

E-Learning Education System and Mental Health Status of Undergraduate College Students during Lockdown of COVID-19 Pandemic: A Cross Sectional Survey

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Abstract

Background: The COVID-19 has resulted in a worldwide closure of colleges. About 1.2 billion kids are out of the classroom worldwide. Education has drastically changed as a result, with the distinctive emergence of e-learning, whereby teaching is carried out remotely and on digital platforms. Research indicates that online learning has been shown to improve data retention and take less time, suggesting the changes caused by coronavirus could be here to stay. Mental disorders constitute an increasingly important public health problem in the general population. Therefore, investigation of the determinants and state of mental health of those who will be the future pillars of the world, to be assessed and justified while implementing any new technique.

Methods: A cross-sectional study was carried out among college students at 1-3-years (N=380) with a self-administered questionnaire that included standardized items on demographic data, online education, mental health status and its consequences. Descriptive statistics and chi-square was done using SPSS ver-25.

Results: In this study, majority of them were male with the mean age of 19.81, minimum age of 18 years and maximum age of 22 years. Most of the students faced problem such as, head ache, eye strain, and unfavorable environment also not able to concentrate long time. Depression is the common mental health illness. There was a strong correlation observed with problems faced by the students and mental health illness (p-value 0.000).

Conclusion: This study showed students prefer online education but they should be trained before implementing it. Majority of them faced depression as mental health illness and head ache, eye strain and family environment is a major problem due to online classes.

Keywords: E-learning; College students; Depression; Mental health illness

Introduction

In India, the first COVID-19 positive case was registered on 30 January 2020. India is currently experiencing sparkly growth in COVID-19 cases. India reported 160,384 active cases, 194,324 recovered cases, and 12,237 deaths as of 18 June 2020. Several strategies to monitor the spread of the disease have been introduced by the government of India along with different state governments. India has observed four phases of national lockdown since 25 March, which was extended to 31 May 2020. During the lockout time of the new 2019 coronavirus disease (COVID-19), not only in India but around the globe, the entire educational system from elementary to tertiary level has collapsed. COVID-19 pandemic has resulted in a worldwide closure of colleges. About 1.2 billion kids are out of the classroom worldwide. Education has drastically changed as a result, with the distinctive emergence of e-learning, whereby teaching is carried out remotely and on digital platforms. Research indicates that online learning has been shown to improve data retention and take less time, suggesting the changes caused by coronavirus could be here to stay. Teachers are advised to teach through online learning platforms during the lockdown [1]. The COVID-19 outbreak leads by online lectures, teleconferencing, digital open books, online review, and engagement in virtual environments to the digital transformation in the higher education system [2]. As of today's scene, in the midst of the COVID-19 outbreak, it is very impossible to attend classes in regular mode in which preserving social distancing is of paramount importance; thus, undoubtedly, online education mode became a necessity that unfreezed both an organization and a students and teachers. Children and young people are mainly impacted by the closure of educational institutions [3]. During this unprecedented age, online classes have been found to be demanding as an alternative to institutional closure. However, both students and teachers face various obstacles and difficulties, including psychological issues, as a result of an insufficient learning strategy [4]. The successful implementation of e-learning programmes depends on how students and instructors execute the programme [5]. While one of the promising alternatives to the physical classroom is online education, students show a negative perception of online learning behavior [6]. In addition, in COVID-19 afflicting times,

online teaching mode offers the feeling of psychological protection to the learning population. The second step is to adjust the mechanism in which two choices are left, either to introduce a new online mode in other organisations elsewhere in practice or to innovate one's own. The analysis is always for a better model that can be applied. However, there are obstacles to tackle. Some students fail to engage in digital learning without reliable internet connectivity and/or technology; this disparity is seen across countries and across income brackets within nations. This research is an overview of the online learning modes adopted for learning process and subsequent semester exams among college students. It looks forward during any adversity to an intellectually enhanced chance for more future academic decision-making. The goal of this paper is to address the mental health status and necessary essentials of online learning in education during COVID-19 pandemic and how, with the aid of virtual classes and other main online tools, existing resources of educational institutions can effectively turn formal education into online education in this constantly changing educational landscape. Mixed study design was used in this research. The goal of this paper is to provide a mental health holistic image of the ongoing online learning activities during the lockdown period, including the relation between the process of change management and the online teaching-learning process in the education system in the midst of the COVID-19 outbreak, in order to resolve the ongoing academic disruption and thus ensure that educational activities are resumed.

Materials and Methods

Conceptual framework and development of hypotheses

The conceptual research model and the respective hypotheses were established based on the literature and online Focus Group Discussion (FGD) with the target group of students by explaining the relationships between exogenous and indigenous variables and/or between them.

Surprisingly, students with new technology or novice students suffer from multiple stressors. Many students acquire knowledge prominently; some do not. This knowledge acquiring procedure depends on how they are treated by resource availability or access to learning tools. Due to social and economic dividends, many students suffer from access to new technology resources. At the same time, a lack of IT knowledge was identified as a significant impediment to non-technical instructors. Moreover, the nature of e-Learning (limited time, interpretation, and assessment methods) compared to traditional classroom methods, makes student dissatisfied. In this technological world, around 25% of teens from lower-income families do not have a home computer and internet access.

Subjects

This is an online survey-based study of the 380 undergraduate students studying in various colleges and universities of Tamilnadu.

Data collection and procedure

An online survey was conducted from June to December 2020 to collect the data. Institutional ethical committee clearance was obtained to conduct this study. A pre-tested structural questionnaire was prepared and the link was sent through 'Google form' through WhatsApp and E-mail. After giving the online consent only, students can able to fill up the "Google form".

