

Online Teaching, a Big Challenge for Developing Countries during the Era of Covid 19, A Survey Conducted in Medical Students of Southern Punjab, Pakistan

Mukhtar Hussain¹, M. Ahmad Mukhtar², Amna Mukhtar³, Naila Tariq², Aeimen Khalid² and Rubina Mukhtar⁴

ABSTRACT

Objective: To find out perception of medical students and scope versus limitations of online teaching in field of medical education during the course of Covid-19 pandemic when schools, colleges and universities were shut down in emergency and online teaching was initiated with intention to fill the stopgap with little to no preparation, inadequate resources and scarce training of teachers

Study Design: Observational study

Place and Duration of Study: This study was conducted at the different medical colleges of southern Punjab from January 2021 to December 2021 for a period of one year.

Materials and Methods: Self designed online questionnaire was circulated among medical students of south Punjab. Response of students was collected, recorded and analyzed for.

Results: Number of total participants was 485. Satisfaction level of students was not optimum being less than 35%. Ground reasons behind were deficiency in pertinent resources and materials, technical problems, lack of favorable home environment for online learning, non-availability of internet facilities to most of students living in remote areas. 68.5 % students rebuffed continuation of online classes with main reason of being unable to learn without one to one classes and to maintain daily routine.

Conclusion: Online teaching is a big challenge for education department especially in highly specialized field of medical education and might lower not the standard of education but also skills and competency of front line soldiers of future. There is utmost need for strategic planning to uplift our online medical education system to strengthen, secure and accomplish our health care system.

Key Words: Online Teaching, COVID-19, Education, Medical Students, Health System

Citation of article: Hussain M, Mukhtar MA, Mukhtar A, Tariq N, Khalid A, Mukhtar R. Online Teaching, a Big Challenge for Developing Countries during the Era of Covid 19, a Survey Conducted in Medical Students of Southern Punjab, Pakistan. Med Forum 2022;33(3):132-136.

INTRODUCTION

Covid-19 pandemic is a big challenge of the day for healthcare system worldwide⁽¹⁾. Pandemic emerged from china in 2019 and entrapped most of the countries in whole world ^(2,3). Pandemic remained inauspicious and badly affected physical and mental health⁽⁴⁾. Millions of Covid 19 related deaths have been recorded.

¹. Quade Azam Medical College (QAMC), Bahawalpur.

². Nishtar Medical University, Multan.

³. Bakhtawer Ameen Medical College, Multan.

⁴. Department of Radiology. MINAR Cancer Hospital, Multan.

Correspondence: Rubina Mukhtar, Consultant Radiologist. MINAR Cancer Hospital, Multan.

Contact No: 0322-6188650

Email: binnamukhtar@hotmail.com

Received: January, 2022

Accepted: February, 2022

Printed: March, 2022

Most of the countries especially developing countries got their economy traumatized by pandemic leading to much challenges. Main focus of concern to utilize all available resources is to treat the infected patients, to control its further spread and to get out of economic losses, overwhelming the large adverse effect of pandemic on education system.

Lockdown is implemented by authorities as an emergency protocol in states of pandemics. During lockdown, the public is compelled to stay at home and avoid unnecessary visits at public a place that is another key step as a protective measure. Lockdown has worst effects not only on the economy but also the academic career of students due to closure of teaching universities and postponement of examinations⁽⁵⁾. A survey by UNESCO in 2017 showed that 264 million children are not registered in school worldwide⁽⁶⁻⁸⁾. Covid pandemic worsened the situation due to shut down of educational institution from Montessori to higher education level including all technical or non-technical level of teaching institute for in definite time⁽⁹⁾.

Students are the assets of any country who build the nation. Their education is already compromised in developing countries like ours not only because of poor strategic planning and least priority given in financial budgets but lack of public awareness, resources and poverty are other important factor. Lock down and closure of educational institutes further aided to downfall of education level of our students based on shifting of formal education to online. There is no didactical replacement of formal education involving teacher –student direct interaction but in the era of covid-19 and lockdown there was no other option then online distant learning to continue teaching with intention to compensate or to minimize the academic loss of university students especially students of health education⁽⁸⁾.

MATERIALS AND METHODS

Self-designed questionnaire Google Performa was designed and distributed online or on whatsapp groups to conduct this observational survey. In addition to Scope and limitations, aptitude of medical students towards online teaching was questioned. Total 485 students both from preclinical and clinical classes responded to questionnaire. Students who willingly filled Performa completely were included while incompletely filled Performa excluded from the study. Response of students was recorded and shifted to spss 24 software for analysis. Response to questioners is shown in Table 01. Percentages and frequencies were

applied to demonstrate the demographic data (Table 02).

