Research Article

A study on stress management in virtual learning during COVID-19 pandemic with respect to management students

Alankar Gawre, Research scholar, Xavier Institute of Management and Entrepreneurship, (Recognized Research center of University of Mysore), Bangalore

Alisha Kawatra, Research Scholar, Xavier Institute of Management and Entrepreneurship, (Recognized Research center of University of Mysore), Bangalore

Dr. K. Subha, Assistant Professor, Xavier Institute of Management and Entrepreneurship, (Recognized Research center of University of Mysore), Bangalore

Abstract

Any kind of change that puts physical, mental, or psychological strain on a person is consideredstressful. Your body reacts to anything that demands attention or action by causing stress. Stress affects everyone to some extent. However, how you deal with stress has a significant impact on how you feel overall.Stress can lead to the development of many mental health conditions like anxiety, depression, sleep disorders, and many more. This research is conducted to find out how management students experienced stress,and managed it during COVID-19 due to virtual learning. The research objectives are to determine the impact of virtual learning, the role of academic workload in building stress, and the relationship between the big five personality traitsand stress. The sample size of theresearch is 122, which is collected from various management schools across the country. The sampling method used is convenient sampling.The conclusion of the result was established on the basis of tests conducted, namely N-way ANOVA and correlation tests. From the results, we interpret that the level of stress among management students varies with demographic factors and that there is a commonality among the students in stress coping strategies during virtual learning.Research also finds that openness plays an important role in reducing stress as compared to the other personality traits.

Introduction

Stress is described as a person's emotional and physical reaction to what they perceive to be a demand or difficulty. Due to their academic and personal lives, students experience stress more frequently. In today's competitive world, students deal with a variety of obstacles, difficulties, and a lot of pressure. The coronavirus (COVID-19) epidemic in 2019 made things worse because of the protracted stress the pandemic caused. The media painted a picture of the epidemic's spread from China to Europe and other nations.

Elementary schools were closed as a result of the COVID-19 outbreak danger, and most universities and colleges were closed within a short period of time in March 2020. Students' whole on-campus learning system was moved to a virtual platform. Students consequently had to change their habits while attending institutions and deal with difficulties caused by the prolonged pandemic. Stress, worry, dread, despair, frustration, and loneliness were additional psychological impacts of the pandemic-related quarantine. The officials issued stay-at-home directives to forbid citizens from leaving their homes for anything other than essential activities. In an attempt to slow the disease's spread, they wanted to restrict people from interacting with one another. As a result, there was an increase in student isolation and a lack of social interaction. According to a WHO survey conducted in the second quarter of 2020, more than 60% of countries reported service interruptions in the area of mental health. Nations have responded to the rise in mental health demands, but the demand for mental health services was already outstripping supply. The COVID-19 crisis has highlighted the global need for unmet mental health care needs.

Review of Literature

Stress

A study was conducted to understand the COVID-19 influence on mental health and how it changes quickly over time. Real-time data gathering and sophisticated optimization were crucial in helping to support this uncertainty. They discovered that the percentage of daily responses at the highest levels of COVID-19-specific anxiety was seven times higher than the percentage of daily responses at the highest levels of non-COVID-19-specific anxiety. (Evan M Kleiman, April L Yeager, Jeremy L Grove, John K Kellerman and Joanne S Kim, 2020)

A study was conducted to analyse the influence of academic load, school absenteeism, and contagion fear on college students. The results showed that excessive academic activity, school separation, and fear of human transmission had negative effects on the lives of college students due to perceived stress. The results enrich books on stress and health and provide new implications for all community gatherings to ensure the health of students in the context of theCOVID-19 epidemic. (Chung-Ying Lin, 2021)

Research was carried out for Chinese college students to look into the mental health of isolated teenagers as a result of the policy reaction to the coronavirus. During the split, 992 Chinese college students were employed to take an online poll. Stress management, mental health, behavioural patterns, risk perception, academic stress, family relationships, and peer interactions were the seven mental well-being variables that were assessed. The paper also suggests a six-step intervention plan to help young people who are alone with their psychological issues. In the face of international threats, it offers useful information on psychosocial interventions. (Bo Chen, Jinlu Sun and Yi Feng, 2020)

A study with 200 Spanish students with a median age of 20.46 and standard deviation of 4.44 was stated. The results showed that academic independence served as a mediator for university students, across all aspects of personality learned as well as stress and eustress. Extroversion, neuroticism, and openness were the factors that were the best predictors of depression.

