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Sources of Stress and Coping Strategies of University Students during COVID-19 Pandemic

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Sources of Stress and Coping Strategies of University Students during COVID-19 Pandemic

Abstract

Purpose: This study seeks to explore the sources of stress and identify the coping strategies employed by university students during the Covid-19 pandemic in Bangladesh.

Methodology: The study uses an online self-administered structured questionnaire to collect data from 409 university students through snowball sampling. Descriptive statistics, Cronbach's alpha, and cross-tabulation were used for the data analysis.

Findings: The paper highlights the significant sources of stress and related coping strategies. It identifies that males are more stressed than females in isolation and financial uncertainty. Moreover, with respect to coping strategies, it is observed that females use some coping mechanisms (household chores, completing assignments, personal hygiene, relaxation exercises, learning new skills, destroying things, screaming and crying) more than their male counterparts.

Value: To help ensure sound mental health conditions, this study benefits psychologists, counselors and academicians to develop strategies for university students to cope with the stress during Covid-19 pandemic.

Keywords: sources of stress, coping strategy, university students, covid-19, social isolation

1. Introduction

1.1. Background

Covid-19 has disrupted the lives of millions of individuals globally, and the resultant social distancing measures have impacted the concept of normal life for many, abruptly, and all at once. Bangladesh's first case was reported on March 08, 2020 and ever since the numbers of new cases have increased exponentially. Social distancing measures imposed by the government included a general lockdown, closure of educational institutions, banning gatherings, halting intra-city and inter-city transportation services, and closure of all private and public offices. Only essential services were exempted from this directive. At the time of writing this paper in the middle of August 2020, the positive cases are still on a rise. Most of the offices and factories have opened putting the SOPs in place, but the educational institutions all over the country are still closed. The closure of all educational institutions and other social distance measures put in practice implied that along with other, the students also have to remain in their own homes with no opportunity to go out and socialize with their peers. Hence we can safely assume that staying indoors for close to five months with very little hopes of any improvement in the near future might have had a detrimental effect on the mental health of the youth.

The interruptions in daily routine and widespread outbreaks of any infectious disease, such as COVID-19 can lead to symptoms of adverse mental health consequences (Rajkumar 2020, Bao et al., 2020) especially for the young generation who enjoy being out. To survive through this situation, the youth have adapted to different coping strategies to deal with the stress of social isolation. Coping mechanisms are specific behavioral and psychological efforts that one engages with to master, tolerate, mitigate, or curtail a stressful situation having an impact on the mental wellness of an individual.

Since its outbreak, the COVID-19 pandemic is causing significant psychological and physical stress and has resulted in high morbidity and mortality rates. (Rosenbaum, 2020; Sohrabi et al., 2020; Tanne et al.,

2020; Wang et al., 2020). In Bangladesh the COVID-19 pandemic has aggravated the healthcare crisis and economic burden. It has triggered the sense of psychosocial and socio-economic insecurity among people due to the loss of lives and livelihoods (Bodrud-Doza et al. 2020). Moreover, as the Bangladeshi people have been subjected to lockdown, quarantine, or social distance since March 2020, it is anticipated that this can cause higher psychiatric sufferings as it has already led to COVID-19 related suicide occurrences in the country ([Bhuiyan et al., 2020](#); Mamun and Griffiths, 2020).

1.2. Objective of The Study

Thus the main purpose of this study was to explore the sources of stress experienced by university students during the proliferation of Covid-19 pandemic in Bangladesh. The study also identified the coping strategies the students have availed to pull through in this difficult time of despair. The two major research objectives were:

- I. To identify the sources of stress regarding Covid-19 amongst the students.
- II. To analyze the relationship between genders with different sources of stress and coping strategies.

The next sections of this study deal with literature review, followed by methodology, analysis and finally conclusion.

1.3. Methodology

A structured questionnaire was developed through literature review and focus group discussion, to collect data. As the magnitude of this adversity is distinctive, and its resultant impact on stress levels is inevitable to be different for every individual, the usual traditional coping strategies in case of loneliness resulting from illnesses, old age, or working in extreme and isolated locations might not work in this scenario. The self-structured questionnaire had three sections which includes demographic information, sources of stress, and statement regarding coping behavior. The questionnaire was reviewed by experts and a group of university students to ensure content validity. The review resulted in a final cross-sectional survey

with 33 statements related to coping behavior using five point Likert Scale and 9 possible sources of stress. All the statements were close-ended and the respondents marked their choices as per their level of agreement in each of the parameters.

