The National Task Force on Mental Health and Well-being of Medical Students

2024

The Report of the National Task Force on Mental Health and Well-being of Medical Students

National Medical Commission

New Delhi – 110077, INDIA

June 2024

(Re)Visioning….

The core mission of every medical college is education, which is why it is often said that medical education is the foundation of a country's healthcare system. The essential goal is to enlighten young minds and guide them to become compassionate and skilled healthcare professionals. These institutions are not merely centers for healthcare services; they are where medical knowledge, critical thinking, compassionate care, and scientific inquiry are cultivated and nurtured.

Medical teachers play an irreplaceable role in shaping the future of healthcare. They are the pillars of the medical community, dedicating themselves not only to the clinical care of patients but also to the profound responsibility of nurturing the next generation of doctors. They guide medical students by transferring knowledge, imparting skills, and mentoring them in compassionate and ethical care. They embody and instil the values of compassion, empathy, and ethical care, mentoring students to become not just competent doctors, but compassionate healers. The impact of guidance from medical teachers is profound, enduring, and infinite.

In medical colleges, providing healthcare services and conducting research are important, but these activities should augment and serve the primary purpose of training and educating medical students. It should not be the other way around, where medical students are used to fill gaps caused by a lack of resources in the healthcare system. This distinction is crucial. Blurring these lines can weaken academic standards and jeopardize the safety and well-being of patients and the future healthcare system of the country. It's essential to maintain this balance with clarity and conviction.

Acknowledgments

On behalf of the National Task Force on Mental Health and Well-being of Medical Students, we extend our heartfelt gratitude to all those who have contributed to the successful completion of this final report. This comprehensive endeavor has been a testament to the collective spirit and dedication of countless individuals and institutions who have united with a shared vision for enhancing the mental health and well-being of our medical students.

A heartfelt and profound thanks to Dr. B.N Gangadhar, Chairperson of the NMC, whose visionary leadership and unwavering guidance have been the driving force behind the success of this initiative.

We extend special gratitude to Dr. Aruna V. Vanikar, whose crucial role in planning and providing unconditional support has been indispensable to the success of this task. Her dedication and commitment have been a cornerstone of our efforts. We also thank Dr. Vijayendra Kumar, a member of UGMEB, for his invaluable support.

Our sincere gratitude goes to Dr. Vijay Oza, President of the Post Graduate Medical Education Board (PGMEB), for his invaluable insights, support, and contributions. Additionally, we thank Dr. Vijaya Lakshmi Nag, a member of the Ethics and Medical Registration Board (EMRB). We would like to thank Dr. B. Srinivas, Secretary, for his unwavering support and guidance. We also express our deepest appreciation to the entire staff of the National Medical Commission (NMC) for their unwavering support and commitment throughout this project. Our heartfelt thanks go to all the undergraduate, postgraduate medical students and faculty, who participated in the online survey and shared their views. Your voices have been pivotal in shaping this report, and your courage and openness in discussing mental health challenges are truly commendable. We also extend our heartfelt thanks to the Deans, Heads of Departments, Administrators, Wardens, and other members of medical colleges who organized and provided logistical support for in-person meetings.

We would like to express our heartfelt gratitude to the reviewers, Dr. Ananda Pandurangi, Dr. Deepak B. Saxena, Dr N.S Harshavardhana, Dr. M Kishor, Dr. Prashant Kumar, and Dr. Rahul Saini. Their insightful suggestions and comments have significantly enhanced the robustness of these recommendations

We extend our sincere gratitude to those who played crucial roles behind the scenes, ensuring the smooth execution of this initiative. Your dedication and hard work, often unseen, have not gone unnoticed. To anyone we may have inadvertently omitted, please know that your contributions are deeply appreciated. It stands as a testament to the power of collaboration and the shared commitment to improving the mental health and well-being of our future medical professionals. Together, we have taken a significant step towards fostering a more supportive and resilient environment for our medical students.

Thank you all for your unwavering support and dedication.

The National Task Force on
Mental Health and Well-being of Medical Students

Chairman

Dr. Suresh Bada Math,
Professor of Psychiatry, Head of Unit-5,
Head of Telemedicine Centre, Head of Forensic Psychiatry,
Officer-in-charge of NIMHANS Digital Academy,
NIMHANS, Bangalore. Email : sureshbm@gmail.com

Members

Dr. Yogender Malik,
Professor of Forensic Medicine and Toxicology,
Bhagat Phool Singh Govt Medical College for Women, Sonipat.
Member (Full Time) Ethics and Medical Registration Board, National Medical Commission, New Delhi.

