



University Students' Anxiety in the Time of the COVID-19 Pandemic

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Abstract

With the emergence of the coronavirus pandemic, many universities shifted to online education. This system provided different merits in the time of university closure, stay-at-home orders and lockdowns and reduced the risks of students' and educators' disease contraction thereby taking care of their physical health. However, the aforementioned system engendered a number of demerits as the mental health of university students was negatively affected and worldwide some students experienced moderate to severe anxiety. In underprivileged countries, this situation was aggravated for students who did not afford electronic devices such as smartphones, laptops, tablets or personal computers. Moreover, in countries where high-speed internet is not available or there are some internet connection problems, university students and educators may feel more anxious during online classes and at the time of exams. It is suggested that some anxiety-reducing strategies be taken by governments and educators throughout the world such as providing free internet packages for students, supplying financial support and interest-free loans for them to afford electronic devices and offering asynchronous classes in addition to synchronous ones. Likewise, some health system strategies should be offered to supply crisis-oriented psychological services for university students.

Keywords: *Learner Anxiety; Online Education; Strategies; University Students*

Introduction

The ongoing global pandemic of coronavirus disease exerted extensive impacts on world education systems. Therefore, a great number of schools, universities and educational institutes resorted to online education as it was according to Dhawan (2020, p. 5) "no more an option" but a necessity. Online learning is necessary to minimize direct contact among students or between students and teachers (Ravi, 2020). The online system of education for medical and veterinary medical students has some merits, such as convenience for students regarding better time management (Abbasi et al., 2020). Moreover, Islam and Alam (2021) mention some other advantages such the use of a variety of various web-based resources in this system, and greater acceptability of this system by the students, the chance to

combine smaller groups into a larger group in an online system and the provision of the students with recorded lectures times and again at their convenience.

However, some problems arose. Students in all levels of education would be inspired with novel and innovative ideas through social interaction with peers, classmates and instructors. With the implementation of quarantine, many students have been isolated from their classmates and teachers and have to stay longer at home as they fear for their health and the health of family members. Consequently, they may suffer from depression and anxiety (Islam and Alam, 2021; Dedeilia et al., 2020; Son et al., 2020). In addition, they may face some mental health issues. Most of them, have according to Adebowale et al. (2020) limited access to sports facilities.

The use of multimedia has become quite widespread (Kashefian-Naeeni and Sheikhnezami Naeini, 2020) and with the emergence of the pandemic, multimedia has been pointed up. Significant research is available in the use of multimedia in online courses that apply both synchronous and asynchronous technologies (Kraus et al., 2017) and computer-mediated technologies in online courses have been at hand for many years. Students do not have to attend face-to-face classes; therefore, many of them spend long hours surfing the internet. Some students may misuse this opportunity and they may become addicted to YouTube, Facebook, LinkedIn, Twitter, Instagram, Sharerit, Uber, Viber, WhatsApp and other social media apps, and lose their valuable times of academic learnings (Mubassira and Das, 2019; Adebowale et al., 2020; Son et al., 2020). Thus, time management will be of paramount importance and educators should teach the necessary skills related to the management of time to their students; otherwise, students' academic performance will be at risk which may lead to greater anxiety on the parts of students.

The Psychological Impacts of the Pandemic on University Students of Different Countries

The COVID-19 pandemic exerted significant psychological impacts on students throughout the world and markedly influenced their mental health. The prevalence of anxiety, depression and stress among university students has been the cause of worry of different educators and made various researchers work on the topic.

Aftab et al. (2021) carried out a cross-sectional study which encompassed 418 undergraduate and postgraduate medical students from all over the world. The foregoing researchers found that Symptoms due to anxiety were noticed in 37.8% of the participants and 90% experienced greater difficulty in learning during the pandemic in comparison to the pre-pandemic time.

Alqudah, et al. (2021) investigated the levels of anxiety among undergraduate university students in Jordan during COVID-19 pandemic. 40.6% of those who took part in the study experienced moderate to severe anxiety. Some factors increased students' anxiety scores which included using chronic medications, GPA, application of distance learning, quarantine in the pandemic, academic tasks, new methods for evaluation and the use of anti-anxiety drugs.

By applying quarantine in different countries for uncertain amount of time, some nations tried to prevent the spread of the coronavirus disease (Yang et al., 2020). This stemmed from the increasing number of corona cases and death rates and the fact that the disease was a contagious one (Lasheras, 2020). The foregoing measures play a role in controlling the spread of the virus; however, the well-being of people in these countries will be at risk and negative psychological impacts may arise for those individuals who are susceptible to mental health problems since anxiety and depression have originated from the same situations in the past (Lei et al., 2020 & Saddik et al. 2020, cited in Lasheras, 2020).

