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Experience and Perception of Learning of Health, Physical Education & Sports Sciences Students in Online Teaching

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Abstract: *To analyze health, physical education & sports sciences students' perception and their experience in online learning. A cross-sectional study was conducted among 220 students of Health, physical education & sports sciences which fulfilled the inclusion criteria. The questionnaire which was used in this study was "Students' perception of online learning units", "Students' experience in online learning" and "Attitudes towards and experience of e-learning and learning of clinical skills". Most students reported positive perception and experience with online learning however, lack of interaction with teachers, and negative influence on gaining clinical skills was also observed. The study revealed that there is a significant association of online learning with the perception and experience of health, physical education & sports sciences students as the p value was found to be <0.05. The majority of students faced problems in utilizing the mode of online learning although overall satisfaction was found in more than 50%.*

Key Words: Online Learning, Satisfaction, Perception

Introduction

As the COVID-19 pandemic started and spread out speedily within months, which affected everything in every zone even the educational environment. The global lockdown has now arrived at the height of educational lockdown, as the crisis worsened. All universities were shifted to online learning and this sudden transition from conventional studying processes to purely online learning environments has changed the approaches

used by medical institutions to offer courses to their students (Khalil [2020](#)).

Online studying has become usual in medical science teaching, as it benefits the students to access courses and materials at all hours to work independently (Hammarlund [2015](#)).

Measures have been taken in hope of avoiding the COVID-19 pandemic which caused the suspension of teaching in a classroom in most institutions worldwide.

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Most institutions then followed the online classroom to proceed with medical education (Tang 2020) (McCutcheon 2014). The current advancement in technology has delivered new probabilities in the education sector (Gagnon 2020). Nonetheless, this shift to a virtual setting was unwelcome, unwelcome, and unstable for the educational endeavor for more than a few institutions, teachers (be they faculty members, instructors, curriculum writers, and facilitators), and students. The urgency and time trouble for these immediate changes to virtual methods has suffered many universities and educational programs to urge the necessary function completed satisfactorily to achieve the tutorial day as the rank of the day. The primary goal was to keep the people safe and healthy throughout this growing health emergency while also maintaining pupils, instructors, and staff. Although, when there is no regular face-to-face (F-t-F) interaction among students and teachers, instructors may suffer ineffectual to accurately resolving student participation, and acknowledging and fulfill correspondingly (Cole 2019).

The COVID-19 epidemic has significantly altered the educational landscape and expedited the movement towards technology-enhanced education in health, physical education, and sports science, which has created challenges for students, faculty, and administrators in this field, as hands-on experiences and physical activities are a critical component of the education and training in this field. Multiple challenges faced by physical education teachers and students, including the shift to online learning, the difficulties of providing physical activity opportunities, and the limitations of technology in delivering effective physical education experiences, have

been noticed. The negative impact of the pandemic on students' physical and mental health, including reduced physical activity levels, increased screen time, and increased levels of stress and anxiety has also been reported. This impact could have long-term consequences for students' physical and mental well-being. Studies suggest that to overcome this profound impact, physical education teachers and schools should work to mitigate these negative impacts by providing students with opportunities for physical activity, and by promoting physical and mental well-being.

It's worth noting that while the shift to online learning has been challenging, it has also created new opportunities and advancements in technology-enhanced education in this field. For example, virtual reality and augmented reality technology has been used to provide students with immersive and interactive experiences that were not possible in a traditional classroom setting.

Furthermore, some universities have created virtual labs and online resources to simulate hands-on experiences in health, physical education, and sports science. This includes virtual anatomy and physiology labs, virtual strength and conditioning workouts, and online coaching clinics, among others.

The COVID-19 pandemic has disrupted the traditional education system in health, physical education, and sports science. However, schools and universities have adapted to the challenges and embraced technology to provide students with a high-quality education, despite the limitations imposed by the pandemic. The pandemic has also highlighted a chance for physical education teachers to embrace the

opportunities presented by online learning and work to develop effective and engaging online physical education programs that meet the needs of their students (Laar 2021).

