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Experiences and Challenges of Educators and Learners During COVID-19; A Qualitative Phenomenology Study

Mushyyada Durrani,[1] Khurram Naushad,[2] Mehwish Durrani,[3] Jodat Askari,[4] Uzma Siddique,[5] Zainab Akbar[4]

1. Peshawar Dental College, Peshawar, Pakistan
2. Khyber Girls Medical College, Peshawar, Pakistan
3. Rehman Medical College, Peshawar, Pakistan
4. Rehman College of Dentistry, Peshawar, Pakistan
5. Peshawar Medical College, Peshawar, Pakistan

ABSTRACT

Background: The COVID-19 pandemic transformed healthcare education, shifting medical and dental fields to online learning due to lockdowns. Transitioning practical disciplines online posed significant challenges.
Objective: To assess the consequences of covid-19 on the clinical and communication skills of medical and dental students in Peshawar Pakistan.
Materials and Methods: This qualitative study employed a phenomenological research design, using semi-structured interviews and focus group discussions. Purposive sampling included thirteen faculty interviews and three student focus groups from dental and medical schools in Peshawar, Pakistan. Descriptive content analysis identified themes from the transcripts.
Results: Six themes emerged: challenges in online teaching and learning, communication skills, hands-on clinical skills, assessments, psychological well-being, and comparisons between face-to-face and online learning. Students expressed concerns about the pandemic's impact on their clinical skill development and exam rescheduling, which affected their mental well-being and learning. While didactic lectures were satisfactory, students preferred traditional sessions, finding online learning challenging due to its unfamiliarity. Online assessments, particularly of psychomotor and affective skills, were problematic, and many students experienced psychological distress due to uncertainties about their future practice.
Conclusion: Effective online education depends on resource access, as the pandemic highlighted the digital divide's impact on academic success. Continuous support and training in online tools, ensuring internet connectivity, and providing necessary devices are essential for educators and learners. Addressing the digital gap is crucial to ensure equal access to resources in educational institutions.
Keywords: Challenges, Covid 19, learners, Medical teachers, Students.

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INTRODUCTION

The initial emergence of Coronavirus Disease (COVID-19) traces back to December 2019 in Wuhan, China.[1] Swift transmission led to a widespread outbreak, impacting not only China but also numerous countries globally. The World Health Organization (WHO) formally recognized it as a global pandemic on March 11, 2020.[1] The escalated risk of exposure and transmission necessitated adaptations in both healthcare delivery and the educational landscape.[1]

The global community was unprepared for this unexpected crisis. Lockdown measures enforced during the pandemic significantly disrupted education across all levels. Among the hardest-hit were frontline healthcare workers and medical and dental students.[2] They experienced heightened stress levels stemming from worries about interacting with non-medical acquaintances and family members. Additionally, concerns regarding the continuity of educational activities and the development of practical skills for medical and dental graduates were legitimate, given the hands-on nature of medicine and dentistry.[2]

Correspondence: Dr. Khurram Naushad
Lecturer, Department of Medical Education
Khyber Girls Medical College, Peshawar, Pakistan
Email: khurram.naushad@yahoo.com

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The field of medical education has felt the effects of the pandemic, witnessing a disruption in conventional teaching methods due to social distancing mandates and the necessity for remote instruction.[3] In response, medical institutions have adopted innovative technologies and methodologies, including online lectures and virtual simulations, to guarantee the provision of top-tier education and training to students, despite the challenges posed by the circumstances.[3]

Eliminating direct patient care, a fundamental aspect of the dental curriculum, has proven to be one of the most daunting challenges encountered.[4] Dental schools are required to assess the competency of dental students while also maintaining flexibility to adjust from the initial curriculum. Dental associations globally have established frameworks for dental education to ensure optimal academic standards for undergraduate programs.[5]

To uphold the integrity and continuity of medical education, educators must securely administer lectures. However, instructors faced challenges in providing demonstrations, and components related to patient instruction were inadequately addressed. Consequently, both patient treatment and students' completion of clerkships have been compromised due to the premature halt of clinical rotations.[6,7] Students' clinical rotations involve interacting with patients and learning essential psychomotor skills, such as communication and hands-on techniques.