The data for this study were obtained using a cross-sectional survey, which was distributed from April 14-25, 2020 during the coronavirus disease outbreak. The study included the university students both male and female who were isolated at their homes because of Covid-19 pandemic situation. The anonymous survey questionnaire was distributed online to students from public and private universities of living in urban and rural area of Bangladesh using non-probability convenient sampling technique. In this study 420 questionnaires were received from which 409 were considered usable for analysis after eliminating the missing values and outliers. Data entry and analysis was done with the statistical software SPSS version 20. Descriptive statistics were used to examine the demographic profile, Cronbach's alpha to measure reliability, and cross-tabulation analysis was done to identify relationship within the variables.

2. Literature review

The world has experienced epidemics in the form of AIDS, SARS, Ebola, to Swine Flu, but none of them created such persistent or extended disruptions to flow of life like COVID-19. To fight with the unseen threat, majority of the countries affected in the world have followed a “general lockdown strategy.” Despite modern lives being increasingly self-sufficient, the social aspect of human lives continues to be important, as people require different kinds of assistance from others. Research conducted on various age cohorts has also indicated the loss of the necessary social support, which can again lead to and promote depression, sleep disorder, and hopelessness (Maris et al. 2000). DiGiovanni, et al 2004, in their research found that emotional reactions to social distancing during SARS outbreak of 2003 were fear, isolation, loneliness, depression, insomnia, and anxiety, but boredom was specifically cited as the greatest emotional hindrance to compliance with quarantine. Several studies during the SARS outbreak investigated the psychological impact on the non-infected community, and identified

significant psychiatric illnesses which were found to be associated with younger age and increased self-blame (Sim, 2010).

Recent studies in China regarding the impact of the pandemic found that many respondents suffered from anxiety symptoms or psychological stress (Cao et al., 2020; Huang & Zhao, 2020; Qiu et al., 2020; Wang et al., 2020). One study during the early stages of COVID-19 outbreak in China found that 53.8% of respondents rated the psychological impact as either moderate or severe, some respondents (16.5%) reported moderate to severe depressive symptoms, and around 28.8% of the respondents reported moderate to severe anxiety symptoms. It was also found that gender, student status, and specific physical symptoms were associated with a greater psychological impact of the outbreak and higher levels of stress, anxiety, and depression (Wang et al, 2020). It is evident that the psychological impact of social distancing is wide-ranging, substantial, and will be long lasting.

Mental disorders have a high economic impact. In addition the COVID-19 pandemic has implications in other sectors of an individual's life: family dimensions, schools closures, inaccessibility of companies and public places, changes in daily routines at work and home, and isolation, all of which can build up to feelings of helplessness and abandonment. Moreover, it can exacerbate the inherent insecurity and the looming adversities on the economy, as well as social life, on a large scale (Ornell et al., 2020).

When delving into the impact on the mental condition of healthcare workers during Covid-19, symptoms of depression (50.4%), anxiety (44.6%), insomnia (34.0%), and distress (71.5%) were identified (Lai 2020). On the other hand, while analyzing the impact on general population, strong positive correlations were found between the fear of COVID-19 and (i) depression, (ii) anxiety, (iii) perceived risk of infection, and (iv) germ aversion (Ahorsu, 2020). With respect to severity of the pandemic, a study found that (Wang et al., 2020). In extreme cases, there were also reports of suicide due to fear of the virus (Mamun and Griffiths, 2020, Goyal et al., 2020).

A research completed on the psychological impact of the COVID-19 epidemic on college students in China, indicated the stressors that involved economic factors, effects on daily-life, and academic delays were positively associated with the level of anxiety symptoms whereas social support was negatively correlated with anxiety (Cao et al., 2020). Emotional distress and increased risk for psychiatric illness associated with Covid-19 were escalated by uncertain projections, unresolved severe shortages of resources for testing and treatment, insufficient protective equipment to prevent responders and healthcare providers from infection, imposition of unfamiliar public health measures that infringe on personal freedoms, large and growing financial losses, and conflicting messages from authorities (Pfefferbaum & North, 2020).