For some time, Delta was the predominant strain of the virus in India and led to the massive second wave of COVID cases in that country. Therefore, Indian officials declared lockdown and asked people to practice social distancing to prevent the spread of infection. Vala et al. (2020) performed a study in India to assess mental status and prevalence of factors such as anxiety, stress and depression among Medical students during the coronavirus pandemic. They maintained that long study hours, examinations, peer competition, sleep deprivation, cause medical students to be more stressed and more depressed. Moreover, they asserted in their work that sudden isolation and social distancing could significantly influence the mental health of the students because they do not participate in extracurricular activities thereby they were separated from their friends and hobbies. It came to light that prevalence of anxiety, stress, and depression were 17.20%, 15.60%, and 10.80%, respectively, in medical students. Gender-based prevalence was also reported in their study; the prevalence of anxiety, stress, and depression among male students were 7.60%, 5.20%, and 6.40%, respectively, and 9.60%, 5.60%, and 9.20% in female students.

In another study, in India, Taneja et al. (2018) strived to determine the prevalence of depression, anxiety, and stress among medical students. They reported the presence of anxiety, depression, and stress in medical students as students do not attend their university. In addition, they maintained that there was a strong correlation between depression, anxiety, and stress. In other words, the aforementioned factors have been shown to be related. Likewise, Mandal et al. (2012) maintained that that language problem, fear of failure, and vast syllabus of 1st-year MBBS accounted for stress. Singh et al. (2012) also labeled examination fear as a stressor for anxiety, stress, and depression in medical students.

In another similar study in China, Wang et al. (2020) performed a number of studies during the initial outbreak of Coronavirus pandemic. They reported that 28.8% of participants illuminated moderate to severe anxiety and 8.1% reported moderate to severe stress level. Furthermore, Rajkumar (2020, cited in Aylie, 2020) labeled symptoms of anxiety, depression and self-reported stress as prevalent psychological reactions to the COVID-19 pandemic.

The psychological effects of COVID-19 pandemic were specified by Aylie et al. (2020). Over three hundred Ethiopian students were involved in South-west Ethiopia. The prevalence of depression, anxiety, and stress were 21.2%, 27.7%, and 32.5%, respectively. According to the foregoing study factors such as staying at home, history of medical illness, and poor and moderate social support elevated the risk of depression. Not living with their parents, relatives' being afflicted with coronavirus disease and low family income were found to be the risk factors for anxiety. Students who were not living with their parents had 3.3 times higher risk of having anxiety in comparison with those who live together with their parents. Moreover, substance use, depression, anxiety, and poor social support were increasing the risk of stress among university students and those who developed anxiety were 2.8 times more prone to develop stress in comparison with those who did not have anxiety. Their study revealed that the prevalence of anxiety was 27.1%, which was higher than the anxiety level among Iranian, Indian, and Spanish students, but lower than Jordanian, Pakistani, French and Turkish students. (See Odriozola-gonzález, et al., 2020, Rehman et al., 2020 and Salman et al., 2020).

Anxiety-Reducing Strategies

In a successful education system, it is necessary to enhance the quality and efficiency of education (Kashefian-Naeeni & Kouhpeyma, 2020). One strategy to help students overcome their anxiety in the time of the COVID-19 pandemic is to make them autonomous in learning. As one of the most important challenges of online learning is how to help students learn autonomously and continuously (Lawanto, Santoso, Goodridge, & Lawanto, 2014). Since autonomous learners continue learning on their own in an independent way. Inasmuch as students are separated from teachers in synchronized or non-

synchronized endeavors, they should, according to Solak and Cakir (2015), carry out learning activities autonomously as autonomy in learning is one of the prerequisites of the e-learning process (Artino & Stephens, 2009).

COVID-19 has negative mental and social upshots, and some lines of research connected social isolation and loneliness to weakened mental health; for example, Aylie et al. (2020) underlined that negative mental health impacts of social isolation may be noticeable among older adults and families with teens, as these groups are already at risk for depression or suicidal ideation. Moreover, Ziong et al. (2020) affirmed that the widespread outbreaks of infectious diseases, such as the outbreak of COVID-19 is connected with psychological distress and mental illness. Early evaluation and intervention should be carried out to decrease anxiety, depression, and stress in medical students (Vala, 2020) as anxiety, depression, and stress are present among medical students. as a result of students' not attending medical colleges and receiving all instructional processes online in COVID-19 phase. Moreover, even at home, medical students are hit with anxiety, depression, and stress. Accordingly, Early detection and intervention may, according to Vala (2020) led to counter and curtail the impacts of distress in students.

