



COMMENTARY

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Saving Gaza's Medical Education

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ABSTRACT

The ongoing genocide in Gaza—culminating in a humanitarian catastrophe lasting over 400 days—has brought the region's medical education infrastructure to the verge of collapse. This commentary examines the current state of medical education in Gaza, outlining the severe challenges faced by medical schools, faculty, and students in sustaining academic activities under conditions of displacement, destruction, and resource scarcity. Focusing on Al-Azhar University–Gaza (AUG) as a case study, we highlight emerging initiatives led by displaced Gazan academics in partnership with international institutions aimed at restoring medical training. We conclude with a call to the global medical and academic communities to take urgent, coordinated action to support and revitalize Gaza's medical education—an essential pillar of its healthcare system and the long-term well-being of its population.

Keywords: Gaza, medical education, Conflict setting, Global health

Since October 2023 and to this day, Gaza's healthcare system has been systematically and brutally targeted. Hospitals were raided and bombed, physicians were kidnapped and imprisoned, and paramedics and ambulance workers were sniped while trying to save lives. In May 2024, the British Medical Journal (BMJ) reported that 500 healthcare workers were killed and only one out of the three hospitals in Rafah was functioning (partially); the other two hospitals were forced to close by relentless Israeli attacks (1). Recently, the Ministry of Health in Gaza published a report that 1151 healthcare workers have been killed, out of whom 986 were verified (2). In addition, more than 300 healthcare providers were unlawfully detained and imprisoned; many experienced physical tortures while some died in Israeli custody (3, 4).

There is incontrovertible evidence that demonstrates the regular and systematic demolishing of Gaza's healthcare system. Less studied and discussed however, is the disintegration of medical education in Gaza as a result of the genocide. There were two medical schools in Gaza, one that is attached to the Islamic University of Gaza and the other to the Al-Azhar University (Shellah, 2022). Both institutions have been reduced to rubble, and hundreds of their academics and students murdered, injured and displaced (5, 6). Medical education in Gaza thus, as it stands today, is on the brink of collapse. Even prior to October 2023, medical students experienced extensive hardship to pursue daily, ordinary educational activities given the years-long blockade, numerous Israeli checkpoints and arbitrary arrests (7).

Today, the exact number of death and injury among the medical students and teachers is unknown, but in April 2024 it was reported that approximately 40 medical students had been killed, 60 were detained, and hundreds were displaced either internally within Gaza or to other

countries, since the genocide began (8). Because of the ongoing bombardment and closure of health facilities, many students were forced to end their clinical rotations early. For those who remain in Gaza, they continue their education from ramshackle tents with intermittent internet access and lack of food, clean water and electricity. For those displaced, little can be said as verified information is scarce. What we know is that some had been able to join medical schools in other countries as visiting students, with the generosity of host institutions, non-profit organizations and private donors. The fate of the vast majority remains elusive.

A good case to highlight is the Al-Azhar University in Gaza (AUG). Prior to October 2023, AUG was a thriving institution with 1817 medical students. The AUG headquarters in Gaza city and its branch in Al-Mughraqa were completely destroyed by recurrent Israeli airstrikes on 11 October, 4 November, and 21 November 2023 (9). According to an internal faculty report, in the first several months of the genocide, 85% of AUG medical students were displaced, 59% reported that their families no longer had any source of income, and almost 10% lost of immediate family members. In addition, three faculty members and 21 students were killed (10). Surviving AUG academics – some of whom are currently displaced – have reached out to scholars and experts from different institutions, forging collaborative efforts to help AUG medical students resume their education. It is worth noting that despite the unspeakable horrors faced by AUG staff and administration, they successfully arranged for exams for final year students; this means over 800 students graduated in the midst of daily bombardment! (10).

Some medical schools in South Africa, Pakistan, Malaysia, Egypt and Turkey have developed new schemes/pathways to absorb students from Gaza. In Malaysia for instance, 65 AUG medical students has been accepted across six public universities with well-established medical training. This comes with government support, alongside local community efforts that pair students with

foster families. Relatedly, about 72 AUG clinical year students have been accepted to continue studying in Pakistan, 60 in South Africa, 10 in Egypt, 4 in Turkey and a few in Italy, Germany and USA. For those who remain in different parts of Gaza, AUG academics and colleagues from across the globe are jointly building an online learning platform where lecture recordings can be uploaded and accessed by students at their own convenience. This was crucial given the unpredictable internet connection and daily uncertainties faced by students that render live lessons impractical. Despite their 'unbearable' living condition, many AUG students have showed extraordinary resilience, incredible courage and inestimable motivation to continue their studies to safeguard the future of Gaza's healthcare system.

The global medical community must come together urgently to address this catastrophe. Due to the inhumane circumstances to which Gazan medical students are subjected, creative solutions are desperately needed. The impossibility of medical education to continue in such dire situations means a definite shift to the virtual realm. For instance, constructing an online learning management system (LMS) that is flexible, user-friendly, mobile-compatible, and tailored to specific needs of displaced students is critical. From our experience, when students' personal laptops become dysfunctional, it is extremely hard (and costly) to find repair services. Smart phones are a better platform as they are portable and handy. It is also perhaps more strategic for students and academics to familiarize themselves with open-source statistical programs such as R, PSPP and Taguette to avoid reliance on paid software options. Free note-taking apps can be helpful in situations where students might have little access to pen and paper.

Above all, the resumption of educational activities online is imperative to boost students' motivation by giving them a taste of normalcy and peer support, and showing them global solidarity. Medical educators, academics and researchers from across the world should come

forward to offer their expertise, time, skills, and resources to assist their colleagues in Gaza who are now struggling to make sure their students remain on track and do not fall into despair.

Beyond these short-term initiatives, the international medical community bears the responsibility to design and implement a long-term strategy for reconstructing medical education in post-war Gaza. While post-conflict reconstruction will undoubtedly require high-level, multi-sectoral, cross-disciplinary, and international collaboration—an endeavor that is costly and time-consuming—it remains achievable with strong leadership and political will. Although the rebuilding of medical education lies beyond the scope of this paper, it is worth noting briefly that efforts must extend beyond the restoration of physical infrastructure to address human resources through capacity-building and psychosocial interventions aimed at healing psychological trauma. Furthermore, given Gaza's volatile context, where the threat of renewed attacks persists, any plan to restore medical or broader tertiary education must incorporate robust contingency measures and resilient features. Such a system should be adaptable enough to anticipate potential disruptions and respond swiftly to acute crises, minimizing impact and loss.

Medical education in Gaza is the bedrock of its future healthcare system and population well-being. The ongoing genocide is without doubt posing endless challenges to the resumption and continuity of medical education. Nonetheless, we must all unite, advocate, collaborate, and innovate. Only by doing this, we can rescue this noble pursuit.

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