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Impact of Online Education and Level of Health Problems during COVID-19

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Abstract:

The research study aims to see whether students in higher educational institutions are satisfied with technology-assisted Online Education during the COVID-19 pandemic and its effect on their physical mental and emotional health The findings of this study could help policymakers and healthcare professionals develop effective psychological therapies and cost-efficient recommendations for preventing negative feelings among general people who are solitary at home. Due to the non-normal distribution of the data, a non-parametric test was employed to investigate the significant correlations between sample characteristics and the level of health problems during the COVID-19 outbreak. The connection between gender, education level, and age group vs the stated level of health problems was evaluated using a One-Way ANOVA test for independence. It may indicate distress and an increased abnormal or obsessive tendency like picking nails, sucking the thumb, and pulling the hair. Excessive use of gadgets even resulted in mental health problems, stress sensations, anxiety, excitation or thrill, headaches, tiredness of the muscle, eye and ear strains, obesity or overweight, faintness, irregular sleep patterns, mental disturbance, back pain, aching shoulders, neck, and muscles pain, etc. Online education also affected the physical activity levels of students like bad postures, later bedtimes, longer sleep rise discontinuation, and later waking times which has been associated with motionless and lazy lifestyles. The online survey form was kept open for a week to allow respondents to reply. The participating population does not have a regional boundary

Keywords: *COVID-19, Health Crisis, Online Education, One-Way ANOVA, Perception.*

1. Overview:

COVID-19, a new pandemic caused by a novel coronavirus, has almost all sectors, including education. As a result, higher education and its students would be the most affected by the outbreak in 2020. The majority of students were pleased with the university's actions throughout the lockdown. In reaction to the rising coronavirus outbreak, colleges have been obliged to close their doors and, where the IT infrastructure allowed, transfer classes to online learning to keep learners' engagement and opportunity to learning. Schools and teachers did not always have the necessary abilities to switch from face-to-face to online teaching with ease, which could mean that the educational process did not expect the same level of quality. The immediate closure and transition from physical to online sessions have created numerous challenges in the learning and teaching process. The normal flow of learning and teaching has been disrupted. To maintain social distance, more limits and uncertainties have been placed, leading to a shift in learning and education toward digital learning with technical equipment and related abilities. Technology can be a useful tool, but it will never be able to replace face-to-face communication. Online learning allows for virtual communication and involvement while learning. As a result, for the new academic year, the university's management must take effective and efficient

efforts to eliminate, as much as possible, these difficulties and improve the performance of the online educational process. To reap the greatest benefits from online education, one must be ready and prepared for this emergency phase. Students are worried about their education and are unable to communicate with their teachers and peers in person. They had issues with slow internet connections and the gadgets most of which were required for active participation in the online class. Furthermore, economically underprivileged students are more likely to have outdated or limited computing gear, as well as less reliable home internet access, placing them at a disadvantage compared to their more affluent counterparts. Social isolation can lead to stress-related emotions and a decrease in overall happiness [4]. Students were put under pressure by sudden demands for a wide range of talents, as well as contests with more resources. So, while online courses make it easier for students and teachers to get an education, they may become more sedentary and develop health problems as a result. Students typically spend a significant amount of time on the internet as part of their online education. This will naturally move their interests away from physical activities like walking, outdoor games, and exercises and toward sedentary entertainment like watching movies and playing video games.

The impact of technology on their mental, physical, and emotional health may be the most significant consequence. Students' attitudes about instructional technology had a direct impact on their learning process, and a negative attitude harmed their academic achievement. Numerous studies have discovered detrimental health effects in these settings. The following are a few of these impacts.

This study attempts to determine the influence of online teaching and learning on education and student health during the COVID-19 pandemic. The findings of this study could help policymakers and healthcare professionals develop effective psychological therapies and cost-efficient recommendations for preventing negative feelings among general people who are solitary at home. A global analysis will assist us in developing the best recommendations for policymakers and higher education institutions on how students may be helped in various crises, including economic, social, cultural, political, and institutional crises.

