"ANALYSIS OF ATTITUDE TOWARDS E-LEARNING AMONG PHYSIOTHERAPY STUDENTS DURING COVID-19 PANDEMIC"

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ABSTRACT*: The COVID-19 pandemic has disrupted teaching in a variety of institutions, especially in medical schools. E-learning became the core method of teaching the curriculum during the pandemic. After weeks of only online learning, a survey was conducted to investigate perception of this type of learning amongst medical students. The aim of the study is to determine the attitude towards E- learning among physiotherapy students. A descriptive cross-sectional online and offline survey was conducted. 296 Physiotherapy students were selected from different physiotherapy colleges of Surat who attended online classes during the COVID-19 Pandemic lockdown. Their attitude towards a technology and access to technology was measured using Closed, quantitative questions and the survey section ―Access to Technology‖ consisted of ten items (technologies) and students were asked to indicate their level of access. The samples used in the study were tested for normality and found to be non-normal. Therefore, Mann Whitney U test was carried out to test significant difference between the groups. To study the relationships between student 's attitudes including level of access to technology, Spearmen Product Moment correlation analysis was conducted. The result after analyses we acquired that the overall scores on the attitude scale indicated were positive. In this study we also found that there were slight differences between female and male students and between urban and rural students in their attitudes towards in the first statement otherwise, there were no differences in rest of the statements. There was a low positive relationship between student attitudes and their levels of access to various technologies. Students in the present study showed overall positive attitude towards E-learning.*

KEYWORDS: *Attitude Towards E-learning, Physiotherapy students, COVID-19 pandemic.*

INTRODUCTION

E-learning has become one of the newer methods of teaching in the modern-day education system. This mode of teaching has been using by developed countries since quite some time. E-learning provides several advantages such as laying out opportunities for anyone who wants to gain knowledge to gain it without being physically present at the university or college. E-learning come with many challenges such as the learners must be persistent, requires such amount of time to read the notes, reading the discussions that have been uploaded to the system, so that the learners motivated to do the assignment. Interfaces such as video conferencing and virtual classrooms make real time synchronous communication possible between teachers and students.[1]

The COVID–19 pandemic has unbalanced the teaching in a variety of institutions but especially in medical schools. On Medical students where another approach for teaching were used to minimize the impact of lockdown. The current innovation has been empowered the electronic learning (e-figuring out how) to be the center technique for showing the educational plan during the COVID–19 pandemic.[2]

E-learning is denied as using information technology to improve the quality of education. E-learning getting the hang of instructing is usually utilized in the preparation of students—not as a sole strategy but rather joined with the customary instructor drove approach... E-learning achievement relies upon many elements, including openness, utilization of fitting strategies, course content, and evaluation measures. There are advantages and disadvantages of E-learning, like any method of teaching for both students and teachers. Besides the epidemiological benets of e-learning during the COVID–19 pandemic, other benets worth mentioning include increased convenience, access to resources regardless of location and time, and reduction of costs and air pollution, e.g., carbon dioxide emission because of the reduction in trac online classes also have limitations, including problems with internet access, poor internet connection quality, and insufficient digital skills of the respondents. Some benets such as time

exibility can also be a limitation, especially for students who have difficulties with self-discipline.[2]

The World Health Organization (WHO) Emergency Committee evaluated the growth rates in countries like China, Italy, Spain, etc. and declared an international health emergency. (5) Several countries around the globe went into nation-wide lockdowns which brought the daily routine lives of the people to a halt. With the COVID-19 pandemic, the world has been struggling with daily routine life. In this struggle, the education sector also has suffered immensely. Due to pandemic schools and colleges were forced to shut down during the midst of the academic year. Students could not finish their courses due to failure of the offline mode of education. Using newer modern technologies, the education sector shifted from an offline mode to and online education mode. E-learning was taken up by several schools and colleges for various activities of education.[1]

In In these times of COVID-19, the need for e-learning seems increased. Schools and universities, both are increasingly using this mode of teaching in such times. Various technical, technological, psychosocial capabilities and growth to cope with this trend will enable to improve standards of education during such trying times.[1]

This study will help to find out the student's attitude towards E-learningduring COVID-19 pandemic. It can be learning paradigm in educational institution to enhance students knowledge and skill though digital technology.

