

Research Article

Assessment of satisfaction level among university teachers of doctor of physical therapy program on online teaching during COVID-19 pandemic: A cross-sectional survey

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ABSTRACT

Background: The recent covid-19 pandemic has also displayed a worldwide increase in online education as a method of learning, at an exponential rate. In the wake of the COVID-19 pandemic, the education program of physical therapy abruptly moved from on-campus to remote online medium.

Objective: to find out the satisfaction level of the faculty of Doctor of Physical Therapy (DPT) in twin cities of Pakistan.

Methodology: A cross-sectional survey was conducted on faculty members of various universities having the Doctor of Physical Therapy program students in Islamabad and Rawalpindi, Pakistan. A total of n=120 participants between 24 to 60 years were recruited through a nonprobability purposive sampling technique. The research team used the Online Faculty Satisfaction Survey (OFSS) which has a total of 34 questions and was designed to quantify and authenticate the satisfaction of faculty regarding the students, teaching mode as well as the institutions. Questionnaires were distributed through emails and other social media applications i.e. Facebook and WhatsApp.

Results: The mean age of participants was 29.4± 6.5 years with 63.3 % females & 36.7% males. The Satisfaction levels were different among the participants. A total of n=66(55%) of participants were less satisfied with the online method of teaching whereas n=42 (35%) shows a higher level of satisfaction. The remaining 10% showed various responses regarding satisfaction level i.e. average n=4 (3.3%), moderately satisfied n=4 (3.3%), neutral n=2 (1.7%), satisfied n=2 (1.7%).

Conclusion: This study concluded that the faculty of Doctor of Physical Therapy (DPT) was less satisfied with online teaching methods due to the lack of face-to-face interaction and practical components of studies.

Keywords: COVID-19; education; faculty satisfaction; pandemic; university teacher.

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INTRODUCTION

The recent covid-19 pandemic has displayed worldwide increase in online education as method of learning, at an exponential rate. There is a wide array of learning technologies over the internet that are utilized to share the syllabus to the students and are also used for student-teacher interaction [1]. This system proves to be helpful for all students especially those who have difficulties adjusting to the typical education system e.g. those engaged in part time jobs, travel too long to reach campus, have social obligations and family duties to fulfil such as babysitting etc [2]. Information and Communication Technology is making exceptional efforts for advancement of education through increasing the organizational and personal capacities. It is also addressing and eliminating the inequalities in the provision of quality education in cities and their outskirts [3].

There is little investigation on academic success of web-based learning in the medical discipline because online education system has recently been tied up with this discipline [4]. The usage of internet features for guidance by healthcare practitioners including physical therapists is now recognized for improving pupils' knowledge [5]. Even after a large increase in admissions in online courses, the comparison of success ratio between online education and offline education system shows higher success in offline education platforms in comparison to online learning platforms [6].

Many teachers have reported that they are not satisfied with web-based classes even before their commencement because they foresee the difficulties they will face during the process because of unfamiliarity with technology and difficulty adapting to a new system [7]. Satisfaction of academic staff greatly influences pupils' grades and improves their perceptions towards distance learning [8].

Different studies shows that faculty satisfaction increase as they are given enough time for preparation as well as they reported that with increasing challenges of technological advances their satisfaction level decreases.[9]. In addition to that, studies had focus on satisfaction levels for traditional education system with remote education or factors influencing the level of satisfaction of the pupils [10, 11]. There is a lack of interest, job stress and unfamiliarity with new technology that hinders the growth of online learning [12].

The studies about online teaching faculty satisfaction are very few. Moreover, there is almost lack of research on the training techniques and modes adopted for online teaching faculties. Most of them are focusing on web-based instruction of pupils, this shows that capabilities, teacher's

individual qualities and mode of delivery are limits. In this study we have identified factors that may have an impact on the level of Doctor of Physical Therapy program's faculty satisfaction. This will aid in providing the faculty with facilities to escalate their proficiency in future. The objective of this research was to explore the satisfaction level of doctor of physical therapy faculty with online teaching during COVID-19 pandemic.

