

The Era of Online Education in Indian Physiotherapy: A Boon or Curse

Vijaya Krishnan*

Assistant Professor, Department of Musculoskeletal Physiotherapy, MGM College of Physiotherapy, Navi Mumbai, India

*Corresponding author: Vijaya Krishnan, Assistant Professor, Department of Musculoskeletal Physiotherapy, MGM College of Physiotherapy, Navi Mumbai, India



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ABSTRACT

Background: For the first time in many years, the doors to education institutions are barred to students owing to COVID 19 pandemic. It has forced us to look back on how far we have travelled and reflect into the future for the journey of professional education ahead. Physiotherapy in India has come a long way. At par with the recent trends, physiotherapy education has also shifted to embrace the digital world. Academicians have adapted to the shift from classroom teaching to e-learning in a short span of time. Teachers have to employ novel methods to engage the students, create interest and increase student participation through multiple modes ensuring an ideal technology enabled environment. Barriers such as technical issues, lack of infrastructure, social alienation, improper compatibility etc. need to be considered. Drastic measures and planning need to be implied to make online education the face of future. This paper intends to appreciate the path travelled and highlight the current status of physiotherapy education in India.

Conclusion: Digital Technology and its advancements is a boon to the physiotherapy education. It has allowed us to continue the teaching-learning process during these stressful times. However, it should be used judiciously in a blended format with the traditional techniques. E-Revolution ensures integration of innovative methods into the present education system to facilitate independent, lifelong student learning.

Introduction

Education is an enlightening experience. It is the process that facilitates learning or training of the young minds by imparting knowledge, imbibing values, and morals, encouraging self-thinking and beliefs and most importantly acquiring life lessons and survival skills. To put it in simple terms – education aims to develop completeness in a being by probing the individual to think, feel and act in various situations. The aim of this review is to highlight the road travelled for physiotherapy education during the past year under the influence of the COVID 19 pandemic. The objectives of the study are to enumerate the various methods adopted during these challenging times to ensure continuity of the teaching-learning process on the way to train students from novices to professional physiotherapists.

Ancient Indian Medical Education

India has been the hub of education since ancient times. The Indian education system being culturally advanced and spiritually enriched operated under both formal and informal settings were built on the sole purpose of promoting individual self-realization. The religion-based system slowly evolved to formulate the Gurukul system which were residential schools of learning usually at the teacher's house or spiritual places. Students gained knowledge through listening, memorizing, assimilation and interpreting fundamental concepts followed by the last stage which included deeper understanding, formulating self-theories and application in daily life. Earliest medicine practiced by sages of ancient India was Ayurveda and Siddha. The other fields and faculties developed

consequently. The surgeon Sushruta practiced techniques which are now the base of physiotherapy in India. Medical students completed 7 years of training and vigorous testing before independent practice. This system modified over the following years to accommodate to the changing era and development, leading to the formulation of the modern education system ever advancing to face the digital and global frontiers [1-3].

Physiotherapy in India

Physiotherapy is one of the noble health professions working to improve human movement and function. Therapeutic knowledge and approaches are used by physiotherapists to evaluate, diagnose, and treat patients holistically to improve their physical and mental health, thereby enhancing their quality of life [4]. An epidemic of Poliomyelitis in Mumbai during 1952, initiated the establishment for the first Physiotherapy school in 1953 as a joint collaboration between Indian Government and WHO [5]. With establishment of the Indian association of Physiotherapy in 1962, the field was promoted with many teaching institutes established all across India dedicated to training more and more students. Rules and regulations were established, curriculums were formulated, and the field is blossoming by the day.

Online Physiotherapy Teaching/Learning in India

COVID 19 pandemic has forced countries to adopt measures of safety, social distancing, stay at home directive etc. This has impacted the Indian education system quite hard. Institutes were forced to look out of the box to continue the education process leading teachers to adopt virtual learning tools. Online learning is any learning experience attained by using whichever device with internet access in synchronous or asynchronous environments [6]. Teachers were introduced to various online apparatus, trained to use them, and made to connect with students in this format. This transition from traditional environment to remote virtual format has led to the emergence of blended and hybrid classrooms [7]. Online Pedagogy has become the need of the hour. The pandemic has brought the near future online training to the current now. The anytime-anywhere feature of this mode has proved to be highly beneficial in these trying times. The student educational experience was also open to the fact that each one can now learn at their own pace. Self-directed learning was gaining more importance now more than ever. Connectivity across the globe for various purposes is now possible smoothly. The scope of learning has advanced tremendously breaking geographical, language and many other plausible barriers. Students can learn using devices such as smart phones, tablets, laptops etc. from their place of comfort.

