

Perceived Barrier in E-Learning Faced By the Undergraduate Physiotherapy Students throughout Covid- 19 Pandemic.

¹Dr. Neha Deshmukh, ²Dr. Milind Kahile, ³Dr. Ranjit Ambad, ⁴Roshan Kumar Jha

¹Assistant Professor, Department Of Musculoskeletal Sciences, Datta Meghe College of Physiotherapy.

²Associate Professor, Department of Community physiotherapy, Datta Meghe College of Physiotherapy.

³Associate Professor Dept. of Biochemistry, Datta Meghe Medical College, Nagpur
Contact no. : +91 9890959395, Email ID: ambad.sawan@gmail.com

⁴Tutor Dept. of Biochemistry, Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences, Sawangi (Meghe), Wardha. Contact no. : +91 9917999919
Email ID: rosstsan47@gmail.com

Abstract

The world of learning has undergone many new impact changes that have been caused due the pandemic raised owing to Covid-19. The overall of structure of education system and learning, which also includes the teaching and assessment methodologies involved in the Medical education, was the first among much other system that was affected by these closures. Higher Education system in the country has a critical claim on its economical future, as a result of the pandemic that has been significantly disturbed. Due to this effective disturbance the aged old, backboard teaching, classroom teaching techniques have driven over the technological interference. Shift of the tec njhnology has created many new windows and also arise many practical difficulties, which also includes the e-learning solutions and tackling of technologies. The article aims to find the perceived barrier in e-learning faced by undergraduate physiotherapy students throughout the Covid-19 pandemic. The aim was achieved by performing a structured interview of 150 college students those who are now attending offline, physical attendance lecture of the Physiotherapy College. The data collected qualitatively and the results were analyzed. The content analysis method was used to determine the perceived barrier faced by the students.

Analysis of the data highlighted the lack of Practical and practice sessions, the inability of a live demonstration, disturbances from the home environment, improper internet connectivity, and lack of communication between teachers and students were the potential barrier in e-learning. While achieving the aim of the article the positive impact of e-learning was also emerging from the interview of the students that was also documented and can be justified by its use in further studies.

Keywords: Barrier, Physiotherapy students, e-learning, positive impact, Content Analysis.

Background:

The education system in India has undergone many hurdles to be an established system all over the country. Indian education has always proved its metals on the world maps; with a mention for medical education. The fundamental right of education was at risk due to the pandemic situation of Covid -19. Physical presence at any place was making it a risk for every individual, which is the basis for every teaching-learning process. But the digital media was a ray of hope to continue the process of learning during these difficult times (1). The medical educational system had never used the technological basis to this extends till now. So to continue the learning activities and proceed with technologies has become a difficult situation to be handled. Again physiotherapy education requires hands-on physical practice and practical sessions for demonstration of various techniques used for the patient's holistic rehabilitation. As a teaching method, online education in its various forms has been hailed for its potential to promote higher-level thinking.

Understanding student perceptions as online learners in health sciences education can help health science educators address students' concerns and expectations, tailor the online modules or information imparted accordingly, and as previous research has shown, can help build more effective online courses(2).

As the world was shifting towards the e-learning platform after a period Physiotherapy colleges also started focusing towards these methods. Physiotherapy colleges governed by the University of Health Sciences have a distribution of Practical and theoretical syllabus for all the 4 years students. More weightage is on the practical sessions, the techniques that is been used by the therapist for the treatment protocol purpose. The main challenge faced by the academicians was

to make them understand the techniques, the feel, the pressure, the touch required for the proper implementation of the treatment or Practical strategies.

The whole Indian education system has faced a negative impact of the pandemic, Physiotherapy colleges not making any differences. Accepting the negative impact and looking forward to the newer and more impactful opportunities in the teaching-learning process was the only aim of every physiotherapy institute. Though many impactful techniques were evolved like e-learning, students and teachers both have to face the consequences of the techniques. This article emphasizes the perceived barrier faced by undergraduate physiotherapy for e-learning. A total of 7 months was the period in the academic session 2020-21 where the total studies of all theoretical and practical shifted to an e-learning model ⁽³⁾. The challenge to adopt the newer method of learning was two waves, where teachers were facing many more technical and adaptive difficulties to match the quality of teaching. During carrying out the structured interview to review the barriers, the article also emphasizes the positive impact of the change of the method of teaching-learning.

As the academics session was going to be counted in the completion of the degree courses, it was important to assess the quality measure of the content that has been introduced to the students in the e-learning manner. Physiotherapy education for undergraduate students includes the theoretical basis with the understanding of human anatomy, physiology, Exercise, and electrotherapy, which proceeds towards the inclusion of medical subjects and course specified Musculoskeletal sciences, Neuro-physiotherapy, community physiotherapy. These entire subjects require the practical as well as theoretical approaches to acquire the skills to be certified as a physical therapist by the university. Online delivery of the lectures for the theoretical syllabus was as easy to be understood as the difference was only the physical presence of the teacher and students. But the practical session was at the digging sides. To evaluate these difficulties from the student's perspective was imperative, thus making it as an objective for the article. Secondly, the examination conducted by the universities will be in the physical form, so the confidence of the students was also a counterpart to be appraised. So to be mindful of all the facts the article reviews the positive and negative impact of the e-learning process.

