



E-learning: Study related to stress among students

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Abstract

Several unprecedented public health measures were implemented in India and many other countries worldwide due to the recent coronavirus pandemic (COVID-19), which the World Health Organization (WHO) declared a national and international public health emergency. These measures included travel restrictions, school closures, lockdowns, general restrictions, curfews, and quarantines. This study examines the stress experienced by postgraduate learners at several colleges in the Indian state of Punjab as a result of E-learning. Several difficulties have been plaguing students at home, including melancholy, anxiety, inadequate internet connections, and an insufficient study environment, to name a few examples. The use of online education has had a significant impact on postgraduate students and those with practical degrees. Students from rural areas and poor groups face significant challenges in pursuing their education through this online mode of delivery. Young people need to gain employment and productivity skills, and efforts to establish a robust education system in the state are desperately needed.

Key words: UNESCO, GER, CMIE, E-LEARNING, SWAYAM, WHO

Introduction

E-learning

Online training, m-learning (mobile learning), and computer-aided distance education are all terms that refer to computer-based training, Web-based training, Internet-based training, online training, and computer-aided distance education. E-Learning is known by many names and may be delivered in several ways. Still, at its heart, it is as follows: "E-Learning is a type of electronically aided learning which depends on the Internet for teacher/student interaction as well as the dissemination of class materials," says the National Center for Education Statistics. With this basic definition comes an infinite number of opportunities for teaching and learning outside of traditional classrooms and away from college and university campuses. Students who have access to the Internet and power may transform any classroom with online learning. Text, voice, video animations, a virtual training environment, and live conversations with instructors are all part of the package. It is a learning setting that allows for greater flexibility than a typical classroom situation. On the whole, online learning has shown to be more successful than face-to-face encounters when used to its total capacity. It may be made more exciting and entertaining, and it can be tailored to accommodate everyone's schedule. Despite the

numerous benefits of e-learning, this unintentional shift from offline to online study may harm students' learning.

Stress

Stress could be described as the body's reaction to any change that necessitates a change in behaviour or environment. Our bodies respond to changes in the atmosphere by exhibiting mental, physical, and emotional responses. Stress is an unavoidable aspect of everyday living. Stress may be felt in three ways: from your immediate environment, through your thoughts, and from your physical body. It is possible to be stressed by even favourable events such as a promotion, a mortgage, or the birth of a kid. The body of the Homo sapiens is built in such a way that it may both feel and respond to stress. It might be unpleasant, positive, or motivating, and it can keep us awake or help us avoid danger. Positive stress occurs when a person is subjected to a continual barrage of challenges with no opportunity for respite or relaxation in between the stressors. Thus, the mind overworks itself, and tension accumulates as a result of this overworking. In reaction, the body suffers from wear and tear in terms of both mental and physical injury due to its long-term existence. Stress that is not alleviated results in discomfort, which is an adverse reaction to the stress experienced. Distress causes the body's internal homeostasis to be disrupted, resulting in symptoms such as headaches, increased blood pressure, an upset stomach, sexual dysfunction, chest discomfort, and sleeping issues, among other things. When people are distressed, they may have emotional problems such as panic attacks, sadness, or anxiety. According to research, stress may also cause or aggravate the development of certain diseases.

Covid-19 & E-learning

The shutdown of educational institutions due to the COVID-19 epidemic has had a significant influence on education that has never been seen before. During the lockdown, instructors have been ordered to use online learning tools to deliver their lessons. Following the outbreak of the COVID-19, the education system has undergone a digital revolution. Due to Pandemic, the use of online lectures, digital open textbooks, teleconferencing, online evaluation, and interactive virtual environments has grown significantly. The closure of educational institutions as a result of the Pandemic, which happened in many nations, has been estimated to have affected almost 1.5 billion learners of all ages from all over the world, according to sources (UNESCO, 2020). The number of learners affected by school closures equals about 90 percent of the world's total enrolled pupils. School closures have increased learning disparities and disproportionately harmed disadvantaged children and youth (UNESCO, 2020). Several measures were taken to guarantee the long-term survival of the educational system, and adopting the motto Learning Never Stops, initiatives were presented that addressed many issues. Globally, the closure of educational institutions has a detrimental impact on about 600 million school-age students who are enrolled in formal education. As reported by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) (2020), about 320 million learners in India are affected, with roughly 34 million of them studying at the university level.

It illustrated that the school system, as a whole, is unprepared for and susceptible to external challenges—established online emergency remote teaching in response to the worldwide educational crisis. However, the educational system continues to struggle with identifying what it is urgently attempting to achieve. Online education is more than just posting instructional information; instead, it is a learning process that gives learners the ability to exercise responsibility, make choices, and have flexibility. It is a complicated process that needs meticulous and critical planning and identifying and creating the objectives to build an effective and efficient learning ecosystem. In appearance, the activity in which we are presently involved appears to be distant online education, yet, in reality, it is more of a temporary solution.

So, when contemplating online distance education, one must look beyond just providing tips, tools, and techniques and instead examine the changing requirements of learners, the settings in which they are learning, and their access to and availability of such technologies and resources. Another significant difference that has been highlighted is how learners are involved and engaged in the procedure. Although distant online education has always been a flexible and alternative learning choice for students, emergency remote teaching has become a must.

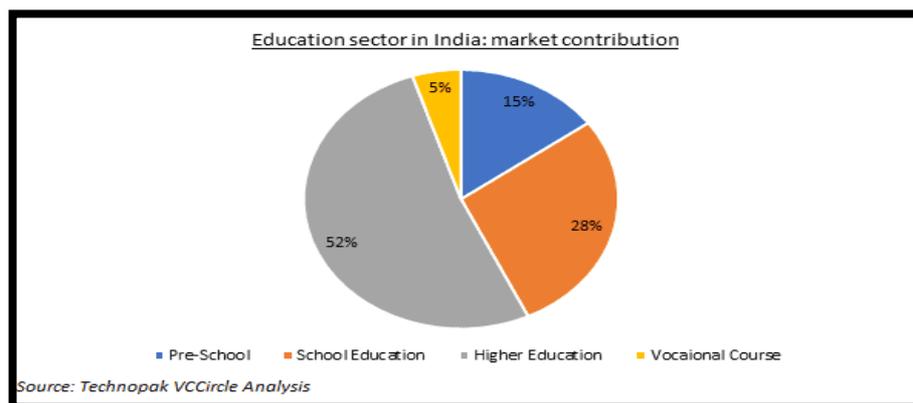


Figure 1: Education Sector in India: Market Contribution

When it comes to global education, India has a significant role. India has one of the most comprehensive higher education networks in the world. Despite this, there is still a great deal of room for further and more productive growth in the educational system. India has a population of around 500 million people, the majority of whom are between the ages of 5 and 24 years, making it the world's biggest country in this age group. Universities and colleges in India numbered 993 in FY19 and 39,931 during the same period the previous year. In the fiscal year 2019 (FY19), about 37.4 million students in India enrolled in higher education. In higher education, the Gross Enrolment Ratio (GER) achieved 26.3% in 2019. India has surpassed the United States as the second most important market for e-learning.

Significant uncertainty exists in the Indian educational system, and students cannot keep up with their regular academic schedules. Because of the pandemic-related emergency, and to ensure the safety and security of students and their education-related issues, most educational institutions have taken the reforms to facilitate: telecommunication, Skype call, zoom application, Google classroom, WebEx, Microsoft teams, and other virtual options to decrease the actual distance between students and their educational issues. It involves training students and instructors on using virtual systems and technology tools to expedite the exchange of information. Without a doubt, a watershed moment in the lives of college and university students. As a result, the primary task was to reduce pressure on students while also aiding them in making the most of their available time without compromising their quality of work. Although there have been some good chances in the student population over this Corona period, there have also been some negative changes. Students' mental health can be affected by digital difficulties, and as a result of these issues, the student may go anywhere.

Impact of COVID-19 on students, young professionals, and parents:

- As a result of the nationwide lockdown, admission procedures for various schools, universities, and other educational institutions have been postponed.
- Examinations for numerous academies, boards, and universities have been postponed or cancelled due to the pandemic preparedness measures implemented by authorities.
- In India, entrance tests for admittance to various universities, research institutes, and educational institutions were disrupted.
- Several competitive tests for government and non-government departments were inflated during this period due to the lockdown and social distance that prevailed throughout the crisis.
- Due to the many issues associated with the Pandemic, Indian students and parents planning to study abroad for specialised courses are in a state of fear. The demand for admission into foreign institutions for higher education and technical approaches may decrease as a result.
- Students from India studying abroad are concerned about a coronavirus pandemic because most nations impacted by COVID-19 are in India, and there is a potential that overseas education would be given less priority in the future.

