

Awareness and Usage of E-learning Among Healthcare Students in COVID-19 Pandemic: A Questionnaire Based Survey

Kurvatteppa Halemani¹ Mahesha Devendrappa Haromat² Apoorva B M³

How to cite this article:

Kurvatteppa Halemani, Mahesha Devendrappa Haromat, Apoorva B M. Awareness and Usage of E-learning Among Healthcare Students in COVID-19 Pandemic: A Questionnaire Based Survey. *Int J Pediatr Nurs.* 2020;6(3):129-134.

Abstract

Introduction: COVID-19 pandemic created multiple problems throughout the world. The virus severity disturbed routine activities and dragged into the worst situation. Globally, millions of people affected and lost their lives. The education system is seriously impacted due to this uncertain situation. This study aimed was to understand the student's opinion and interest in E-learning.

Method: A survey online-based descriptive study was conducted among 320 nursing students, selected from various institutions, India. Non-probability snowball sampling technique was used, data gathered from social media through.

Result: A sample characteristic of participants the majority of students were female 287 (89.7%), were studying in diploma nursing 223 (69.6%). Most of the students were less than 22 years 231 (72.2%), anxiety i.e 16% of students were worried, 34% nervousness, 32% tension, and 18% apprehension, respectively. The students show interest in traditional teaching and the majority of students were secured about online classes.

Conclusion: A study concluded that the majority of participants worried about their professional development. However, e-learning is not much impact on students' academic performance. Thus, the majority of students demonstrate distress, anxiety, and depression towards Online classes. Traditional classes are help to improve the self confidence and more secured to the students.

Keywords: Online class; E-learning; COVID-19; Traditional lasses; Anxiety

Introduction

The COVID-19 pandemic has disturbed widely to the human beings, especially in vulnerable populations like children, pregnant mothers, and old age. Due to lockdown, the numbers of families are starving for basic needs like food, hospital,

employment, and education. Many countries, including India, imposed lockdown from the end of March 27, 2020, uncertain lockdown risk to millions of people were stranded across the country. On the other hand, an afraid of Virus transmission education institutions had suspended the face-to-face classes. With regards to students' and teachers' safety and resembling regular classes, to minimize the lockdown impact, the education institution started an online learning platform for all students from primary to post-graduation and above courses throughout the country. Fortunately, teachers and students are well aware of advanced technology ease to meet curriculum through the Zoom, Webinar, and google meet the application.¹

Digitalization trends in India have emerged from 2014. Consequently, several parts of the country prioritized paperless work. The success of digitalization depends on people's knowledge

Author Affiliation: ¹Teaching Faculty, Department of Pediatric Nursing, College of Nursing, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, Uttar Pradesh 226014, India. ²Principal, Government General Nursing and Midwifery Training Institute, Jehanabad, Bihar 804417, India. ³ 2nd year MSc Nursing student, Division of Computer Application, ICAR-Indian Agricultural Statistics Research Institute, New Delhi 110012, India.

Corresponding Author: Kurvatteppa Halemani, Teaching Faculty, Department of Pediatric Nursing, College of Nursing, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, Uttar Pradesh 226014, India.

E-mail: kurru.hali@gmail.com

and interests. Similarly, the success rate is mainly depending on the openness of technology, desires of students and teacher, data availability, and techniques of teaching-learning methods. Online teaching has both advantages and disadvantages, mainly depends on how the teacher preparing the topics, selecting the teaching method. However, students have a pivotal role in E-learning. The overall teaching-learning should be the students' center. Online teaching is a cost-effective method, covers geography in a short period. It also can be accessed at any time at any location. At the same time, there also have some limitations like the internet-accessible problem, limited interaction between teachers, and learns there also have poor practical skills.²

Nursing profession is always uplift its professionalism, eternity, and nurses are providing comprehensive and holistic services to all needy people in health care system. During pandemic crisis nurses have been faces the various challenges and strengthening their commencement towards health care system.³ The numerous unexpected health crises are influencing the nursing students being prepared themselves to focus prospectively to self and others. Additionally, nursing students especially final year students are prepared for public health in various level of health care system and community setting. The widening gap nurse and patient ratio is emerging issue in all over the world, demands of the nurses is emerging indicator that need to be urgent response-learning is not permanent solution for nursing students there are huge gap between the practical and theoretical aspects. The nursing curriculum practical exceed than the theory block. However, many nursing institutions worried about the practical skills of students. Consequently, Indian Nursing Council (INC) and some universities offering examination guidelines and tentative examination dates for final year students.