Coherence and Conscience were the best predictions of eustress. (Hector Galindo-Domínguez María José Bezanilla, 2021)

A study found by K. Jayasankara Reddy, Ms. Karishmarajanmenon and Anjanathattil using a random sampling method in which the total number of participants who underwent analysis procedures was 336. Using ANOVA, they discovered that 48.80% of students have high stress levels. (K. Jayasankara Reddy, Ms. Karishmarajanmenon, Anjanathattil, 2018)

In an online study, high levels of extraversion and neuroticism were found to be related to greater levels of stress in a sample of 1055 Canadian individuals. The association between neuroticism and depression was significantly mediated by thoughtful and potent threats, suggesting that those with higher degrees of neuroticism also had higher levels of despair. Our findings highlight the fact that personality traits can play a significant role in determining who is likely to experience depression during an epidemic. (Sam Liu, Alexander Lithopoulos, Chun-Qing Zhang, Mauricio A. Garcia-Barrera, Ryan E. Rhodes, 2021).

A study was conducted to find out the level of stress and sleep deprivation among college students, before and during the COVID-19 epidemic. The analysis revealed evidence of insomnia, excessive use of sleeping pills, and poor sleep quality during the epidemic. (Grant Benham, 2021)

Research published in Iraq on the coronavirus found that research points to the need for community health measures to promote mental health and demographic diversity due to the high rates of common mental disorders during an epidemic. (Niaz Mustafa Kamal, Nasih Othman, 2020)

Students' attitudes towards online education during COVID-19 showed a wide range of responses, many of which expressedconcern about online learning as opposed to standard classroom reading. After three weeks, students said they felt less anxious about studying online, reported an improvement (Yes: 51.4%, No: 48.6%) in a follow-up survey, but many students expressed concern for their grade education. (Shem Unger, William R. Meiran, 2020)

Stress Management

Under stress management and its effects, it was found that 40% of the students felt overwhelmed by their academic performance and misunderstanding of the subject. The introduction of stress management education in the curriculum may help them combat this problem. Students themselves should be stress management trainers (R. Hemamalini, V. Ashok, V. Sasikala, 2018)

A journal focused on the difficulties college students confront with regard to family, money, peers, and the place of study. In order to gather the necessary data, 150 college students were surveyed using the Student-Life Stress Inventory Questionnaire. Frequency, percentage, rate, and correlation calculations were performed. Working with strangers, having problems with your parents, and having relationships with people of a different gender are just a few of the direct effects stress has on people. These findings suggest developing a stress management system, which higher education institutions should take into consideration. (Juvilyn G. Bulo, Dr. Marita G. Sanchez, 2014)

A successful study of stress management among students found that student-friendly and temporary jobs after school with universal participation can be helpful in reducing stress. (Veena.S.Rai, 2016)

Relationship, financial, and emotional stress are the top contributors to teen depression, according to a study on the causes of stress and its management in youth. They experience stress related to their jobs at the next level. They fear having access to employment and how they would fare in a cutthroat society. The younger generation is only interested in using technology for communication and interaction because social media platforms have proliferated. Physical

exercise and socialising with family and friends decrease. Stress from all of this, raises the possibility of depression and suicide. For young people to succeed, they must set organised goals, utilise technology responsibly, and communicate their emotions to others. (Dr. Deepti Bhargava & Hemant Trivedi, 2018)