COVID-19's effect on learning and Inter-Professional Education programs are nevertheless to be regulated, particularly the irregular and swiftly altering the natural history of the pandemic. This ambiguity creates some arrangement tentative, but it's comprehensible that the widespread disease is altering the method we aware of, determine, and perform. Substitute taking out of learning like online and faraway knowledge is appropriate for the new regular and thus, medical education programs have to plan for the end of the day to promote excellent-quality educational delivery. However, with the occurrence of top-quality academic learning, IPE programs may be a difficult edge with several parts that have got to be speedily over the later few months. At the equivalent time, a robust based system for college kids, lecturers, and organizations alongside innovative access in addressing inter-professional competencies through a virtual approach is compulsory.

The COVID-19 epidemic has caused the entire academic community to shift to a virtual environment; it is important to understand how these changes are affecting our teachers and students physically, intellectually, socially, and academically. For many students, this is not an ordinary moment (faculty). These days have been particularly difficult for many students due to the pandemic's existential threat and the impending fear of a worldwide economic recession, which has increased their worry and depression globally. Several students struggle daily because their loved ones have the virus, have passed away from it, have

lost their jobs, or have internet access issues (Khalili 2020).

Two factors that encourage students to enroll in online courses are the flexibility of the schedule and the financial advantages. However, some students might not succeed in a learning environment where the instructor and the student are physically apart, where communication is asynchronous, and where learning is more self-directed. Higher education professionals are challenged to discover innovative approaches to create an atmosphere that fosters effective learning by taking students' preferences into consideration while the demand for online learning stays high (Rios 2019).

During the prolonged period of lockdown due to the COVID-19 pandemic, many challenges were faced by medical schools and universities in order to provide a better quality of education to their students. Technologically progressed nations have frameworks set up for e-learning and online clinical training. But this is not the situation with a large portion of the low-pay nations like Pakistan. Students and medical faculty members are encountering many challenges while engaging in online learning programs, as the majority of the population of Pakistan was never prepared for this unexpected and sudden change from face-to-face teaching to a total online conveyance of instructive substance surprisingly fast with no broad arranging, planning, and staff preparing or training of faculty members. Internet connectivity problems, student engagement, web availability, online appraisals, absence of workforce preparation and institutional help, and issues with understanding the extraordinary elements of online instruction are hardly any difficulties looked by clinical

employees, Pakistani medical faculty, and students taking online medical courses during the COVID-19 pandemic (Farooq [2020](#)).

The principal goal of this exploratory study is to conclude medical students' perception and satisfaction level concerning online learning techniques applied in courses during the ongoing COVID-19 pandemic in Pakistan. To critically analyze health, physical education & sports sciences students' perception and their experience in online learning.

Material and Methods

For this study, an observational cross-sectional design was used. Data were gathered using a convenience non-probability sampling technique. There were 220 people in the sample size. Calculating the sample size using an open epi. The sample was drawn from undergraduate students studying health, physical education, and sports sciences as well as MPhil students in those fields. The student inclusion age ranged from 20 to 30 years old. The survey did not include students majoring in fields other than health, physical education, or sports sciences or those enrolling in doctoral programs in those fields. Upon permission, the trial was continued for three months. The sample was taken from the different universities of Karachi and Hyderabad, Pakistan which was offering undergraduate and post-graduation degrees in health, physical education & sports sciences. Prior to the data collection, informed consent was taken from the participants and they were free to withdraw their participation. All the data of the participants will remain confidential and was collected through an online survey forms and through physical approaches by giving questionnaires to the students of universities. The total sample size was calculated to be 196,

a 12% dropout ratio was considered and responses from 220 participants were taken. Online open epi version 3.0 was used with students' level of satisfaction regarding the current online teaching method 85% being very satisfied or somewhat satisfied. The confidence interval was 95%, the margin of error 5% and the power of the study 80%. (Hameed [2020](#)). The questionnaire used in this study was 7 point grading scale for "Students' perception of online learning units", 4 points Likert scale to evaluate "Students' experience in online learning" and 5 points Likert scale to evaluate "attitudes towards, and experiences with, e-learning and clinical skill learning". The questionnaire design consists of six sections with the consent form, demographic facts, regarding the student's perception of online learning, regarding student's experience, related to the experience of clinical skills in online learning taken, and the option to submit. Data were analyzed by SPSS on Version 23. Frequencies and percentages were taken out for all responses. The chi-square test was applied to identify any significant association of online learning with the perception and experience of health, physical education & sports sciences students. P-value <0.05 was considered significant.