Brooks et al., 2020 specified stressors that included greater duration of confinement, having inadequate supplies, difficulty securing medical care and medications, and resulting financial losses. Young adult group with high score in stress seem to confirm findings from previous research that indicated young people tend to obtain a large amount of information from social media that can easily trigger stress (Cheng et al, 2014).

Studies related to COVID -19 identified sources such as being tensed personally or for the family, fear of losing jobs or uncertainty about future career options, sickness of the respondents or people related, food crisis, disruption of normal flow of education and other future activities (Ahorsu et al., 2020; Liebrezn et al., 2020; Torales et al., 2020; Qiu et al., 2020; and Zhang and Ma, 2020).

A study in Bangladesh found that most of the participants are in COVID-19-related stress, due to which they face sleep shortness, short temper, and chaos in family. It was identified that respondents feel stressed economically and also while thinking of their family member, managing food, losing their jobs, future career. They also feel stressed as the formal education is being hampered. This stress increases while getting updates from different media. This stress influences the mind to commit suicide and creates mental pressure causing short temper and chaos in the family (Islam et. al, 2020).

Social Isolation is a unique strategy that has been used to reduce the infection rates of COVID-19, places discreet pressures on the ability to maintain a strong attitude which is different from the natural disasters in which community members join together, physically and socially. However, even individuals in isolated circumstances with limited social interaction and contacts, can find engagements meaningful even in regular an ordinary tasks, especially when performed with a motive to achieve self-care and stress-release, when feeling the under pressure due to the prevailing situation. Activities like that can include, for example, engaging in beloved hobbies, playing internet games, or taking up challenging mental tasks such as solving puzzles; learning to play music, playing a solo instrument, singing, listening to music, watching television; or the more strenuous tasks like learning a language, improving skill sets like writing, painting or simply take stock of their surroundings can prepare when life gets back to normalcy after the end of the pandemic situation. Actions that lead to engaging in activities that help appreciate life during times of mass traumas is a robust predictor of improved psychological well-being and lower post-traumatic stress symptoms (Dekel, et al., 2015). Many other strategies that can be used includes activating social communication (Manuel & Cukor 2011), taking online courses and learning new skills (Botella et al., 2016; Kanas, 2015), evading conflict (Comeliussen et al., 2017), and developing skills to live with people in harmony (Barrett & Martin, 2014).

Activities that are employed to help cope with stress are coping mechanisms, and can help to divert the mind away from the stressors that are out of individual control, and help boost positive emotions that researchers have found to be critical towards creating resilience, and smoothen recovery after 9/11. They enable the individual abilities to recoup from negative experiences (Fredrickson et al., 2003), work to diminish the psychological burdens imposed by long periods of distress, and boost intellectual capacities to contend with everyday stressors amidst shifting environments (Bonanno et al., 2010).

The most common research referred to identify or measure coping mechanism is known as COPE. COPE has 13 different conceptually different factors namely Active coping, Planning, Suppression of competing

activities, Restraint coping, Seeking social support for instrumental reasons, Seeking social support for emotional reasons, Positive reinterpretation & growth, Acceptance, Turning to religion, Focus on & venting of emotions, Denial, Behavioral disengagement, Mental disengagement and Alcohol-drug disengagement. This scale developed by Carver, Scheier & Weintraub was mainly based on an extensive review of the available measures of coping. Moreover, earlier models of behavioral self-regulation and the Lazarus model of stress were used to serve as benchmarks. (Carver & Scheier, 1989; Scheier & Carver, 1988) Another way to look into coping strategies is to divide them as either problem focused or emotion focused. A study in Germany found that most respondents prefer using problem focused dimension (Gerhold, 2020).

The existing literature in this field has highlighted the significance of the topic. Though there have been numerous researches done on this field, studies focusing on both stress and coping mechanisms especially for the university students in Bangladesh have not yet been explored. This area needs attention as understanding the strategies used can help the policy makers and academicians to design appropriate strategies to mitigate mental health problems of students during this pandemic.

3. Analysis

3.1. Reliability analysis

Reliability test was necessary as the questionnaire used for data collection was designed for the unique situation of social isolation due to COVID -19. The Cronbach Alpha testing was used as it is the most well accepted reliability test tools applied by social researcher (Sekaran, 2003). The questionnaire used in this research is considered acceptable as the value of Cronbach Alpha is 0.954.