- There has been a noticeable influence on the ability of some parents to pay for private educational institutions as a result of their lack of ability to spend.
- Students and young professionals may experience problems in placements, training, apprenticeships, on-campus and off-campus interviews, internships, and jobs due to the economic losses suffered by the education industry as a whole.

Impact of Covid 19 on educational institutions:

- Several faculty and staff in the private education industry may be faced with the prospect of losing their jobs or seeing their salaries lowered; bonuses and raises may also be delayed or decreased.
- Schools, colleges, and other educational institutions and universities may experience difficulties due to a slowdown in students applying for admissions.
- The education sector may experience difficulties collecting fees, making it more challenging to maintain and manage the schools in the long run.
- The development of infrastructure, teaching styles, evaluation methodologies, and the overall quality of education may be adversely affected due to the conditions that educational systems are confronted with.
- Several educational institutions may be forced to slash employment or reduce their workforces due to prolonged economic stagnation in the sector.
- As a result of the industrial crisis and slowdown, several institutions will be compelled to close altogether. According to the Centre for Monitoring Indian Economy (CMIE), the unemployment rate climbed from 8.4 percent in mid-March to 23 percent in early April, with the urban unemployment rate rising to 30.9 percent in the same time.

The Indian government has made free e-courses available through SWAYAM/SWAYAM PRABHA channels on DTH platforms. It is also experimenting with the possibility of transferring curriculum to students through All India Radio Doordarshan 3G networks. To go along with this, the government has launched many faculties development programs to help them deepen and improve their understanding of the digital classroom and their technological abilities. As a result of the closure of educational institutions during the lockdown period, there has been a substantial disturbance to the educational system and the process of teaching and learning. It is necessary to prepare effective interventions to ensure that the teaching and learning process goes smoothly and effectively while reviewing the teaching-learning process during this period. In this context, the current study attempts to evaluate the learning status, learning style, and study-related difficulties among postgraduate students in Ludhiana, Punjab. They are now under lockdown as a result of the COVID-19 outbreak.

Review of Literature

Kapasia et al. (2020). Studied the influence of shutdown on learning status in West Bengal and discovered that the epidemic had had a significant impact on academic activities, with students facing various problems online. They concluded that there is an urgent need for strategies to build a robust education system to enhance skills and productivity in young people.

Bozkurt and Sharma (2020). Online distance education is much more than merely downloading educational information; it is a learning process that empowers students by granting them responsibility, flexibility, and choice throughout their educational journey. Creating an effective learning ecosystem is a time-consuming system that requires dedication, accurate planning, and the development of specific goals to be successful. Notably, remote education is a multidisciplinary area that has developed through time and has proved beneficial in meeting learners' requirements and directing open educational practices.

Mukhtar et al. (2020). Web-based software applications that are used for delivering, tracking, and managing courses over the Internet. It entails applying of technological breakthroughs to guide, produce, and distribute material and allow two-way communication between students and professors. Their support for online learning was based on their consideration of its merits and encouraging a student-centred learning approach. These online learning platforms provide students with a practical and straightforward approach to attain their educational goals.

Pajarianto et al. (2020). Investigated the relationship between religion, teacher support, and parental support in the context of Covid-19 academic stress and discovered that these three factors are all positively and substantially connected to academic focus. As a result, increasing student religiosity, parental and teacher support throughout the Pandemic can help to reduce academic stress associated with online learning during the outbreak.

Bokde et al. (2020). Examined the potential consequences of Coronavirus on India's education sectors, concluding that education is critical for the socioeconomic advancement of the people in any country. There are still sure holes in the education sector in India, and the government is currently confronted with a predicament due to the innovative COVID-19 epidemic that has emerged. The circumstances surrounding the lockdown may impact the socioeconomic status of the population and educational institutions in the country. It is essential to take appropriate and quick actions to reduce the impacts of a pandemic during this moment of crisis. To overcome the problem and reshape the education system, the authors propose specific hygiene and health-related initiatives and socioeconomic and technological measures. When these suggested steps are implemented, the country will make significant strides ahead and will be able to assure general growth in the education sector.

Surkhali and Garbuja (2020). Conducted a review of the advantages and disadvantages of online learning and concluded that, even though learners can engage themselves from any location through e-learning, it becomes a challenge when it comes to practical subjects and several other issues such as internet connectivity, handsets, and laptops availability, and technological barriers. As a result, it is essential to refine the infrastructural facilities to overcome the obstacles listed above.

Handel (2020). Emphasized the importance of assisting postgraduate students in facing the threats associated with e-learning in the face of the Pandemic and suggested that, to address a student's socio-emotional state, should provide appropriate workshops and webinars on computer literacy, and students counselling offices should be available digitally to assist and guide the students.

Demuyakor (2020). Studied the degree of satisfaction of Ghanaian international students with online learning in higher educational institutions in Ghana and discovered that adopting online learning programs during the lockdown time was highly beneficial. On the other hand, the expense of learning over the Internet was quite expensive. The bulk of the pupils were unable to pay for internet access due to financial constraints.

Bao (2020). Explained the school system is being pushed to transition from a traditional classroom to an online platform. The use of information technology and Microsoft Office made it possible for the faculty to provide classes online. Students and instructors were also confronted with the challenge of poor network access. Retailers have shifted their operations to an online platform to serve their customers better.

Adnan and Anwar (2020). Illustrated learners' viewpoints regarding online education in Pakistan and concluded that COVID-19 had influenced the traditional mode of learning technique used by academic institutions throughout the globe. The administrators of schools, colleges, and universities have chosen online classes as an alternate method of resuming educational services in their respective institutions. Even though electronic learning is proven to be supportive and helpful in protecting the health of students and teachers during the COVID-19 epidemic, it has been said that e-learning does not perform at a level comparable to traditional learning.

Chen et al. (2020). Conducted a study on user contentment on virtual education platforms in China during the pandemic era, concluded that could not ignore technological issues with online education platforms. Student discontent is a direct result of technical difficulties associated with these platforms, which harms the overall quality and efficiency of the teaching environment. As a result, there is a pressing need to improve platform technology, and e-platforms must actively create diverse interactive formats to encourage efficient learning and improve the overall quality of educational provision.

Jena (2020). Identified internet access and the capacity to use digital devices and working conditions that are safe for students, for instructors, and families to operate and includes lesson plans for students with disabilities. Other concerns highlighted include digital device availability and accessibility, safe learning environments, and teaching faculty, family, and student capacities.

Ali (2020). Examined some of the issues and worth of incorporating online learning into tertiary institutions. He concluded that this digitalized revolution could bring together students' academic aspirations with their passions, which they have become digital addicts. COVID-19 has also offered

students the option to embrace online learning, which is necessary to keep up with the fast growth of new technologies.

Almanthari et al. (2020). Investigated the hurdles of E-learning adoption during the COVID-19 epidemic at the teacher, school, curriculum, and student levels and concluded that policymakers, educators, and students should collaborate to overcome these obstacles. The education of students in the use of e-learning virtual tools must be thorough; schools, in particular, must create comprehensive ways of doing so. When faced with a crisis such as a pandemic, solutions may include giving students with internet access coupons and incremental training related to e-learning in the run-up to the problem to be proactive with education.

Vogel and Schwabe (2016). Studied the influence of stress on diverse memory processes, such as learning and remembering. Stress has far-reaching repercussions on learning and memory, which had a substantial impact on school settings. Even primary school children regularly suffer stress-related symptoms, which means it is essential to comprehend the influence of stress on pupils' long-term memory. An excellent educational atmosphere is the most important as it lays the foundation for future professional achievement and socioeconomic status. In addition, our educational system has a tremendous impact on society since it teaches and trains the next generation.

Joksimovi (2015). Student participation in an online learning environment must give them the impression that they are participating in human-to-human interaction and that they have the chance to establish personal relationships. According to the authors, students' sense of belonging to a learning community is a critical component of their learning experience in e-learning, particularly given the difficulty students have in establishing a social presence in an online setting.

Weidlich et al. (2005). Conducted research on the transactional distance between students and learning technology. It is essential for the experience of learning satisfaction in online-based learning circumstances to have social relationships and interactions with others. Student-teacher connections are necessary for learning, but their relationships with their classmates are also significant in the learning process.

Allan and Lawless (2003). Cyber-stress and techno-stress can induce stress as well as being linked to working in a virtual environment. There are two components that we believe lead to e-team stress: dependability and trust.

Research Objectives

1. To determine the learning state and issues among the students during this lockdown in the middle of the COVID-19 epidemic.
2. To analyse the factors imposing stress during E-learning.
3. To study the impact of E-learning on education.

