



## Letter to the Editor: Nationwide Study on Stress Perception Among Surgical Residents

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Occupational stress is one of the most pressing concerns among healthcare providers lately and nearly no field of medicine is immune to it. Recently, Guglielmetti et al. reported high levels of perceived stress in their prospective and representative cohort of surgical residents, with females being affected more than their male counterparts [1], a paper that we read with interest. We commend the authors for indicating a need for detailed sex-specific analysis and correction of these stressors, which we believe is a worthwhile goal. Here, we expand on their current discussion and comment on how COVID-19 has played a role among surgical residents as it relates to stress.

As if the stress of surgical residency in itself was not enough, COVID-19 brought a multitude of additional stressors among surgical residents, including extended hours, redeployment in other fields to enhance manpower, emotional exhaustion, and depersonalization. In a survey-based study, Collins et al. reported that over 90% of their cohort expressed concerns about the decline in operative exposure due to a reduction of general surgery procedures during the peak of COVID-19 [2]. Although experts report this to be a temporary hiccup, surgical residents reported high levels of stress concerning their preparedness. Furthermore, residents who were in contact with COVID-19-positive patients were 2.6 times more likely to develop post-traumatic stress disorder [3], which could not only interfere with their daily life functioning but also compromise patient care due to their potential impaired

technical performance and medical errors. To put this argument into perspective, there was a significant increase in the prevalence of burnout and distress rates among surgical residents during the pandemic as compared to studies before (50.4% vs. 73%) [4]. Furthermore, it was also reported that attrition rates among surgical residents are among the highest (around 20%) than residents in any other specialty, with females more likely to leave the program than males [5]. Some reasons why perceived stress, attrition, and burnout are reported to be higher in female surgical residents as compared to their male counterparts could be due to longer work hours than males, perceived lack of mentorship and work–life balance especially among married resident, etc. It has also been reported that surgeons are at a higher risk of committing suicide as compared to non-surgeon physicians [6], indicating a greater need for personal, institutional, organizational, and systemic interventions.

By addressing these concerns, not only we would be able to ensure organizational well-being and efficient healthcare delivery but also lessen the economic burden that comes with it. For example, a medical center reported an annual economic burden of around 15–55 million dollars from personnel burnout [6]. We argue that preventive interventions at both organizational and systemic levels coupled with a detailed sex-specific analysis could curb some stressors among surgical residents, resulting in improved overall health, revamped concentration during

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debilitating tragedies like COVID-19 pandemic, and better patient outcomes.

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