2. Review of Related Literature:

Previous studies have shown that the more physically active a child is during their developing years, the better their physical and mental health will be for the next three to four decades. Later bedtimes, greater sleep onset latency, and later waking periods have all come from technology advancements. Early works on online education and its implications on teacher and student health are the topic of the following literature review by calculating p=0.045, the author discovered a strong association between the number of hours spent in online classes and health concerns.

According to Dangal, & Maharjan[1] long hours of online classes and sitting in the wrong (occasionally) and same postures caused eye and back problems in Kathmandu University instructors and students. Even the majority of the students complained, with 27% having anxiety concerns and 13.5% having sleep issues. Back pain, neck pain, eye pain, and headaches affected several of them, as well as other minor issues.

Because Hamza *et. al*[2]. did not notice greater rates of clinically significant symptoms reported pre-and during COVID-19, and innovative results suggest that the mental health condition on college and university campuses in the context of COVID-19 may not be as severe as specific writers have cautioned. The prevalence rates of clinically severe symptoms, on the other hand, were comparable. During COVID-19, the author noticed a decrease in wellness and an increase in depressive symptoms among students who had no prior mental health issues. Their findings show that rising social maltreatment (especially isolation and loneliness) among such students may explain at least some of their misery.

Chakraborty *et. al.*[3] discovered that a significant percentage of students suffer from various mental issues based on empirical investigations conducted in several countries throughout the world. They are experiencing worry, despair, addiction, and even suicidal thoughts as a result of the pandemic and their careers. They fell behind in online education due to a lack of enthusiasm and unpleasant feelings. They are scared of losing their internet connection when taking online classes; hence they are worried about getting sick. According to their poll, 82.7% of students believe that online education has led to an increase in the usage of digital technologies. In addition, 74.6% are concerned about excessive screen use, which creates stress and disrupts students' sleep. On online assessments, 54.2% of students reported feeling more anxious than on traditional forms of evaluation in offline, face-to-face classroom education.

3. Objectives of the Study:

i) To understand the perception of students on online education.
ii) To find challenges of online education on students' health.
iii) To find how online education affected students' physical, mental and emotional health.
iv) To find out how the behavior of students changes before and during the pandemic.

4. Hypothesis of the Study:

H_1: Online education has a significant impact on students' eye health.

[1] Dangal, M. R., &Maharjan, R. (2021). Health Problems Experienced in Online Learning During COVID-19 in Nepali Universities. *International Journal of Online Graduate Education*, *4*(1), 1–14.
[2] Hamza, C. A., Ewing, L., Heath, N. L., & Goldstein, A. L. (2021). When social isolation is nothing new: A longitudinal study on psychological distress during COVID-19 among university students with and without preexisting mental health concerns. *Canadian Psychology*, *62*(1), 20–30.
[3] Chakraborty, P., Mittal, P., Gupta, M. S., Yadav, S., & Arora, A. (2021). Opinion of students on online education during the COVID -19 pandemic. *Human Behav and Emerg Tech*, *3*(3), 357–365.

H_2: There was no significant change in the students' habit frequency before or during the COVID19 pandemic.

H_3: Students suffered greatly during the lockdown of COVID-19 under stress and anxiety.

H_4: The students were under academic stress and poor emotional wellness during online training because of the COVID 19 pandemic.

5. Questionnaire Design and Survey Implementation of the Study:

The questionnaire, titled 'Students Perceptions of the Impact of Online Education on Health during COVID19: A Survey Study', consisted of 38 major and 52 minor questions divided into five categories as follows-