Dr. Nandini Desai,
Dean & Professor, M.P.Shah Government Medical College,
Jamnagar, Gujarat.

Dr. Geeta Guin,
Professor & Head, Department of Obstetrics & Gynecology,
Netaji Subhash Chandra Bose Medical College, Jabalpur.

Dr. Naveen Sankhyan,
Professor of Pediatrics, Advanced Pediatrics Center,
PGIMER, Chandigarh.

Dr. Vijay Kumar,
Professor of Plastic & Reconstructive Surgery, King George's Medical University, Lucknow.

Dr. Bhavuk Garg,
Professor of Orthopaedics, AIIMS, New Delhi.

Dr. K.Senthil,
Professor of Medicine, Govt Medical College, Madurai &
Part time Member, Post Graduate Medical Education Board,
National Medical Commission, New Delhi.

Dr. Pushpendra Malik,
Professor of Surgery,
Bhagat Phool Singh Govt Medical College for Women, Sonipat.

Dr. Reetu Hooda,
Professor of Obstetrics & Gynaecology,
Pt.B.D.Sharma PGIMS, Rohtak.

Dr. Kamlesh J Upadhyay,
Professor & Head, Department of Medicine,
B.J. Medical College, Ahmedabad.

Dr. Sumit Rana,
Professor of Psychiatry, Lady Hardinge Medical College, New Delhi.

Dr. Vijay Silan,
Associate Professor of Community Medicine,
Bhagat Phool Singh Govt. Medical College for Women, Sonipat.

Dr. Sunaina Hooda,
Assistant Professor of Pathology,
Bhagat Phool Singh Govt. Medical College for Women, Sonipat.

Member Secretary

Shri. Aujender Singh,
Deputy Secretary, PGMEB, NMC, New Delhi.

Co-opted Member

Dr. V. Senthil Kumar Reddi,
Professor of Psychiatry, Head of Emergency Psychiatry & Acute Care Service
NIMHANS, Bangalore.

2. Terms and References of the National Task Force

Term: The National Task Force on Mental Health and Well-being of Medical Students will submit its final report by 31st May, 2024. During this period task force will submit its progress report to the Anti-Ragging Cell of NMC once in a month.

References:

Scope of Work: The Task Force shall study existing literature and data on mental health & suicide of medical students, analyze factors contributing to these challenges, and propose evidence-based strategies for improving mental health & prevention of suicides. The committee may visit the Colleges where incidents of suicides have been reported.

Reporting: The Task Force shall submit a comprehensive report outlining key findings and actionable recommendations for promoting the mental health of medical students by 31st May 2024. The task force will submit the monthly progress report to the Anti-Ragging Cell.

Meetings: The Task Force shall convene regular meetings, either virtually or in person, as necessary to fulfil its mandate. Additionally, committees may visit the medical colleges where incidents of suicide have been reported. The committee may co-opt other Members on a need basis to facilitate its study and timely finalization of the report.

डॉ. बी. न. गंगाधर
Dr. B. N. Gangadhar
अध्यक्ष/ President
चिकित्सा मूल्यांकन और मापन बोर्ड
Medical Assessment & Rating Board
& Officiating Chairman, NMC

सत्यमेव जयते

आज़ादी का अमृत महोत्सव

राष्ट्रीय आयुर्विज्ञान आयोग
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
भारत सरकार
National Medical Commission
Ministry of Health & Family Welfare
Government of India

MESSAGE

It is with a profound sense of responsibility and deep commitment to the well-being of our future healthcare providers that I present the comprehensive report of "The National Task Force on Mental Health and Well-being of Medical Students." This report is not just a document but a beacon of hope for the thousands of medical students who dedicate their lives to the noble pursuit of medicine.

Our medical students face immense stress and challenges that often go unrecognized. The rigorous demands of medical education, coupled with the high expectations and pressures, place an extraordinary burden on their mental health. It is heart-wrenching to acknowledge that many of our brightest minds struggle silently, some even to the point of contemplating suicide. This is a reality we can no longer ignore.

In our quest to provide world-class healthcare, we must remember that the core responsibility of medical colleges is education. Health services, while essential, should remain secondary to our primary mission: nurturing knowledgeable, compassionate, and resilient medical professionals. The need for a paradigm shift from service back to medical education is urgent and imperative.