Result

A total of 220 participants participated with a mean age of 20 – 30 years of age. Out of N= 220 total participation in which females were higher than males, n = 183 with a percentage of 83.2%, and n= 37 with a percentage of 16.7%. Moreover, 20.9% (46 out of 220) were in 'the 3rd year' 13.6 (30 out of 220) were in 'the 4th year, 58.6% (129 out of) were in 'the 2nd year' and 6.8% (15 out of 220) were in 'MPhil'. [Figure-1]

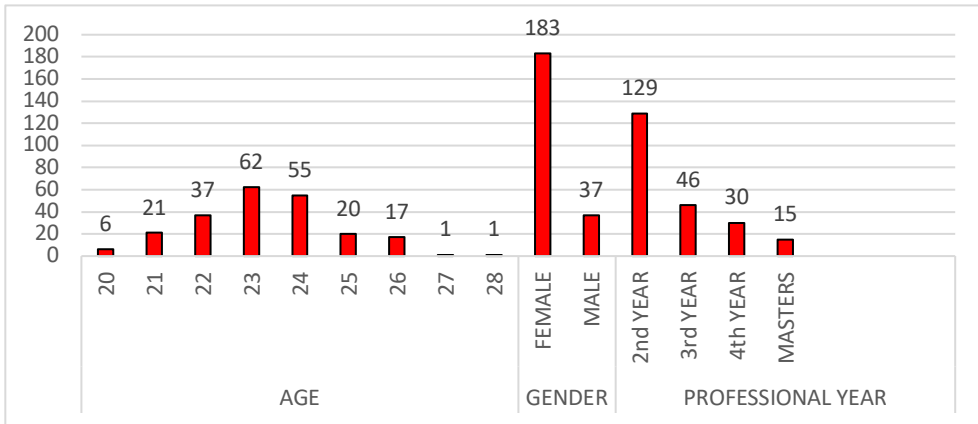


Figure 1: Demonstrate the Demographics (Age, Gender, Professional Year, Institute Name) of the Participants.

Reviews of the results were offered in three domains associated to the research questions: the perception of online teaching, the experience of online education of health, physical education & sports sciences students, and the clinical skills experience of students in e-learning.

than half 61(27.7%) participants were moderately satisfied with the overall satisfaction with the online learning unit, 54(24.5%) were slightly satisfied, 41(18.6%) were extremely dissatisfied, 23(10.5%) were extremely satisfied, 16(7.3%) were slightly dissatisfied, 13(5.9%) showed no opinion, and 12(5.5%), were moderately dissatisfied with the online learning unit. [Figure-2]