Methodology & Data Collection

Primary Data was collected; a questionnaire with questions related to online education using scales like nominal, ordinal, interval & ratio was used for data collection. Convenience sampling technique was used to collect the primary data. In total 186 respondents were interviewed, Respondents interviewed from various education streams are as follows:

- Business administration - 50
- Engineering- 36
- Arts & Humanities - 50
- Sciences – 50
- Total 186 respondents

Scope of Study

This study highlights the importance of online education and the need to improve infrastructure related to it so that colleges, universities, and companies that are a part of the education industry can take advantage of it and take the lead by developing new strategies and innovating in this mode of learning, which will be more convenient and effective for both students and teachers.

Results

Mode of Learning Preference

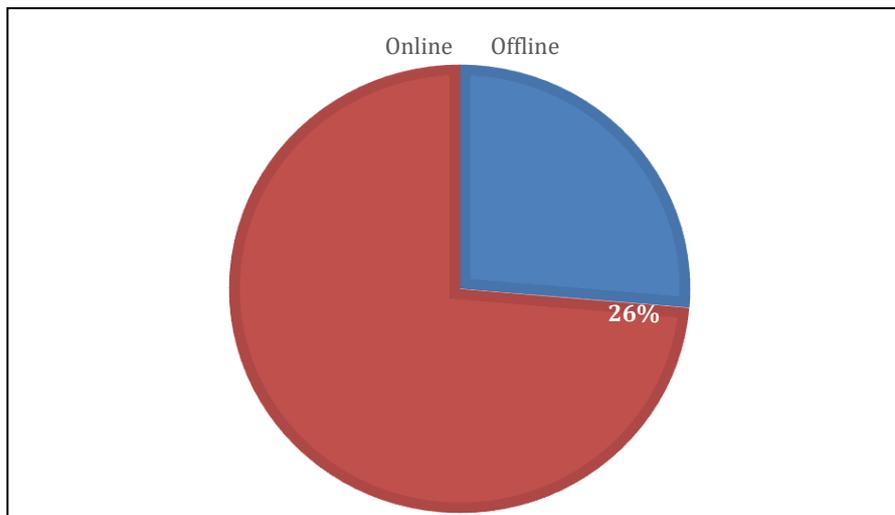


Figure 2: Preferred Mode of Learning

The figure mentioned above depicts that most respondents, i.e., 74% prefer learning through offline mode, and only 26% of respondents prefer learning through online mode.

Device Used

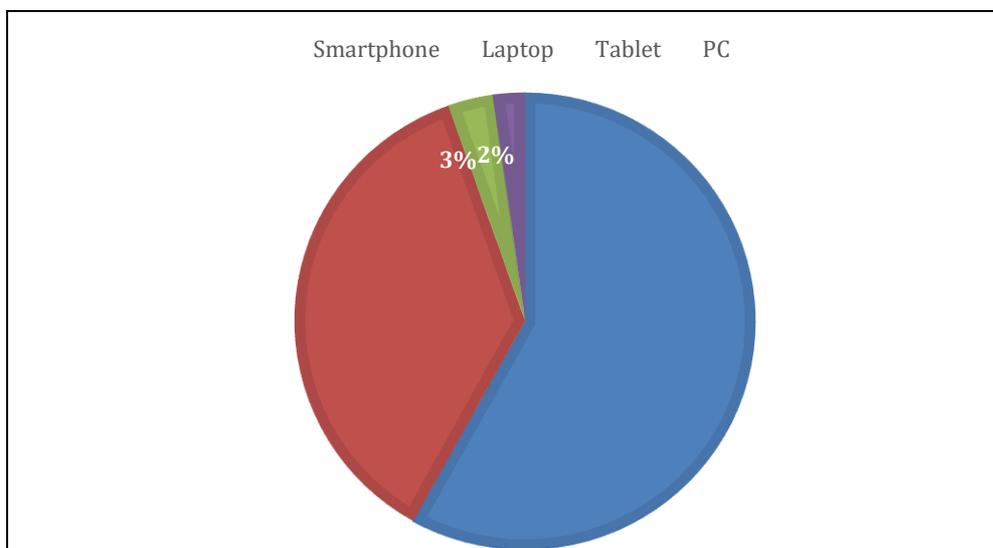


Figure 3: Device Used to Attend Classes

A large number of respondents (58 percent) prefer to participate in online classes through their smartphones, and (35 percent) prefer to participate through a laptop, with only a small number (3 percent) preferring to participate through a tablet and a small number (2 percent) preferring to participate through a PC.

Preference for E Platform

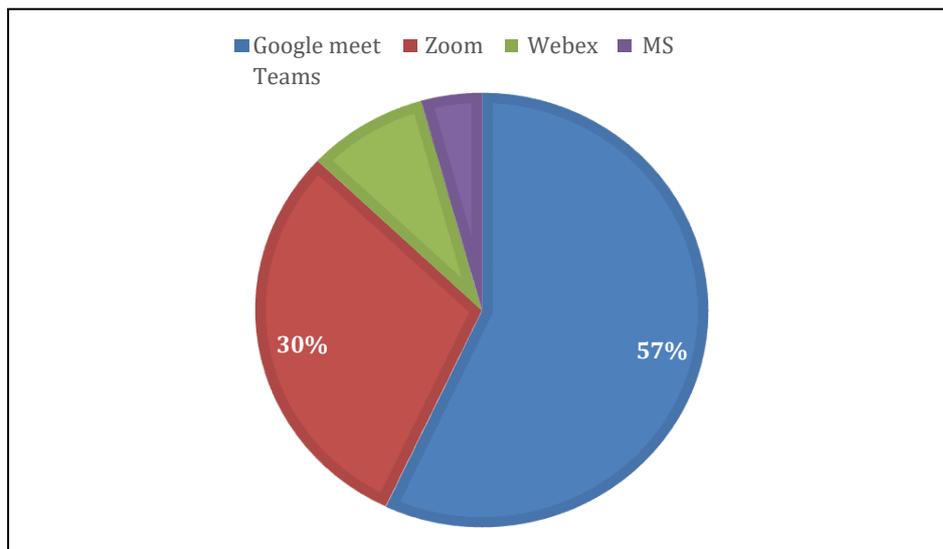


Figure 4: Preferred E-Platform to Attend Classes

Fifty-seven percent of respondents prefer attending online classes using Google Meet, while 30 percent prefer listening to Zoom. Only 9 percent and 4 percent prefer attending online classes through WebEx and Microsoft Teams, respectively, as seen in the graph mentioned above.

Duration of Classes

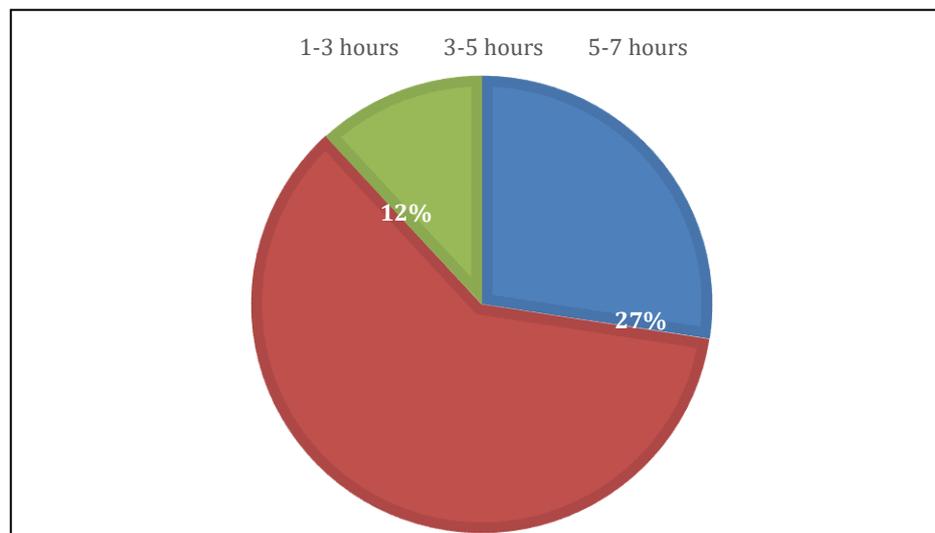


Figure 5: Duration of Attending Classes

The chart mentioned above depicts that the vast majority of respondents, 61 percent, are attending online classes for approximately 3-5 hours, while 27 percent of respondents are attending online classes for about 1-3 hours, and only 12 percent of respondents are attending courses for approximately 5-7 hours, respectively.

Screen Timings fatigue

The below-mentioned statistic illustrates that the vast majority of respondents, around 88 percent, agree with the assertion that extended screen time causes fatigue.