Aims and Objectives:

Aims:

To perceive the potential barrier in e-learning faced by the physiotherapy students throughout the Covid-19 pandemic.

Objective:

1. To learn the positive and negative impact of e-learning from student's perspective.
2. To learn the challenges faced by the academicians during the shifting of the teaching and learning methods.

Methods:

Present article was aimed to find out the perceived barrier in e-learning. Research method of content analysis was used for analyzing written and verbal messages ⁽³⁾.its need is to conduct explanation about experience and to produce idea for theoretical categorization ⁽⁴⁾. A feedback survey on e- learning was conducted, to collect the qualitative data through various open ended questions. These students have attended 7months of online lectures. Each month consist of approximate 104 hrs of e-learning where they need to present along with their gadget (Mobile phone/Laptop) with proper internet connectivity in them. Per day 4 hrs of teaching were targeted whereas the physical teaching hrs was of 7 hrs.

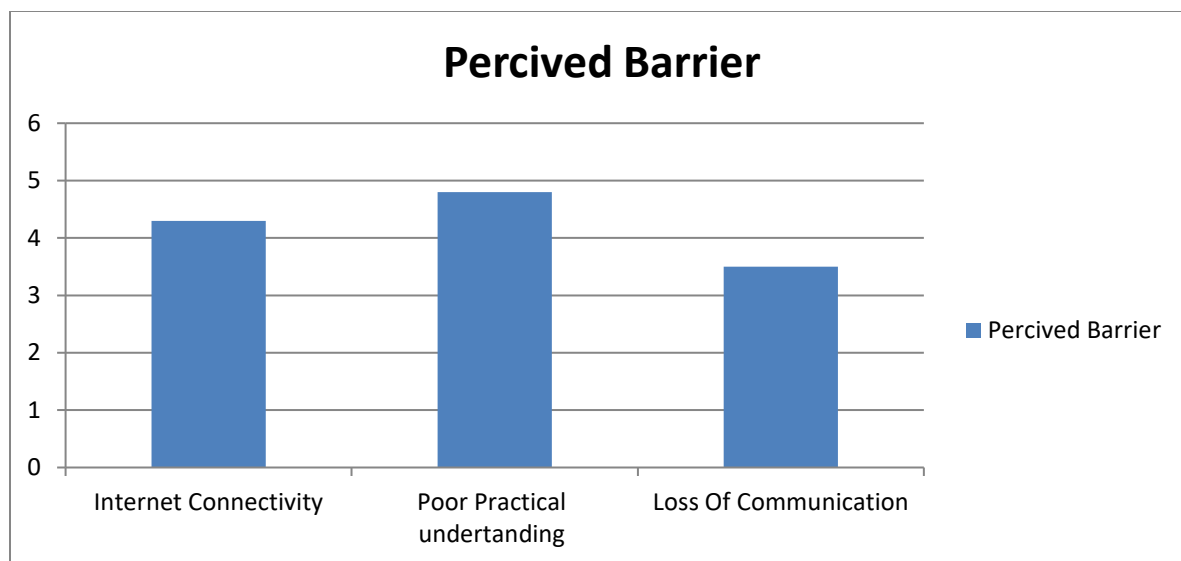
Structured interview (Feedback survey) for all the students was carried out in their physical presence. 150 students participate in this study who were attending the e-learning lecture for various subject covered by the Physiotherapy College.

Results:

A) Post Module Surveys Question and response options Average overall (%)

Questions	Very good	Good	Average	Poor	Very poor	Unanswered
To what standard did the lecture covered meet the objectives and learning outcomes stated in the lecture?	41	35	6	18	0	0
How do you rate the learning material provided during the lectures?	52	44	4	0	0	0
How would you evaluate the overall E – learning during lock down?	22	30	36	9	2	0
How would you evaluate the network connectivity during E-learning?	40	21	0	17	19	3
How would you evaluate the particle demonstration of technique during E-learning process?	20	27	3	28	10	2

B) Perceived Barrier in E-learning:



Discussion:

The education system went under many molds during the pandemic of Covid -19. Where the new normal's are been adapted the individuals, the education system also allowed the technologies to take over the traditional methods of teachings. Digital media, technology have given us efficiency and reliable which allowed all the educational institutes to get along with their schooling (4). With all the technological advances that e-learning has given us, it has been faced many difficulties and disadvantages. Medical education resembles more over the practicality rather than their theoretical approaches. The structured interview has focused on poor internet connectivity, loss of communication with teachers and inability of the reading material, more exposure to technical devices, and inability to understand the practical demonstration as the potential barrier in e-learning (5). The article also underlines the positive impact of e-learning, where all the faculty members of the institutes are inclined towards the technology. E-learning has evolved as a potential platform for delivering the knowledge, where the loss of the academic of the wards can be compromised. E-learning also makes the students use the reading material that available in the soft copy form and also improved digital literacy.