I am proud to highlight the critical role of yoga in this transformation. Yoga, with its holistic approach to mental and physical well-being, has proven to be a powerful tool in preventing mental illness, reducing stress, and building resilience. Integrating yoga into the daily routine of medical students can create a healthier, more balanced environment, empowering them to face their challenges with greater strength and serenity.

This report stands as a testament to the tireless efforts and unwavering dedication of the National Task Force. I extend my heartfelt congratulations to the chairman and all the members of the task force for their remarkable work in bringing out this comprehensive and insightful report. Your commitment to the mental health and well-being of our medical students is commendable and deeply appreciated.

Let us move forward together, armed with the insights and recommendations of this report, to create an environment where our medical students can thrive academically and personally. Together, we can build a future where the well-being of our healers is prioritized, ensuring that they, in turn, can provide the best care to our society.

(Dr. B.N. Gangadhar)

Pocket-14, Sector-8, Dwarka, Phase-I, New Delhi-110077
Tele: 011-25367321, Website.www.nmc.org.in, Email: kalyanybg@yahoo.com

डॉ. अरुणा वी. वणीकर
Dr. Aruna V. Vanikar
अध्यक्ष/ President
स्नातक चिकित्सा शिक्षा बोर्ड
Under Graduate Medical Education Board

सत्यमेव जयते

आज़ादी का अमृत महोत्सव

राष्ट्रीय आयुर्विज्ञान आयोग
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
भारत सरकार
National Medical Commission
Ministry of Health & Family Welfare
Government of India

MESSAGE

'Education is not the filling of a pail, but the lighting of a fire. We want that education by which character is formed, strength of mind is increased, the intellect is expanded, and by which one can stand on one's own feet. The only way to do good work is to love what you do.'

Swami Vivekananda

I am happy to present to the readers this report of "The National Task Force on Mental Health and Well-being of Medical Students." This landmark document prepared with a great responsibility is one more attempt of our unwavering commitment to the future leaders of our society - the medical students who will become compassionate caregivers and public health pioneers of tomorrow.

Our mission extends beyond imparting knowledge; it is about nurturing resilient medical professionals equipped to face multifaceted challenges beyond their careers. Medical students are the bedrock of our healthcare system, and it is our duty to ensure they receive not only the finest education but also the support and mentorship necessary to thrive both personally and professionally.

Our aim is to create medical doctors who are humble but not be humiliated, and to make best possible decisions in the worst situations. Mentor-mentee program is the cornerstone of this vision. By fostering meaningful relationships between experienced professionals and students, we can guide them through the rigors of medical education, providing support and wisdom they need to succeed. This report calls for a paradigm shift - from a singular focus on knowledge acquisition to a more holistic approach that emphasizes skill development and compassionate care.

The recommendations of this report aim to significantly reduce mental health issues, drug abuse, and suicides that disturb our profession. This holistic approach will not only benefit our medical students but will also have a ripple effect, enhancing an overall health and well-being of the communities they serve.

I extend my heartfelt congratulations to Dr. Suresh Bada Math, Chairman, and the members of the National Task Force, for their tireless efforts and dedication in bringing forth this comprehensive report. Your work will undoubtedly pave the way for a brighter, healthier future for our medical students and, by extension, for our entire society.

Together, let us commit to creating an environment where our future medical professionals are knowledgeable, compassionate, and equipped to lead. Let us build a healthcare system where mental health is prioritized, ensuring the well-being of those who dedicate their lives to caring for others.

With deep appreciation and hope for a brighter future,

A Vanikar

(Dr. Aruna V. Vanikar)

Pocket-14, Sector-8, Dwarka, Phase-I, New Delhi-110077
Tele: 011-25367033, Website.www.nmc.org.in, Email: president.ugmeb@nmc.org.in

डॉ विजय ओझा
Dr Vijay Oza
अध्यक्ष/President
स्नातकोत्तर आयुर्विज्ञान शिक्षा बोर्ड
Post Graduate Medical Education Board

सत्यमेव जयते

आज़ादी का अमृत महोत्सव

राष्ट्रीय आयुर्विज्ञान आयोग
भारत सरकार
National Medical Commission
Government of India

MESSAGE

It is with a deep sense of responsibility and urgency that I present the report of "The National Task Force on Mental Health and Well-being of Medical Students." This comprehensive report sheds light on the critical mental health issues faced by our postgraduate students, who are the backbone of our public healthcare ecosystem.