RESULTS

Most of students were not satisfied with online teaching and preponderance was of clinical students. Majority of students were not in favor of continuation of online classes (Graph 01) based on two major reasons, First was the Most of students have no previous experience of online classes (Graph 02) while a significant majority forming 66% of total from remote areas were not even taught computer or electronic media in schools and even were unaware of computer use (Graph 3&4). Second main reason was the lack of training and practice of teachers for online teaching due to abrupt decisions by authorities to replace classroom teaching by digital teaching being the only solution to fill in the gap.

A considerable number of students (63%) showed casual attitude towards online classes and used to attend classes in bed without fresh up while a very small proportion of students remained disciplined for online classes. Mobile or Tab remained the most popular device used for digital classes (Table 03). Maximum rating that was 71% for digital learning was given to basic subjects that does not need any hands on or practical sessions. Clinical students were more worried for their clinical classes as direct interaction to patients was not possible via online system.

Table No.1: Showing response to Questionnaires

Sr#	Questions	Yes		No		Rare/ to some extent	
		Frequency	%tage	Frequency	%tage	Frequency	%tage
1.	Was computer taught in school?	226	32.8	159	67.2		
2.	Do you use computer for assignments?	348	10	49	71.7	98	18.3
3.	Have you used online teaching system before Covid -19?	82	16.8	333	68.7	70	14.4
4.	Would you like to continue online teaching in future?	153	31.5	332	68.5		
5-	Are you satisfied with online teaching?						

Table No.2: Showing Demographic features n=485

Demographic Feature	Frequency	%tage
Gender		
Females	274	56.5
Male	211	43.5
Total	485	100
Age		
<20	50	61
>20	189	39
Total	485	100
Study year		
Preclinical (1 st + 2 nd year)	213	36.9
Clinical (3 rd + 4 th + 5 th Year)	141	24.4
Total	485	100

Table No.3: Devices used for online teaching

Sr #	Device	Number of students used	Percentage
1-	PC	9	1.9
2-	Laptop	52	10.7
3-	Mobile/Tab	384	79.2
4-	oportunistic	40	8.2
	Total	485	100

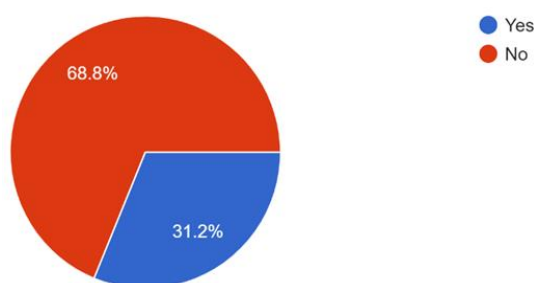


Figure No.1: Would you prefer to continue with online teaching? – 481 response

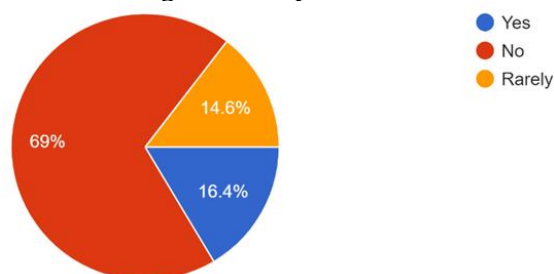


Figure No.2: Have you used online teaching and coaching systems BEFORE covid-19 lockdown? – 481 response