Discussing the perceived barrier in e-learning, the majority of the students faced poor internet connectivity in their living spaces(6). These barriers grossed the students living in rural areas, where technological advances are still reserved. Those students were lacking for the digital media to have a impact on their syllabus and ongoing studies.

Cuisle Forde and Silvia Gallagher (7) in their study also meet with same barrier while studying the post-graduate students perspective. Understanding student expectations, concerns, and

experiences of our e-learning proposes was crucial for the development and successful facilitation of this education modality. Their study also concluded that overall students were highly appreciative of the learning resources available to them in an easily accessible and flexible format, the quality of teaching, the support received by peers as well as teaching staff, and the relevance of the material presented to their clinical settings and learning goals. The online nature of the course was perceived as a challenge by some students and not without its limitations. Another's barrier expected from the students perspective was the poor understanding of the practices or loss of practice sessions that thoroughly available during the physical attendance of the students. The physiotherapy techniques for delivering quality treatment, which is main outcome measure that is, expected from the students need the proper assessment, appropriate hand placement and a fine. All these components are effect of live demonstration by the faculty members on the models or patients that are to be practiced by the students. The pandemic situation forced all the individuals to remain indoors, hence the practical demonstration where at the receiving end from physiotherapy student's perspectives. You tube videos, videos recorded by the faculty members where measure that was been taken to reduce the severity of loss.

Loss of communication between the teachers and students was another perceived barrier in e-learning. Availability of teachers, their physical presence is the crucial part of our education system. Sudden drift to teacher's physical absence and only availability of their voice left the students in the sense of confusion. Body language of teachers makes a remarkable difference when teaching is considered. The hand movement, the eye contact all these things make a mark in teaching and learning processes. That all vanished during the e-learning technique, only ability was the voice commands by the teachers or the videos explaining any physiotherapy technique. This perceived barrier make a belonging to the study conducted by Alawamleh et al which was aimed to explore whether online learning affects communication between instructors and students in a negative way, if online learning affects students' productivity levels. As well as, to evaluate and suggest ways of improving effective communication between instructors and students in online courses. The data was collected by using an online survey which was distributed to a random sample of 133 students from The American University of Madaba (AUM). As mentioned in the results above, the analyzed data and the information received from the students all agree with the questions of the study. The majority still prefer classroom classes over online classes due to the many problems they face when taking online classes, some of which include: their lack of motivation and understanding of the material, the decrease in communication levels between the students and their instructors, and their increased feeling of isolation caused by online classes. This study found that online learning indeed has a negative impact on communication and its effectiveness between instructors and students (8).

Battling the barrier from student's as well as teacher's perspective e-learning has provided a safe and hassle free environment for everyone those involved in teaching learning process. In the initial days of the pandemic remaining safe was the only motto of every human being, but as the

time progressed taking carrying out our important things was also an appeal from the system. Considering the higher education that also related to the health care system, physiotherapy colleges have to meet the demand. The present article highlighted the barrier from students perspective needs the necessary attention from the system, so that the process of e-learning can be carried out promptly in nearly future. There arises the future scope for the article to study the measures that can be carried out to reduce the perceived barrier.

Conclusion:

The article highlight the lack of Practical and practice sessions, inability of live demonstration, disturbances from the home environment, improper internet connectivity and lack of communication between teachers and students as the potential barrier. Whereas, safety of the student was impacted as a potential facilitator of e-learning during the Covid -19 pandemic.

References:

1. Jena, Pravat. (2020). Impact of Pandemic COVID-19 on Education in India. *International Journal of Current Research*. 12. 12582-12586. 10.24941/ijcr.39209.07.2020.
2. Howland, Jane & Moore, Joi. (2002). Student Perceptions as Distance Learners in Internet-Based Courses.
3. Hsieh, Hsiu-Fang & Shannon, Sarah. (2005). Three Approaches to Qualitative Content Analysis.
4. Elo, Satu & Kyngäs, Helvi. (2008). The qualitative content analysis. *Journal of advanced nursing*. 62. 107-15.
5. Jena, Pravat Kumar, Impact of COVID-19 on Higher Education in India (June 18, 2020). *International Journal of Advanced Education and Research (IJAER)*, Vol-5, Issue-3, Pg-77-81 (2020)
6. Agarwal, S., Kaushik, J.S. Student's Perception of Online Learning during COVID Pandemic. *Indian J Pediatr* 87, 554 (2020).
7. Megha Sheth, Priyasingh Rangey and Srishti Sharma (2020); PERCEPTION OF E-LEARNING AMONG PHYSIOTHERAPY STUDENTS DURING THE COVID-19 PANDEMIC *Int. J. of Adv. Res.* 8 (Aug). 193-201] (ISSN 2320-5407)
8. Alawamleh, Mohammad & Al-Twait, Lana & Al-Saht, Gharam. (2020). The effect of online learning on communication between instructors and students during Covid-19 pandemic.