A study was conducted among 2220 university students in Pakistan to determine the psychological effects of COVID-19 and student satisfaction with the online classes. The findings showed that approximately 41% of the students were experiencing severe psychological distress, and approximately 65% were dissatisfied with online classes. Therefore, it is necessary to implement proper psychological strategies, interventions, and safety precautions in order to reduce the degree of psychological distress and raise students' satisfaction with online classes. (Muhammad Babar Khawar, Muddasir Hassan Abbasi, Shabbir Hussain, Mehwish Riaz, Mussarat Rafiq, Rabia Mehmood, Nadeem Sheikh, Hafiza Nabeela Amaan, Sana Fatima, Faiza Jabeen, Zaira Ahmad, Adil Farooq, 2021)

A study was commissioned to determine whether a guided internet-based stress management intervention for university studentswho experience high levels of stress is feasible and acceptable. This study's findings provided guidance for creating psychological therapies and raising the standards of mental health apps for higher education (YagmurAmanvermez, Eirini Karyotaki, Pim Cuijpers, Elske Salemink, Philip Spinhoven, Sascha Struijs, Leonore M. de Wit, 2021)

To better understand how pupils might manage their stress, research was conducted. This study looked at the immediate benefits of yoga, humor, and reading on stress in occupational therapy students. The Daily Stress Inventory (DSI) score of students who participated in a 30-minute yoga class, jokes, and a research intervention session decreased, as did their blood pressure and heart rate. (Denise Rizzolo, Genevieve Pinto Zipp, Doreen Stiskal, Susan Simpkins, 2009).

Stress coping strategies

It is found that students have a high level of stress, and with increasing days, the level of depression also increases. Students use coping techniques such as yoga, exercise and mind-altering treatments such as spending time with family and watching television. (Hena Yasmin, Salman Khalil, Ramsha Mazhar, 2020)

To reduce the perception of depression, a study was conducted and it was found that mindfulness practise helps to reduce the perception of depression in a stressful situation. (Ole Boea, Kjetil Hagena, 2015)

The level of academic and environmental stress among college students, as determined by a study of 107 students, indicates that the majority of college students experience moderate levels of academic and environmental stress. Moreover, the findings of the questionnaire reflect that most college students practise a variety of strategies to deal with similar problems, like playing games, chatting with roommates, going out with friends, listening to music, watching movies and reading books. (Dawit Yikealo, Bereket Yemane, Ikali Karvinen, 2018)

A sample of 396 students (who were graduating from one university in Chung-Buk) was used for the study, which examined the connections between students' perceptions of their health, their personalities, obstacles in their way, and their behaviours that promote good health. The estimated health state explains 16% of the variance in behaviour that improves students' health, while personality explains 21.3%. To improve health behaviour and lower the barrier to status for students, health development programmes that improve health and well-being should be developed. (Kim, Myoung-Sook, 2004)

Research Gap

Stress is one of the most prevalent issues that the fast-paced world is facing today, and in particular, the student population's learning has been

impacted to a higher level. A few studies have been conducted on the amount of stress and coping techniques experienced by healthcare professionals and service executives. But there hasn't been adequate research on stress management among students pursuing management degrees online during COVID-19. Hence, this study is conducted to determine the intensity of stress among people in the mentioned category and analyse the coping mechanisms for the same.

Research objectives

1. To assess the impact of demographic factors on the stress level of students pursuing online management studies
2. To find out the relationship between the personality of students and the stress experienced

3. To analyse the stress-handling strategies of management students to cope with virtual learning in the COVID-19 pandemic.

Method

Participants in the study are students studying in management schools in various parts of the country. The type of sampling used was convenient sampling, and the number of samples taken was 122, in which participants were asked to fill out an online questionnaire. Four sections make up the questionnaire: demographics, virtual education, personality traits, and stress management techniques. The result was then analyzed using techniques like N-way ANOVA and Correlation testing using IBM SPSS Statistics 25 software.