The disruption caused by lockdown measures has significantly impacted the learning process. More than a year into the pandemic, a significant portion of trainees resorted to self-study without proper supervision or guidance due to the absence of infrastructure supporting online instruction and a shift in focus towards patient care.[8] Upon the resumption of instructional activities, students were restricted from participating in most clinical duties to prevent overcrowding and minimize the risk of virus transmission. Instead, emphasis was placed on didactic lectures and brief clinical demonstrations.[8] Consequently, various aspects of clerkships, short-case demonstrations, direct patient communication, and counseling were discontinued, leading to the loss of inexperienced students with limited clinical confidence and expertise.[8]

These challenges hinder optimal education and restrict opportunities for in-person learning. Alterations in the training schedule, including prolonged breaks from formal classes during lockdowns and reduced exposure to clinical cases upon resumption, alongside an increased focus on simulations, didactic lectures, and postponed assessments, have negatively impacted exam performance and practice competency.[9] Since the onset of the pandemic, multiple disruptions have occurred in learning activities, affecting the duration of instruction. In contrast to the common practice of early student graduation in several developed nations.[9]

Nonetheless, educators are obligated to devise strategies to continue providing patient care and medical education amid the pandemic. Government entities should uphold ethical principles grounded in virtues such as courage and selflessness.[1] In response to the cessation of clinical clerkship rotations, an alternative virtual avenue for clinical exposure has been proposed.[1] This involves engaging in patient interviews, collaborating on treatment planning with assistants, assisting with administrative tasks, and providing counseling to patients regarding their health, illness, and prognosis. Through these activities, medical students have the opportunity to adopt the role of healthcare providers.[1]

Obtaining the viewpoints of medical and dental students regarding the impact of the COVID-19 Pandemic on their communication skills and performance would contribute valuable qualitative insights to the existing body of research. These students represent a unique cohort facing unprecedented circumstances in the twenty-first century. As integral stakeholders in the healthcare education system, their perspectives should be considered when formulating policies.

MATERIALS AND METHODS

This qualitative study was designed to facilitate a phenomenological inquiry. Kirkpatrick's theoretical framework was used to guide the analysis and interpretation of the data. Faculty members participated in semi-structured interviews, while medical and dental students engaged in focus group discussions (FGDs). Utilizing a semi-structured guide, the objective was to uncover the experiences of medical and Dental students during the lockdown. These interviews and FGDs were conducted face-to-face at Rehman Medical Institution (RMC, RCD).

A purposive sampling method was employed to recruit 13 faculty members who taught students in Covid-19 and 21 students as participants for the study. Students and faculty who experienced clinical and basic sciences online education during pandemic were included in the study.

Final year MBBS & BDS students currently undertaking their house job and fourth year MBBS students, who received online instruction during their fourth year, were included. total of 13 faculty interviews and two focus group discussions (FGDs) involving six participants each and one FGD involving nine participants were conducted. Saturation was deemed to have been attained when no new information emerged during subsequent reviews of the recorded interviews. This decision was made after careful consideration of the collected data.

This study did not involve any patients. Instead, the participants were faculty members and undergraduate students in medical and dental programs from a private sector institution. The IRB approval was limited to my own institution where I was employed.

The interview guide was designed by the researchers by careful consideration of the literature and sent to two experts for validation.

Participants were contacted one hour prior to their scheduled time to confirm their availability. On average, faculty interviews lasted 15 minutes, while focus group discussions (FGDs) with students spanned 45 to 60 minutes. All interviews were recorded using an electronic recorder for subsequent transcription. Prior to each interview, formal verbal and written consent was obtained, outlining the study's purpose and granting permission for audio recording. Participant-provided information was treated with utmost confidentiality, and participant names were coded to ensure anonymity. No follow-up interviews were conducted.