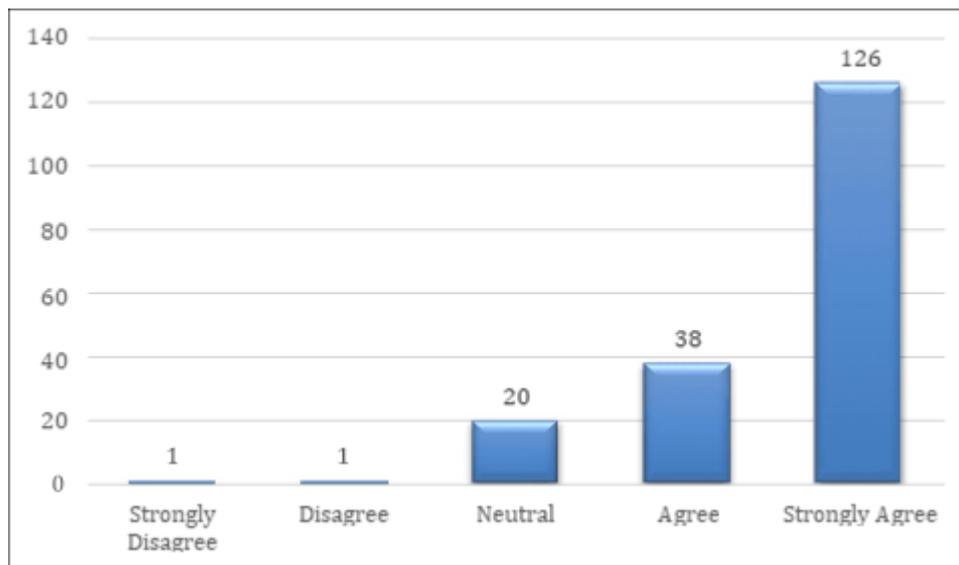


Figure 6: Prolonged Screen Timings causes Fatigue

Practical implications

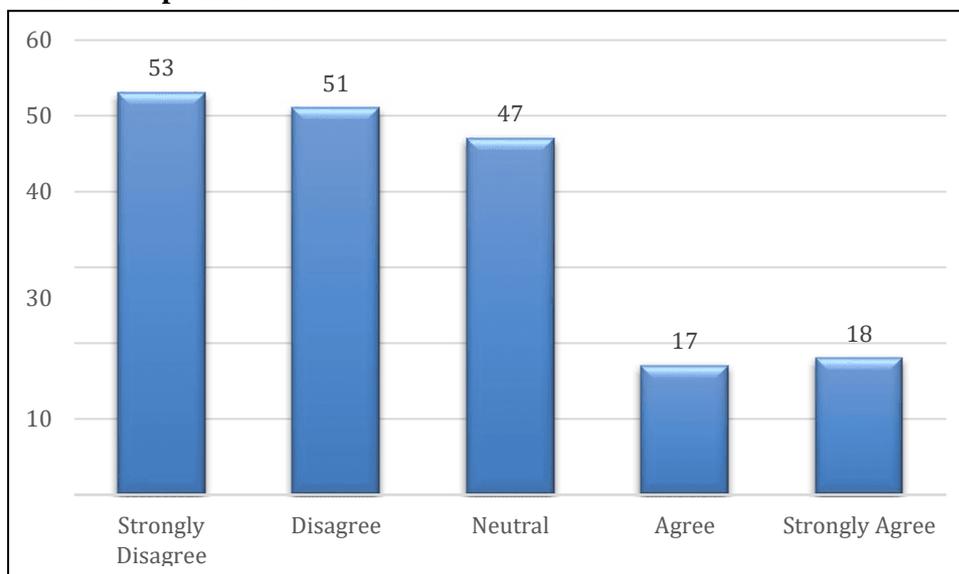


Figure 7: Understanding regarding Practical Subjects

As depicted in the figure mentioned above, nearly 65 percent of the respondents cannot comprehend the practical implications of their courses. In comparison, approximately 9 percent of the respondents can learn the same, while 25 percent have an average opinion about the statement mentioned above.

Instructor/Teacher support

Below mentioned data represents that almost 50 percent of respondents found their teachers supportive and appealing, whereas 15 percent of respondents do not believe their professors are helpful at all, and 34 percent of respondents have replied on the neutral side, indicating that their instructors were somewhat supportive.

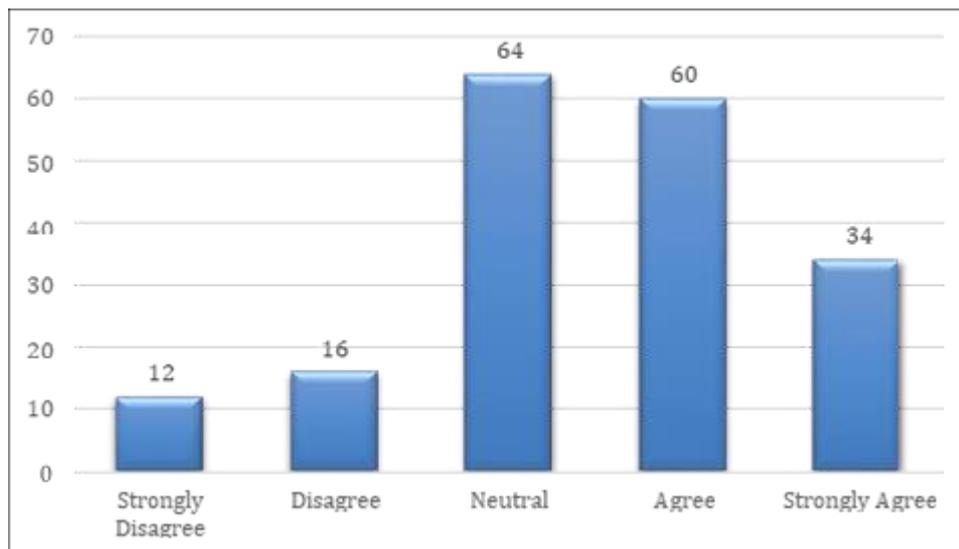


Figure 8: Teacher/Instructor Support

Chance of interaction

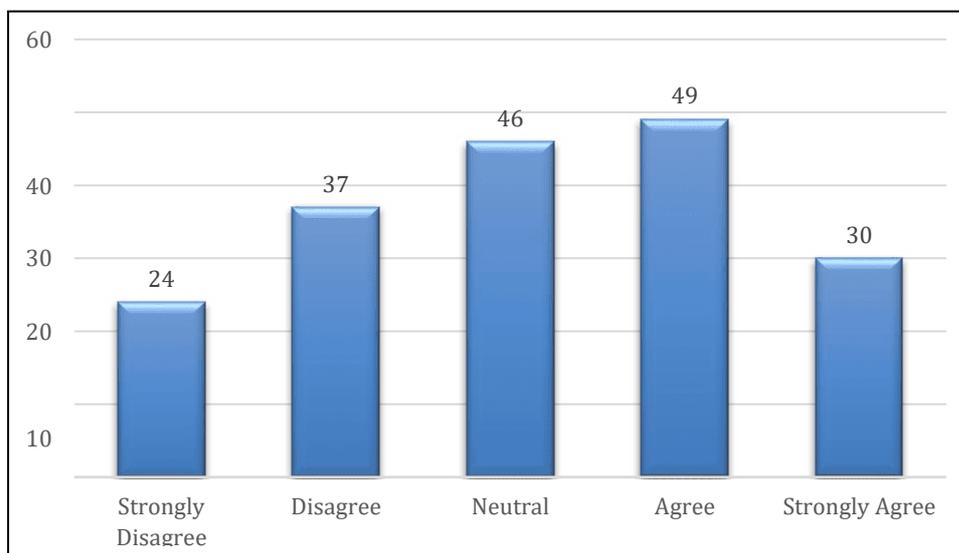


Figure 9: Chance of Interaction

Figure 9 shows that approximately 42 percent of respondents were effectively participating in their online classrooms, whereas 32 percent of respondents were unable to participate in their classes and 25 percent could interact at times but not all of the time in their online classes.

Family Support

Figure 10 depicts that 59 percent of the respondents found their family cooperative while they were attending online classes whereas only 13 percent of the respondents found their family unsupportive during attending online classes and 27 percent of the respondents had a mixed opinion for the above statement.