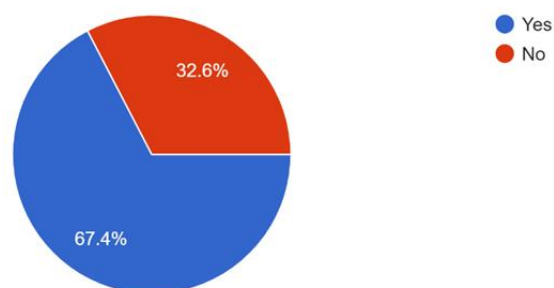


Figure No.3: Were you taught computer in school? – 484 response

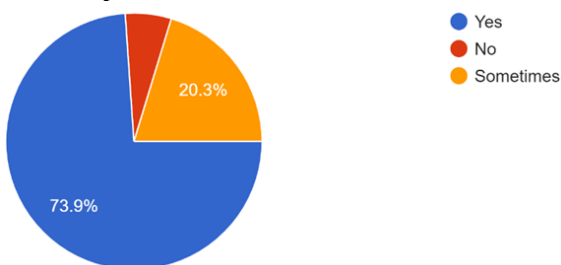


Figure No.4 Do you use computers/mobiles for your assignments? – 484 response

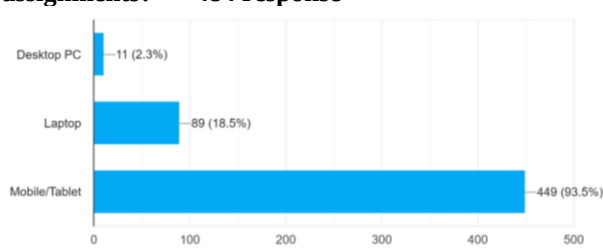


Figure No.5: What device you use for online learning purposes? – 480 response

DISCUSSION

Covid 19 is a highly infective disease presenting with Pneumonia like picture, caused by corona virus. It's a communicable disease that has proven transmission via animals and direct contact with infected human via touching, coughing and sneezing^(2,10). There is no definitive treatment protocols rather supportive treatment is the only elucidation for infected patients. Prevention is foremost affective in controlling this pandemic and is being exercised worldwide^(4,11,12). Thus the prime focus is to control its spread. Isolation and quarantine of infected patients are major measure to control the spread of infection. Use of face mask, frequent hand wash, Social distancing and to stay at home or self-quarantine are the key measures to prevent its spread^(2,4,13).

It is imperative to stay at home to implement social distancing and to put this deadly disease behind bar. Different studies have shown significant impact of indoor confinement on mental stress and anxiety levels^(4,14). It is far much damaging for university students to stay home free of assignments. Lock down and shutting schools, colleges and universities was the only option to protect our children from deadly pandemic of Covid-19⁽¹⁵⁾. Temporary closer of educational institutes was decided by number of increasing countries including Pakistan.

In this epoch, online teaching or learning is the best possible solution to keep students busy on one end and to minimize their academic loss on the other end⁽¹⁴⁾.

Although COVID 19 is a global issue and affected whole world but is more challenging in developing countries because of strain on already compromised health department and poor to negligible utilization of electronic media in education system. There was a great lapse of prerequisites for online teaching in our education department. Department was neither equipped nor up for it. Neither teachers nor students were proficient or having aptitude for online teaching⁽¹⁶⁾. All these together intensely affected our education quality especially that of medicine. Medical students are highly precious to be future frontline soldiers against these types of disasters⁽²⁾. A paramount concern is indispensable to scrutinize and rectify the short falls of online teachings.

Covid crisis forced the shifting of formal classroom education to distant learning that was taken as non-formal earlier. Seminars shifted to webinar and personnel meetings shifted to virtual ones⁽¹⁷⁾. A study by Lederman shows that both students and teachers are in a situation to face and pass this unwilling process of distant teaching and learning⁽⁶⁾. No other stopgap is on record to compensate the huge academic loss especially in field of medicine that is highly noteworthy. Medical education needs face to face classes and physical clinical training that was suspended during eve of

COVID for the sake of physical health of medical students who have always been at high risk of exposure to communicable diseases due to direct interaction with patients during wards classes. Abrupt decision of authorities to shift to online classes in the wake of their time and academic loss initially created lot of problems on both sides. Students were neither use to nor aware of this genre. Similarly teachers especially of our country being under developed country were not prepared for online classes. Lack of preliminary or rudimentary teachers' trainings reverberated in hassles of preparing for online lectures and presentations. More over infrastructure and resources for online classes were insufficient too. In sum, total forced students to continue learning at odds with their satisfactory level compromising the quality of education.

Online teaching has its own cons and pros. Multiple advantages include absent physical boundaries and convenient for students to learn in their comfort zone. Nevertheless it has its own challenges, even as one to one interaction being the best form of communication is usually best perceived in comparison to remote classes. One study conducted by Graham & Pasi aided the stumbling blocks of online teaching and elaborated how prompt decision of school closure left no time for strategic planning and planned transition to remote learning. Examination oriented syllabi remained no longer fit for purpose as all exams and test were held up. Most of students bump into anxiety of uncertainty for their academic year progress in university⁽¹⁸⁾. Not only might this but slowed down the exam progress especially of those students who find no access to technology or befitting learning environment at home. In a nut shell, this pandemic has transformed centuries old face to face learning and teacher student relationship to that is technology driven one. Many factors including complexity, technical issues, insufficient infrastructure to consolidate a new medium are coupled with Stumbling blocks to assimilate multimedia based distant learning⁽¹⁹⁾.