Data collection occurred between 15th September 2022 and 30th November 2022, comprising two main components: demographic details and open-ended questions. No personally identifiable information, such as names or educational institution names, was collected. Demographic information encompassed the participant's city of origin, enrollment status in a private institute, and their year of study in medical or dental school.

During the interviews, participants were prompted with additional explanatory questions to gain deeper insights into their responses. The transcription was done manually by the researchers. Audio recordings were made, and field notes were taken during the sessions.

Transcription of the interviews commenced concurrently with the interview process, continuing until saturation was reached. Following 13 interviews, saturation was determined as no novel information was forthcoming. Member checking was performed by sending transcripts to participants for review and potential corrections. Any suggested changes were incorporated into the transcripts before commencing data analysis.

The data were subsequently analyzed manually by all investigators, employing a simultaneous and iterative approach. The decision was made to conduct a manual analysis to provide a contextual and personalized interpretation. The framework method was utilized to construct a table facilitating the management of the substantial volume of gathered information. Thematic analysis was conducted through a series of steps, typically involving six stages: 1. familiarization, 2. coding, 3. topic generation, 4. theme review, 5. theme definition, and 6. write-up10. Data coding was carried out based on thematic areas and descriptions developed during the analysis process. A total of 178 codes were identified and subsequently merged into 25 categories. These categories led to the emergence of 15 subthemes, which ultimately resulted in six main themes. Duplicate soft copies of the entire data collection were created as a backup measure to ensure data security.

RESULTS

Six themes were identified through the analysis of the data.

Themes	Sub-Themes
Challenges for online teaching and learning	Pros of Online teaching & learning
	Cons of Online teaching & learning
Challenges for communication skills	Internet & network issues
	No communication with patients
Challenges for hands on clinical skill	interpersonal interaction
	Learning psychomotor skill in virtual environment
Challenges for assessment	Lack of fidelity
	Developing and administrating online assessment
Impact of psychological wellbeing	Proctoring issues
	Psychological stress
Comparing of face to face and online learning	Financial stress
	Didactic lectures VS recorded lectures
	Lack of training of faculty

The data analysis findings are arranged into themes based on emergent codes. This contains respondents' thoughts and experiences with the impact of COVID-19 learning on their educational competencies, as well as the problems they encountered when acquiring online education. The topics and sub-themes that emerged from the data are summarized.

During the COVID-19 pandemic, the change from in-person to online education presented various obstacles. Students and instructors had internet access challenges, particularly in distant places. Interaction in online classes was low, with many students turning off their cameras, making engagement impossible. Instructors struggled with new technology and handling small group conversations online. Despite these challenges, online learning offered some benefits, like the ability to access recorded courses.

Online examinations presented challenges for both staff and students, mostly as a result of erratic internet connectivity. Exams that are taken online are unsupervised, which makes cheating more likely. The usage of webcams during tests was prohibited due to cultural restrictions, raising questions over academic honesty. One major obstacle was that clinical skills could not be taught or evaluated online.

The interruptions brought on by the pandemic produced psychological stress in the students. Anxiety was sparked by rushed or delayed tests, missed clinical rotations, and less one-on-one time with teachers. Their anxiousness was exacerbated by worries about the caliber of their education and employment opportunities in the future. Concerns among the students were their clinical competence and the consequences of being branded as "COVID-time graduates."

Face-to-face learning was favored for practical tasks because it allows for more engagement and immediate feedback from instructors. Students and teachers liked the direct communication, body language, and eye contact that in-person sessions provided, as these were critical for effective learning, particularly in medical and dentistry schools.

Online courses were more flexible and provided access to a larger selection of subjects, but they were less motivating and engaged for students. Students began to approach learning more casually as a result of recorded lectures; they frequently put off watching the lectures and lost the chance to ask questions. Test and practical exam results suffered as a consequence of this disengagement.