Allocation of adequate resource and infrastructure building is for practical skills long-lasting global health issue. Nurse are backbone of health care system; online class are not effective practical needs of students. Among health the health care team only nurses are closely spending their quality time with patients, while they understand patients' needs in term of psychological, spirally and physical needs. Hence many studies revealed that only theoretical aspect will not be strengthened nurse's

confidence, nursing education only believe learning by doing. Therefore, the study focused how online classes impact on student's mental professional development, along with compared the face to face classes with E-learning.

This paper contains three major sections. The first objective understands the students' demographic variables, then the second objective to determine their anxiety level, and the last objective focused opinion about online and traditional classroom teaching. This study mainly study focused on empirical evidence for an understanding of the E-learning portal uses among nursing students.

Materials and Methods

Online cross-sectional survey study was conducted among 320 nursing students from various nursing institutions, India.

Research design

This research study adopted non experimental survey research design. Before finalizing the research, design investigator discussed the pros and cons of the study and asked the expert opinion of possible distractions like feasibility, accessibility, authenticity, sample technique sample availability..

Samples and setting

Due to participants scattered in large demographic areas we used non-probability, snowball sampling technique. Before approaching to samples, the investigator asked oral permission from concerned authority for data collection.

Participants

The present study has included diploma, graduation, and post-graduation nursing students selected from various nursing institutions, India. Participants were selected based on sample criteria. i.e students who are willing to participate, students who don't have previous E-learning experience, and those have internet facilities were included in study.

Data collection Instrument

Online survey-based questionnaires were used for understanding the student’s perceptions and opinions regarding the online class. Before introducing the standardized knowledge questionnaires, the investigator developed an instrument and validated from various researcher scholars and educationalist, then checked the reliability of the tool (r = .089).

Procedure

Due to digitalization the majority of people are using internet, smartphone and other devices to connect each other. Hence fore, researcher chooses a social media for data collection. Before data collection investigator prepared google question format. i.e URL link directly send to the participants, when respondents click on a particular link automatically questions displayed on their desktop. The majority of participants have replied questionnaires through Gmail and WhatsApp, respectively. Before data

collection, investigators conceptualized data collection procedures, methods of data collections, and prepared questionnaires in google format. Before data collection investigator explained study purpose data anonymity and confidentiality, then written consent was obtained from each participant. After these formality investigators was sent the questionnaires’ link to the concerned student. Follow up was done through remind note those who are not replied at given time. Throughout the study, 38 participants made remind requests during the follow-up period.

Result

The raw data categorized and summarized and analyzed in tables. Descriptive statistic used for demographic variables in term of frequency and percentage (table 1). The majority of participants were less than 22 years 231 (72.2%), most of them were female (287 (89.7%), had studying in diploma nursing 223 (69.6%). Most of the students not had previous E-learning experience.

Table 1: Demographic Variables frequency, percentages and chi-square values. n = 320.

S. No	Demographic variables	Frequency (f)	Percentage (%)	
1	Age in years	Less than 22	231	72.2
		22-30	89	27.8
2	Gender	Male	33	10.3
		Female	287	89.7
3	Qualification	Diploma students	223	69.6
		Graduation student	68	21.4
		PG & above student	29	9
4	Previous online experience	Yes	312	97.5
		No	8	2.5

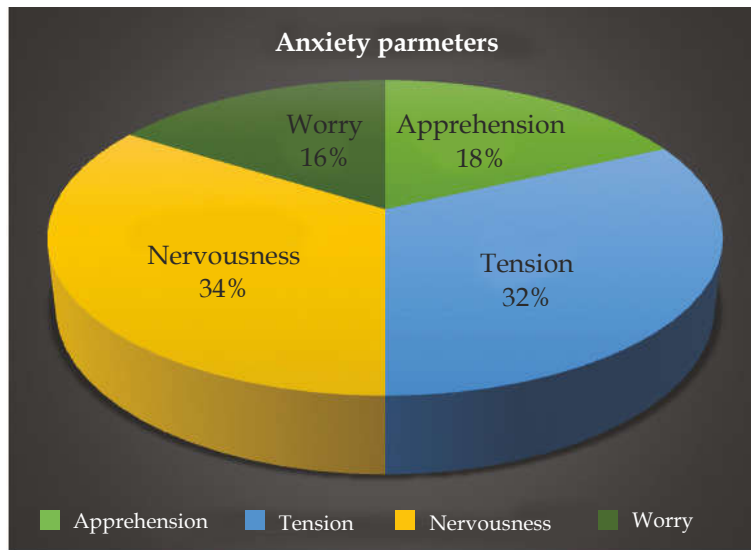


Fig. 1: Students Anxiety towards Covid-19 pandemic.