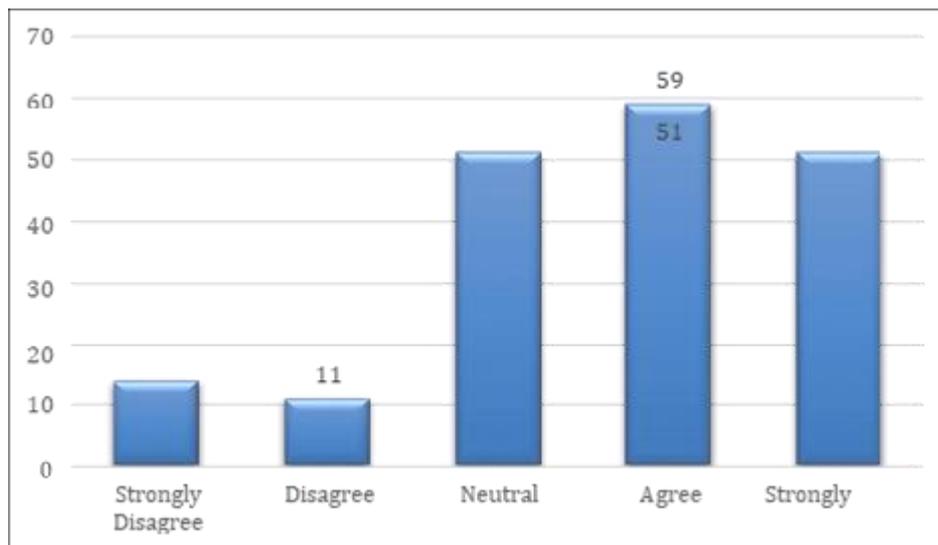


Figure 10: Family Support

Depressed and Worthless

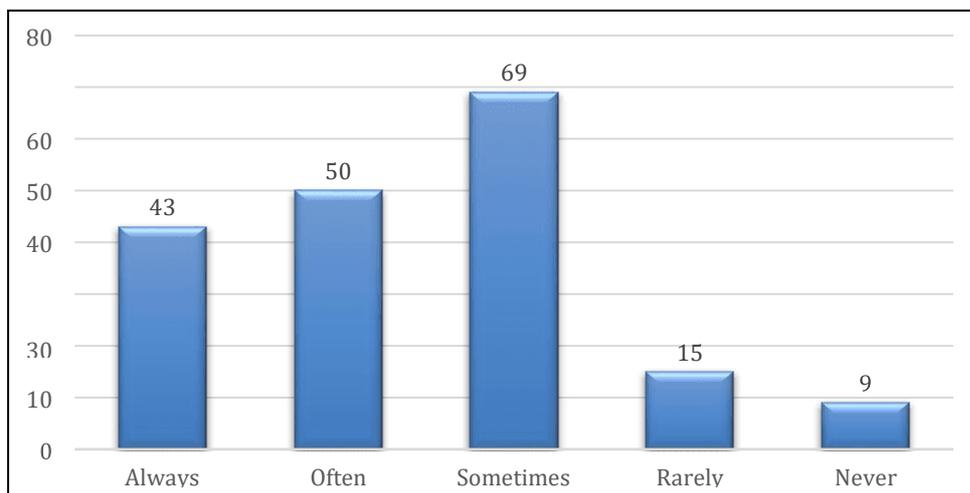


Figure 11: Felt Hopeless, Depressed & Worthless

The figure mentioned above depicts that nearly 50 percent of the respondents felt dismal, depressed, and worthless while participating in online education, whereas only 13 percent of the respondents did not feel the same way and 35 percent of the respondents occasionally felt hopeless, depressed, and worthless while participating in online education.

Students /Teachers Health

The statistic mentioned below illustrates that around 80 percent of respondents believe that the internet has badly impacted the health of pupils and instructors, while just 7 percent believe the internet has had no negative influence, and a total of 13 percent have a neutral impression.

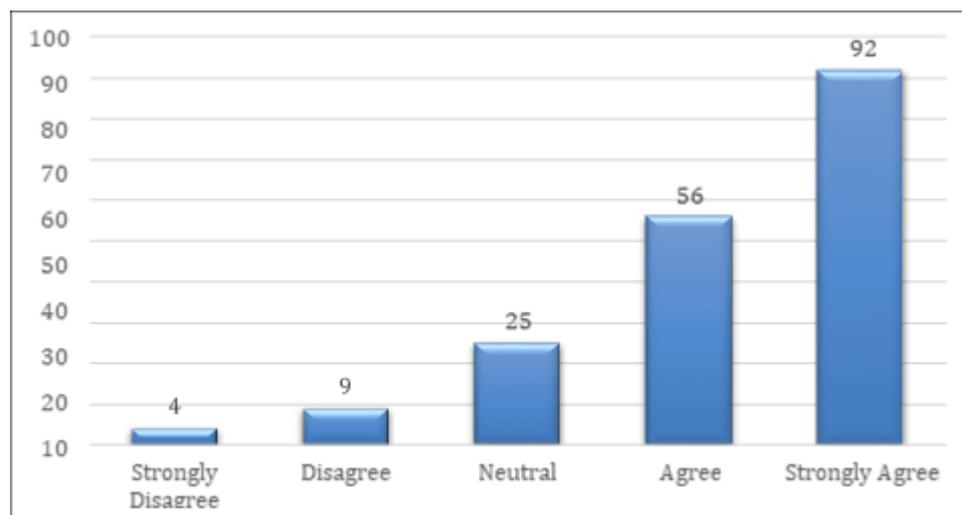


Figure 12: Student/Teacher's Health Affected

Factors imposed stress

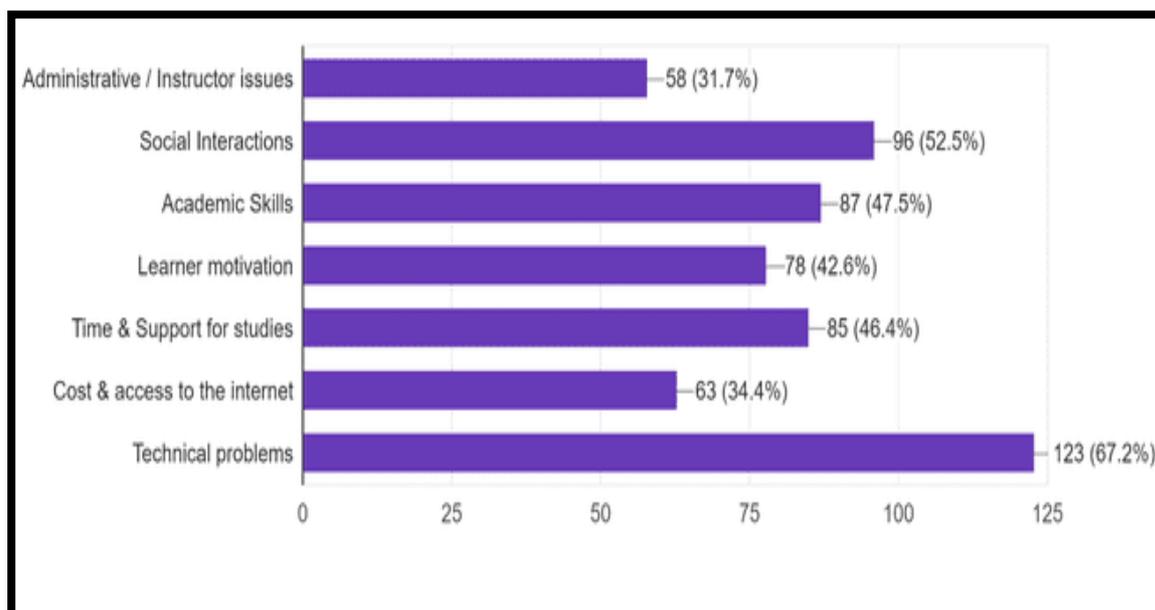


Figure 13: Factors Imposing Stress While E-learning

The statistic mentioned above indicates that nearly all of the respondents were stressed as a result of technological difficulties and a lack of interpersonal contacts. Next, factors such as respondents' average academic talents, time and support for studies were taken into account when determining whether or not to place stress on them. And, last but not least, the respondent's stress has been exacerbated by the learner's motivation, as well as the expense and lack of access to the internet.

Physical Stress

The data mentioned above illustrates that, when it comes to physical stress, the majority of those who responded reported experiencing headaches as a result. Additionally, the majority of them have reported feeling fatigued and having difficulty sleeping a lot. Some respondents reported experiencing muscular aches as a result of their E-learning experience. Some respondents also reported experiencing indigestion and irregular stress as a sign of physical stress, which is on the lower end of the spectrum.