Not all students have access to a strong internet connection as it depends on their proximity to a router or the quality of broadband package. Therefore, many students fear that they lose their classes due to poor internet connection. Upon availability, students should consider more than one connection mode. However, in some underprivileged societies in which students face serious connection problems or in which internet access is not provided to remote villages, instructors may have to record their online classes and share them with their students or they may combine online and offline education and hold some synchronous and some asynchronous classes.

In the underprivileged societies, where students worry about high internet expenses that they are charged for downloading offline instructional videos, instructors can use some multi-format video encoding applications such as StaxRip through which they can convert their video files to reduced size without losing quality. That enables students to download instructional videos of their instructors which are of small sizes; thus, students will be able to economize which leads fewer economical drawbacks and reduced levels of anxiety.

Many experts advocated the use of some strategies which reduce anxiety among students in the time of the pandemic. Lasheras (2020) confirmed that the already-high levels of anxiety in medical students should not prevent the carrying out of specific anxiety-reducing strategies owing to the fact that the several COVID-related stressors discovered in the specified population could greatly affect impact their typical behavioral cycle of anxiety. Aylie et al. (2020) also reported a higher prevalence of depression, anxiety, and stress among university students and emphasized that governments and policy makers should develop health system strategies to offer crisis-oriented psychological services for university students to diminish the mental health effects of the outbreak.

Countries like Iran have provided some free internet packages for teachers, instructors and students as internet is the essential part of online learning. This trend can be followed by many countries throughout the world. According to Islam and Alam (2021), to minimize the adverse effects of the COVID-19 pandemic on students, providing some interest-free loans to students can be of great help as they can purchase the needed electronic devices such as smartphones, laptops, tablets and personal computers so that they may be able to attend their online classes. Moreover, uninterrupted internet supply and high speed of the internet should according to them be guaranteed throughout the world during the pandemic.

The use of a telemedicine system of learning is another option. The rapid implementation of telemedicine because of the COVID-19 outbreak can according to Iancu et al., (2020) serve as a chance to improve medical education curricula and to supply medical students with important educational opportunities when in-person encounters are confined and the projected growth of telemedicine calls for the students' learning of new skills to be efficacious providers.

University students in remote villages in some countries may fear missing their online exams due to connection problems. Therefore, teachers and practitioners of education can divide the scores into different parts and allocate some homework, recorded presentations, several quizzes and different exams during a semester so that if students miss one online exams, they do not lose a lot of points.

Instructors should endeavor to alleviate their students' fears in the time of the pandemic by providing their students empathetic support so that students will not be afflicted with high levels of anxiety. Furthermore, some health system strategies should be offered to supply crisis-oriented psychological services for university students and free consultations should be provided to them so that they can overcome psychological distress which is prevalent in the time the COVID-19 pandemic.

Conclusion

The global pandemic of the coronavirus disease had significant impacts on world education systems. Many educational settings resorted to online education which offered some merits together with a number of demerits. The COVID-19 pandemic and its consequential isolation and quarantine not only exerted adverse psychological impacts on university students but it also considerably influenced their mental health. The prevalence of stress and anxiety among the aforementioned students has sparked deep concerns in world educators and has led many researchers to work on the topic.

It is of paramount importance to pursue some anxiety-reducing strategies. Lack of strong internet connection may bring about students' loss of their online classes. Therefore, it is suggested that instructors combine synchronous education with asynchronous one. Moreover, would governments and educational authorities had better provide free internet packages for students as internet is the part and parcel of online learning. Supplying some interest-free loans to students help them to buy the needed electronic devices to attend their online classes. Providing empathetic support by instructors and consultations and crisis-oriented psychological services in different educational systems help students overcome their fears and anxiety in the time of the pandemic and to achieve their educational goals.