Modes Used for Online Education

The quest for the best mode of delivering information and educating students begins here forth. Both asynchronous and

synchronous objectives must be addressed. Multiple platforms and software's are being currently used to deliver sessions. Few of them are Webinars, Zoom Meetings, Microsoft Teams, Google Meet, Telegram, WebEx, Skype you tube video interactions etc with assignments given on google classroom, WhatsApp, Emails etc. Videos can be uploaded to repositories such as Google drive and shared with the entire class for improving student understanding and thus, learning. A study done by Munjal and Zutshi, using webinar to educate physiotherapy interns showed that students preferred webinar-based teaching to classroom atmosphere with practical skills being a limitation for its regular use [8].

Barriers

Challenges identified during online teaching/learning are quite alarming too. Modifying the environment and getting accustomed to virtual models while feeling equally overwhelmed about the pandemic is one of the biggest trials. The problems range from technology support, infrastructure, funding, curriculum and syllabus planning and designing, universal education programs and reforms, research and innovations etc. The objective of education goals is somewhere lost in understanding and perception and further implementation in actual society. Digital inequality is also a rising factor that needs to be considered. Negative attitudes of both students and teachers towards acceptance of new technology is a serious issue. Kaur et al in their study concluded that even on eliminating various barriers, online learning is not a replacement for traditional teaching methods [9].

Teacher's Concerns

Physiotherapy is a profession which relies very much on hands on skill which has become difficult to achieve due to a virtual environment. The entire skill based psychomotor domain is now being converted to virtual models. It is a constant worry for the teacher to understand whether the students have actually grasped the concept required to implement both preclinical and clinical skills. Lack of personal and eye to eye contact with students makes it tough to gauge their level of understanding. Guided practise, communication with patients and working with community becomes essential [10]. Dhawan in his study coined the term "Panicgogy" to summarize the situation of the educators who have converted the existing material available into online framework as soon as possible leading to chaos [11]. Creative and innovative teaching to grasp the student attention specially to learn skill-based activities still pose a major concern. It was becoming more and more tiresome to monitor each and every students' progress over the screen. There is also high level of stress and exhaustion due to lack of a technology enabled environment conducive for conducting sessions. Creating online student appropriate material for independent learning requires meticulous planning and designing. Some teachers find it difficult to construct meaningful

content, patient scenarios, practical simulations etc. to complete the learning objectives. The main challenge is to capture and retain the students' attention. Educators find it hard to connect to students due to lack of face-to-face interactions. Digital divide and digital illiteracy also add to the anguishes for senior faculty who find it difficult to adapt to the technology.

Student's Woes

Though initially the concept of studying while enjoying the comforts of home was very exciting, soon bitter truths of reality set in. The loss of formal institutional environment affected student concentration, attention, seriousness and eventually learning. Thakur in her study on undergraduate health science students deduced that majority of them were not studying regularly. Self-study and self-learning were not achieved during the lockdown period [12]. Home environment though comfortable became a route cause of multiple distractions. The enjoyable learning experience with peers was immensely becoming a burden. Social isolation is an unintended by-product. Kumar et al in their study found that though students were comfortable with online classes, majority of them were eager to begin regular classes once the lockdown was lifted indicating that classroom teaching was more effective especially for learning skill-based lessons [13]. Moreover, the increased screen time is affecting their health as well with symptoms such as eye irritation, headaches, body pains due to sedentary and abnormal postures etc. Sheer boredom to attend sessions are side effects to this mode of learning. They are also losing confidence to develop physical contact and rapport with the patients by the day. Students' perceptions and mental health need to be considered as well.

Physiotherapy in India - Towards the Bright Future

Physiotherapy is a humble profession providing service to mankind. Learning is a lifelong, continuous process. The pandemic opened the Pandora of technology available at our disposal for enriching the teaching/learning. There is a radical transformation observed in all aspects of education. Verma et al in their interaction with academicians, found that majority of the teachers have gracefully accepted online modes of teaching and acknowledge the fact that it is boon in the current situation [14]. Many complex concepts in physiotherapy, biomechanics and biological conditions can be explored and understood better with use of 3-D models and other applications. Smart boards and technology enabled learning solutions need to be encouraged. The entire unexplored arena of telehealth and telerehabilitation can be explored further. We need to remember that education not only increases knowledge but also brings about personality and behavioural changes. We as educators, mentors and policy makers should form an all-inclusive curriculum for professional practice which is built on the roots of the Indian eternal morals and values augmenting all the aspects of education such as intellectual, ethical, biological, socio-cultural, spiritual etc.

The ideal system would reflect the perfect incorporation traditional and modern methods with perfect balance between the digital and the human world. It is time to embrace the tech savvy world. E-Learning complements traditional teaching facilitating lifelong learning [15].

Conclusion

A digitalized education system though welcomed with open arms, needs to be streamlined to achieve definitive and positive results. An ideal curriculum should include an amalgamation of online education as well as offline practices to ensure superior student learning. Constant student feedback and digitally evolving faculty are the key features responsible to implement an effective E-Learning System. Teachers need to hone their skills and stay abreast with the recent advances making the classroom technology enabled. With awareness and proper facilities at grassroot levels, online education will flourish exponentially.

Conflict of Interest

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