Table 2: Effectiveness of Regular Online compared to regular classes.

n = 320

S. No	Parameter	Regular classroom setting			Online classes		
		More Effective (%)	Average Effect (%)	Less Effective (%)	More Effective (%)	Average Effect (%)	Less Effective (%)
1	Meeting teacher-learning achievement growth expectation	65.3	28.2	7.5	12.5	21.3	66.2
2	Building theoretical & practical relationship	68.9	23.3	8.4	11	10.3	77.7
3	teacher-learner interactions	56.7	29.5	13.8	28	10.1	61.9
4	Offering teachers professional development	41.4	54.1	4.5	33.1	8.9	58
5	Knowledge & skills acquisitions	66.5	31.1	2.4	8	17	75
6	Understand student expectation	71	26.3	3.6	20.3	15.6	64.1
7	Clarification learner doubts	69.9	23	7.1	29.1	4.5	66.4
8	Meeting learners needs	77.6	12.2	10.2	24.7	13.6	61.7

Figure 1 depicts that COVID-19 pandemic created different level of anxiety among nursing students. Although learners' anxiety being categories 16% of student were worried, 34% nervousness, 32% tension and 18% apprehension, respectively.

Table 2 summarized the effectiveness of online teaching and traditional teaching methods. Each parameter given 3 options with one right answer asked the participants to select appropriate option. The present study parameters were strongly contributed towards the traditional teaching. Students were eager waiting for classroom teaching.

Out 8 domains a single parameter i.e. teachers' professional development was average effect towards traditional class room teaching method (54.1%) and rest of the students were favored to class room teaching.

Looking into the online teaching data, the majority of the students have not demonstrated the interest on online classes. However, the majority of students seems to poor affinity towards the online teaching i.e. building theoretical & practical relationship (77.7%), Knowledge & skills acquisitions (75%) shown less effective.

Discussion

Nursing profession is globally recognized and most trusted health care profession. COVID-19 pandemic created anxiety and panic situations, especially for nurses exploited by this outbreak. To stand against the unfavorable situation where the nurses required adequate clinical skills, commitments, and constant dedication towards patient care. COVID-19 pandemic seriously affected to economy and education system. Many students need to eliminate anxiety, develop practical-oriented professional skills. Online teaching is emerging at all levels, primary to professional courses. As per evidence online teaching is less effective while compared to classroom teaching where many student's dissatisfactions and more anxious about the current situation.

Due to the pandemic, many countries had imposed restrictions. Meanwhile, India also decided stepwise lockdown from March 2020 throughout the country. Approximately 4-months people have restricted their movements, excluding basic needs providers. On the other hand, educational institutions initiated online teaching during the lockdown period to continue teacher and student interaction. Online learning new challenges for teachers and educational institutions to prevent the failure of the education system.

However, previous studies' findings online learning is not an effective teaching-learning method while comparing to traditional classes, the students are ease distract by online teaching the majority of students did not present mentally and keep showing online during lecture hours. The interaction between teachers and students is a pivotal aspect of the teaching-learning process and practical skills. The nursing profession required sufficient practical skills than the other course.

Our core finding of the study revealed that online classes inadequate as compared to traditional teaching. However, the majority of students expressed enthusiasm about the physical method by enjoying through peer interaction, teacher-student feedback. Online classes do not yield similar results, and teachers being concern over online teaching required additional effort like PowerPoint presentations (PPT), commitment, and pedagogical practices. Usually, online classes distracting students' minds and concentration regularly. Therefore, teachers should ask the question to know their interaction throughout the online classes. The results of the study show there is strong anxiety-like 16 worried, 34% nervousness,

32% tension, and 18% apprehension, respectively. There is no significant difference in performance between online classes with respected demographic variables like age, gender, and qualification.⁴ The present study supported was conducted in Lebanon, the majority of students produced anxiety about E-learning mean and standard deviation.^{5,6} 7.25, & 4.75, respectively.⁷

A similar study was among nursing students, demonstrated the fear of online and home environments. Many strategies have started diverting themselves to reduce anxiety.⁸ An unforeseen situation like the COVID-19 pandemic created a stressful situation, shifting students to exclusive e-learning, induced long-lasting anxiety, and depression in the students.⁷

In a similar study conducted in West Bengal, India, the students reported online difficulties like stress, depression, and anxiety (42%), the favorable environment at home (12.6%), and problem-related to the internet (32.4%).⁶ Approximately 86% of teachers are dissatisfied over the online class having various distractions like a lower the students' interaction, and many poor students do not offer smartphone internet. This research study gives strong recommendations to support the students by asking their opinion about online teaching and address their problems timely. The teachers are supposed to provide the assignment to students, most of the students are required to interact with each other virtually during online class.²