References

- Abbasi, M. S., Ahmed, N., Sajjad, B., Alshahrani, A., Saeed, S., Sarfaraz, S., Alhamdan, R. S., Vohra, F., & Abduljabbar, T. (2020). E-Learning perception and satisfaction among health sciences students amid the COVID-19 pandemic. *Work*, *67*, 549–556. <https://doi.org/10.3233/WOR-203308>
- Adebowale, O. O., Adenubi, O. T., Adesokan, H. K., Oloye, A. A., Bankole, N. O., Fadipe, O. E., Ayo-Ajayi, P. O., & Akinloye, A. K. (2021). SARS-CoV-2 (COVID-19 pandemic) in Nigeria: Multi-institutional survey of knowledge, practices and perception amongst undergraduate veterinary medical students. *PLoS ONE*, *16*(3), e0248189. <https://doi.org/10.1371/journal.pone.0248189>
- Aftab, M., Abadi, A.M., Nahar, S., Ahmed, R.A., Mahmood, S.E., Madaan, M., Ahmad, A. (2021). COVID-19 pandemic affects the medical students' learning process and assaults their psychological

wellbeing. *International Journal of Environmental Research and Public Health*. 18, 5792. <https://doi.org/10.3390/ijerph18115792>

Alquda, A., Al-Smadi, A., Aqal, M., Qnais, E. Y., Wedyan, M., Gneam, M. A., Alnajjar, R., Alajarmeh, M., Yousef, E., & Gammoh, O. (2021). About anxiety levels and anti-anxiety drugs among quarantined undergraduate Jordanian students during COVID-19 pandemic. *The International Journal of Clinical Practice*, 75(7), 1–9. <https://doi.org/10.1111/ijcp.14249>

Artino, A., & Stephens, J. M. (2009). Academic motivation and self-regulation: A comparative analysis of undergraduate and graduate students learning online. *The Internet and Higher Education* 12(3–4), 146–151.

Aylie, N. S., Mekonen, M. A., & Mekuria, R. M. (2020). The psychological impacts of COVID-19 Pandemic Among University Students in Bench-Sheko Zone, South-west Ethiopia: a community-based cross-sectional study. *Psychology Research and Behavior Management*, 13, 813–821.

Dedeilia, A., Sotiropoulos, M. G., Hanrahan, J. G., Janga, D., Dedeilias, P., & Sideris, M. (2020). Medical and Surgical Education Challenges and Innovations in the COVID-19 Era: A Systematic Review. *In vivo (Athens, Greece)*, 34(3 Suppl), 1603–1611. <https://doi.org/10.21873/invivo.11950>

Dhawan, S. (2020). Online learning: a panacea in the time of COVID-19 crisis. *J Educ Technol Syst* 49(1), 5–22. <https://doi.org/10.1177/0047239520934018>

Iancu A. M, Kemp M. T, Alam H. B. (2020). Unmuting Medical Students' Education: Utilizing Telemedicine During the COVID-19 Pandemic and Beyond. *J Med Internet Res*, 22(7): e19667.

Islam, Md., & Aminul Alam, Mohammad Shah. (2021). Impact of SARS-CoV-2 infection on veterinary medical education, *Journal of University Teaching & Learning Practice*, 18(5), <https://ro.uow.edu.au/jutlp/vol18/iss5/14>

Kashefian-Naeeni S., & Sheikhezami-Naeini Z. (2020). Communication skills among school masters of different gender in Shiraz, Iran. *International Journal of Advanced Science and Technology* 29 (2), 1607-1611.

Kashefian-Naeeni, S., & Kouhpeyma, Y. (2020). Fostering Learner Autonomy in Educational Settings. *International Journal of Multicultural and Multireligious Understanding*, 7(7), 190-201.

Krause, J., Portolese, L., & Bonner, J. (2017). Student perceptions of the use of multimedia for online course communication. *Online Learning*, 21(3), 36-49. doi:10.24059/olj.v21i3.1198

Lasheras I, Gracia-García P., Lipnicki D. M., Bueno-Notivol, J., Lopez-Anton, R., de la Camara, C., Lobo, A., & Santabarbara, J. (2020). Prevalence of anxiety in medical students during the COVID-19 pandemic: A rapid systematic review with meta-analysis. *International Journal of Environmental Research and Public Health*., 17(18):6603.