Reliability Test:

Table 1 - Cronbach's Alpha value

Cronbach's Alpha	N of items
0.847	23

The reliability test is conducted in order to determine the consistency of the collected data. This test is conducted using SPSS. Based on the analysis, it is found that Cronbach's alpha value is 0.847, which means there is consistency in the data that was collected and it can be used for further analysis.

Results and Discussion

Objective 1: To assess the impact of demographic factors on the stress level of students pursuing online management studies

Table 2 -Demographic Profile

Source	Type III sum of squares	Df	Mean Square	F	Sig.
Corrected Model	14.926	35	0.426	1.708	0.024
Intercept	479.888	1	479.888	1922.356	0.000
Gender	2.760	1	2.760	11.054	0.001
Undergraduate specialization	10.234	21	0.487	1.952	0.017
Work experience	0.007	1	0.007	0.028	0.867
Gender*Undergraduate specialization	1.693	8	0.212	0.848	0.563
Gender*Experience	0.736	1	0.736	2.948	0.090
Undergraduate specialization*work experience	1.334	2	0.667	2.672	0.75
Gender* Undergraduate specialization* work experience	0.602	1	0.602	2.410	0.124

Table 3- Mean values as per gender

	Gender	Numbers of candidate	Mean
Productivity affected because of stress	Female	61	3.72
	Male	61	3.54
Confident of ability to handle problems	Female	61	3.75
	Male	61	3.93

H1: Demographic factors affect the stress level among students pursuing online management studies.

Based on the samples collected from various management schools, analysis is done to determine the intensity of stress caused by the virtual academic workload. In this objective, Gender, Undergraduate specialization, and Work experience are kept as independent variables whereas, Stress is a dependent factor. From the above table, it could be interpreted that the stress level of the students varies with gender, as it is significant at a 99 percent confidence level (p-value of 0.001).

Research found that there is a difference between genders in terms of productivity and confidence level in handling problems. Female productivity is lower (mean value of 3.72) than that of males (mean value of 3.54). The confidence level to handle problems is also found lower for females (mean value of 3.75) than males (mean value of 3.93). Stress levels do vary with the specialisation of the students at their undergraduate level as it is significant at the 95 percent confidence level (p-value of 0.017). However, stress levels do not vary with their work experience.

Objective 2: To find out the relationship between the personality of students and the stress experienced

Among the interactive effects, it is found that gender along with work experience does influence the level of stress among management students, as it is significant at a 90 percent confidence level (p-value of 0.090). It is clear from the table that the interactive effects of gender, work experience, and undergraduate specialisation do not influence the level of stress significantly among the management students pursuing classes virtually.

Table 4 - Correlation between personality traits and stress

		Openness	**Agreeable-ness**	**Conscientious-ness**	**Extrovert**	**Emotional stability**	**Stress**
Stress	**Pearson Correlation**	-0.279	-0.047	0.054	-0.142	0.144	1
	Sig. (2 tailed)	0.002	0.605	0.557	0.120	0.113	
	N	122	122	122	122	122	122

H1: There is a relationship between the personalities of the students and the stress they experience

Correlation was used to assess the relationship between the personalities of the students and the stress they experienced. The Big Five personality traits—conscientiousness, agreeableness, openness, extraversion, and Neuroticism were considered. It is inferred from the study that there

is a significant relationship between Openness (significance at 99% confidence level) and the stress experienced by the management students, and it is negative in nature. The stress level is unaffected by other traits, including agreeableness (p-value of 0.605), conscientiousness (p-value of 0.557), extraversion (p-value of 0.120), and neuroticism (p-value of 0.113).

Objective 3: To analyse the stress-handling strategies of management students to cope with virtual learning in the COVID-19 pandemic.

