

A DECLINE IN EDUCATIONAL ACHIEVEMENT: THE IMPACT OF VIRTUAL LEARNING ON THE PEDIATRIC ROTATION FOR MEDICAL SCHOOL STUDENTS

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During the past few years in Türkiye, an abrupt closure of universities occurred primarily due to the coronavirus disease-2019 pandemic, and then again for the second time after the February 6th 2023 earthquake, as students were sent home to provide shelter for earthquake survivors in student dormitories (1, 2). These shut-downs have ushered in a myriad of challenges, casting a shadow on the traditional education landscape and notably, impacting the realm of pediatric training. With the closure of campuses and the shift to online courses, the adverse effects have affected both academic and professional domains (3).

One of the foremost problems has been the loss of hands-on experience crucial for medical students, particularly in clinical branches like pediatrics. The absence of physical classrooms and in-person clinical rotations has deprived aspiring medical students of valuable interactions with patients, hindering their ability to hone crucial diagnostic and interpersonal skills. Because of the physiological and emotional differences that exist between adults and children, medical students undergo specialized training that equips them to effectively meet the health needs of young patients during their pediatric rotation, which cannot be experienced online. Furthermore, the shift to online education has strained the sense of community and collaboration that is pivotal in medical training. The camaraderie developed through shared experiences in clinics and at patient

bedsides is irreplaceable. Pediatrics, by nature, demands a nuanced understanding of not only the medical aspects but also the intricacies of patient-doctor relationships, often requiring a delicate touch that can only be refined through direct, in-person encounters. A study by Dev et al. (4) looked at the impact of online education on medical students and found that only 13% found this method of education to be effective. Similarly, Sutoi et al. (5) found that the lack of interaction between students and other colleagues, educators, doctors, and patients was the most important disadvantage highlighted by medical students. In this study, over 75% stated that they felt online education had a negative influence on their professional development (5).

In addition to the challenges faced in pediatric training, the transition to long-distance learning has also been accompanied by a concerning decline in academic performance among students. When we evaluated our rates of academic achievements over the past few years, we found that in 2021, 37% of students in the first pediatric rotation group failed their exams. This was the first face-to-face rotation after the lockdown. In 2022, this decreased to 18% but increased again in 2023 to 28% as students had again been employing online education for the past six months due to the earthquake. The shift from traditional classrooms to virtual platforms has posed a steep learning curve for many, as students grapple with technological hurdles, a lack of face-to-face interaction with instructors, and



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potential distractions within their home environments (4, 5). The absence of immediate feedback and the informal support networks found in physical classrooms have contributed to a decline in engagement and understanding. Moreover, the digital divide has exacerbated disparities, with some students facing difficulties accessing necessary resources or maintaining a conducive learning environment.

Equally concerning is the potential impact on mental health and well-being, both for students and educators. The isolation that accompanies prolonged periods of remote learning can contribute to burnout, stress, and a sense of disconnect. In the demanding field of pediatric medicine, where empathy and emotional intelligence are integral, the toll on mental health can compromise the quality of care provided to young patients. As educators, we have all seen the toll on mental health in our students. A study by Aljhani et al. (6) showed that two-thirds of medical students reported generalized anxiety and a shocking 94.4% moderate to high stress levels during the pandemic.

As grades dip and academic motivation wanes, the repercussions are not only felt by individual students but also raise broader concerns about the long-term impact on the quality of education and the preparedness of future professionals across various disciplines, including pediatrics.

In conclusion, the closure of universities and the shift to online education during the pandemic and after the earthquake have cast a pall over the pediatric training of medical students. The loss of hands-on experiences, community collaboration, and the

potential toll on mental health could have lasting repercussions on medical students. As we navigate these challenging times, it becomes imperative to find innovative solutions to mitigate these negative effects and ensure that face-to-face education is not compromised again.

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REFERENCES

1. Kanbur N, Akgül S. Quaranteenagers: a single country pandemic curfew targeting adolescents in Turkey. *J Adolesc Health* 2020;67(2):296-7. [Crossref]
2. Düzova A, Akgül S, Utine GE et al. The Türkiye-Syria earthquake: a response from the editors of the Turkish Journal of Pediatrics. *Turkish J Pediatr* 2023;65(1):1-2. [Crossref]
3. Ulum H. The effects of online education on academic success: a meta-analysis study. *Educ Inf Technol (Dordr)* 2022;27(1):429-50. [Crossref]
4. Dev D, Kumari M, Sharma J et al. Impact of online education on medical students. *Int J Health Sci* 2022;6(2):13355-65. [Crossref]
5. Sutoi D, Bazavan CO, Sutoi M et al. The learning experience of Romanian medical students during the online teaching imposed by the COVID-19 pandemic. *Adv Med Educ Pract* 2023;14:1077-86. [Crossref]
6. Aljhani S, Alateeq D, Alwabili A et al. Mental health and online learning among medical students during the COVID-19 pandemic: a Saudi national study. *J Ment Health Train Educ Pract* 2022;17(4):323-34. [Crossref]