

Challenges of Online Learning and Attitude of Medical Student at LUMHS: Comparative Study among Rural and Urban Students during Covid -19 Pandemic

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ABSTRACT

Objective: To enumerate the challenges of online learning faced by urban and rural medical students in LUMHS and highlight the preference of medical students regarding online learning also seek association of medical students of both populations with the challenges of online learning.

Study Design: A comparative Cross sectional study

Place and Duration of Study: This study was conducted at the Liaquat University of Medical and Health Sciences, Jamshoro from February 2021 to April, 2021.

Materials and Methods: This study was conducted among urban and rural MBBS students of LUMHS, via non probability convenient sampling. A predesigned close ended Google form questionnaire used to gather data. The data was analyzed by using SPSS 23.00 with significant $p < 0.05$. Students who were willing to participate are included in the study while who were not willing to participate were excluded.

Results: Among 487 students of LUMHS 43.7% male and 56.3% female. 55.3% to urban areas and 44.9% to rural areas. 89.52% of students have internet availability. 69.02% of urban and 82.64% of rural population shows problem of internet signals. 82.08% of urban and 91.78% rural students faced electricity problem. 78.85% of respondents said their study work increased due to e-learning and 52.15% faced problem of privacy. 62.68% and 76.86% of urban while 76.25% and 81.27% of rural students feels stress on submission of assignment and appearing in online test/exams. Most of 86.19% of urban and 85.84% of rural didn't prefer online teaching. while 76.86% urban and 75.34% rural student said online teaching should not be made part of regular education.

Conclusion: Students of both population were facing problems of internet, electricity, privacy of learning and feel stress during online submission of assignment and test/exams. Students belongs to urban population was facing less problem of internet and electricity than rural students ($p < 0.001$).

Key Words: Challenges, MBBS students, Online learning

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INTRODUCTION

In December 2019 started, in China's Hubei province and Wuhan city.^{1,2} COVID-19 was declared it a Public Health Emergency of International Concern by WHO on 30th January 2020.³ COVID-19 was declared - a pandemic by WHO, On the 11th of March, as by then about 114 countries had been affected.^{4,5}

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The first case of COVID-19, in Pakistan, was reported on February 26, 2020 from Karachi, with Pakistan's estimated population of as 204.65 million.^{6,7} The virus successively spread into different regions countrywide and is presently an epidemic.⁸

In the light of the coronavirus disease (COVID)-19 pandemic situation, the government closed all the colleges and universities for classroom teaching. Thus, the option of e-learning was introduced for teaching purpose in medical colleges and universities.^{9,10}

E-learning is defined as "learning experiences with internet access using different devices (e.g., mobile phones, laptops, etc.) in synchronous or asynchronous environments. In these environments, students from anywhere (independent), can learn and interact with teachers and fellow students".¹¹

Many institutes, due to lockdown, shifted to e-learning behavior to facilitate students and save the lost time. The technological uprising in the present times and extensive accessibility and nonstop connectivity of internet, has opened many avenues for distant learning

and opportunities for learning and exchange of knowledge worldwide. Unlike many developed countries, developing countries including Pakistan does not have colleges and universities with well-established online and distant- learning programmes in place.^{12,13}

Numerous school of thoughts are associated with online learning. Accessibility, affordability, flexibility, learning pedagogy, life-long learning, and policy are some of the arguments related to online pedagogy.¹⁴

There is a lack of standard for quality, quality control, development of online resources, and online content delivery. This issue needs to be handled right away so that everyone can enjoy the benefits of quality education via online learning.¹⁵

Rationale: Due to COVID-19 Pandemic government closed all teaching institutions and started online teaching to engage students in distance learning to continue education without gap. Due to sudden shift from traditional teaching methods towards online learning techniques and implementing a new learning environment for teaching, students are facing many challenges due to online e-learning. This study would highlight the gaps and hassles in this new age learning method. This study will provide a platform for institutions to overcome the challenges faced by students in future.

MATERIALS AND METHODS

A comparative Cross Sectional study design was carried out among sample of 487urban and rural

undergraduate MBBS students of Liaquat University of Medical and Health Sciences, Jamshoro via non probability convenient sampling. An online predesigned close ended Google form questionnaire used to gather data about the challenges and attitudes of medical students regarding online learning. The data was complied with proper coding in Microsoft excel and further analysed by using statistical package for social sciences SPSS 23.00. P value of less than 0.05 was considered statistically significant. The study was completed in 2 months after the approval of ERC. Undergraduate MBBS students of LUMHS who had will to participate in the study were included in the study while students who were not willing to participate questionnaires with incomplete information or missing data were excluded.

RESULTS

About 487 students of Liaquat University of Medical and Health Science were participated in this study. Among them 43.7% were male and 56.3% were females (Fig.1). Most of students belonged to Urban areas 55.3% and 44.9% from rural areas (Fig.2). Challenges of online learning that were faced by MBBS Students are shown in figures.

Table 1. shows that 89.52% of students have internet availability. Among them 69.02% of urban and 82.64% of rural population have problem of internet signals.