- Academic characteristics of students: 4 major questions about their name, gender, academic level and the subject of study, and the devices they used to access online education.
- Knowledge statement and source of information: 13 major questions about COVID-19 and its spread & containment, and source of information.
- Effect on physical health: 7 major and 14 minor questions on physical activities, screen time, digital eye stress, vision difficulty, injuries, eating habits, and fitness.
- Effect on mental health: 8 major and 15 minor questions on sleep habits and patterns, habit frequency, stress and anxiety experience, and control.
- Effect on emotional health: 5 major and 17 minor questions on students' emotions since the outbreak of the COVID-19 pandemic.
- Overall Experience: 1 major and 6 minor questions on personal experience of online education. The online questionnaire was made available to participants through Google Forms, a free Google application that allows users to conduct online surveys. The survey was only open to those who were 18 or older and currently enrolled in a higher education institution for data protection considerations. Students were told that the online survey would take about 15 minutes and that it would be about their experiences with online education and its impact on their physical, mental, and emotional health. A self-designed questionnaire in the English language was developed specifically for the study and distributed via the Internet. The Google Form's URL was distributed via social media platforms such as email and what's App. The participants were given one week time to record their responses. The privacy of participants was safeguarded and all data was anonymized. The participants were also informed that their participation in the survey was completely voluntary and anonymous. By completing the survey, the participants gave their informed consent.

6. Sample of the Study:

The non-probability sampling technique convenience sampling was used to collect data for the study. The aim of using these methods is to come up with hypotheses and conduct exploratory research on the topic. The sample size needed for this study was calculated using an online service

provided by Statistics Kingdom[4]. To achieve the required confidence interval, the sample size is calculated as confidence level: 0.95 (95%), a margin of error: 0.05. The standard deviation is based on the proportion is: √ (p (1-p)) = 0.50. Calculates the sample size to get the following confidence interval: 0.5 ± 0.05. α = 1 - 0.95 = 0.050. $Z_{(1-\alpha/2)} = Z_{(1-0.050/2)} = Z0_{.975} = 1.96$. The required sample size is: $n = Z^2_{0.975}*p\ (1-p)/MOE^2 = 1.96^2*0.5(1-0.5)/0.05^2 = 385$, rounded up from: 384.15. A convenience sampling technique was used to select research subjects and the final study sample consisted of 385 subjects who replied to the questionnaire using Google Forms[5].

Participants: 385 students from higher education made up the current sample. 85% are enrolled in undergraduate programs, while 15% are enrolled in Postgraduate programs. Male students make up 55% of the group, while female students make up 45%. 66% of respondents live in cities, 12% live in suburbs, and 22% live in rural areas.

7. Methodology of the Study:

To demonstrate the demographic and other selected features of the respondents, a descriptive analysis was done. Due to the non-normal distribution of the data, a non-parametric test was employed to investigate the significant correlations between sample characteristics and the level of health problems during the COVID-19 outbreak. The connection between gender, education level, and age group vs the stated level of health problems was evaluated using a One-Way ANOVA test for independence. A statistically significant two-tailed $p<.05$ was used. To evaluate the problems and benefits of emergency online classes, a comparative table of student perspectives was analyzed. The study is attempting to determine the changes observed in the students, with a particular focus on health issues.

8. Analysis and Interpretation:

The personal profiles of the responders are shown in Table-1. Total respondents 385. Male students make up 45% of the 385 subjects that responded, while female students make up 55%. Undergraduate students accounted for 85% of the responses, while postgraduate students accounted for 15%. Urban institutions are attended by 66% of respondents, suburban institutions by 22%, and rural colleges by 12%. A whopping 92% of respondents use their smartphones to participate in online education discussions, while only 7.5% use desktops or laptops. Only 0.5% of students use other devices to attend online classes, such as tablets.

Table 1: Personal Profile of the Respondents

Variable	Options	N	%
Gender	Male	173	45%

[4] https://www.statskingdom.com/50_ci_sample_size.html
[5] https://forms.gle/9nXsedemYV6kYjpA9

	Female	212	55%
Education Level	UG	327	85%
	PG	58	15%
Location	Rural	85	22%
	Suburban	12	12%
	Urban	66	66%
Device Type	Smartphones	354	92%
	Desktop/Laptop	29	7.5%
	Others	2	0.5%

Using a One-way ANOVA statistical model, the hypotheses were tested. One-way ANOVA ("Variance Analysis") compares the means of two or more independent groups to determine if there is statistical evidence of significant differences in the associated population means. "The one-way ANOVA compares the means between the groups of data and determines whether any of those means are statistically significantly different from each other. Specifically, it tests the null hypothesis:

$$H_0: \mu_1 = \mu_2 = \mu_3 = \cdots = \mu_k$$

where μ = group mean and k = number of groups. If, however, the one-way ANOVA returns a statistically significant result, we accept the alternative hypothesis (HA), which is that there are at least two group means that are statistically significantly different from each other". (https://www.socscistatistics.com/tests/anova/default2.aspx) is used to perform the test with data samples.