There is a need to understand the digitalization, availability of smartphones, and internet facilities to students from all sections. Before scheduling the online classes, the need to explore problems and challenges and find the solution to unexpected events. A recent survey carried out by TV and newspaper. Many female students have claimed that they did not own personal mobile phones. E-learning implementation in children is a challenging task, and with too many distractions, children are not able to attend learning outcomes. In online classes, the students do not directly interact with the patient in a real-life situation. The clinical setting is an opportunity for nursing students to their professional accountability and practical skills by creating real-life situations.⁹

A similar study reported that classroom teaching was a high impact (60.5%) compared by online learning (46.1%), the study concluded that classroom learners performed very impressive and notably depression and anxiety higher e-learning.¹⁰ The major part of the study replicates the majority of students who have believed in face-to-face

classes are impressive and ease than E-learning. Besides this, online teaching is a challenging task, especially for those who came from a poor economic background. Similarly, many students reported online classes are insecure, not accessible like a blackboard. However, students demonstrated a sincere interest in a traditional classroom program.¹¹

Limitations of study

A study limitation, this study was conducted survey based online among nursing included small sample size which may chance of selection bias. Face to face data collection methods rendered real opinion.

Conclusion

A study concluded that students have worried about their professional development. E-learning is not much impact on students' academic performance. However, the majority of students demonstrate distress, anxiety, and depression in online classes. Traditional classes are given more strength and security to the students. Present study findings strengthened the evidence that helps to formulate new policies

Funding

This research study was not funded by any sources or agencies.

Conflict of interest

The author has declared that there is no potential conflict of interest with respect to the research, authorship and/or publication of this article.

References

1. Dr. Hurst-Della Pietra. No Title. Children and screens [Internet]. Available from: <https://www.childrenandscreens.com/media/press-releases/covid-19-and-at-home-learning/>
2. Bączek M, Zagańczyk-Bączek M, Szpringer M, Jaroszyński A, Woźakowska-Kapłon B. Students' perception of online learning during the COVID-19 pandemic: a survey study of Polish medical students. 2020;1-14.
3. Kurvatteppa Halemani RH. The Nursing Journal of India. Nurs J India [Internet]. 2018;4:17-180. Available from: <https://www.tnaionline.org/cms/newsimages/file/bulletin2018/3-4.pdf>
4. Paul J, Jefferson F. A Comparative Analysis of Student Performance in an Online vs. Face-to-Face Environmental Science Course From 2009 to 2016. *Front Comput Sci.* 2019;1(November).
5. Schack S, Foundation K. The Effectiveness of E-Learning : An Explorative and Integrative Review of the Definitions , Methodologies and Factors that Promote e-Learning Effectiveness ResearchLAB : IT and Learning Design , Dep . of Learning and Philosophy , Aalborg. *Electron J e-Learning.* 2015;13(4):278-90.
6. Kapasia N, Paul P, Roy A, Saha J, Zaveri A, Mallick R. Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID- 19 . The COVID-19 resource centre is hosted on Elsevier Connect , the company ' s public news and information . 2020;(January).
7. E-learning: Depression, anxiety, and stress symptomatology among Lebanese university students during COVID-19 quarantine. *Clinowl [Internet].* 2020; Available from: <https://clinowl.com/e-learning-depression-anxiety-and-stress-symptomatology-among-lebanese-university-students-during-covid-19-quarantine/>
8. Chandra Y. Online education during COVID-19: perception of academic stress and emotional intelligence coping strategies among college students. *Asian Educ Dev [Internet].* 2020;1. Available from: <https://www.emerald.com/insight/content/doi/10.1108/AEDS-05-2020-0097/full/html>
9. Tabrizi JS, Seyedhejazi M, Fakhari A, Ghadimi F, Hamidi M, Taghizadieh N. Preoperative education and decreasing preoperative anxiety among children aged 8 - 10 years old and their mothers. *Anesthesiol Pain Med.* 2015;5(4).
10. Dondorf T, Breuer R, Nacken H. Classroom Vs. E-Learning: a Case Study on the Performance of Students in Different Learning Scenarios. *EDULEARN16 Proc.* 2016;1(October):6507-16.
11. Amanda Hurlbut. Online vs. traditional learning in teacher education: a comparison of student progress. *Am J Distance Educ [Internet].* 2018;32(4):248-66. Available from: https://www.researchgate.net/publication/328375942Onlinevs_traditional_learning_in_teachereducationacomparisonofstudentprogress