Table No.1: Challenges Regarding Online Learning - n=487

| Variables | | Urban | | Rural | | Total | | P-value |
|--|-----|-------|-----------|-------|-----------|-------|--------|---------|
| | | n=268 | %(55.03%) | n=219 | %(44.96%) | | | |
| Internet Service available | Yes | 216 | 80.59% | 110 | 50.22% | 436 | 89.52% | 0.000 |
| | No | 52 | 19.40% | 109 | 49.77% | 161 | 33.05% | |
| Problem of Internet signals | Yes | 185 | 69.02% | 181 | 82.64% | 365 | 74.94% | 0.001 |
| | No | 83 | 30.97% | 38 | 17.35% | 121 | 24.84% | |
| Go far for internet facility | Yes | 33 | 12.31% | 82 | 37.44% | 115 | 23.61% | 0.000 |
| | No | 235 | 87.68% | 137 | 62.55% | 372 | 76.38% | |
| Face technical issues | Yes | 195 | 72.76% | 186 | 84.93% | 381 | 78.23% | 0.001 |
| | No | 73 | 27.23% | 33 | 15.06% | 106 | 21.76% | |
| Electricity Problem | Yes | 220 | 82.08% | 201 | 91.78% | 421 | 86.44% | 0.002 |
| | No | 48 | 17.91% | 18 | 8.21% | 66 | 13.55% | |
| Study workload Increase | Yes | 202 | 75.37% | 182 | 83.10% | 384 | 78.85% | 0.038 |
| | No | 66 | 24.62% | 37 | 16.89% | 103 | 21.14% | |
| Problem of Privacy | Yes | 129 | 48.13% | 125 | 57.07% | 254 | 52.15% | 0.049 |
| | No | 139 | 51.86% | 94 | 42.92% | 233 | 47.84% | |
| Mental Health (Feel stress) while submitting online assignment due to electricity /connectivity issues | | | | | | | | |
| | Yes | 168 | 62.68% | 167 | 76.25% | 335 | 68.78% | 0.001 |
| | No | 100 | 37.31% | 52 | 23.74% | 152 | 31.21% | |
| Mental Health (Feel stress while appearing In online test or exam due to electricity /connectivity issues) | | | | | | | | |
| | Yes | 200 | 76.86% | 178 | 81.27% | 384 | 78.85% | 0.236 |
| | No | 62 | 23.13% | 41 | 18.72% | 103 | 21.14% | |

Table No.2: Preference Regarding Online Learning and Traditional learning n=487

| Variables | | Urban | | Rural | | Total | | P-value |
|--|-----|-------|----------|-------|----------|-------|--------|---------|
| | | n=268 | %(55.3%) | n=219 | %(44.9%) | | | |
| Online learning is better than traditional learning | Yes | 37 | 13.80% | 31 | 14.15% | 68 | 13.96% | 0.912 |
| | No | 231 | 86.19% | 188 | 85.84% | 419 | 86.03% | |
| Online learning gives full satisfaction about course | Yes | 35 | 13.05% | 27 | 12.32% | 62 | 12.73% | 0.810 |
| | No | 233 | 86.94% | 192 | 87.67% | 425 | 87.26% | |
| Face to face contact with instructor is necessary | Yes | 236 | 88.05% | 193 | 88.12% | 429 | 88.09% | 0.982 |
| | No | 32 | 11.94% | 26 | 11.87% | 58 | 11.90% | |
| Is online learning is convenient method of study | Yes | 67 | 25% | 51 | 23.28% | 118 | 24.22% | 0.661 |
| | No | 201 | 75% | 168 | 76.71% | 369 | 75.77% | |
| Online teaching should be made part of regular education | Yes | 62 | 23.13% | 54 | 24.65% | 116 | 23.81% | 0.695 |
| | No | 206 | 76.86% | 165 | 75.34% | 371 | 76.18% | |

12.31% of urban and 37.44% of rural students go far for avail the facility of internet,78.23% faced technical issues and 82.08% of urban and 91.78% of rural students faced electricity problem. On the other hand 78.85% of respondents said their study work increased due to e-learning and 52.15% students faced problem of privacy in their home. It is also shown in this table that 62.68% of urban and 76.25% of rural students feels stress while submitting online assignment and 76.86% of urban and 81.27% of rural students feels stress while appearing in online test/ exams.

learning is convenient method of learning while 75.77% didn't prefer it. 76.86% of urban and 75.34% of rural student said online teaching should not be made part of regular education.