H_1: Online education has a significant impact on students' eye health

Result Details				
Source	*SS*	*df*	*MS*	
Between-treatments	437857.5714	4	109464.3929	*F* = 109.4199
Within-treatments	65026.4286	65	1000.4066	
Total	502884	69		

The One-Way ANOVA test is conducted at a 5% level of confidence with 4(V_1), 69(V_2) degrees of freedom. The critical f-ratio value is 109.4199. The *p*-value is < .00001. The result is significant at $p < .05$. Hence the alternate hypotheses were accepted.

H_2: There was no significant change in the students' habit frequency before or during the COVID-19 pandemic.

Result Details				
Source	*SS*	*df*	*MS*	

Between-treatments	16309.3333	4	4077.3333	*F* = 2.43817
Within-treatments	117060.6667	70	1672.2952	
Total	133370	74		

The One-Way ANOVA test is conducted at a 5% level of confidence with 4(V_1), 69(V_2) degrees of freedom. The critical f-ratio value is 2.43817. The *p*-value is < .054952. The result is not significant at $p > .05$. Hence the alternate hypotheses were rejected.

H_3: Students suffered greatly during the lockdown of COVID-19 under stress and anxiety

Result Details				
Source	*SS*	*df*	*MS*	
Between-treatments	8610.25	4	2152.5625	*F* = 4.26666
Within-treatments	17657.75	35	504.5071	
Total	26268	39		

The One-Way ANOVA test is conducted at a 5% level of confidence with 4(V_1), 39(V_2) degrees of freedom. The critical f-ratio value is 4.26666. The *p*-value is <.006454. The result is not significant at $p < .05$. Hence the alternate hypotheses were accepted.

H_4: The students were under academic stress and poor emotional wellness during online training because of the COVID 19 pandemic.

Result Details				
Source	*SS*	*df*	*MS*	
Between-treatments	46545.5556	4	11636.3889	*F* = 67.55088
Within-treatments	6890.4444	40	172.2611	
Total	53436	44		

The One-Way ANOVA test is conducted at a 5% level of confidence with 4(V_1), 44(V_2) degrees of freedom. The critical f-ratio value is 67.55088. The *p*-value is < .00001. The result is not significant at $p < .05$. Hence the alternate hypotheses were accepted.

9. Findings:

COVID-19 has transformed into much more than a health emergency. It has created catastrophic social, financial, and political emergencies that will leave deep scars by focusing on all of the countries that are affected. Very often physical and mental health are considered as different aspects of human life but in reality, they go hand in hand. One has a greater influence on another. For example, too much stress and anxiety can reduce the immunity of a person. Too much exposure to mobile and laptop

screens is currently one of the major disadvantages of online education and leads to a feeling of isolation and fear. It could signal unhappiness as well as an increase in odd or obsessive behaviors such as nail picking, thumb sucking, and hair-pulling. Excessive use of gadgets has been linked to mental health issues such as stress, anxiety, excitation, or thrill, headaches, muscular exhaustion, eye and ear strains, obesity or overweight, faintness, sleep patterns, mental disruption, back discomfort, shoulders, and neck muscles, among other things. Students' physical activity levels were also altered by online education, including improper postures, later bedtimes, longer sleep rise cessation, and later waking hours, all of which have been linked to sedentary and inactive lifestyles. Developing a positive attitude by family members can have a significant impact on the mental wellbeing of students. During the COVID-19 pandemic, those students with preexisting mental health concerns were very much vulnerable to the psychological impact of online learning. The descriptive analysis of the findings of this survey study is listed below. Supporting statistics are given in Table 2 below.