3.2. Demographic profile

The questionnaire included the demographic information about age, gender, marital status, type of university, religion, living arrangement, number of family members and current location. From Table 1, we see the basic demographic profile of the respondents. Majority of the respondents were male (60.4%), single (94.4%) and private university students (84.4%). Since

the respondents were university students, most of them were in the 21-24 years age cohort. Maximum students were Muslims (Islam 91.4%). Looking into the current living arrangement, we can see that a significant number of respondents were located in urban area (77.8%) and staying with their families (94.6%), where a large number of families consisted of 3-4 members (50.1%). Finally, it is seen that students from all divisions have participated although the majority of them were located in Dhaka (72.6%).

Table 1: Demographic profile of respondents

Gender	Male 60.4%				Female 39.6%			
Marital Status	Single 94.4%				Married 5.6%			
Institution	Public University 15.6%				Private University 84.4%			
Area	Rural – 22.2%				Urban 77.8%			
Age	Below 21 yrs 12.2%		21-24 yrs 79.2%		Above 24 yrs 8.6%			
Religion	Islam 91.4%			Hinduism 8.3%		Others 0.2%		
Living Arrangement	Alone 3.2%			With Family 94.6%		With friends 2.2%		
Current family member	None :1.7%	1-2 : 12.5%	3-4 : 50.1%	5-6: 28.1%	<7: 7.6%			
Division	Dh 72.6%	Rj 4.4%	Rn 3.2%	Ch 6.6%	My 6.6%	Kh 4.2%	Ba 2.2%	Sy 0.2%

Note Dh= Dhaka; Rj=Rajshahi; Rn =Rangpur; Ch= Chittagong; My= Myemensing; Kh= Khulna; Ba= Barisal and Sy= Sylhet

3.3. Stress regarding Covid-19

Covid-19 pandemic situation has had a great impact on stress levels of university students isolated in their homes. Figure 1 illustrates that most of the students were really stressed because of the issues in this pandemic. This gives rise to the next question what were the issues creating their stress. Figure 2 indicates the response of the students regarding different sources of stress.

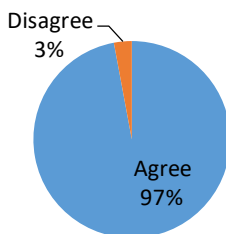


Figure 1: Stress level of Students

From the Figure 2, two things can be identified. First, it has been observed that students were most worried about uncertainty about the future impact of Covid-19, followed by fear for the health of family members, and the fear of getting themselves infected. The least worrisome of their stressors seems to be regarding insufficient information about Covid statistics. In some of the stress items, it has been noticed that males and females equally agree on being stressed by different issues, like uncertainty about the future impact of Covid-19, information about Covid-19 on different media, fear about family members' health and lack of information about Covid-19 statistics. Whereas in other items like being isolated for a long time, the fear of getting infected, financial uncertainty, food shortage and uncertainty about future law and order situation, male respondents are more worried than females.

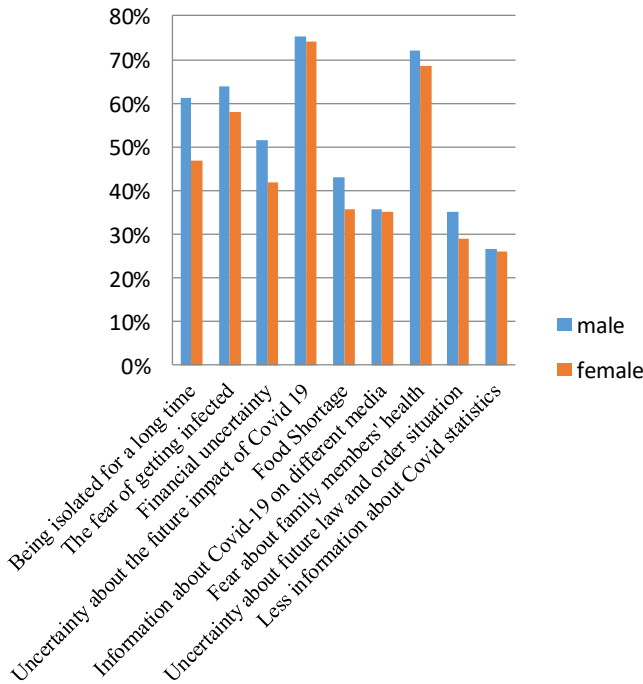


Figure 2: Sources of Stress

Table 2 summarizes the results of cross-tabular analysis that has been done between gender and stress items. Here, from the p values, it was clearly visible that gender has strong association with the stress item of being isolated for a long time ($\chi^2 = 8.01$, $p = 0.003$) and financial uncertainty ($\chi^2 = 3.646$, $p = 0.035$). Thus it was evident that most male respondents identified being stressed on both the parameters. However for females, this item was not a matter of much concern as most of them disagreed on being stressed in these two aspects. For all the other statements, male and female respondents were equally stressed. Thus, no significant relationship was observed.