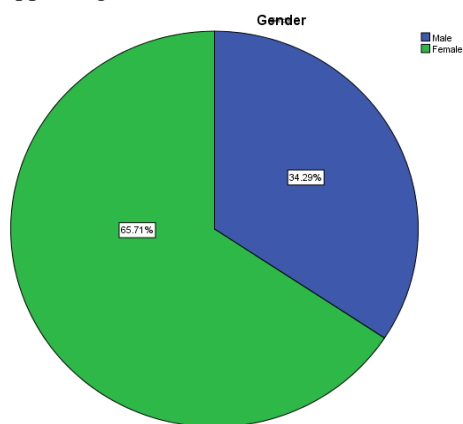


Figure No.1: Gender Distribution n (487)

Table.2 shows Preference of MBBS students towards online learning and traditional learning. Most respondents 86.19% of urban and 85.84% of rural didn't prefer online teaching. 86.94% of urban and 87.67% of rural students said they didn't have full satisfaction about course. 88.09% of Students prefer that face to face contact is necessary.24.22% said online

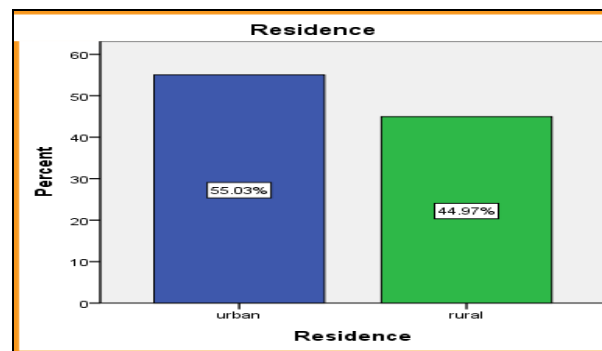


Figure No.2: Residence - n (487)

DISCUSSION

This study was conducted to observe the challenges of MBBS Student of urban and rural population during e-learning. In the currently situation corona virus disease (COVID 19) pandemic has had disturbed all lives and affected health and economy. The decision to shut down all educational institutions greatly affected the entire education system throughout the world. To fill in that gap many institutes across the globe came up with virtual teaching techniques like live or recorded video lectures. and started training of students and teachers for running online teaching.^{16,17} Pakistan being one of the developing countries and facing basic challenges like internet and electricity issues among other things. With these challenges students were facing many problems in their studies.

This study will highlight the issues of medical students as they faced a new situation and tried to cope with it. In present study main problems which were highlighted by MBBS student are related to internet and electricity issues. Mostly, 89.52% of respondents have internet facility among them 69.02% of urban and 82.64% of rural population have problem of internet signals. 12.31% of urban and 37.44% of rural students said that they go far from their home to avail internet facility, and 78.23% respondents faced technical issue. While 82.08% of urban and 91.78% of rural students faced electricity problem. However in a study conducted at Libiya suggested that most of their respondent reported that they had access to fourth-generation internet services with an acceptable or good internet connection.¹

On the other hand 75.37% from urban and 83.10% from rural students reported that their study work was increased due to e-learning. It is found in present study that 57.15% of rural students faced problem of privacy in their home as in rural areas they live in combined family system and online learning requires privacy to fully understand the concept of topic covered in lectures and for participation.

Another challenge that was observed was related to mental health. It is very difficult to submit online assignment and appear in online test/or exam in conditions like fluctuation or complete absence of electricity and slow speed of internet or other connectivity issues that build up stress among students. In this study 62.68% of urban and 76.25% of rural students suggested that they were stressed while submitting online assignment and 76.86 of urban and 81.27% of rural students feel stressed while appearing in online test/ exams.

Around 68.99% students also said they have lost their interest in studies due to facing such difficulties while attending online classes. Study of Sindiani and et al also shows that mostly their respondents did not attend their online lectures due to bad internet connection.¹⁹

In present study most respondents 86.19% of urban and 85.84% of rural didn't prefer online teaching. 86.94% of urban and 87.67% of rural students said they didn't have full satisfaction about course and they cannot easily understand course. 88.09% of Students prefer that face to face contact is necessary. 24.22% said online learning is convenient method of learning while 75.77% didn't prefer it. Study of Jamnagar shows that medical students prefer traditional teaching methods (57%) over e-learning classes. Hannay and Newvine also observed in their study that students prefer distance learning (e-learning) more than traditional teaching methods While in a Study of Riyad conducted by Rajab et al shows the preference of combining online with face-to-face instruction.^{9,20,21}

Although the online teaching is convenient method for the students and main advantages of online teaching are

the time and money saved from the expenses of travel and it is feasible for students as they can learn without going anywhere at the comfort of their own place also include opportunities for students to anonymously ask and answer questions.²²

Regarding a question related to making online teaching a permanent part of regular teaching in future most of the respondent of present study, i-e 76.86% of urban and 75.34% of rural student said online teaching should not be made part of regular education. In this regards Rajab et al also shows that their respondents were unhappy with the online learning experience. They wanted to return to conventional face to-face education right after the pandemic.²¹

CONCLUSION

It was concluded from the study that students belonging to urban and rural population both were facing problems of internet availability, electricity, privacy of learning and. It is shown that they have increase study workload and they feel stress during submission of assignment and test/exams because of internet and electricity problems. Most of students prefer traditional teaching rather than online teaching. As compare to urban and rural population, students belongs to urban population was facing less problem of internet and electricity (<0.001) than rural students.

Author's Contribution:

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| Concept & Design of Study: | Muhammad Ilyas Siddiqui, Rafaina Shah |
| Drafting: | Kanwal Naz Ariser, Rafaina Shah |
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| Revisiting Critically: | Rafaina Shah, Kanwal Naz Ariser |
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