Student's Perception of Online Teaching and Learning

The analysis of outcomes showed that more

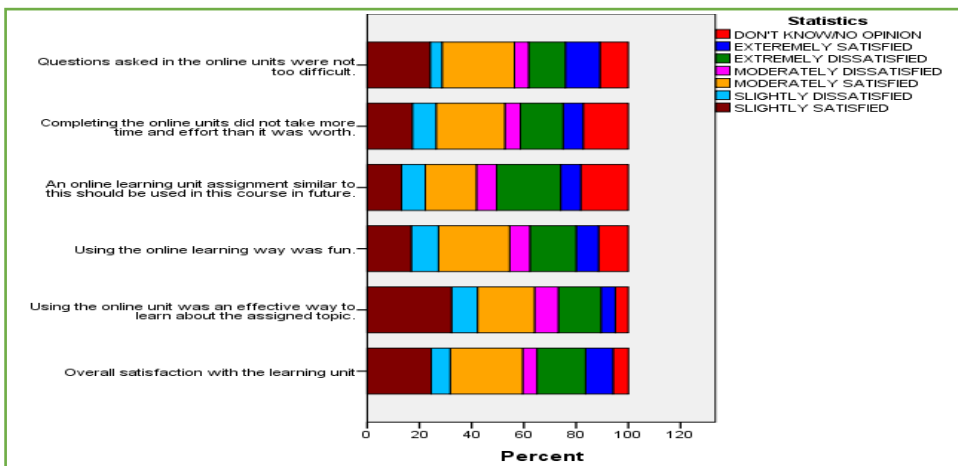


Figure 2: Illustrate the Questions Health, Physical Education & Sports Sciences Student's Perception of Online Teaching and Learning.

Student's Experience of Online Teaching and Learning

Out of N-220, n=101(45.9%) and 14(6.4%) participants agreed and strongly agreed with convenience in studying respectively, n=122(55.5%) and 28(12.7%) agreed and

strongly agreed with the access to information and learning materials respectively, n=85(38.6%) agreed with opportunities to interact with teachers and n= 57(25.9%) and n=76(34.5%) agreed and strongly agreed to interact with classmates respectively. [Figure-3].

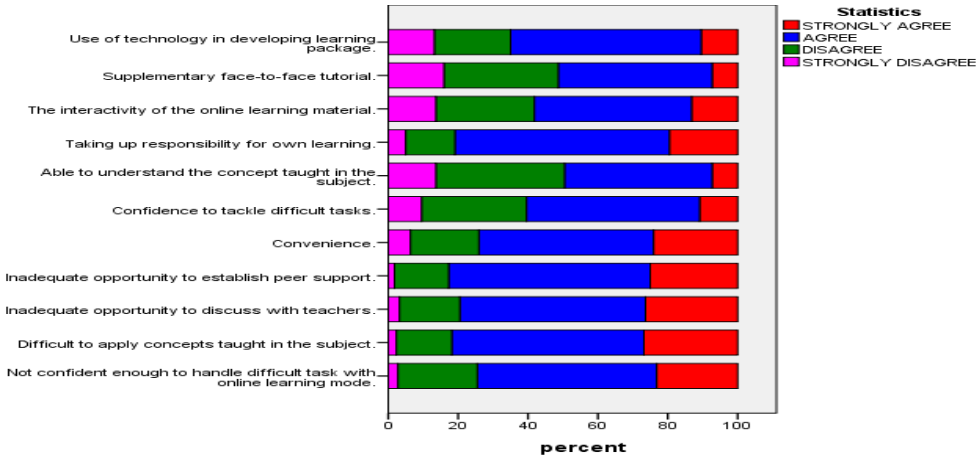


Figure 3: Health, Physical Education & Sports Sciences Student's Experience of Online Teaching and Learning.

Health, Physical Education & Sports Sciences Student's Attitudes towards Experience of e-Learning and Learning of Clinical Skills

The summary of individual studies investigating the attitude toward the experience of e-learning and learning of clinical skills as shown in [Figure-4].

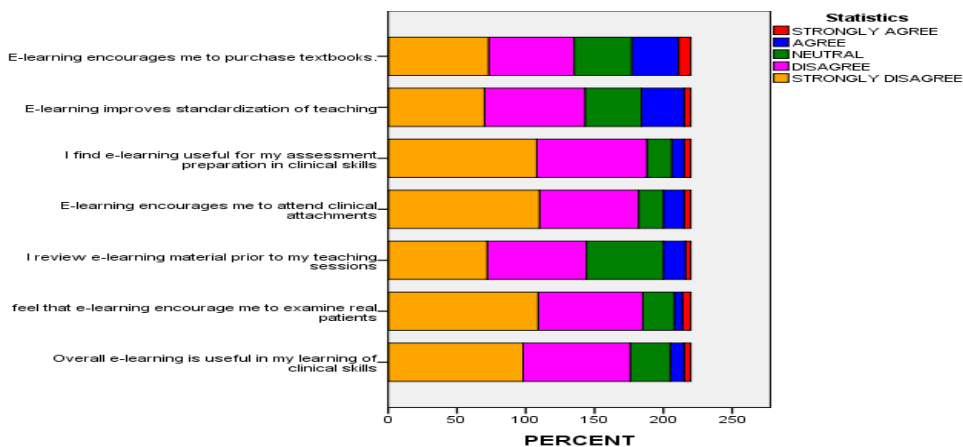


Figure 4: Health, Physical Education & Sports Sciences Students Attitudes towards Experience of E-Learning and Learning of Clinical Skills.