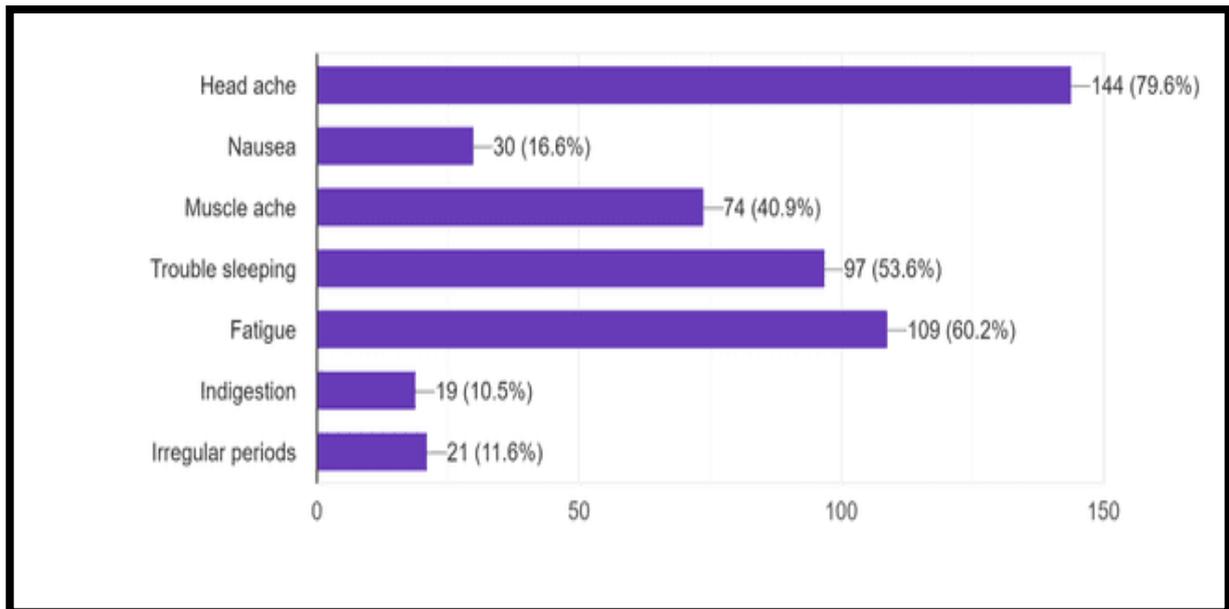


Figure 14: Encountered Symptoms of Physical Stress

Emotional Stress

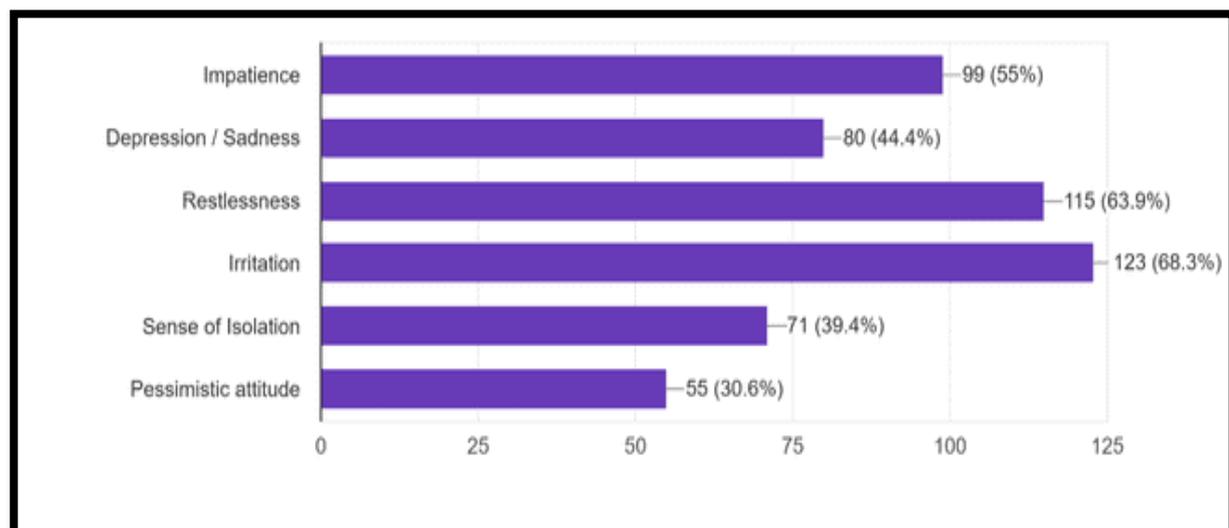


Figure 15: Encountered Symptoms of Emotional Stress

The data mentioned above indicates that, when it comes to emotional stress, the most respondents have reported feeling irritable and restless. As a result, several of them have reported feelings of impatience and sadness as a side effect. Some of the respondents have also expressed feelings of isolation as a result of a lack of social connections.

Cognitive Stress

The statistic mentioned below illustrates that, in terms of cognitive stress, the majority of respondents reported feelings of worry and a lack of concentration. As a result, many of them have said that they forget things and make terrible decisions due to their condition.

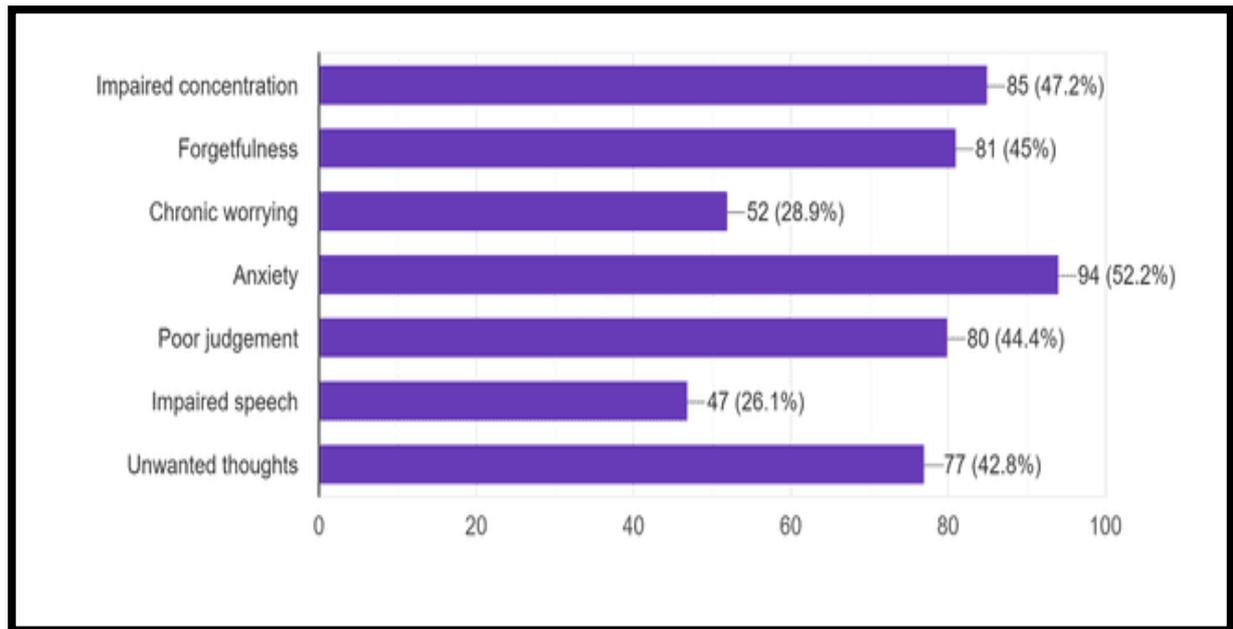


Figure 16: Encountered Symptoms of Cognitive Stress

Behavioral Stress

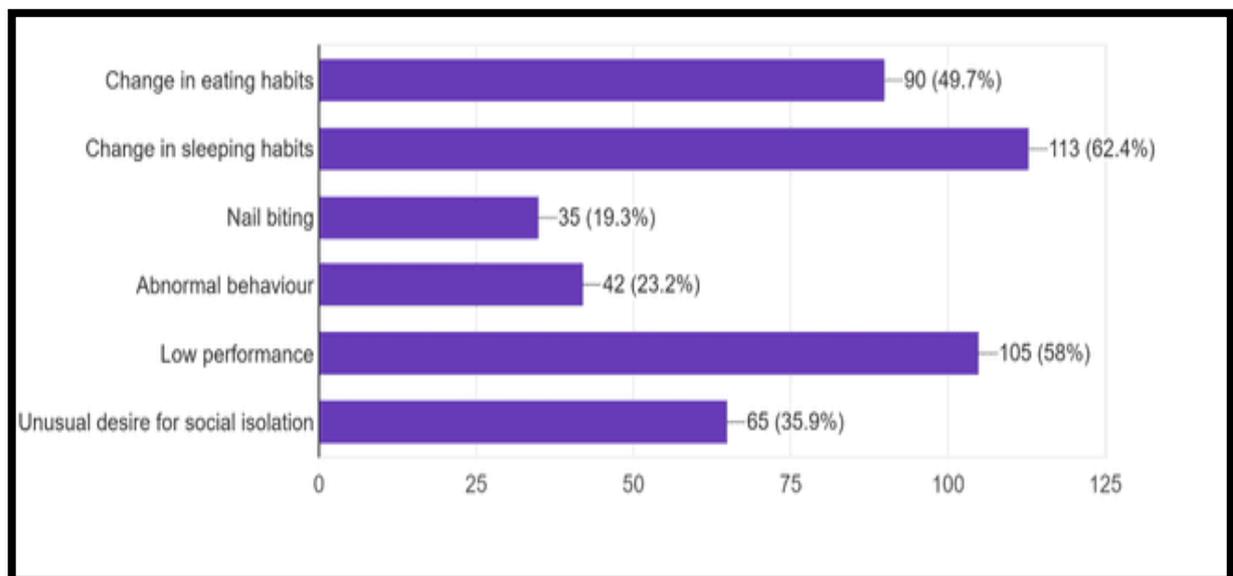


Figure 17: Encountered Symptoms of Behavioral Stress

According to the chart mentioned above, when it comes to behavioral stress, most respondents have seen a change in their sleeping patterns and finding themselves functioning below expectations. As a result, several of them have reported that their eating habits have changed, and there has been an extraordinary increase in the desire to isolate themselves from others.

