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Letter to the Editor

Anxiety Among Final-Year Medical Students: Missing the Context of Conflict-Affected and Underserved Settings in Khyber Pakhtunkhwa, Pakistan

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We read with considerable interest the original article by Özdemir et al., published in the International Journal of Medical Students (IJMS) Vol. 14, No. 1 (2026), titled "Occupational Exposure to Blood and Body Fluids and Its Association with Anxiety Among Final-Year Medical Students."[1] In this single-centre, cross-sectional study from Türkiye, blood and body fluid exposure, performance anxiety, and pressure from assistants were each associated with higher anxiety scores.[1] We write to highlight a dimension that a single-centre study was not designed to address: the contextual factors that may shape anxiety among final-year medical students in underserved and conflict-affected settings, such as Swat district, Khyber Pakhtunkhwa (KPK), Pakistan.

As an MBBS student and a faculty member at Swat Medical College, we offer the following as local observations, not findings of a systematic survey. We think that anxiety among students in our setting may extend beyond occupational exposures. In our own observation, some students are the first physicians in their families, and students may face academic pressure, financial hardship, and cultural expectations alongside the lingering psychological consequences of the armed conflict in Swat. Conflict-related traumatic events have been associated with psychological distress among pregnant women in Swat a year after the conflict ended,[2] but we are not aware of such data for medical students, and we have not seen this topic addressed in our own curriculum. Depressive symptoms are common among medical students worldwide,[3] and a recent meta-analysis of Pakistani studies reported prevalence estimates of depressive symptoms ranging from 9% to 94%, across heterogeneous studies using different instruments and cut-offs.[4] This range concerns depressive symptoms, not anxiety, and does not estimate the burden among students in Swat; we cite it only to show why comparable measurement across sites is needed. In April 2026, the Pakistan Medical and Dental Council (PM&DC) directed medical and dental colleges to implement structured mental health screening and counselling.[5] At our own institution, we can speak only to what we have observed: as of October 2026, we are not aware of a formal screening programme or dedicated counselling service. Whether such services are available and accessible in practice, and how the directive is being implemented across KPK medical colleges, are questions for investigation, not established facts.

Özdemir et al. reported that pressure from assistants and performance anxiety were significantly associated with anxiety severity.[1] In our setting, we have observed infrastructure limitations that may add to such stressors, including frequent power outages, unreliable internet, and limited simulation facilities at district-level teaching hospitals, where clinical exposure and supervision can also be inconsistent. We are concerned that limited occupational safety infrastructure could affect how often blood and body fluid exposures occur and how they are managed, but we are not aware of published data from KPK district hospitals, and this requires investigation. A survey published in 2010 at one private tertiary teaching hospital in Karachi found that 14 of the 47 students who had sustained a needlestick injury had reported it to their consultant or the Infection Control Office;[6] this finding is limited to that survey site and cannot be generalised to KPK, but it suggests that post-exposure management merits examination in other settings.

We encourage the IJMS community, the PM&DC, and KPK health authorities to support multicentre studies that extend the anxiety research agenda beyond tertiary centres to include district and semi-urban medical colleges, including those in post-conflict regions. Such studies could measure anxiety, and where feasible related mental health outcomes, with validated screening instruments such as the 7-item Generalized Anxiety Disorder scale (GAD-7),[7] which screens for symptoms rather than diagnosing a disorder. These could be assessed alongside contextual variables: socioeconomic circumstances, working hours, clinical

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supervision, blood and body fluid exposure, access to mental health services, institutional resources and, where ethically appropriate, conflict-related stressors. Questions on sensitive experiences would require informed consent, confidentiality, participant support and ethical review. To examine whether the association between exposure and anxiety varies across training settings, prespecified multilevel regression could be used, with students nested within institutions, an exposure-by-setting interaction term, and adjustment for student-level factors (such as sex, year of study and socioeconomic circumstances) and institution-level factors (such as hospital type, resources and supervision). The proposed design could estimate adjusted associations between these factors and anxiety and assess whether they vary across training settings. As an observational study, it could not establish causal effects, but its findings could help inform support for medical students in resource-constrained and conflict-affected settings.

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Ethics Statement

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