Chi Square Analysis

The study used the chi-square test which compares the association of online learning with the experience and perception of health, physical education & sports sciences students.

Chi Square Result of Perception of Online Learning and Teaching

According to the chi-square result of the questionnaire of perception, participant's overall satisfaction with the learning units was

79.600, by means, the online unit was effective for the students to have knowledge on allocated topic proportion was 91.500, 43.900 students were reported using the online learning was fun, 40.400 students proportion reported that the online unit assignment should be used in the future courses, 71.200 shows that question inquired in the online unit were not too difficult, and 47.464 proportion of the test statistic shows finishing the online entities did not yield additional time and effort than it was worth.

Table 1. Chi-Square Result of Perception of Online Learning and Teaching.

	General appreciation for the instructional	The online course was a useful tool for learning about	It was enjoyable to learn through the internet.	This type of online learning unit assignment should be employed going forward in this	The questions in the online units were not overly challenging.	It did not need more time and effort than it was worth to complete the
Chi-Square	79.600 ^a	91.500 ^a	43.900 ^a	40.400 ^a	71.200 ^a	47.464 ^a
Df	6	6	6	6	6	6
Asymp. Sig.	.000	.000	.000	.000	.000	.000

There are 0 cells (0.0%) with anticipated frequencies under 5. The anticipated minimum cell frequency is 31.4. Table 35: Illustrate the chi-square result of the perception of online learning and teaching.

Chi-Square Result of Experience of Online Learning and Teaching.

When analyzing the student's experience of online learning, the proportion of 75.89 showed that they were convenient with online learning, 112.364 showed access of information and learning materials, 57.745 reported interacting with teachers, and 46.800 reported that got to have an opportunity to interact with student's classmates. While when the students were asked to report the element of learning, 209.200 students accepted to take responsibility for their own learning, 188.182 showed a highly effective way to go over the

subject content at their own places, 72.545 showed electronic communication was useful with the subject lecturer, 67.673 showed that can easily navigate the subject learning material, and 46.073 believed that F-T-F resources were beneficial when combined with online learning. Analyzing the mode of learning through learning hindrance, out of 220 participants, the proportion of 146.655 showed that the students contributed with insufficient opportunity to learn with other students, 105.564 were not confident in their ability to complete a difficult task with online learning, 132.21 showed the difficulty to apply

the concept, 117.200 reported an opportunity to interact with teachers and 149.564 established the peer support. In student's response to the variables questionnaire, it was convenient for 88.255 of the students to be able to study at their own pace, 93.709 were not confident to tackle difficult tasks, the

proportion of 77.564 was capable of comprehending the concept taught in the subject, 164.655 were taking charge for their own learning, 59.745 were interactive, 72.255 were reported the supplementary from a face-to-face tutorial and 108.61 reported the use of technology to create a learning package.

Table 2. Chi-Square Result of Experience of Online Learning and Teaching.

	Chi-Square	df	Asymp. Sig.
Convenience in studying	75.891 ^a	3	.000
Knowledge and educational material approach	112.364 ^a	3	.000
Opportunities to interact with teachers	57.745 ^a	3	.000
Opportunities to interact with classmates	46.800 ^a	3	.000
I was motivated to take responsibility of my own learning	209.200 ^a	3	.000
I was enabled to proceed through the coursework at my own pace	188.182 ^a	3	.000
The subject material was easy to search	67.673 ^a	3	.000
When combined with online learning, the F-t-F resource sessions were really beneficial	46.073 ^a	3	.000
It was beneficial to communicate electronically with the course instructor	72.545 ^a	3	.000
Insufficient study time with other classmates	146.655 ^a	3	.000
Insufficient confidence to undertake challenging tasks using online learning mode	105.564 ^a	3	.000
It is difficult to apply principles learned in the topic	132.218 ^a	3	.000
There isn't enough time to talk with teachers	117.200 ^a	3	.000
Inadequate possibility for peer support	149.564 ^a	3	.000
The ability to learn on your own schedule is convenient	88.255 ^a	3	.000
Confidence to tackle difficult tasks	93.709 ^a	3	.000
Capable of comprehending the subject's concept	77.564 ^a	3	.000
Taking up responsibility for own learning	164.655 ^a	3	.000
The involvement of the subject material through online learning	59.745 ^a	3	.000
Supplementary face-to-face tutorial	72.255 ^a	3	.000
Utilization of technology in the development of education	108.618 ^a	3	.000

