Medical Students Will Take Care of the People, We Need to Take Care of Them

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Jamil et al published their work in this current issue of the Avicenna Journal of Medicine reporting on a study of anxiety and depression among 130 graduating medical students taking the National Medical Unified Exam (NMUE) in Syria. The title of their paper was “The Impact of Anxiety and Depression on Academic Performance: A Cross Sectional Study Among Medical Students in Syria.” This was an important work for several interconnected and overlapping reasons. Alarming, the prevalence of anxiety and depression in this study sample was 59 and 58%, respectively, which was almost twice as much as the average reported in medical students worldwide (33.8 and 27.2%, respectively).2,3

In the United States, the prevalence of depression among medical students was reported to be around 8%,4,5 32.7% in China,6 3.7% in Portugal,7 31% in Nepal,8 51.30% in Ethiopia,9 and 30.6% in Brazil.10,11 A large systematic review and meta-analysis of more than 129,000 medical students in 47 countries worldwide had found that 27.2% (183 studies, 95% confidence interval [CI] 24.7 – 29.9%) of medical students had depression or depressive symptoms.2 The pooled prevalence of the estimate reported by individual studies in that review ranged from 9.3 to 55.9%, depending on assessment tools used, which was consistent with the wide ranges reported in other reviews.12 This placed the prevalence of depression reported by Jamil et al from Syrian medical students (58%) alarmingly higher than the average which had been reported from those 47 countries (27%).

As for anxiety, Jamil et al reported a prevalence of 59.2% among Syrian medical students recruited in their study. In the United States, the prevalence of anxiety among medical students was reported to be 30%,4,5,13 27.2% in China,6 21.5% in Portugal,7 45.3% in Nepal,8 30.1% in Ethiopia,9 and 32.9% in Brazil.10,11 A large systematic review and meta-analysis of more than 40,000 medical students worldwide had found that 33.8% (69 studies, 95% CI 29.2–38.7%) of medical students had anxiety.3 The largest prevalence of anxiety was found among medical students in the Middle East (42.4%; 95% CI: 33.3–52.1%) and Asia (35.2%; 95% CI: 26.3–45.3%) as compared with the rest of the world (27.5%; 95% CI: 21.5–34.5%).

Several factors may have been at play behind these staggering numbers of anxious and depressed Syrian medical students. In the Syrian context, the Syrian crisis, which has now spanned 11 years, has left the country devastated in many ways. Conservative estimates report that deaths from war and violence surpassed 610,000.14 Independent humanitarian agencies report massive internal and external forced displacement of civilians, with estimates of 50 to 60% of the entire population being directly affected.15 Millions have lost their relatives, homes, livelihoods, access to education, access to health care, as well as income. The economy has been in shambles, with the country’s agricultural, industrial, and trade activities almost entirely halted. The World Food Program estimates that 90% of Syrians currently live below the poverty line and more than 80% are food insecure.16 The health care infrastructure has been targeted and destroyed in many cities.17 For all of that, medical students completing their education under these circumstances are understandably under high pressure and distress.

Additionally, the coronavirus disease 2019 (COVID-19) pandemic has had its effects worldwide as well, particularly on the health care workforce including medical students. When compared with prevalence prior to the COVID-19 pandemic, the prevalence of anxiety and depression among U.S. medical students during the pandemic was found to be 61% higher for anxiety and 70% higher for depression.13 In a survey of 1,428 students across 40 U.S. medical schools, 30.6 and 24.3% of respondents were found to have anxiety and depression, respectively, which was consistent with other U. S. studies.18,19 During the COVID-19 pandemic, high rates of medical students’ anxiety and depression, albeit lower than Syria’s, were reported elsewhere in the world as well,

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including Kuwait,\textsuperscript{20} Libya,\textsuperscript{21} India,\textsuperscript{22} the Czech Republic and Slovakia,\textsuperscript{23} and Pakistan.\textsuperscript{24} Neighboring Lebanon did not suffer from a war in this past decade but did suffer from some of the repercussions of Syria’s conflict, along with Lebanon’s own political and security challenges. Lebanon also had alarmingly high rates of anxiety and depression among medical students during the COVID-19 pandemic (48.7 and 46.8\% of anxiety and depression, respectively).\textsuperscript{25}

Also, interestingly, the authors reported that anxiety and depression were inversely associated with NMUE scores, but the association disappeared once the analysis was adjusted for a few potential confounders. As the assessments were conducted 1 month prior to the date of the NMUE, the anxiety (and to a lesser extent, the depression) may have been affected by exam apprehension too. Medical students preparing for high-stakes exams, such as the United States Medical Licensing Exam Step 1 and the COMLEX-1, have also shown higher than usual levels of anxiety and depression.\textsuperscript{26,27} This added another potential factor that may have affected the overall well-being of the medical students in the Jamil et al study, particularly in terms of anxiety and depression.

There is a general lack of evidence in the literature on the well-being of physicians and physicians-in-training, especially in low- and middle-income countries. Physician distress and burnout have formed silent (and sometimes not so silent, when they manifest with suicides) epidemics of their own worldwide.\textsuperscript{28} These massive waves of burnout have particularly heightened during the COVID-19 pandemic.\textsuperscript{29} For physicians and medical students in Syria, who had to survive the war and its consequences, let alone live and continue their education in dire economic circumstances, perhaps it was not surprising to witness such high rates of anxiety and depression. Furthermore, one may have expected even higher rates of anxiety and depression, in which case the current estimates may reflect the high resilience and hard work required to not only survive, but to thrive, in such conditions in Syria. This work is of paramount importance and provides awareness that should guide medical educational intervention and curricular redesign. Although individual factors, such as resilience and physical activity, may help combat anxiety and depression among medical students, systemic interventions specifically designed to address these issues would arguably offer the most potential benefit.

Conflict of Interest
None declared.

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