67)	12.33 (10.75)
Unmarried	155	32.20 (13.07)	15.97 (10.04)	10.30 (9.03)	14.64 (11.50)
Hall status					
Residential	75	32.45 (12.83)	15.03 (9.10)	10.76 (8.88)	14.14 (10.33)
Non-residential	92	31.23 (13.84)	16.44 (10.55)	9.85 (8.99)	14.75 (12.30)
Any Covid-19 infected person in the immediate vicinity?					
Yes	124	32.36 (13.44)	16.32 (10.02)	10.97 (9.17)	14.95 (11.56)
No	43	29.23 (11.78)	13.85 (9.52)	7.23 (7.15)	12.78 (11.41)

Demographic variables as defined in the present study presented in Table 1 show that the majority of participants were male (51.5%), aged 22 or more years (79.6%), studying at postgraduate levels (54.5%), unmarried (92.8%), non-residential students of a university hostel (55.1%), and most participants in the study (74.3%) provided a "yes" response to the question of whether or not someone in the immediate vicinity of the participant's current living area is infected with the coronavirus. Except for male (14.62) and married (13.67) respondents (whose mean values were close), the mean scores of all the indexed were at the clinical level.

Linear regression was performed to predict any association between the psychological measures (DASS subscale scores and IES-R score) and defined demographic variables. With a 95% confidence interval, the beta (coefficient) demonstrated the estimated strength of associations. Age was significantly associated with the DASS stress subscale (B = -.159, AR^2 =.019, 95% CI: -1.023 to -.021). The younger age group was 1.9 times more likely than the older age group to experience stress. Other demographic variables, including gender, marital status, education, university hall status, and an additional question about the participant's current living area, had no significant association with IES-R and DASS-21 subscale scores.

Discussion

The findings of our study showed that 19.2% of participants reported severe to extreme levels of stress, while 29.45% of participants reported severe to extreme anxiety, which can potentially have serious psychological consequences. Moreover, 28.2% of participants reported having severe to extremely severe depressive symptoms. These findings of the greater impact of lockdown correspond with the available studies conducted with the college and university students of Bangladesh during the COVID-19 period, as well as with the general population of China at the initial stage of the epidemic (Khan et al., 2020; Wang et al., 2020). Similarly, the study findings were in agreement with a countrywide study of adult mental health in Bangladesh during the COVID-19 period in identifying psychological distress, but at a higher percentage than that reported in the earlier study (Das et al., 2021).

Age was the only variable that was associated with stress symptoms in a way that was different from other variables. No significant association was found between any other variables and stress, anxiety, or depressive symptoms. This implies that the lockdown period of COVID-19 has a parallel impact across the studied demographic variables except for the age group. Important enough to note is that the immediate vicinity didn't have any differential effect on psychological response, implying lockdown had an equal impact on psychological well-being regardless of the increased risk of social contact. The younger age group was 1.9 times more likely to experience stress than the older age group. Uncertainties around academic advancement can be a source of tension for young people (Roy et al., 2020). All of these findings of our study are consistent with the findings of Ochnik et al. (2021), which showed that students around the world didn't react to the global epidemic very differently, but that students in their younger years were more likely to self-report more mental health issues.

Limitations: Our study was conducted online with limited participants, and it was pilot in nature. There was a high chance of response bias and multicollinearity in that self-reported online survey. A large number of participants is strongly recommended for future research among that subpopulation.Further qualitative studies are also suggested to gather information from the participants regarding their knowledge, attitude, and behaviour after the COVID-19 period.

Implications and recommendations: Though it is challenging to state that the lockdown is causing these severe symptoms as the BDASS 21 scale is independent of events, the overall findings call for the attention of authorities. The evidence from this study suggests that there was a significant amount of psychological distress during the COVID-19 lockdown period, which could pose a future threat to mental health. In light of this larger context, it is essential to regard this increase in psychological discomfort as a normal response to a difficult situation that may be temporary rather than the beginning of continuous and long-term issues, but this is only feasible with the correct kind of psychological intervention. Accessibility to regular counselling sessions along with other mental health facilities may be helpful to overcome the negative psychological impacts and ensure the well-being of university students. Further efforts, such as mental health-related workshops or campaigns, are also needed to capture the attention of institutions and legislators and

establish appropriate tactics and suggestions for that group. Future in-depth research and/or planning on the psychological health of university students in crisis may benefit from the findings of this report.

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