Table 5 -Stress handling strategies of Management Students during Virtual Learning

Factors	Female	Percentage of female	Male	Percentage of male	Total
Physical exercise	25	40.9 %	30	49.1 %	55
Yoga	21	34.4 %	16	26.2 %	37
Singing/ Dancing	36	59 %	25	40.9 %	61
Listening to music	48	78.7 %	55	90.1 %	103
Reading	18	29.5 %	19	31.1 %	37
Watching Movies	44	72.1 %	42	68.8%	86
Small breaks in between the	32	52.4%	31	50.8 %	63
Social interactions with friends and family	45	73.8%	39	63.9 %	84

Percentage analysis was used to determine the stress management techniques adapted by management students. The table above lists the variables indicated as strategies. It is found from the above table that listening to music (84.4%), watching movies (70.4%), and social interaction with friends and family (68.8%) are the most popular stress management strategies practised by the students. Reading (30.3%) and yoga (30.3%) are the least preferred strategies among the students to cope with their stress. Additionally, a gender-based comparison was made. The most preferred strategy used by males to deal with stress is listening to music (90.1%), and the same strategy worked as a stress-buster for females as well, accounting to a lesser percentage (i.e., 78.7%). The second most preferred strategy used by males is watching movies (68.8%). For females, it is social interaction with family and friends (73.8%). The least common method used by males is yoga (26.2%), and the second least used strategy is reading (31.1%). On the other hand, the least number of females preferred reading as a strategy (29.5%), and the second least used strategy is yoga (34.4%).

Findings

- The study finds that there is a difference in the stress level of management students depending on factors like gender, undergraduate specialization, and work experience.

- Among the big five personality traits, Openness is the only factor that relates to the stress experienced by the students. The openness trait and stress experience have a negative relationship.

- It is found that factors like listening to music, watching movies, and social interaction with friends and family are the most preferred, while yoga and reading are the least preferred stress coping strategies used by the management students.

Discussion

Stress is an unpleasant psychological process that occurs in response to environmental pressure. (Stephen Robbins, 2019). This study is being carried out among management students in order to investigate their stress management in virtual learning during the COVID-19 pandemic According to demographic data, the level of stress varies with the gender, undergraduate specialization, and the combination of gender and work experience. Among all the personality traits, Openness is one of the traits used by management students to deal with stress during COVID-19. And the most commonly used stress-reduction strategies among management students are listening to music, watching movies, and social interaction.

Conclusion:

Academic, social, environmental, and health issues are all significant contributors to stress. All these factors contribute to their mental health being disturbed. Academic factors are the most important stressors; hence, it is necessary to take particular, targeted actions to significantly reduce

the burden of stress. The study concluded that students are under a lot of stress, and as the number of days increases, so does the stress level among students. Incorporating stress management education into the curriculum may aid in addressing this issue. Students themselves should become stress management trainers. This trend will undoubtedly give students a sense of empowerment and success in both their academic and personal lives.

Future Scope

This study collected 122 samples from various colleges across India; therefore, future studies can collect more samples from more students covering more institutions. There can even be a comparison between the stress levels of students studying in management institutions in tier-1 and tier-2 cities.

References

1. Bo Chen, Jinlu Sun and Yi Feng (2020). How Have COVID-19 Isolation Policies Affected Young People's Mental Health? – Evidence from Chinese College Students. Original Research, June 2020; Volume 11; Article 1529.
2. Chung-Ying Lin (2021). College students' stress and health in the COVID-19 pandemic: The role of academic workload, separation from school, and fears of contagion. PLoS ONE 16(2): e0246676.
3. Dawit Yikealo, Bereket Yemane, IkaliKarvinen (2018). The Level of Academic and Environmental Stress among College Students: A Case in the College of Education. Open Journal of Social Sciences, 6, 40-57.
4. Denise Rizzolo, Genevieve Pinto Zipp, Doreen Stiskal, Susan Simpkins (2009). Stress Management Strategies for Students: The Immediate Effects of Yoga, Humor, And Reading on Stress. Journal of College Teaching & Learning, Volume 6, Number 8.

5. Distance. International Journal of Technology in Education and Science, Volume 4, Issue 4, ISSN: 2651-5369.

6. Dr. Deepti Bhargava & Hemant Trivedi (2018). A Study of Causes of Stress and Stress Management among Youth. IRA-International Journal of Management & Social Sciences; ISSN 2455-2267; Vol.11, Issue 03; Pg. no. 108-117; Institute of Research Advances.