The aim of the study is -to know the level in the attitude of physiotherapy students towards E-learning, to find out the significant differences in attitude towards E-learning between female and male students, urban and rural students, to find out relationship between physiotherapy students' attitude towardsE-learning and their Access to technology

Metaerials and methods:

This is Observational cross-sectional study and, in the study, data was collected from various Physiotherapy colleges. In our study 296 sample was taken by convenient sampling and participants were physiotherapy college students. Participants were including in the study by following inclusion criteria: The participants were physiotherapy undergraduate students; age group was between 18-30, Male or female physiotherapy students who agreed to participate in study were included, who were currently studying in physiotherapy colleges. The participants were excluded on these criteria, students who are not co-operating., Physiotherapy students following internship will be also excluded from the study. Outcome measures used for the study were Attitude towards E-learning scale Attitude towards E-learning scale, Access to technology scale to measure the objectives. First, we had taken permission from principal or director or HOD from each college. The purpose of study was explained to the subject. Among 300 Physiotherapy students296 were selected based on inclusion and exclusion criteria, they were willing to participate and inform consent form was also obtained from subject. First attitude towards E-learning scale, second access to technology scale was distributed among the students and procedure to fill out the questionnaire was explained to them and the survey was also prepared online and hyperlink to the survey was distributed to students using mobile group messaging application. After some days we had collected the questionnaire manually and online form for further evaluation. Then total score of these questions was calculated for each subject. The period of study was the month of March-April 2021.

Data analysis was done by SPSS software and excel database 2007.The samples used in the study were tested for normality and found tobe non-normal. In this way, tests violate one of the important conditions for leading parametric tests like ANOVA, t test, and so on. Consequently, Mann Whitney U test was completed to test critical contrast between gatherings, which is a most generally utilized non-parametric test. The Mann-Whitney U test is a non-parametric test, ideally used toassess variance between two independent sets It used in situations where the dependent variable is ordinal or continuous and non- normal. It is one of the elective strategies accessible to test critical contrasts when autonomous example t-test isn't relevant because of ordinariness suspicion infringement.

To study the relationships between student 's attitudes including level of access to technology, Spearmen Product Moment correlation analysis was conducted.

RESULT

Box.1 Describes the demographic characteristics of the participants.

Demographic characteristics of participating students		
Demographic	Physiotherapy studentsN=296	
Gender	Male	N=58
	Female	N=238
Region	Urban	N=232
	Rural	N=64

Generally speaking, Student Attitudes towards Technology and Differences among Female and Male Students, and Between Urban and Regional Students. To figure out which things represented positive understudy mentalities, a thing investigation of reactions to the review was led by falling the two proportions of firmly concur 'and _agree ', and _strongly deviate' and _disagree Considering agree 'with statements as indicators of positive attitudes, it was apparent that the range of percentages under the _agree 'category was 40-67%as compared to 11- 33% under the _disagree 'category. The analyses of the overall scores on the attitudescale indicated that students 'overall responses to this scale were positive.

Generally, the outcomes showed that female and male understudies had uplifting outlooks towards innovation (see Box.2) and results showed that metropolitan and provincial area understudies had inspirational perspectives towards innovation. It likewise shows that every one of the partaking understudies had uplifting outlooks towards ICT and e-learning; they felt sure about utilizing PCs, appreciated utilizing ICTs in their examinations, had faith in the advantages of e-learning, and would be keen on contemplating courses that pre-owned e-learning. Students believed strongly that e-learning would give them the opportunity to acquire new knowledge and enhance their learning experiences; the mean values scored more than 3.5. On the other hand, students reported moderate enjoyment of using ICT for studies; the mean values scored less than 3.

The descriptive analysis shows that there were differences between female and male students and between urban and

rural students in their attitudes towards in the first statement, I feel confident in using computers provided in Box.2 otherwise there were no differences in rest of the statements, the result of Mann-Whitney U shows that there was no significant difference between the genders. They likewise outline that there was no huge distinction in the degree of perspectives towards ICT and e-learning between the metropolitan and provincial gatherings.

Box. 2: Means for gender and region and There attitudes towards technology	Scale	R- value	**student attitudes towards technology by exists no significant difference in student between gender and region.**		
	Access to technology scale	r=0.1			
	Attitude towards E-learning				

Sr No	Means for student attitudes towards technology	Gender	P-value	Region	P-value
1	I feel confident in using computers	Male=3.99 Female=3.83	0.01	Rural=4.08 Urban=3.9	0.05
2	Learning becomes fun through e-learning.	Male=3.51 Female=3.38	0.15	Rural=3.42 Urban=3.43	0.86
3	I believe that e-learning gives me the opportunity to acquire new knowledge	Male=3.66 Female=3.47	0.13	Rural=3.48 Urban=3.52	0.69
4	I believe that e-learning enhances my learning experience	Male=3.42 Female=3.37	0.99	Rural=3.39 Urban=3.37	0.93
5	I believe that convenience is an important feature of e-learning	Male=3.47 Female=3.49	0.71	Rural=3.34 Urban=3.47	0.22
6	E-learning increases the quality of learning because it integrates all forms of media	Male=3.47 Female=3.42	0.71	Rural=3.22 Urban=3.43	0.13
7	Adopting e-learning allows for increased student satisfaction	Male=3.4 Female=3.14	0.23	Rural=3.16 Urban=3.18	0.86
8	I would be interested in studying courses that use e-learning	Male=3.33 Female=3.05	0.76	Rural=3.02 Urban=3.11	0.52