- The participants generally knew very well the principal modes of COVID-19 transmission, common disease symptoms, and recovery from the infection. All knowledge questions in the survey have been correctly answered.
- Official sources of information were the most trusted, with 62.47% of students believing in them: the government (57.66%) and medical experts (67.27%). Non-official sources, on the other hand, are trusted by 33.37% of students: social media (31.68%) and family and friends (35.06%). The information provides by news websites is also plausible and trustworthy, according to 47.79% of students.
- Students' behavior changed dramatically as a result of COVID-19. Students are now more cautious about handwashing, not leaving the house for no reason, avoiding crowds and large gatherings, avoiding touching facial parts, shaking hands, trying to avoid tours and visits, attempting to avoid public transportation for travel, increased physical activity, stocking up on essentials, and, most importantly, wearing masks when going outside.
- Prolonged screen usage has been linked to an increase in vision difficulties as well as frequent headaches. In addition, anxiety and depression are on the rise as a result of home confinement, as are sleep difficulties. Students who take online classes from home are not required to be professional in the classroom. As a result, their physical health is worsening in numerous ways. Many students have noticed that their vision has deteriorated as a result of their constant use of a smartphone or computer screen. A substantial number of online students reported having headaches. More than half of the students reported itching and watering in their eyes. Burning eyes, excessive blinking, pain in the eyes, blurred vision, and increased sensitivity to light are just a few of the common eye-related symptoms that many online students experienced.
- Students are not able to follow good ergonomics at home, unlike in the classroom. One of the most prominent reasons for the recent rise in back problems is taking online classes on beds,

sofas, floors, etc. in postures that aren't ergonomic. While attending classes online, more than half of the students (58.70%) complained of back pain.

- Obesity is on the rise among students, either as a result of a lack of outdoor physical activity or as a result of binge eating and ready access to junk food at home. During the lockdown caused by COVID19, a large number of students developed the habit of eating more than the required four meals per day, and as a result, they noticed a change in body weight.
- During the lockdown period, students' sleeping patterns changed noticeably, which was reflected in their feelings of fatigue or sleepiness during online classes. Approximately 89% of students agree that their sleeping patterns have changed, and 55% believe they have experienced exhaustion or sleepiness while taking online classes.
- The majority of online students faced stress during their remote education. There could be a variety of reasons for this. Some people were stressed because of academic estrangement, while others were stressed because of developmental challenges. A few students were under pressure due to friendship issues. For many individuals, social mistreatment is a source of stress. Many of the students were under stress due to time constraints.
- Students' anxiety during their online education is primarily caused by their fear of the future and the worst-case eventuality. Students were less concerned about death, losing control, and losing their relatives as a result of the COVID-19 scare.
- 3/4 of students are concerned about catching COVID-19 either directly or through family members. 73.5% of students are terrified of catching COVID-19, and 86% are concerned that a family member will be infected.

Table 2: Descriptive statistics for observed indicators of COVID-19 knowledge, sources of information, behaviors, and health issues (N = 385).

Variable	Category	N (%)
I. Statements of knowledge (True / False)	COVID-19 spreads through respiratory droplets of infected people (T)	361 (93.76)
	COVID-19's main clinical signs are fever, fatigue, and dry cough (T)	378 (98.18)
	There is an effective cure for COVID-19 (T) Early detection and	357 (92.72)
	supportive treatment can help most patients recover from the	345 (89.61)
	infection (T) All COVID-19 infected individuals will develop severe	334 (86.75)
	illness (F)	381 (98.96)
	The elderly with chronic disease are more likely to be serious (T)	367 (95.32)
	If there is no fever, people with COVID-19 cannot	380 (98.70)
	transmit the virus to others (F)	362 (94.02)
	People must avoid going to crowded places to prevent COVID-19	332 (86.23)
	infection (T)	
	Isolation of COVID-19 infected persons is effective means of reducing the	
	spread of the virus The measures to prevent COVID-19 infections should	
	be taken by young adults	