Data analysis

Descriptive statistics were carried out to understand the distribution of study participants. Simple percentage distribution was estimated to assess the learning status, mode of learning, and opinion on online educational, mental health illnesses and problems related to study due to the lockdown. Chi-square test was used to compare the data. All the analyses were performed using the Statistical Package for Social Science (SPSS Version: 25).

Results

Totally, 381 students were enrolled to this study. Of which majority of them were girls (51%) in the age group of 19 years. Around 58% of them were living in urban area and 51% were from government colleges, 86% of them are science students (Table 1).

Variables	Frequency	Percentage
Age distribution (yrs)		
18	43	10.8
19	121	30.3
20	109	27.3
21	81	20.3
22	27	6.8
Gender		
Boys	176	44.1
Girls	205	51.4
Place of living		
Urban	234	58.6
Rural	147	36.8
Type of college		
Government	176	44.1
Private	205	51.4
Stream of course		

Arts	69	61
Science	165	86

Table 1: Participant's characteristics.

Around 85% had the knowledge on computer and internet. During lockdown 78% learnt through online by using mobile phones (87%). Majority of the students said they had access to internet and only 10% said internet connectivity is irregular.

It is found that the students were using various platforms for e-lectures, study material sharing and learning evaluation, such as the Zoom app, YouTube, Skype, Google meets, Google classroom, WhatsApp, etc. The results also show that most of the respondents (32%) used the Zoom app for attending online classes, followed by Google classroom (28%) and YouTube live (14.7%). The learners also followed many platforms for getting study materials during this lockdown period. It is observed that students were more likely to study through shared study materials than attending online lectures mainly due to poor internet connectivity. The majority of the respondents (39.4%) used the WhatsApp group for getting study the materials from teachers and as well as friends and 31.8% of students used Google Classroom for this purpose. However, fewer learners followed institutions/teachers' website and YouTube lives for study materials. Teachers used many platforms not only for digital teaching and learning but also for learning-evaluation very quickly through WhatsApp group, Google classroom, Google form, and so on. The learning of the respondents mostly evaluated through the you-tube (39%), email (4%), WhatsApp group (37%), Google classroom (19%).

Discussion

This is a first study conducted to assess the mental health status of the students who attending online classes during covid-19 pandemic. In academic operations, the lockout in the middle of COVID-19 has produced major disturbances. During this pandemic, the present study compared the mental health status and online learning of undergraduate students. Although a significant proportion of students use digital learning tools, many of them face immense online learning challenges. In this study depression is a major mental health illness during online learning and student's complaint that they were not able to concentrate continuously more than 3-5 hours and unfavorable family environment. Students are willing to learn through online education system though they faced a lot of problems. But as we know from previous evidences, most e-learning projects have failed because they were not efficiently designed and operated by regulatory and government agencies [7-8]. In online education system, many students tend to adopt certain behavioral patterns that can lead to negative health issues such as depression and stress. A prospective cohort study conducted in Malaysia, found that depression and anxiety significantly increased in students by the end of the academic year during lockdown. In turn, Aragon, Johnson, and Shaik did not find significant differences in the level of anxiety during TL and OL. There were no many researches available to compare these study findings.

Limitation

The present study also has certain limitations. The major disadvantage of STA block is the inability to block visceral pain, which can be substantial, both intra and post operatively. The other major limitation is dermatomal limitation of the block. STA block provides reliable analgesia covering T6-T10 dermatomes.

Conclusion

It is clear that this pandemic has totally destroyed a system of education. Instead of focusing on skills such as critical thinking and adaptability, which would be more essential for future success, colleges prefer to concentrate on conventional academic skills and rote learning. Will the transition to online learning be the catalyst for the emergence of a modern, more productive way of educating students? In order to create a resilient education system in the state that will ensure the production of skills for employability and the competitiveness of young minds, vital multi-prolonged strategies are urgently needed. A standardized academic plan for universities and colleges should be developed and a proper education plan should also be implemented to continue the learning process during this pandemic. Infrastructural facilities should be used by educational institutions which, during future health emergencies, can monitor the digital learning process. There is a need to ensure sufficient funding for the advancement of the education system and to provide the stakeholders of higher education institutions with training in capacity growth. A targeted approach should be used to create a supportive space for research among students from disadvantaged sectors of society.

Conflict of Interest

Nil

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References

1. Abidah A, Hidaayatullaah HN, Simamora RM, Fehabutar D, Mutakinati L (2020) The impact of COVID-19 to Indonesian education and its relation to the philosophy of "merdeka belajar". *Stu Phil Sci Edu* 1: 38-49.
2. Strielkowski W (2020) COVID-19 pandemic and the digital revolution in academia and higher education.
3. De Oliveira Araújo FJ, De Lima LSA, Cidade PIM, Nobre CB, Neto MLR (2020) Impact of SARS-CoV-2 and its reverberation in global higher education and mental health. *Psy res* 288: 112977.
4. Alam A (2020) Challenges and possibilities of online education during COVID-19.

5. Bao W (2020) COVID-19 and online teaching in higher education: A case study of peking university. *Hum Beh Emer Tech* 2 :113–115.
6. Siegal W, Church AH, Javitch M, Waclawski J, Burd S, et al. (1996) Understanding the management of change: An overview of managers' perspectives and assumptions in the 1990s. *J Organ Chang Manag* 9: 54-80.
7. Crooks CV, Smith AC, Robinson-Link N, Orenstein S, Hoover S (2020) Psychosocial interventions in schools with newcomers: A structured conceptualization of system, design, and individual needs. *Child Youth Ser Rev* 112: 104894.
8. Huffman S (2018) The digital divide revisited: What is next?. *Education* 138: 239-246.