METHODOLOGY

An institutional based cross-sectional study was conducted from April to July in 2020 at private and public institutes which are offering DPT program in the twin cities of Pakistan. The ethical approval was granted by the Institutional Ethical Committee of Shifa Tameer-e-Millat university (IEC:234-1054-2020). An electronic informed consent was taken from the subjects after detailed orientation regarding the survey's objectives, procedures, and possible outcomes. This study was conducted in accordance with the Declaration of Helsinki [13]. The target population was the faculty members of the Doctor of physical therapy program who taught spring course 2020 online, during Coronavirus (COVID-19) Pandemic. Both males and females between the age group of 24 to 60 years were selected. A sample size of n=120 people was calculated using online Rao-soft software with a power of 0.8, variance of 5 and confidence interval of 0.95.

The faculty members at different institutes were contacted via e-mail with information about the study and a link to the Online Faculty Satisfaction Survey (OFSS) that was developed by Bolliger and Wasilik in 2009 [14]. The Online Faculty Satisfaction Survey questionnaire has total of 28 question which is designed to quantify and authenticate satisfaction of faculty regarding the students, teaching as well as institutions and its reliability is 0.85. The questionnaire was distributed via e-mail and social media (Facebook, WhatsApp. Participants were directed to login through a secure server-site where all responses were kept secret and confidential.

Data was entered and analyzed using Statistical Package for Social Sciences software version 22.0 (SPSS Inc., IBM Corp, Chicago, USA) for Windows. Descriptive statistics were computed using frequencies regarding students, teaching, and institution related factors. Cross-sectional reporting guidelines of strengthening the Reporting of Observational studies in Epidemiology (STROBE) were used to assess manuscript paper components [15].

RESULTS

A total of n=76(%) were females and n=44(%) were males. The mean age of participants was

29.4+6.5 years. The questionnaire was sent online to a total of 150 individuals out of whom, 120 responded leading to 80% response rate.

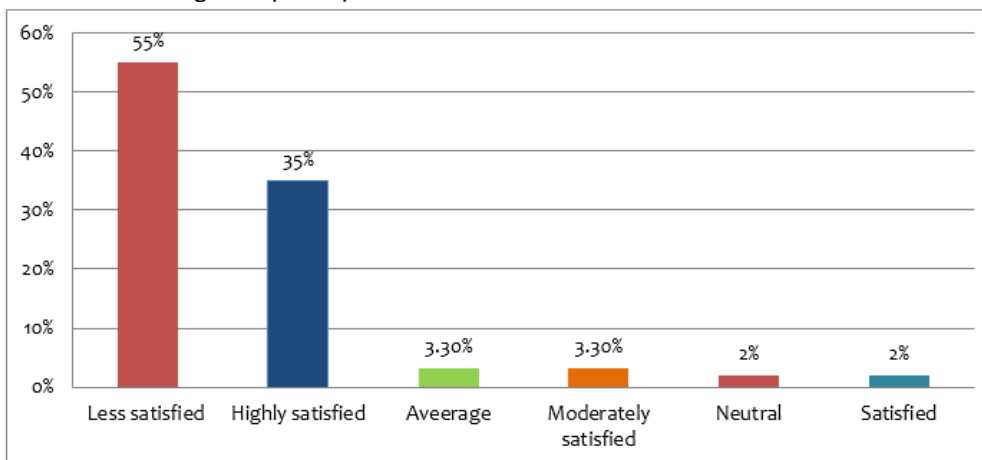


Figure 1: Faculty satisfaction level towards online method of teaching

Satisfaction was measured with question regarding their level of satisfaction as highly satisfied, less satisfied and others. Level of satisfaction among 108 individuals from total 120 participants, n=66(55%) was less satisfied and n=42(35%) were highly satisfied. Out of 120, 12 individuals showed different responses i.e., average n=4(3.3%), moderately satisfied n=4(3.3%), neutral n=2(1.7%), satisfied n=2(1.7%) with online method of teaching. (Figure 1)

Students Related Issues: According to analysis in hierarchical order, initially the lack of face-to-face interaction greatly affected the level of satisfaction. All participants agreed that they missed face-to-face interaction with students during online classes. The factor of students' access to online classes had positive impact on level of satisfaction of teachers. Next, factor stated that online teaching was satisfying because it provides them with an

opportunity to reach students who otherwise would not be able to take courses. (Table 1)