II. Sources of Information (Yes/No)	Official Sources Government (Y) Health Professionals (Y) Unofficial Sources Social-Media (Y) Family and Friends (Y) News Websites (Y)	222 (57.66) 259 (67.27) 122 (31.68) 135 (35.06) 184 (47.79)
III. Change in behaviors (Yes/No)	Washing hands (Y) Leaving the house for unnecessary reasons (N) Avoid crowds and large gatherings (Y) Avoided touching your face (Y) Shaking hands (N) Stocking up on essentials (Y) Canceled travel (Y) Avoiding public transport (Y) Wearing a mask outside (Y) Recreation or workout (Y)	367 (95.32) 217 (56.36) 310 (80.52) 332 (86.23) 191 (49.61) 278 (72.21) 319 (82.86) 319 (82.86) 362 (94.03) 303 (78.70)
IV. Physical Health & Related Attributes (Yes/No)	Burning in Eyes (Y) Itching in Eyes (Y) Foreign Body Sensation in Eyes (Y) Watering/Tearing in Eyes (Y) Excessive Blinking of Eyes (Y) Redness in Eyes (Y) Pain in Eyes (Y) Feeling of Dryness in Eyes (Y) The blurring of Vision (Y) Double Vision (Y) Difficulty in Focusing Nearby (Y) Halos Around Objects (Y) Increased Sensitivity to Light (Y) Headache (Y) Noticed vision deteriorating (Y) Felt back pain (Y) Developed the habit of eating more than the recommended four meals per day (Y) Change in body weight before &after lockdown (Y)	172 (44.67) 217 (56.36) 101 (26.23) 238 (61.81) 157 (40.77) 148 (38.44) 187 (48.57) 125 (32.46) 167 (43.37) 91 (23.63) 146 (37.92) 86 (22.33) 171 (44.41) 298 (77.40) 216 (56.10) 226 (58.70) 233 (60.51) 260 (67.53)
V. Mental and Emotional Health & Related Attributes (Yes/No)	Felt fatigue/sleepiness during the online classes (Y)	212 (55.06)
	Change in sleep pattern during lockdown period (Y)	343 (89.09)
	Stressful experiences during lockdown period Academic alienation (Y) Development challenge (Y) Friendship problems (Y) Social mistreatment (Y) Time pressures (Y)	 46 (11.94) 103 (26.75) 28 (7.27) 52 (13.50) 156 (40.51)
	Level of anxiety during the COVID-19 pandemic	

	Fear of death (Y) Fear of losing control (Y) Fear of losing your relative (Y) Fear of worst happening (Y) Future anxiety (Y) Nervous (Y) Scared (Y)	21 (5.45) 16 (4.15) 38 (9.87) 74 (19.22) 138 (35.84) 41 (10.65) 42 (10.90)
	Afraid of contracting COVID-19 (Y)	283 (73.50)
	Worried that a family member will contract COVID-19 (Y)	332 (86.23)
	Worried about the personal problems Personal physical health Personal mental health Studying issues Future education Family and relationship Professional career in the future Similar pandemic crisis in the future Leisure activities	(Mean) 2.4 2.4 2.8 3.3 2.8 3.3 2.6 2.6

10. Conclusion:

COVID-19 has had a significant impact on our lives. Students, unfortunately, are among those who may be most affected by the virus. Whether it is mental health, physical health, or a mixture of the two, students have experienced their fair share of health issues during this pandemic. Students who take online lessons from home do not have to be as professional as their peers in the classroom. As a result, several areas of their physical health are worsening. One of the most prominent explanations for the current upsurge in backaches is poor ergonomics, such as attending online classes on beds and sofas. Obesity is on the rise in youngsters, either as a result of a lack of outdoor physical activity or as a result of binge eating and easy access to junk food at home. Youngsters are also losing muscle mass and gaining fat, which will hinder their growth. The fact is that the more physically active a youngster is during his or her growing years, the better their physical and mental health will be for the next three to four decades. Due to the current health crisis, this is completely absent. A lack of physical exercise, lack of adequate exposure to sunlight, and an imbalanced diet are all factors that contribute to calcium and vitamin D deficiencies. Muscle cramps, twinges, and strains/tears are typical in children with severe impairments owing to minor traumas or bad posture. Moreover, students are finding it difficult to cope with remote education options which is indirectly increasing stress on them. Every youngster wishes to be outdoor, and their fitness has deteriorated as a result of the confinement. Students who were isolated at home struggled with depression. In this study, the researchers shed light on the health difficulties that students are experiencing as a result of their engagement in technology-assisted online education. There have also been some suggestions for the use of educators and students so that students can maintain their health without disturbance. Researchers hope that the

