Navigating Remote Learning During the COVID-19 Pandemic: A Qualitative Exploration of First-Year Medical Students' Experiences in Pakistan

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Abstract: During the COVID-19 pandemic, the introduction of an online teaching system greatly affected the academic, emotional, and social experiences of medical students. Thus, this study was designed to determine personal experiences to help explore more supportive educational practices.
This was a qualitative study in which structured interviews were taken from first year medical students across different areas of Pakistan (Lahore, Abbottabad and Rawalpindi). Themes were systematically identified and developed from students' experiences and narratives via an inductive coding approach.
Five major themes were developed : (1) Emotional and psychological burden experienced by students, including anxiety, isolation, and mental health issues; (2) Academic Challenges, involving problems with content delivery, insufficient practical exposure, and less student engagement; (3) Social Connection and Support, feeling disconnected from peers and lack of university support; (4) Adaptation and Perseverance, with students showing personal growth and strategic use of coping mechanisms; and (5) Institutional Response and Recommendations, urgent need for better support methods.
Although remote learning brought challenges to medical students, they showed great resilience and adaptability. Medical schools should adopt a hybrid learning system to expand mental health support and foster stronger connections between students and teachers to handle future crises.

Keywords: Medical Education, Remote Learning, Qualitative Study, Mental Health, COVID-19.

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1. Introduction

The COVID-19 pandemic resulted in a sudden interruption of the medical education system worldwide, thus resulting in a transformation to online learning methods, replacing face-to-face teaching. This transition brought multiple challenges, especially in low- and middle-income countries where technological infrastructure and institutional preparedness were often lacking [1], [2].

Medical education relies mostly on learning by experience, clinical exposure, training in procedures, and direct peer or faculty interactions [3]. Digital platforms were not able to fully replace these immersive experiences, thus leading to concerns over clinical competence, engagement, and mental well-being [3], [4]. A study conducted in India found that 78% of medical students believed that lack of hands-on practice compromised their learning [5]. In

Pakistan, a similar study reported increased student anxiety, lower motivation, and overall dissatisfaction with the quality of virtual education during the pandemic [6].

Although many quantitative studies have measured the effectiveness of online learning, fewer have used qualitative research to highlight the personal realities of medical students. Understanding these nuanced perspectives is crucial for designing resilient and student-centered educational policies.

This study investigates the personal experiences of undergraduate medical students in Pakistan during remote learning during the COVID-19 pandemic, targeting academic, emotional, and institutional factors.

2. Methods

2.1 Study Design and Setting

A qualitative phenomenological design was employed to understand students' experiences during the remote learning period. The study involved students in first-year medical programs from different cities of Pakistan, including Lahore, Abbottabad, and Rawalpindi during 2020–2021. A total of twenty students were approached to participate in the research. Sampling was done using a convenience snowball approach. Each student was requested to recommend other students who were willing to share their feelings. Written informed consent was obtained from all participants, and their right to withdraw at any time was also explained.

2.2 Data Collection

Semi-structured interviews were conducted via Zoom or telephone, lasting 45-60 minutes. Questions explored emotional reactions, academic challenges, coping strategies, and perceptions of institutional support. The interviews with the students were recorded with their consent. Anonymity was ensured. The tapes from interviews were destroyed once the results were written.

2.3 Data Analysis

Data were transcribed word for word to ensure accuracy. Thematic analysis was carried out using Braun and Clarke’s six-step framework. Codes were grouped into broader themes, and peer debriefing was used to ensure credibility. Five main headings were developed from the data for interpretation. The accuracy of the category system was verified by two independent researchers, and minor modifications were made.

3. Results

3.1 Emotional and Psychological Impact

Students described initial feelings of anxiety, nervousness, and uncertainty (P2, P8, P9, P10, P14, P20). Social isolation and long duration on screens resulted in mental health issues,

including low motivation and emotional fatigue. Coping mechanisms included hobbies, counselling, meditation, and exercise (P2, P8, P10, P11, P13, P14, P20).

3.2 Academic Challenges

There was difficulty in concentrating due to distractions at home, and the learning method was labelled as passive. (P2, P8, P10, P12, P14). Complex subjects such as anatomy and biochemistry were particularly difficult without hands-on learning (P2, P8, P9, P10, P12, P13, P14, P20). Students also reported screen fatigue and disengagement.

3.3 Social Connection and Support

Most students felt lonely and isolated from their fellows and teachers. (P2, P8, P10, P13, P14, P20). Although online counselling sessions were provided by some institutions but it was found to be inadequate. (P2, P8, P10, P11, P20).

3.4 Adaptation and Resilience

The students developed coping strategies for this difficult situation in the form of digital tools, group chats, and study groups (P2, P8, P9, P10, P11, P12, P13, P20). The positive aspects described by participants included improved self-discipline, digital fluency, and emotional strength.

3.5 Institutional Response and Recommendations

There were mixed perceptions regarding the role of universities in handling this transition (P2, P6, P9, P20). The majority demanded more structured peer mentoring, virtual labs, and hybrid learning methods (P2, P8, P10, P12, P14, P20). More personalized support and frequent monitoring were also suggested.

4. Discussion

This study demonstrated the impact of online education during COVID-19 on medical students in Pakistan. Students suffered emotional disturbance, non-engagement in academic activities, and social deprivation, which is consistent with other research studies. [5]; [8]; [9].

The participants described emotional distress in the form of anxiety, loneliness, and lack of motivation, which aligns with global findings, where medical students experienced higher levels of stress and burnout during the pandemic [10]. Almost 62% of medical students had symptoms of depression during lockdown, according to a cross-sectional study in Lahore during lockdown [7].

Non-availability of clinical exposure and interaction with teachers negatively affected students' satisfaction and learning outcomes. Similar impact was shown in a study from Iran, where students expressed fear of being underprepared for clinical responsibilities [11]. The

students in this study raised concerns that without hands-on practice, it was difficult to grasp practical subjects.

Despite all these challenges, the adaptation and resilience were worth noting. Emotional growth, resourcefulness, and self-directed learning were demonstrated in the majority of students. This coincides with literature from other countries, where students used technology and peer networks to overcome limitations of online education [12]; [13].

The results of this study highlighted the importance of institutional support during crisis. Although students praised the online mental health services, they found them insufficient. The need for a blended learning system and faculty engagement is consistent with other studies favouring hybrid education as the most sustainable post-pandemic approach [14].

5. Conclusion

Although remote learning brought challenges to medical students in Pakistan, they showed great resilience and adaptability. Medical schools should adapt hybrid learning systems and responsive educational models to expand mental health support and foster stronger connections between students and teachers to handle future crises.

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