7. Evan M Kleiman, April L Yeager, Jeremy L Grove, John K Kellerman, Joanne S Kim. (2020). Real-time Mental Health Impact of the COVID-19 Pandemic on CollegeStudents: Ecological Momentary Assessment Study. JMIR Ment Health 2020 | vol. 7 | iss. 12 | e24815.

8. Guided internet-based stress management intervention for university students with high levels of stress: Protocol for an open trial. Internet Interventions 24, 100369.

9. Grant Benham. (2020).Stress and sleep in college students prior to and during the COVID 19 pandemic. Stress and Health. 2021; 37:504–515.

10. Hector Galindo-Domínguez María José Bezanilla. (2021). The Importance of Personality and Self-efficacy for Stress Management in Higher Education published. International Journal of Educational Psychology Vol. 10 No.3, pp. 247- 270.

11. Hena Yasmin, Salman Khalil, Ramsha Mazhar (2020). Covid 19: Stress Management among Students and its Impact on Their Effective Learning International Technology and Education Journal Vol. 4 No. 2; ISSN: 2602-2885.

12. Juvilyn G. Bulo, Dr. Marita G. Sanchez (2014). Sources of Stress among College students. CVCITC Research Journal; Vol. 1, No. 1, 2014; ISSN: 2362-9029.

13. K. Jayasankara Reddy, Ms. Karishmarajanmenon, Anjanathattil (2018). Academic Stress and its Sources among University Students. Biomedical & Pharmacology Journal,Vol. 11(1), 531-537.

14. Kim, Myoung-Sook (2004). A Study on the Relationship between Perceived Health State, Personality, Situational Barrier, Health Promoting Behaviour in Students. Korean Journal of Adult Nursing, Volume 16, Issue 3.

15. Muhammad Babar Khawar, Muddasir Hassan Abbasi, Shabbir Hussain, Mehwish Riaz, Mussarat Rafiq, Rabia Mehmood, Nadeem Sheikh, Hafiza Nabeela Amaan, Sana Fatima, Faiza Jabeen, Zaira Ahmad, Adil Farooq (2021). Psychological impacts of COVID-19 and satisfaction from online classes: disturbance in daily routine and prevalence of depression, stress, and anxiety among students of Pakistan. Heliyon 7, e07030.

16. Niaz Mustafa Kamal, Nasih Othman. (2020). Depression, Anxiety, and Stress in The Time of COVID-19 Pandemic in Kurdistan Region, Iraq. Kurdistan Journal of Applied Research Special Issue on Coronavirus (COVID-19).

17. Ole Boea, KjetilHagena. (2015). Using mindfulness to reduce the perception of stress during an acute stressful situation. Ole Boe and Kjetil Hagen / Procedia - Social and Behavioral Sciences 197, 858 – 868.

18. R. Hemamalini, V. Ashok, V. Sasikala. (2018). A Study on Stress Management and its Impact among Students. International Journal of Academic Research economics and management sciences Vol. 7, No. 3, E-ISSN: 2226-3624.

19. Sam Liu, Alexander Lithopoulos, Chun-Qing Zhang, Mauricio A. Garcia-Barrera, Ryan E. Rhodes (2021).Personality and perceived stress during COVID-19 pandemic: Testing the mediating role of perceived threat and efficacy. Personality and Individual Differences 168, 110351.

20. Shem Unger, William R. Meiran.(2020). Student Attitudes Towards Online Education during the COVID-19 Viral Outbreak of 2020: Distance Learning in a Time of Social

21. Veena.S.Rai. (2016). Successful Study Management among students and your impact on their outcoming education. International Journal of Engineering Research and Modern Education (JERME) ISSN (Online): 2455 – 4200.
22. Yagmur Amanvermez, Eirini Karyotaki, Pim Cuijpers, Elske Salemink, Philip Spinhoven, Sascha Struijs, Leonore M. de Wit (2021).