information interpreted and analyzed in the study will also help managers to simplify online methods and techniques of delivery of education.

11. Suggestions:

The unprecedented situation of the COVID-19 pandemic has compelled educational institutions to go for a completely online mode. The sudden shift from the conventional mode of learning to the complete online mode has a tremendous impact on the overall well-being of students. Since learning in online mode is the only possibility to continue education without wasting a year or two, one cannot avoid it. However, some recommendations can be made for the successful implementation of online learning. If students try to follow them the health hazards can be reduced.

- Virtual learning should be limited to 3-4 hours per day since extensive use of technology, as well as time spent in front of screens and using devices, has been related to physical, mental, and emotional health challenges.
- Because online learning is more flexible, most students do not strictly adhere to timetables. Unscheduled activities put an extra burden on the body and disrupt sleep patterns. Using one's bedroom as a virtual classroom might also create a stressful environment. Using the bedroom to attend online classes should be avoided. To put it another way, learning should not be brought to bed.
- Students become overburdened as a result of rigorous academic tasks online and offline. Time management is critical for reducing the stress and anxiety generated by online learning. Distress is greatly influenced by time management. Stress can be reduced if available time is used wisely. The learning environment must be kept clean and orderly. Folders should be used to organize digital learning materials. Participating in stress-relieving activities can also improve mood and create a healthy learning environment. Students should take a short break while online studying because it is an excellent technique to adjust one's mood.
- Students will be unable to retain information if learning is not methodical. They will be able to hold the information for a longer period if they use a scientific approach to learning and choose the ideal type of content for them depending on their cognitive abilities. Involving in mentally stimulating activities such as solving puzzles will sharpen the memory.
- Setting up a comfortable and well-ventilated place for study, keeping the cellphone in do-not-disturb mode to avoid endless notifications from several apps, avoiding the use of social media, keeping the body well hydrated, getting a good night's sleep, and following a healthy diet can enhance the concentration of students during online classes
- Interacting with friends and family members, being involved in hobbies, etc. can reduce social isolation. It is disheartening that many students consider online activities such as computer games, watching web series, involving in social media activities, etc. as their stress-busters. This in turn increases social isolation. Hence it is high time for them to go for 'internet fasting'. During online

learning when 'internet fasting' is not possible, they can at least practice 'internet diet' to reduce online activities other than learning.

- Having positive feelings towards online learning, feeling optimistic that the current situation will be better shortly can reduce extreme fear and anxiety
- Following a healthy diet, involving in physical activities regularly can instill a positive attitude among students. If they are confident to face the challenges of online learning there will not be any negative thoughts such as depression, suicidal syndrome, and addiction.
- Sedentary nature of online learning activities, consumption of high-calorie food body weight. Following a balanced diet, regular sleep patterns, and involving actively in physical activities can help students gain excess body weight.
- Use of ergonomic furniture, sitting in proper posture, taking short breaks, following quick upper body stretching for a short period of 2 seconds can reduce strain, back pain, and fatigue. It is recommended to follow some quick relaxation techniques to overcome pains in the body because of online learning
- Self-care, self-confidence, and self-motivation are very much essential to stay fit and healthy during online learning. As good sleep is very much essential, it is essential to practice healthy bedroom habits. Laptops and smartphones are to be closed at least an hour before the bedtime
- The furniture and gadgets are to be adjusted properly to ensure minimum discomfort. Sitting in a 90degree posture with proper support at back can reduce strain.

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