- Lawanto, O., Santoso, H. B., Goodridge, W., & Lawanto, K. N. (2014). Task value, self-regulated learning, and performance in a web-intensive undergraduate engineering course: How are they related? *MERLOT Journal of Online Learning and Teaching*, 10(1), 97–111.
- Lei, L., Huang, X., Zhang, S., Yang, J., Yang, L., & Xu, M. (2020). Comparison of prevalence and associated factors of anxiety and depression among people affected by versus people unaffected by quarantine during the COVID-19 epidemic in Southwestern China. *Med. Sci. Monit.*, 26, 1–12.
- Li, H. Y., Cao, H., Leung, D. Y. P., & Mak, Y. W. (2020). The Psychological impacts of a COVID-19 outbreak on College students in China: A longitudinal study. *Int. J. Environ. Res. Public Health*, 17, 3933.
- Mandal A., Ghosh A., Sengupta G., Bera T., Das N., & Mukherjee, S. (2020). Factors affecting the performance of undergraduate medical students: A perspective. *Indian J Community Med*, 37, 126-9.
- Mubassira, M., & Das, A. K. (2019). The Impact of University Students' Smartphone Use and Academic Performance in Bangladesh: A Quantitative Study. *Proceedings of the 13th International Conference on Ubiquitous Information Management and Communication (IMCOM)*, 734–748. https://doi.org/10.1007/978-3-030-19063-7_59
- Odrizola-gonzález, P., Planchuelo-gómez, Á., Jesús M., De Luis-garcía, R. (2020). Psychological effects of the COVID-19 outbreak and lockdown among students and workers of a Spanish university. *Psychiatry Res.*, 290, 113108. doi:10.1016/j.psychres.2020.113108
- Rajkumar R. P. (2020). COVID-19 and mental health: A review of the existing literature. *Asian J Psychiatr.*, 52, 102066. doi:10.1016/j.ajp.2020.102066
- Ravi, R. C. (2020). Lockdown of colleges and universities due to COVID-19: Any impact on the educational system in India? *Journal of Education and Health Promotion*, 9, 209. https://doi.org/10.4103/jehp.jehp_327_20
- Rehman, U., Shahnawaz, M. G., Khan, N. H., Kharshiing, K. D., & Khursheed, M. (2020). Depression, anxiety and stress among Indians in times of Covid-19 lockdown. *Community Ment Health J.* 57(1),42-48. doi:10.1007/s10597-020-00664-x
- Saddik, B., Hussein, A., Sharif-Askari, F. S., Kheder, W., Temsah, M., Koutaich, R. A., Haddad, E. S., Al-Roub, N. M., Marhoon, F. A. , Hamid, Q., & Halwani, R. (2020). Increased levels of anxiety among medical and non-medical university students during the COVID-19 pandemic in the United Arab Emirates. *medRxiv*, 13, 2395-2406.
- Salman, M., Asif, N., Mustafa, Z. U., Khan, T. M., Shehzadi, N., Hussain, K. (2020). Psychological Impact of COVID-19 on Pakistani university students and how they are coping. *medRxiv.*, 1–6. doi:10.1101/2020.05.21.20108647
- Singh R, Goyal, M., Tiwari, S., & Ghildiyal, A. (2012). Effect of examination stress on mood, performance and cortisol levels in medical students. *Indian J Physiol Pharmacol*, 56, 48-55.

- Son, C., Hegde, S., Smith, A., Wang, X., & Sasangohar, F. (2020). Effects of COVID-19 on College Students' Mental Health in the United States: Interview Survey Study. *Journal of Medical Internet Research*, 22(9), e21279. <https://doi.org/10.2196/21279>
- Solak, E., & Cakir, R. (2015). *Language learning strategies of language e-learners in Turkey*. *E-Learning and Digital Media* 12 (1), 107-120.
- Taneja, N., Sachdeva, S., & Dwivedi, N. (2018). Assessment of depression, anxiety, and stress among medical students enrolled in a medical college of New Delhi, India. *Indian J Soc Psychiatry*, 34, 157-62.
- Vala N. H., Vachhani, M. V., Sorani, A. M. (2020). *Study of anxiety, stress, and depression level among medical students during covid-19 pandemic phase in Jamnagar city*. *Natl J Physiol Pharm Pharmacol.*, 10(12),1043–5.
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *Int J Environ Res Public Health.*, 17(5):1–24.
- Yang, H., Bin, P., & He, A. J. (2020). Opinions from the epicenter: An online survey of university students in Wuhan amidst the COVID-19 outbreak. *Journal of Chinese Governance*, 5, 234–248.
- Xiong J., Lipsitz, O., Nasri, F., Lui, L. M. W., Gill, H. Phan, L., Chen-Li, D., Iacobucci, M., Ho, R. Majeed, A., & McIntyre, R. S. (2020). Impact of COVID-19 pandemic on mental health in the general population: A systematic review. *J Affect Disord.*, 277, 55–64. doi:10.1016/j.jad .2020.08.001

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