(* p < 0.05)

Box. 3: The Relationships between Student Attitudes towards E-learning and Access to technology

To study the relationships between students' attitudes including level of access to technology, Spearmen Product Moment correlation analysis was conducted (Box.3). As outlined in Box.3, the connections were roughly straight between understudy perspectives towards e learning and understudy admittance to advancements. The Spearmen Product Moment connection coefficients were utilized to gauge the connections between the factors. The relationship coefficients were deciphered by utilizing Davis (1971) descriptors (irrelevant = 0.00 to 0.09; low =0.10 to 0.29. moderate = 0.30 to 0.49; considerable =0.50 to 0.69;

extremely amazing = 0.70 to 1.00).[3] Therewas a low positive relationship between student attitudes and their levels of access to various technologies (r =0.1, p<0.01).

DISCUSSION

This study was carried out to determine the attitude towards E-learning among physiotherapy students with that other objective were also to know the level in the attitude of physiotherapy students towards E- learning. The result after analyses we acquired that the overall scores on the attitude scale indicated were positive. In this study we also found that there were differences between female and male students and between urban and rural students in their attitudes towards in the first statement, I feel confident in using computers otherwise there were no differences in rest of the statements. There was a low positive relationship between student attitudes and their levels of access to various technologies.

A similar examination demonstrated that the taking part understudies in the metropolitan and territorial regions were decidedly arranged towards e-learning and had faith in its advantages. The uplifting outlooks and the ability of understudies to en-gage in e-learning courses propose that future e-learning drives have incredible potential. These revelations are comparative with the results of an assessment coordinated in Punjab University in India by Suri and Sharma (2013), an assessment drove in the Gulf region by Al-Doub, Goodwin and Al-Hunaiyyan (2011), also similarly as with the delayed consequences of an assessment drove in Saudi Arabian Universi-ties by Hussein (2011). Concerning sway, this investigation discovered that both female and male understudies held moderately comparative uplifting outlooks towards ICT and e-learning. This lines up with the discoveries announced by Hussein (2011) who discovered no genuinely huge contrasts between the mentalities of male and female understudies in Saudi colleges. Additionally, the impacts of other segment attributes like understudy area (metropolitan/provincial were not measurably huge as far as their perspectives towards e-learning.[4]

The examination exhibited that there was a genuinely critical low sure connection between understudy mentalities toward innovation and their degrees of admittance to different advances; obviously, understudies who would do well to access to technology and the Internet generated low positive attitudes. According to the literature, the level of access to technology and its reliability influence student Intentions to use ICTs to support learning (Papaioannou&sCharalambous, 2011; Paris, 2004; Sweeney & Geer, 2010).

The discoveries of this examination could fill in as an indicator of the mentalities of future understudies towards e-learning. They can be considered as a source of information for academics, administrators, researchers and decision- makers involved in planning, design, implementation and promotion of e- learning medical education institutions in Surat.

Notwithstanding, for e-figuring out how to be generally acknowledged in clinical instruction foundations in Surat, there is a requirement for the arrangement of fitting preparing at various levels, the improvement of mastery in e-learning use, and exploration to accumulate information and advice future turns of events. These are important tasks that require substantial attention and great effort from the Gujarat government to ensure the development of adequate awareness, positive attitudes, and improved motivation towards e-learning. The attitude of E-learning on the practical aspect in the profession of physiotherapy was not assessed. The other factors like skills of using technology and perception of students about quality of lectures availability was not assessed. The collecting data manually for evaluation was very time consuming. Future studies regarding the actual knowledge gained from an E –learning programme should be conducted.

CONCLUSION

The students in the present study showed overall positive attitude towards E- learning. They found the E-learning system as easy to access. This finding will also help to solve the actual problem students while running online classes to make the education system more effective in medical school.'

AUTHOR CONTRIBUTIONS

All the authors listed in the manuscript contributed sufficiently to qualify for authorship. The design and concept were given by Sneha Somarajan. The statistical analysis was mainly done by Akshata Chaphekar. The major part of data collection by interns and original draft was done by Sneha Somarajan, other authors also contributed.

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