Yoga: A Strategy to Cope up Stress and Enhance Wellbeing Among Medical Students

Dear Editor,

Stress, burnout, and coping strategies in preclinical medical students by Fares et al. \cite{1} made for an interesting read. I would like to compliment the authors for the commanding effort to put together a burning issue of psychological and physical stress and burnout among the medical students. The issue is often neglected both by the vulnerable population of students as well as the health-care community itself. The article definitely brings attention on the need for coping strategies and also puts together various methods for the physical and psychological wellbeing of the doctors-in-making.

Yoga, a mind–body practice of ancient Indian origin has gained significance in recent times due to its health benefits. Various practices of yoga have been found beneficial to attenuate stress and enhance functionality among medical students. Despite an array of coping strategies, yoga practices are found to reduce perceived stress,\cite{2,5} anxiety,\cite{4,6,8,10} markers of stress such as cortisol,\cite{9} improved general health and well-being,\cite{5,10,11} physical and physiological health,\cite{6,12,13} improve cognition\cite{14} as well as cultivation of positive emotions\cite{2,3,7} such as empathy, compassion, and self-regulation. There is evidence of a reduction in work-related stress and better autonomic balance with the practice of yoga in health professionals.\cite{15} The studies indicate not just the psychological benefits of yoga, but the physical benefits such as better autonomic balance, enhanced respiratory endurance, auditory and visual reaction times as well as muscle strength.\cite{13} Few research studies showing the beneficial effects of yoga among medical students are listed in Table 1.

One of the most important stressors among medical students is the examination. Malathi and Damodaran and Malathi et al.\cite{8,12} have found yoga to be beneficial in modulating the response to stress during the examination. In addition, studies indicate that yoga could enhance the examination performance and reduce anxiety.\cite{16} Another important area of concern brought out by Fares et al. is the lack of self-care behavior among medical students.\cite{1} Yoga and mindfulness-based practices have demonstrated beneficial impact on the self-care behavior in counselors, who encounter similar health issues of that of medical students.\cite{17}

From the review of existing scientific literature on the application of yoga in medical students, it is evident that yoga is a self-practiced, low cost, safe, efficacious as well as acceptable tool benefiting the target population. There are positive outcomes for the medical students in their physical, psychosocial, and emotional health. The practices that are safely used in the wellbeing of student community include asana (physical postures), pranayama (breathing practices), dhyana (meditation), mindfulness-based stress relaxation, and mind sound resonance technique (MSRT).\cite{12,13,18} These techniques were used either as standalone modality in a combination or even as an adjunct program within the frame of medical curricula. The possible mechanisms involved with the beneficial effects of yoga among medical students include autonomic balance, relaxation, better emotional status, and self-care behavior. There is scope to evaluate the effects of yoga further among the medical students through rigorous clinical studies, wherein these mechanisms could be tested.

Considering the current evidence in the field, which indicates the beneficial effects of yoga on the physical, psychological, emotional, spiritual, and overall well-being of medical students, it could be recommended to incorporate yoga into the medical curricula for the health benefits of the doctors-in-making, medical fraternity, and community at large. The possible inclusions in such program could be the practice of simple asana, pranayama, meditation, and mindfulness-based relaxation. The following module is proposed to be incorporated for medical students keeping in mind the existing literature on yoga for medical students:

- **Shithilikarana vyayama** (loosening exercises) - 5 min
- **Suryanamaskara** (sun salutation) - 5 min
- **Asana** (physical postures) - 15 min.
  - Ardhatkitchakrasana (lateral bend pose)
  - Ardhamukhaasana (backward bend pose)
  - Padhabhastasana (standing forward bend pose)
  - Sarvangasana (shoulder stand pose)
  - Matsyasana (fish pose)
  - Bhujangasana (serpent pose)
  - Padmasana (lotus pose)
  - Savasana (corps pose).
- **Pranayama** (breathing practices) – 10 min
  - Kapalabhati (illuminating forehead breath)
  - Nadisuddhi (alternate nostril breath)
  - Ujjayi (the psychic breath)
  - Bhramari (humming bee breath)
Meditation/relaxation – 10 min
Mindfulness-based relaxation/yoga nidra (psychic sleep)
MSRT or cyclic meditation – once a week.

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Dear Editor,

Yoga is gaining prominence in improving mental health and quality of life and in the treatment of a number of psychiatric and psychosomatic disorders. Previous studies on medical education have shown that perceived stress is higher in medical students than in other age-controlled students.

As medical students are the underpinning of the medical profession, they must be aware of the adjunct therapy of yoga for the betterment of their own health as well as that of their patients.

As defined by the World Health Organization, health is "a state of complete physical, mental, and social well-being and not merely absence of disease or infirmity."[2] This definition has been expanded to embrace the ability to "lead a socially and economically productive life."[3]

Apart from causing mental turbulences, anxiety and stress have unfavorable effects on the body that may evolve into chronic conditions, if left untreated.[4] Stress has been linked to harmful effects on the immune system,[5,6] while anxiety has been associated with coronary heart disease,[7] decreased quality of life,[8] and suicidal behavior.[9]

Although yoga has been practiced for over 5000 years, it has only newly gained popularity worldwide.[10] The drill originated in India and has been applied to relieve both mental and physical infirmities,[11‑13] for it incorporates postures, breathing techniques, and meditation. From the yogic perspective, the body and the mind are so interconnected that they are essentially inseparable.[14] Whatever affects the body must impact the mind and vice-versa. Since the mind exists throughout the body and pervades its every particle, the yogic techniques which are implemented to stretch, strengthen, and otherwise improve, and develop the body must have a correspondingly deep effect on the mind and the emotions as well.[14]

Psychological stress and yoga are believed to be reciprocally related. Stress induces imbalance of the autonomic nervous system with decreased activity of

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