Table 2: Relationship between gender and stress items

	Male	Female	P value	χ^2
Being isolated for a long time	61.13%	46.91%	.003	8.01
The fear of getting infected	63.97%	58.02%	.135	1.461
Financial uncertainty	51.42%	41.98%	.035	3.646
Uncertainty about the future impact of Covid-19	75.30%	74.07%	.433	.079
Food Shortage	42.91%	35.80%	.091	2.06
Information about Covid-19 on different media	35.63%	35.19%	.507	.008
Fear about family members' health	72.06%	68.52%	.254	.593
Uncertainty about future law and order situation	35.22%	29.01%	.115	1.713
Less information about Covid-19 statistics	26.72%	25.93%	.476	.032

3.4. Students coping strategy during covid-19

The chart (Figure 3) describes the different coping strategies used by the respondents during this pandemic. The first three statements look into coping through social support. Here we see that students largely depend on the support of their family or friends for coping with various kinds of stress, indicating the significance in the role our support networks are playing during this pandemic. The next statement on practice of religion shows that 70% have received comfort through it, and used it as a strategy. The

following three statements show that students even cope by focusing on academics. Although the percentage is low, it is still a coping mechanism used by many. Looking into how students are coping by being involved in different activities, it is seen that many are taking up development activities like learning professional skills (42%). With fear associated with the COVID 19, many healthy activities are being practiced like maintaining better personal hygiene (68%) and eating more healthy food (54%). Moreover, other significant activities the respondents are involved in include doing household chores (61%), watching films (62%), spending time on social media (55%), listening to music, music (55%) and watching news (52%). A majority of the university students are also increasing their sleeping hours (57%) to cope with this pandemic.

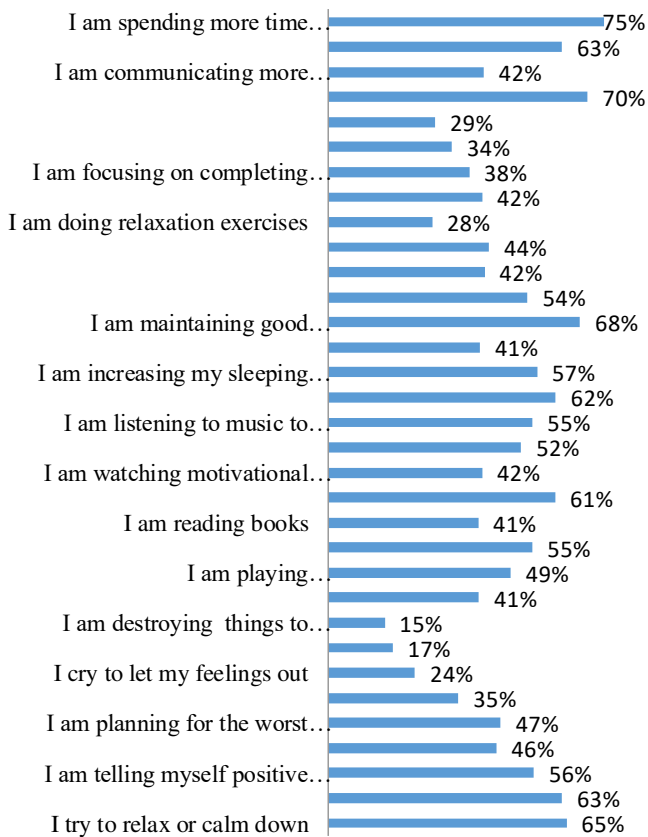


Figure 3: Coping Strategy

A major issue of concern is regarding how youth are using some destructive mechanisms in the current scenario like destroying things to express frustration (15%), yelling, screaming or getting angry (17%) and crying to let feelings out (24%). Although the percentage is small, it is still significant, especially since the first two can be an indication of severity in the mental health condition.