Teachers Related Issues: Creativity is next important factor in hierarchy that has also affected faculty satisfaction level. 67.5% participants agreed that they must be more creative in terms of the resources used for the online course. Usefulness of technology was also a contributing factor. Over 75% agreed about satisfaction towards reliability of technology. Next mentionable factor is flexibility provided in online environment to which over 78% population agreed. Following in order, 68.3% participants acknowledged the use of communication tools for online education. (Table 1)

Institution Related Issues: Over 58% of participants agreed that they received fair compensation for online teaching. Around 45% participants reported and agreed that they had higher workload when teaching an online course as compared to the traditional. (Table 1)

Table 1: Factors that has an impact on the level of faculty satisfaction.

	Strongly Disagree	Disagree	Agree	Strongly Agree
Students related factors				
My online students are actively involved in their learning.	12(10%)	28(23.3%)	72(60%)	8(6.7%)
I miss face-to face contact with students when teaching online	0(0%)	0(0%)	68(56.7%)	52(43.3%)
It is valuable to me that my students can access my online course from any place in the world.	2(1.7%)	8(6.7%)	84(70%)	26(21.7%)
Online teaching is gratifying because it provides me with an opportunity to reach students who otherwise would not be able to take courses.	4(3.3%)	34(28.3%)	74(61.7%)	8(6.7%)
Teaching related factors				
The flexibility provided by the online environment is important to me	8(6.7%)	18(15%)	78(65%)	16(13.3%)
I am satisfied with the use of communication tools in the online environment (e.g., chat rooms, threaded discussions, etc.)	6(5%)	24(20%)	82(68.3%)	8(6.7%)
The technology I use for online teaching is reliable.	6(5%)	16(13.3%)	91(75.8%)	7(5.8%)
I have to be more creative in terms of the resources used for the online course.	2(1.7%)	18(15%)	81(67.5%)	19(15.8%)
Institution related factors				
I receive fair compensation for online teaching.	6(5.0%)	42(35.0%)	70(58.3%)	2(1.7%)
I have a higher workload when teaching an online course as compared to the traditional one.	7(5.8%)	29(24.2%)	55(45.8%)	29(24.2%)

DISCUSSION

The current study concluded that maximum faculty were not much satisfied with the online education system during the pandemic COVID-19. There were multiple reasons which were contributing to less satisfaction i.e., no face-to-face interaction with students during the lectures, less productivity in delivering online lectures and poor creativity in lecture formulation as well. However, the reliability of technology used by teachers during the pandemic COVID-19 and access of classes for every student from anywhere motivated the teachers to conduct their lectures through online education system.

A cross-sectional survey conducted to find out the level of satisfaction of online teaching staff during COVID-19 and the problems faced during this period, concluded that teacher's satisfaction level was the key factor in providing better quality education hence improving student's knowledge. According to the study, 75% of teaching staff was not much satisfied with the services provided by their concerned organizations and only 25% of teachers were satisfied [16]. This study has supported the results of current study where most of teaching staff was not satisfied.

Another study was conducted to assess the needs of students and level of satisfaction of tutors in online education system. The study showed that a flexible environment is the key factor for a student to choose online education system which adds to his or her interest in learning in an online education system hence adding to tutor's satisfaction regarding the teaching system. The study concluded that most of the tutors were not happy with the online teaching system but were satisfied with the technological advancements hence providing environmental flexibility and meeting student's needs [17]. The current study showed that student related factors are the key components when we investigate level of satisfaction in teaching staff. According to the current study, face to face interaction of teachers with the students play an important role in teacher's satisfaction level. Most of the teachers missed face to face interaction with their students but they were satisfied with the technological aids.

A study to determine the faculty leadership in online education and the students' satisfaction along with consistency in learning, was conducted by Jeannine Koranzow who concluded that the governing educational policies play a very important role in conducting online lectures and classes for students; they must be flexible enough to meld with every environment which can help experienced teachers as well as newly appointed online teachers to provide effective and quality education hence

improving overall student's satisfaction level. The results of this study summed up that teacher's satisfaction of online education is dependent upon the level of satisfaction of their respective students [18]. This study supports the results of current study where a student's satisfaction in online education affects teacher's satisfaction level and flexible environment plays and important in teacher's satisfaction.