CONCLUSION

During the era of Covid-19, Unplanned and unanticipated execution of online teaching on hit or miss basis in contemplation of keeping students at home concerning their health has been a big challenge for under developed countries like ours with skimpy infrastructure for said purpose. This is a matter in question demanding instant and efficacious measures for tactic plans to minimize the decline in education, trainings and skills levels of medical students that might lead to downturn of our health care system.

Author's Contribution:

Concept & Design of Study: Mukhtar Hussain
Drafting: M. Ahmad Mukhtar,
Amna Mukhtar

Data Analysis: Naila Tariq, Aeimen
Khalid, Rubina Mukhtar
Revisiting Critically: Mukhtar Hussain, M.
Ahmad Mukhtar
Final Approval of version: Mukhtar Hussain

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES

1. Modi PD, Nair G, Uppe A, Modi J, Tuppekar B, Gharpure AS, et al. COVID-19 awareness among healthcare students and professionals in Mumbai metropolitan region: a questionnaire-based survey. *Cureus* 2020;12(4).
2. Mukhtar MA, Hussain M, Tariq N, Mukhtar R. Evaluation and comparison of Awareness and practice of protective measures for COVID-19 between preclinical and clinical Medical students in developing country: Pakistan. *Technium Soc Sci J* 2021;17:104.
3. Ikhlaiq A, Hunniya B-E, Riaz IB, Ijaz F. Awareness and attitude of undergraduate medical students towards 2019-novel corona virus. *Pak J Med Sci* 2020;36(COVID19-S4):S32.
4. Mukhtar MA, Sajid M. Impact of the Covid-19 Pandemic on Anxiety Levels of Medical Students in Pakistan. *NETSOL: New Trends in Social and Liberal Sciences*. spring 2021;6(1):34-6.
5. Li HY, Cao H, Leung DYP, Mak YW. The psychological impacts of a COVID-19 outbreak on college students in China: a longitudinal study. *Int J Environmental Res Public Health* 2020;17(11):3933.
6. Mishra L, Gupta T, Shree A. Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *Int J Educational Res Open* 2020;1:100012.
7. Mohamed Y. Children at increased risk of harm online during global COVID-19 pandemic-UNICEF 2020.
8. Reuge N, Jenkins R, Brossard M, Soobrayan B, Mizunoya S, Ackers J, et al. Education response to COVID 19 pandemic, a special issue proposed by UNICEF: Editorial review. *Int J Educational Development* 2021;87:102485.
9. Martinez J. Take this pandemic moment to improve education. *Edu Source* 2020.
10. Paules CI, Marston HD, Fauci AS. Coronavirus infections—more than just the common cold. *JAMA* 2020;323(8):707-8.
11. Cheng HY, Jian SW, Liu DP, Ng TC, Huang WT, Lin HH. Contact tracing assessment of COVID-19 transmission dynamics in Taiwan and risk at different exposure periods before and after symptom onset. *JAMA Int Med* 2020;180(9):1156-63.

12. Lai S, Ruktanonchai NW, Zhou L, Prosper O, Luo W, Floyd JR, et al. Effect of non-pharmaceutical interventions to contain COVID-19 in China. *Nature* 2020;585(7825):410-3.
13. Nguyen HT, Do BN, Pham KM, Kim GB, Dam HTB, Nguyen TT, et al. Fear of COVID-19 scale—associations of its scores with health literacy and health-related behaviors among medical students. *Int J Environmental Res Public Health* 2020; 17(11):4164.
14. Jena PK. Online learning during lockdown period for covid-19 in India. *Int J Multidisciplinary Educational Research (IJMER)* 2020;9.
15. Martinez J. Take this pandemic moment to improve education. *Ed Source* 2020;22.
16. Kubai E. A critical analysis of the education sector in kenya during the onset of Covid-19 period. *J Edu Practices* ISSN 2617-5444 (ONLINE) & ISSN 2617-6874 (PRINT). 2020;3(1):86-97.
17. Anderson T. The theory and practice of online learning: Athabasca University Press; 2008.
18. Graham A, Pasi S. Las escuelas migran a un servicio en línea, pero no todos los niños comienzan digitalmente iguales. *Enseñanza de emergencia a distancia: textos para la discusión*. 2020:8-9.
19. Boyles PC. Maximizing learning using online student assessment. *Online J Distance Learning Administration* 2011;14(3).