Challenges for Communication in online learning
Lack of Patient Communication and interaction
Communication skills among students were significantly impacted by COVID-19, mainly at home, depending on online lectures. It was challenging to see instructors and fellow students; the only way to get in touch with them was by phone. Interacting with patients during the busiest, most valuable days was impossible. Online teaching during COVID-19 negatively impacted Student-Patient interaction because they stayed at home and did not visit them.

"Let me tell you what I can about these students' abilities because they did not get a chance to get exposed to clinical settings or the communication skills that develop when interacting with patients…." interview 1.

Due to a lack of clinical exposure, COVID-19 Pandemic impacted their interpersonal skills, particularly with patients. They felt that their professional grooming, which included learning about the patient's background and how to connect with them and deal with them, was insufficient.

Students' opinions on communication vary depending on who they are talking with; if it is a patient, you would prefer to speak to them in person or perform a clinical examination. And they must receive proper communication skills training for this.

"My communication ability has been impacted by COVID-19, mainly when it was at its peak, and we were all at home, just watching online lectures. Because I wouldn't meet my instructors or colleagues every day and could only reach them via phone, it was challenging to get in touch with them. Additionally, we were supposed to speak with our patients on the days of important peak activity to understand how they interacted. I didn't see any patients and stayed at home. So yeah, now that the COVID-19 Pandemic is gone, I think I might have difficulty interacting with patients…." Excerpt FGD 1.

Challenges for Clinical skills development
Lack of Hands-on experience
Most students thought a lack of practical experience was detrimental to skill development, which caused some to worry about their future careers as doctors. Although the vast majority of students continued to have favorable experiences, emphasizing both their own and patients' safety, most of them also reported that having fewer face-to-face interactions had hampered their ability to develop rapport with patients. It was partially caused by COVID-19 infection's restrictions, including a decline in clinical capacity and social distance, as well as a drop in the number of patients wanting to visit the dental facility.

"Because we didn't have enough cases for them to gain the expected experience and competency, it affected their level of competency compared to pre-COVID." Because many patients were afraid to come to the clinic, the clinical department suffered greatly, affecting the students' competency …" Interview 3.

As a substitute for clinical practice, online learning has drawn criticism from certain students who claimed that "in general, there was a decreased quantity of quality teaching time due to the lack of clinical time." Shorter rotations and a lack of clinical experience hampered skill acquisition and specialty exposure; even if disruptions are brief, they may raise concerns about long-term problems for physicians looking to advance their careers.

"Acquiring hands-on clinical skills during the COVID-19 Pandemic was challenging because most classes were online. We were not participating actively in any of such activities. We're only reading books and listening to our teachers, but we're not practicing anything. But dentistry is clinical, mainly. So, I say that had an impact on my clinical skills…" Excerpt FGD 2.

DISCUSSION

The objective of this study is to analyze and evaluate the challenges associated with online instruction and learning during the COVID-19 pandemic. This was the first instance in Pakistan where lectures were delivered online due to the uncertainty surrounding the reopening of universities for in-person instruction.[12] Both students and teachers faced numerous challenges, such as network issues, lack of student motivation, and punctuality. Engaging students in online lessons proved difficult. Small group discussions were not feasible online, and many teachers and students were inadequately trained in the required technology. Consequently, in-person sessions were not possible.[13-15]

Contrary to my current study, Papapanoun et al.[16] and Hattar et al.[13] reported that online group discussions were fully implemented. However, this was not the case in my study, as online group discussions were unfeasible, and many teachers and students lacked sufficient training in online teaching.