Stress Level

The figure mentioned below depicts that the majority of respondents 41 percent have experienced symptoms of physical stress, followed by 30 percent who have experienced symptoms of emotional stress, and a small number of respondents (eighteen percent and eleven percent, respectively) have experienced symptoms of behavioural and cognitive stress.

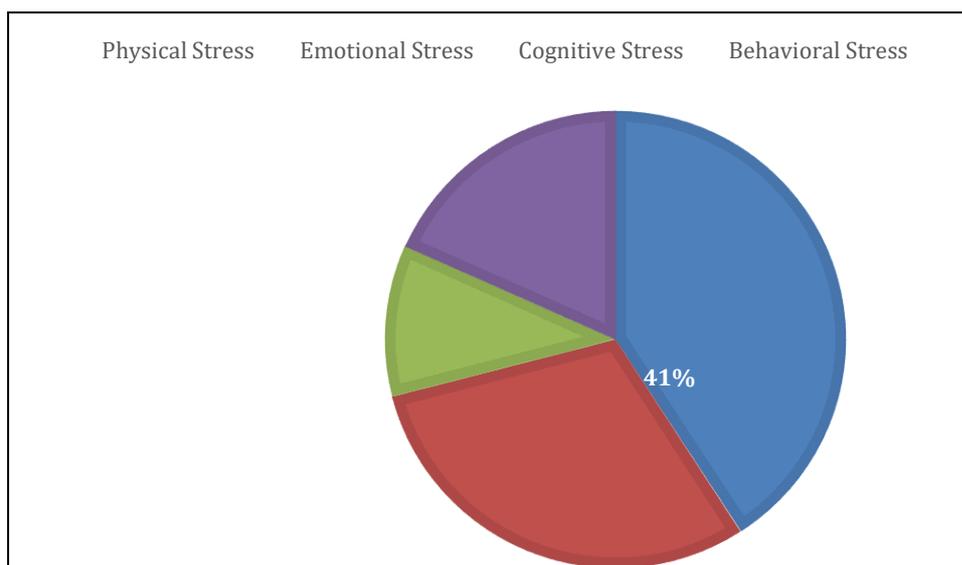


Figure 18: Level of Stress

Permanent Adoption

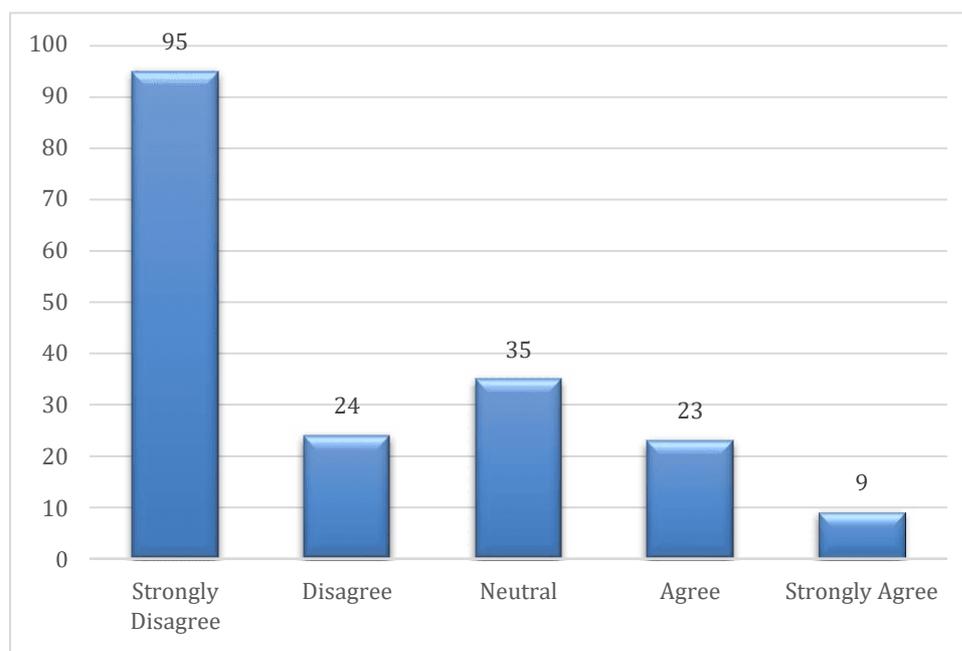


Figure 19: Permanent Adoption of E-Education System

A majority of respondents, 64 percent, do not want Indian institutes to adopt this E-education system at all. Only a tiny minority, nearly 17 percent, want Indian institutes to adopt this E-education system permanently. Almost 19 percent of respondents cannot form a clear opinion on this and are okay with both modes of education, as illustrated in the figure mentioned above.

Covid-19 Effect on Career Opportunities

Seventy-eight percent of respondents believe that job possibilities have fallen significantly due to the epidemic. In contrast, just 6 percent disagree with this assertion, and almost 16 percent believe that employment chances are still there but not as many as before the Pandemic began.

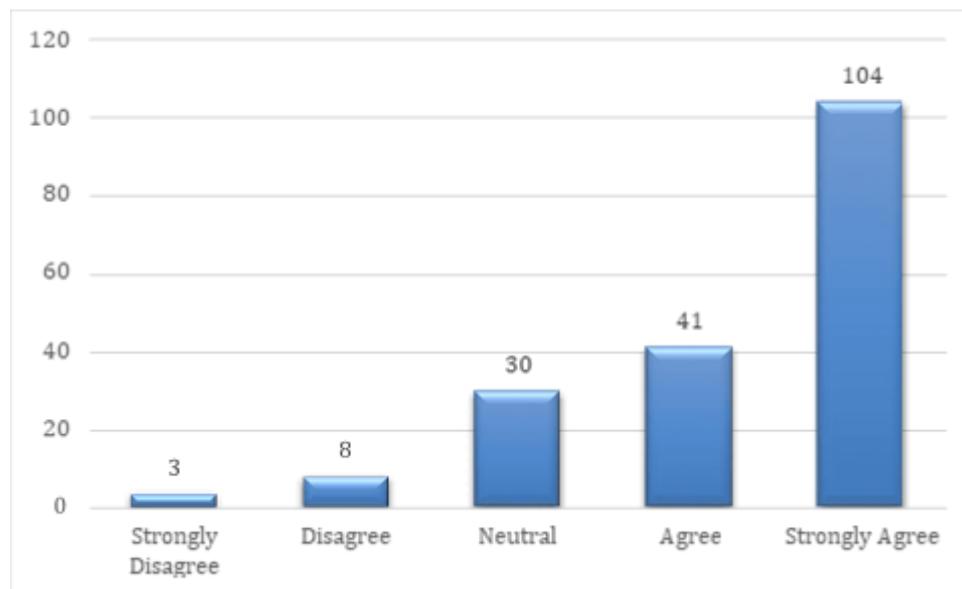


Figure 20: *Effect of Covid on Career Opportunities*

E-Learning Experience.