Lana C. Jackson et.al conducted a study to identify how teacher's satisfaction is depending on the learner's satisfaction. In the study, they have discussed that other than the common factors affecting level of satisfaction towards online education system. The feedback and reflection from the teachers in online assignments and quizzes is a very important factor which must be noticed while considering the satisfaction status in electronic education. This study concluded that student's satisfaction response has a huge impact on their tutor's satisfaction level in online education and it must be considered as a key factor [19]. This study supports the current study with the evidence that the access of every student from anywhere has added a positive reflection in teacher's satisfaction with the student's responses in assigned quizzes and assignments additionally.

Nasser Binsaif conducted a cross sectional survey in Saudi Electronic University to investigate the level of satisfaction of teachers regarding online teaching standards and policies. An original standardized questionnaire was distributed amongst 231 staff members of university. The questionnaire comprised of 17 items including the initial preparations for e-assessments, the skills of faculty members to run their academic activities with e-assessments, the grading permissions to the faculty members, department's chairs and deans at the articular university. The results of this study concluded that the level of staff satisfaction towards the use of e-assessment was high whereas, the low score was recorded for the initial preparations for e-assessments [20]. The current study confirms that the initial preparations for electronic learning was a difficult task, and it has affected their satisfaction level initially, but they were satisfied with the technology they are using.

A study was conducted to identify and confirm the factors affecting the satisfaction of online teaching staff by Doris U. Bolliger and Oksana Wasilik. The study mentions that there are three important factors that ultimately affect faculty satisfaction during online teaching i.e. students' satisfaction, positive student outcomes and satisfaction from administration. The results of this study concluded that teachers are the main pillar in

the learning gateway for students and they are instrumental. If positive student outcomes are received, the administration should focus on faculty's satisfaction level by governing laws and standards for online education which can ease every faculty member with better way [14]. The current study concluded that a flexible environment and governing policies play a very important role in teacher's satisfaction towards online education.

Deanna L. Howe et.al carried out a comparative descriptive study to find out the differences in nursing faculty satisfaction who are teaching online. The study has concluded that satisfaction was significantly higher in those faculty members who taught 20 or more courses online compared with those who taught only five or fewer than that. This level of satisfaction of online nursing teachers was depending on the level of mentoring received, the release time, technical support for all types of needed soft wares and hardware, the learning management system, and the training for use [21]. The results of this study confirms the current study results with the fact that advancements in technical aids and smart ways in making the environment more interactive in the learning gates have a huge impact on teacher's satisfaction towards electronic learning..

CONCLUSION

This study concluded that of the maximum faculty members teaching DPT program in the twin cities of Pakistan are less satisfied with online teaching. The factor of student's access to online classes from around the country has positive impact on level of satisfaction of teachers. Use of technology has also contributed to the satisfaction. Furthermore, lack of face-to-face interaction has greatly affected the level of satisfaction, use of communication tools has affected the level to a lesser extent while the factor that has least affected the faculty satisfaction is the active involvement of students in their learning.

DECLARATIONS & STATEMENTS

Author's Contribution

RA and RH: substantial contributions to the conception and design of the study.

SZ and MA: acquisition of data for the study.

HA and MUI: interpretation of data for the study.

HA and MUI: analysis of the data for the study.

SAH and MMK: drafted the work.

RA, RH, SZ, MA, HA, MUI, SAH and MMK: revised it critically for important intellectual content.

RA, RH, SZ, MA, HA, MUI, SAH and MMK: final approval of the version to be published and agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. All authors contributed to the article and approved the submitted version.

Ethical Statement

The ethical approval was granted by the Institutional Ethical Committee of Shifa Tameer-e-Millat University (IEC-234-1054-2020).

Consent Statement

Informed consent was obtained from all subjects involved in the study.

Data Availability Statement

The data presented in this study are available on request from the corresponding author.

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Funding Sources

None to declare.

Conflicts of Interest

The authors declare no conflict of interest.

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