Teachers found online assessments challenging and disadvantageous, with poor MCQ and SEQ results due to widespread copying from the internet. Concerns persisted about evaluating student preparedness for annual exams. Challenges included internet connectivity issues, software glitches, difficulties in designing and administering assessments, and providing timely feedback. Additionally, clinical evaluations were not feasible online, leaving students unprepared for final exams.[13]

Online sessions were preferred for theoretical lectures, while in-person instruction was deemed essential for clinical training. Educational stakeholders were worried about student disengagement due to facility closures.[13] Although most students favored face-to-face sessions for better evaluation and immediate feedback, they appreciated online lectures and completed clinical activities without issues. The primary student concern was incomplete clinical training impacting their annual exams and medical knowledge. Both students and teachers were also worried about infection risks during clinical rotations.[17]

During the Focus Group Discussion, medical and dental students deliberated on the diverse effects of COVID-19 on their clinical education. The pandemic significantly hindered many students' clinical skill training, exam preparation, exposure to specialties, and career advancement. Students also reevaluated their roles as learners, contributors, educators, and advocates. They characterized this perspective as a call for adaptability, pride in their profession, and a desire to assume a more influential empowering role in the future. This perspective underscores the exceptional qualities of the students and offers potential insights into how these future healthcare providers envision the evolution of their responsibilities.

While there was considerable emphasis on students' interactions with educators and the enhancement of their competencies, improving communication skills during COVID-19 presented significant challenges. The shift to online education posed limitations as students lacked alternative avenues for learning, exacerbating the difficulty of acquiring communication skills, particularly in patient interaction. The absence of clinical exposure due to staying at home further hindered students' clinical abilities and interpersonal skills, particularly those involving patient interaction. COVID-19 underscored the impact of inadequate clinical exposure on students' ability to effectively communicate and interact with patients. Students perceived deficiencies in their professional preparation, particularly in understanding patient history and effectively engaging with them. In dentistry, proficiency in communication and clinical skills is indispensable, as adequate patient information and satisfaction are paramount in treatment planning and procedures. For this reason, the student needed to interact with the patient in person to learn the proper methods of communication[13] Due to the fact that the sample population in Castro-Vale was postgraduate Salgado, as opposed to Salgado, which focused on health care professionals who were already familiar with patient interactions and communication.[12] In contrast, my study sample consisted of undergraduates who had been taught online teaching.

Students lacked awareness of the patients' care requirements, as clinical skills could not effectively be taught online. Despite many instructors providing recordings of their clinical practice, these resources had minimal impact. The substitution of clinical practice with online learning faced criticism from some students, who argued that the reduced quantity of quality teaching time resulted from the absence of clinical exposure. Limited interactions hindered students' capacity to establish rapport with patients and restricted patient engagement, as noted by the students.[11-13]

CONCLUSION

This study highlights the significance of resource accessibility in determining students' ability to effectively engage in online learning and teaching. Challenges such as network coverage, power interruptions, and the requirement to attend clinical specialties while participating in lectures were reported. Consistent with the findings of this study, students expressed disinterest due to these challenges but remained hopeful for improvement and a return to in-person learning. The existing digital divide exacerbated by the COVID-19 pandemic has negatively impacted students, thereby affecting their academic performance adversely. Effective student interaction is deemed crucial for successfully implementing the mandated shift to online education. In essence, while physical distance is necessary, maintaining social connectivity is imperative.

Ethical consideration

This study was approved by Institutional Review Board Rehman Medical Institution, Peshawar, Pakistan.

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Conflict of Interest

Authors declared no conflict of interest.

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AUTHORS' CONTRIBUTION

The following authors fulfill authorship criteria as per ICMJE guidelines;

Durrani M, Naushad K:	Substantial contribution to conception and design, drafting the manuscript, final approval, agreed to be accountable for all the work.
Durrani M, Askari J:	Substantial contribution to conception and design, data acquisition, drafting the manuscript, final approval, agreed to be accountable for all the work.
Siddique U:	Analysis and interpretation of data, drafting the manuscript, final approval, agreed to be accountable for all the work.
Akbar Z:	Analysis and interpretation of data, critical revision, final approval, agreed to be accountable for all the work.

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