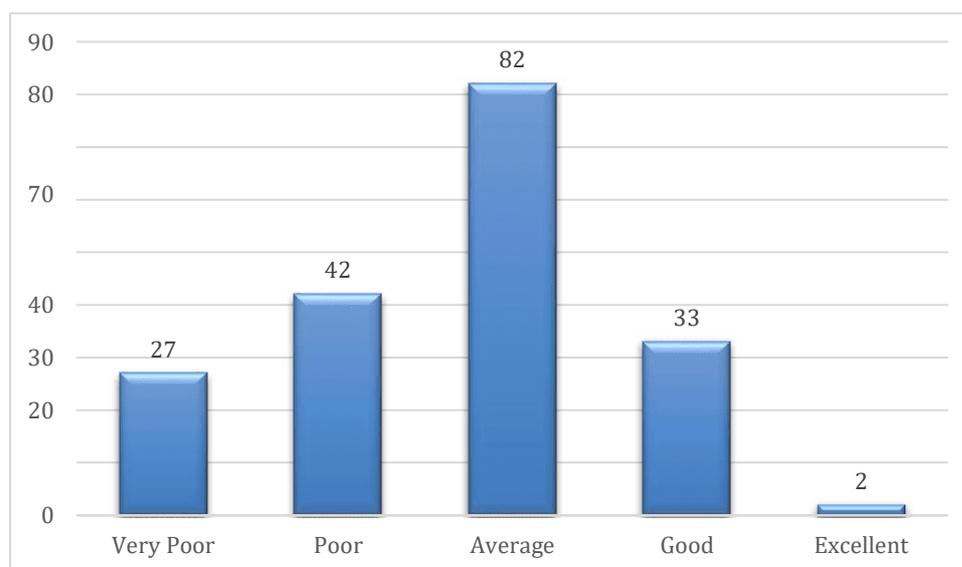


Figure 21: *Overall E-Learning Experience*

It can be seen in the figure mentioned above that nearly 37 percent of respondents had a poor experience with the online mode of education and that only a small number of respondents, 19 percent, reported having a positive experience with the online way of teaching. The majority of respondents, 44 percent, reported having an average experience while learning via the Internet.

KEY FINDINGS

- Google Meet and Zoom are the most preferred E-platforms among respondents.
- Prolonged screen timings have left the respondents in a state of Fatigue.
- The online method of teaching has a significant impact on the understanding regarding practical subjects.
- The Majority of the respondents prefer the offline mode of education.
- Smartphones and laptops are the widely used devices to attend online classes.

- Internet Breakage affects the concentration of students while learning.
- Instructor/teacher and family support have a significant effect on the performance of students.
- During this virtual mode of education, less interaction left students angered, hopeless, worthless and depressed.
- Online mode of education has a significant impact on the health of students and teachers.
- E-Learning has caused nervousness and stress among students & technical issues. Social interactions & long-time duration for online classes have been the essential factors imposing stress on the students' Headache, fatigue, and trouble sleeping are the acute symptoms of physical stress all respondents have encountered while learning online.
- Irritation, Restlessness, impatience and depression are the significant symptoms of emotional stress all respondents have encountered while learning online.
- Anxiety, impaired concentration & forgetfulness are the utmost symptoms the maximum number of respondents have faced during this online mode.
- Respondents have also realized changes in sleeping habits, eating habits & low performance as symptoms of behavioral stress.
- The maximum number of respondents have faced physical stress and emotional stress the most.
- Duration of attending classes has a significant impact on a student's performance.
- Respondents do not want this online mode of education to continue for longer.
- Online mode of education has decreased career opportunities.

Limitations

There were certain limits to this research, and some suggestions will be made for future research due to these constraints. To create accurate and reliable data and results for generalization purposes, the first advice is that the sample size is increases for potential researchers. In addition, the researcher should make an effort to obtain a fair and balanced representation of respondents from various educational backgrounds. Furthermore, it is necessary to broaden the scope of the investigation to include additional cities. According to the authors, other characteristics should be addressed in future studies when measuring their degree of comprehension and the stress experienced by postgraduate students while participating in this online method of instruction.

Research Implications

The education system of India has been hit hardest by Coronavirus. Institutions have been forced to transform to online education mode overnight. The present study assessed the stress of E-learning among postgraduate students. Even though many students use digital platforms for learning, many of them experience significant difficulties in online education.

Online mode of education has a significant impact on the performance of students as well as their health. It has significantly lowered the performance of students and has caused stress among the students. While adapting to this online mode of education students have faced all the levels of stress at one or another moment. Online learning is complex for students who have practical subjects tied to specific clinical processes and practice-driven. Spending too much time in front of a computer or other electronic device might have a harmful physical impact. Over-engagement and looking at a screen for long periods without taking a break can cause various health issues, including visual discomfort, tiredness, and muscle or joint pain. Lack of socialization and isolation lead to lower academic performance and even emotional distress. According to our findings, virtual education requires refinements in terms of reliable and affordable Internet, adequate infrastructure installation, technological advancements, and the provision of well-guided technical support to all to be effectively used, improved, and modified in the future, eventually improving the learning process.

Institutional teachers could utilize the open-source digital learning and learning management system to conduct online learning during this vital era. Finally, essential long-term measures are required to construct a resilient education system that ensures employability and productivity skills in young minds.

References

- Adnan, M., & Anwar, K. (2020). Online Learning amid the COVID-19 Pandemic: Students' Perspectives. *Journal of Pedagogical Sociology and Psychology*, 2(1), 45-51.

- Ali, W. (2020). Online and Remote Learning in Higher Education Institutes: A Necessity in light of COVID-19 Pandemic.
- Allan, J., & Lawless, N. (2003). *Higher Education*, 10(3), 16-25. Stress caused by on-line collaboration in e-learning: a developing model. *Education+ Training*, 45(8/9), 564-572.
- Almanthari, A., Maulina, S., & Bruce, S. (2020). Secondary School Mathematics Teachers' Views on E-learning Implementation Barriers during the COVID-19 Pandemic: The Case of Indonesia. *Eurasia Journal of Mathematics, Science and Technology Education*, 16(7), em1860, 1-9.
- Bao, W. (2020). COVID-19 and online teaching in higher education: A case study of Peking University. *Human Behavior and Emerging Technologies*, 2(2), 113-115.
- Bokde, V., Kharbikar, H. L., Roy, M. L., Joshi, P., & Ga, A. (2020). Possible impacts of COVID-19 Pandemic and lockdown on the education sector in India. *Food Sci. Rep, 1(special issue)*, 1-7.
- Bozkurt, A., & Sharma, R. C. (2020). Emergency remote teaching in a time of global crisis due to CoronaVirus pandemic. *Asian Journal of Distance Education*, 15(1), i-vi.
- Chen, T., Peng, L., Yin, X., Rong, J., Yang, J., & Cong, G. (2020). Analysis of user satisfaction with online education platforms in China during the COVID-19 Pandemic. In *Healthcare* (Vol. 8, No. 3, p. 200). Multidisciplinary Digital Publishing Institute, 1-26.
- Demuyakor, J. (2020). Coronavirus (COVID-19) and online learning in education institutions: A survey of the perceptions of Ghanaian international students in China. *Online Journal of Communication and Media Technologies*, 10(3), e202018, 1-9.
- Händel, M., Stephan, M., Gläser-Zikuda, M., Kopp, B., Bedenlier, S., & Ziegler, A. (2020). Digital readiness and its effects on higher education student socio-emotional experiences in the context of COVID-19 pandemic.
- Jena, P. K. (2020). Impact of Pandemic COVID-19 on education in India. *International Journal of Current Research (IJCR)*, 12(7), 12582-12586.
- Joksimović, S., Gašević, D., Kovanović, V., Riecke, B. E., & Hatala, M. (2015). Social presence in online discussions as a process predictor of academic performance. *Journal of Computer Assisted Learning*, 31(6), 638-654.
- Kapasia, N., Paul, P., Roy, A., Saha, J., Zaveri, A., Mallick, R. & Chouhan, P. (2020). Impact of lockdown on learning status of undergraduate and postgraduate students during COVID-19 Pandemic in West Bengal, India. *Children and Youth Services Review*, 116, 105194, 1-5.
- Mukhtar, K., Javed, K., Arooj, M., & Sethi, A. (2020). Advantages, Limitations and Recommendations for online learning during COVID-19 pandemic era. *Pakistan Journal of Medical Sciences*, 36(COVID19-S4), S27-S31.
- Pajarianto, H., Kadir, A., Galugu, N., Sari, P., & Februanti, S. (2020). A Study from Home in the Middle of the COVID-19 Pandemic: Analysis of Religiosity, Teacher, and Parents Support Against Academic Stress. *Journal of Talent Development and Excellence*, 12(2s), 1791-1807.
- Sreevatsan, Ajai. (2020). Covid-19 lockdown impact: Unemployment rate rises to 23.4%. <https://www.livemint.com/news/india/covid-19-lockdown-impact-unemployment-rate-rises-to-23-4-11586202041180.html>
- Surkhali, B., & Garbuja, C. K. (2020). Virtual Learning during COVID-19 Pandemic: Pros and Cons. *Journal of Lumbini Medical College*, 8(1), 154-155.
- Swayam Prabha Free DTH Channel for Education Retrieved from <https://www.swayamprabha.gov.in>
- UNESCO (2021) Education: From disruption to recovery. Retrieved from <https://en.unesco.org/covid19/educationresponse>
- Vogel, S., & Schwabe, L. (2016). Learning and memory under stress: implications for the classroom. *npj Science of Learning*, 1(1), 1-10.
- Weidlich, J., & Bastiaens, T. J. (2018). Technology Matters—The impact of transactional distance on satisfaction in Online Distance Learning. *International Review of Research in Open and Distributed Learning*, 19(3), 223-242.