Though young, some respondents are also taking strategic coping mechanisms like planning what to do in the worst situation (47%) and setting new goals for themselves (46%). This is a good sign, showing a proactive approach towards the situation. Finally, it can be seen that a

majority of the respondents are taking a more positive approach by focus on positives (63%), telling positive things (56%) or trying to just relax and calm down (65%).

Table 3: Relationship between gender and coping strategy

	Male	Female	χ^2	df	P value
Helping in household chores.	56.2%	69.2%	11.484	4	.022
Focusing on completing homework/assignments	32.4%	46.9%	9.976	4	.041
Maintaining good personal hygiene	62.8%	76.5%	19.153	4	.001
Doing relaxation exercises/meditation/yoga	23.9%	34.6%	10.351	4	.035
Learning a new skill (Handicraft/ cooking etc)	37.6%	52.5%	15.409	4	.004
Destroying/breaking things to express frustration	14.1%	16.7%	13.327	4	.010
Yelling, screaming, or getting angry	15.8%	19.8%	15.160	4	.004
Crying to let the feelings out	17.8%	32.1%	12.733	4	.013

The relationship with gender and coping strategy was identified using cross-tabular analysis presented in Table 3. Here, from the p values, it was clearly visible that gender has a strong association with coping strategies which includes helping in household chores ($\chi^2 = 11.484$, $p=0.022$), focus on completing homework or assignments ($\chi^2 = 9.976$, $p=0.041$), maintaining good personal hygiene ($\chi^2 = 19.153$, $p=0.001$), doing relaxation exercise/meditation/yoga ($\chi^2 = 10.351$, $p=0.035$), learning a new skill ($\chi^2 = 15.409$, $p=0.004$), destroying/breaking things to express frustration ($\chi^2 = 13.327$, $p=0.010$), yelling screaming or getting angry ($\chi^2 = 15.160$, $p=0.004$) and crying to let the feelings out ($\chi^2 = 12.733$, $p=0.013$). It was marked that most female respondents use these coping strategies more than male respondents. For all the other statements, male and female respondents were equally using the coping strategies, revealing no significant relationship with gender.

4. Conclusion

The paper has highlighted the significant sources of stress and coping strategies during pandemic according to the context and culture of Bangladeshi university students. The sources of stress analysis indicated that the current situation created fear regarding uncertainty about the future impact of Covid-19, followed by fear associated with family members' health, and the fear of getting infected. The most common coping strategies used by the students were spending time with family, praying, maintaining personal hygiene, relaxation, focusing on positive thinking and watching movies. It is important to mention here that destructive strategies (destroying things to express frustration, yelling, screaming or getting angry and crying to let feelings out) were also used by the students although the frequency was low. Moreover the paper identifies a strong relation associated with sources of stress (being isolated and financial uncertainty) with gender. Furthermore females are found to use a few coping strategies such as participating in household chores, completing assignments, maintaining personal hygiene, focusing on relaxation exercises, learning new skills, destroying things, screaming and crying, as compared to males.

The study had its limitations such as being cross-sectional study among a non-representative sample where the participation from people who had limited internet access could not be ensured. It also includes the variables that were self-reported which may not completely reflect all possible sources of stress and coping strategies. However, the questionnaires were conducted in an anonymous way to avoid social bias. Besides, the COVID-19 related human stress assessment tools were not included in the research.

Despite all the limitations, the present study provides the novel findings on the coping strategy and its relationships with gender. However alternate methodologies apart from cross-sectional study, such as longitudinal or experimental designs, should be employed to verify the findings of this study. Level of stress and the impact of the stress on physical and mental health can also be analyzed in future exploration.

The findings of this research will help towards ensuring sound mental health condition of the university students considering students' perspective. It is highly beneficial for psychologists, counselors and

academicians for developing strategies to intervene and provide adequate guidance which will be beneficial for the student community of the country.

It is recommended that targeted psychological interventions be implemented for student communities affected by Covid-19, by enhancing awareness and delivering online psychological interventions through application based technologies. In this time of crisis even universities need to be empathetic and have more active participation in helping out the students. These institutions can take steps like reducing tuition fee, introducing flexible policies and establishing online counseling services. The research also indicated the need for different approach of handling male and female students during professional counseling. These measures can help reduce or prevent future psychiatric indisposition.

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