Medical Student Burnout

By Etesam Amir, Uradu Olivetta, Malik Mansoor, M.D

Psychological distress and chronic exposure to high levels of stress during medical school can result in a "burnout syndrome" with the potential for multiple detrimental consequences. Burnout syndrome develops as the sequence of emotional exhaustion, followed by depersonalization as a coping mechanism, and which finally manifests itself as feelings of professional dissatisfaction and anguish[1]. If burnout continues into residency and later into medical practice, it will affect the physician's functioning and quality of life. Interventions targeting unsuccessful coping strategies and complications related to burnout, may offer an opportunity to improve medical student well-being and mental health [8].

Research suggests that medical school burnout is estimated around 50% [5], about the same prevalence as in residents and physicians. Consequences of medical student burnout, in addition to high levels of perceived stress and emotional distress[7], include self-reported cheating and dishonest clinical behaviors [2], increased symptoms of depression[5], and the increased likelihood of suicidal ideation[6].

In 2011, the prevalence of burnout among practicing physicians in the United States was estimated at 54% [3] with several contributing factors ranging from excessive workload to conflicts with work-life integration. This chronic condition not only impacts physician and medical students' well-being but is also important because it is directly linked to lower patient satisfaction, longer post-discharge recovery time[6], and higher mortality ratios in hospitalized patients[2]. While the problem of physician burnout is widely recognized with diverse solutions implemented across the country, research into resident burnout is less, and there has been almost no research into medical student burnout.

Physician burnout may be related to chronic workplace stressors starting as early as the first year of medical school, with onset of burnout arising from mental and physical exhaustion owing to the demanding medical curriculum, increasing time constraints, and harsh learning climates[3]. Calls for changes to medical curricula to address psychological distress have been made, but little is known about how curricula could be reformed and the expected outcome, despite information regarding the interference of burnout with the teaching/learning process. Other contributors to burnout are students' self-perception of health, optimism and motivation regarding their studies, constant exposure to sick patients and death, and exhausting study routines [1].

Two key maladaptive coping strategies, avoidance and decreased engagement in values-based behavior, has been recognized to have a significant detrimental effect on medical students' emotional well-being. Strategies in managing these detrimental behaviors have been suggested in an effort to control the burnout level in this group. Avoidance is an attempt to prevent exposure to unwanted experiences and that provides immediate relief and satisfaction. However, this can also result in abandoning the medical student's life goals. Dissatisfaction with life correlates with burnout in a variety of samples of health care providers.

The second factor, decreased engagement in values-based behavior, occurs when students engage in maladaptive actions even in the presence of dissatisfactory internal experiences. For example, students will over-study for exams thereby jeopardizing their relationships with friends and family members.

Burnout and depression can potentially be minimized if students are able to live in accordance with his or her values, despite stressors. This will provide opportunities to reconnect with the surrounding environment and benefit from social support and positive reinforcements

and this will result in positive outcomes, including decreased psychological distress, better adjustment, and improved quality of life [8].

Contributors outside the school environment, and family-related stressors, have relatively insignificant influence on the development of burnout and stressors induced by the intense study, the frequent testing that takes place, and the continuous interaction with sick patients and death. If students spent more time outside of the hospital setting, this could potentially be protective against burnout. Family closeness and interactions have been reported as protective factor that lower stress levels and promotes happiness [1].

In summary, medical student burnout is common, and additional more effort should be made to study its prevalence amongst medical students, its racial and socioeconomic effects, and subsequent training that will effectively address the emotional, mental, and physical challenges inherent to medical school. Given that burnout has been significantly associated with suboptimal patient care, interventions that improve medical student mental health, and subsequently physician mental health, have the potential to improve the quality of healthcare and patient outcomes in the long term.

References

1.Boni RAdS, Paiva CE, de Oliveira MA, Lucchetti G, Fregnani JHTG, Paiva BSR (2018) Burnout among medical students during the first years of undergraduate school: Prevalence and associated factors. PLoS ONE 13(3): e0191746. https://doi.org/10.1371/journal.pone.0191746

2.Dyrbye LN, Massie FS, Eacker A, et al. Relationship Between Burnout and Professional Conduct and Attitudes Among US Medical Students. JAMA. 2010;304(11):1173–1180. doi:10.1001/jama.2010.1318 . https://www.ncbi.nlm.nih.gov/pubmed/20841530

3.N Dyrbye, Liselotte & R Thomas, Matthew & Harper, William & Stanford Massie, F & Power, David & Eacker, Anne & W Szydlo, Daniel & Novotny, Paul & Sloan, Jeff & Shanafelt, Tait. (2009). The learning environment and medical student burnout: A multicentre study. Medical education. 43. 274-82. 10.1111/j.1365-2923.2008.03282.x. https://www.ncbi.nlm.nih.gov/pubmed/19250355

4. N Dyrbye, Liselotte & R Thomas, Matthew & Stanford Massie, F & Power, David & Eacker, Anne & Harper, William & Durning, Steven & Moutier, Christine & W Szydlo, Daniel & Novotny, Paul & Sloan, Jeff & Shanafelt, Tait. (2008). Burnout and Suicidal Ideation among U.S. Medical Students. Annals of internal medicine. 149. 334-41. https://www.ncbi.nlm.nih.gov/pubmed/18765703

5.N Dyrbye, Liselotte & West, Colin & Satele, Daniel & Boone, Sonja & Tan, Litjen & Sloan, Jeff & Shanafelt, Tait. (2014). Burnout Among U.S. Medical Students, Residents, and Early Career Physicians Relative to the General U.S. Population. Academic medicine : journal of the Association of American Medical Colleges. 89. 10.1097/ACM.0000000000000134. https://www.ncbi.nlm.nih.gov/pubmed/24448053

6.Halbesleben, Jonathon & Rathert, Cheryl. (2008). Linking physician burnout and patient outcomes: Exploring the dyadic relationship between physicians and patients. Health care

management review. 33. 29-39. 10.1097/01.HMR.0000304493.87898.72. https://journals.lww.com/hcmrjournal/Abstract/2008/01000/Linking_physician_burnout_and_patient_outcomes_.5.aspx

7.Heinen, Ines & Bullinger, Monika & Kocalevent, Rüya-Daniela. (2017). Perceived stress in first year medical students - associations with personal resources and emotional distress. BMC Medical Education. 17. 10.1186/s12909-016-0841- https://www.ncbi.nlm.nih.gov/pubmed/28056972

8.Kroska, E. B., Calarge, C., O'Hara, M. W., Deumic, E., & Dindo, L. (2017). Burnout and depression in medical students: Relations with avoidance and disengagement. *Journal of Contextual Behavioral Science, 6*(4), 404-408. doi:10.1016/j.jcbs.2017.08.003. https://contextualscience.org/publications/burnout_and_depression_in_medical_students_relatio

9.Shanafelt, Tait & Hasan, Omar & N. Dyrbye, Lotte & Sinsky, Christine & Satele, Daniel & Sloan, Jeff & West, Colin. (2015). Changes in Burnout and Satisfaction With Work-Life Balance in Physicians and the General US Working Population Between 2011 and 2014. Mayo Clinic Proceedings. 90. 1600-1613. 10.1016/j.mayocp.2015.08.023. https://www.ncbi.nlm.nih.gov/pubmed/26653297

10.E Wallace, Jean & Lemaire, Jane & A Ghali, William. (2009). Wallace JE, Lemaire JB, Ghali WA. Physician wellness: A missing quality indicator. Lancet. 374. 1714-21. 10.1016/S0140-6736(09)61424-0. https://www.ncbi.nlm.nih.gov/pubmed/19914516