Illustrate the chi square result of the experience of online learning and teaching.

The P-value was revealed to be less than = 0.05 by comparing the chi-square result of the

perception and experience of health, physical education, and sports sciences students. We

can accept the alternative hypothesis and reject the null hypothesis based on significant value. It is possible to conclude that online learning has a major impact on the knowledge and perception of students studying health, physical education, and sports sciences.

Discussion

This study focuses on the experience and perception of learning of health, physical education & sports sciences students in online teaching due to the COVID-19 pandemic. As it started and spread around the world speedily within a small time frame, all the areas of life were affected together with the educational environment. All universities were shifted to online learning and have changed the approaches used by medical institutions to offer courses to their students. It has been suggested that the majority of students were satisfied with the online learning unit.

In the present work, we evaluated the student's perception regarding the experience of online learning and clinical skills experience in e-learning of 220 participants. The analysis of outcomes of overall satisfaction with online learning units displayed that 138(62.7%) participants were extremely/moderately/slightly satisfied with the overall satisfaction with the learning unit, 69(31.4%) were extremely/moderately/slightly dissatisfied while 13(5.9%) displayed no opinion with the learning unit which shows the positive impact on the satisfaction with online learning. This result was similar to the finding of Demuyakor J 2020 which showed a higher mean score of 3.77 on the effectiveness of online learning in students' perspectives on a 7 point grading scale which concluded that

students were positively contributing to online learning and teaching (Demuyakor 2020).

Additionally, this study revealed that concerning the overall experience of the students with online gaining knowledge was positive in regard to aspects of satisfaction, elements in the learning process, and variables except that students find difficulties with opportunities to interact with teachers, able to understand the concept taught in a subject and electronic communication with the subject lecture was not useful. This study also found that students experienced hindrances inadequate opportunities to study with classmates, not being confident enough to handle difficult tasks within mode, difficulties to apply concept taught in the subject, inadequate opportunities to discuss with teachers, inadequate opportunities to establish peer support.

The result of this study were found similar with the outcomes of the study done by Pei L. and Wu H in 2019 on undergraduates had revealed that learning online was as effective as learning offline, but there is still some room left for more research comparison of these two methods. The overall finding did not imply that online teaching method was effective in every learning sense for every student. The viability of web based knowledge was affected by numerous components. Web-based learning has several limitations due to a few minor factors, such as cost, access to the internet, specialized concerns, time constraints, social communication challenges, academic aptitudes, and student inspiration. Various factors, such as a flawed media materials strategy and plan, could result in poor quality web-based learning. (Pei 2019)

Furthermore, as the result was based on student's perspectives, it was difficult to analyze the problems faced by the faculty members during online education which may cause a negative impact on student's online learning education. Limitations of the study were the inability to measure educational outcomes related to distance learning compared to face to face learning.

Conclusion

To conclude this research quite clearly explains the experience and perception of learning of health, physical education & sports sciences

students as well as their experience of e-learning and learning of clinical skills of and MPhil students. There was found to be a positive impact on perception and experience with online learning of theoretical knowledge but a negative impact on learning of clinical skills. According to the students, major problems in utilizing the mode of online learning were to facilitate interaction among classmates and teachers to provide a useful environment to have proper peer support and socialization. Based on the evaluation, students believe that there needs to be proper research done to integrate better approaches for upskilling the student's clinical work.

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