Our postgraduate students operate in a challenging and often toxic environment, filling critical gaps in the public healthcare ecosystem. They endure immense stress and workload, often without the necessary support and resources. This report highlights the urgent need to invest in the mental health and well-being of these young doctors who are integral to our nation's health. We must initiate a dimensional change in our medical education system, one that prepares these budding doctors to become a resilient healthcare force. By addressing the mental health challenges they face, we can ensure they not only provide exceptional care within our nation but also extend their compassionate services globally.

The young Indian medical force, through their dedication and compassionate care, has the potential to bond countries in the true spirit of *'vasudhaiva kutumbakam'* - the world is one family.

This report calls for a strategic investment in public health and a renewed focus on creating a supportive educational framework. By implementing these recommendations, we can transform our medical education system and ensure our postgraduate students are equipped with the resilience and skills necessary to thrive in their careers.

I extend my heartfelt congratulations to the chairman and members of the National Task Force for their unwavering dedication and hard work in bringing this comprehensive report to fruition.

Together, let us commit to building a resilient, compassionate medical community that prioritizes mental health and well-being. Let us empower our young doctors to be the healers and leaders our world needs.

With sincere gratitude and hope for a transformative future,

Vijay V. Oza

(Dr Vijay Oza)

डॉ. (प्रो.) बी. श्रीनिवास (एमडी)
सचिव
Dr. (Prof.) B. Srinivas (MD)
Secretary

सत्यमेव जयते

आज़ादी का अमृत महोत्सव

राष्ट्रीय आयुर्विज्ञान आयोग
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
भारत सरकार
National Medical Commission
Ministry of Health & Family Welfare
Government of India

Message from Secretary (NMC)

As we continue our journey to improve the mental health and well-being of our medical students, I am filled with immense gratitude for your unwavering commitment and contributions to the National Task Force. Your dedication and passion are the driving forces behind our collective success.

Our medical students are the future of healthcare, and their mental health is of paramount importance. Together, we can create an environment that supports their academic growth and nurtures their emotional and psychological well-being. By doing so, we can empower them to bring about positive changes in society, including preventing suicide and reducing the treatment gap for mental illness.

On a personal note, I am reminded of my own days as a medical student. The long hours, intense pressure, and relentless pursuit of excellence often took a toll on many students. I vividly remember moments of self-doubt and the struggle to maintain a balance between my academic responsibilities and personal life. It was the support from my mentors and peers that helped me navigate those challenging times. This personal journey has fueled my passion for ensuring that today's medical students receive the support they need to thrive academically, professionally, and personally.

The input from the task force report is invaluable as we finalize our strategies and implement our plans. Let us strive to make a lasting positive impact on the lives of our medical students.

(Dr. B. Srinivas)

Pocket-14, Sector-8, Dwarka , Phase -I, New Delhi-110077
Tele: 011-25365075, Email: secyoffice-nmc@nic.in

Content

1. Definitions

a. **Attempted Suicide:** A non-fatal, self-directed, potentially injurious behavior with the intent to end one's own life through actions that may cause harm, but it doesn't always result in injury.

b. **Deliberate Self-Harm:** Deliberate self-harm, also known as self-injury behavior or self-mutilation, refers to the intentional and direct injuring of one's body tissue without suicidal intent. It is often used as a coping mechanism or to express distress.

c. **Mental Health** - A state of well-being in which an individual realizes their own abilities, can cope with the everyday stresses of life, can work productively, and can contribute to their community. Mental health is not just the absence of mental disorders but encompasses emotional, psychological, and social well-being. It is an essential component of overall health

d. **Medical Students** - This term encompasses undergraduate students (pursuing MBBS and interns), postgraduate medical students, super-specialization medical students, and physicians-in-training.

e. **Risk Factor -** A characteristic, condition, or behavior that increases the likelihood of getting a disease or injury

f. **Suicide:** Intentionally ending one’s own life

g. **Suicidal ideation:** Any thoughts about ending one’s own life. It may be active, with a clear plan for suicide, or passive, with thoughts about wishing to die.

h. **Suicide Spectrum -** Refers to a range of thoughts, behaviors, and actions related to suicide. It encompasses suicidal ideation (thoughts about taking one's own life), suicide attempts (non-fatal self-harm with intent to die), and completed suicide (death resulting from self-inflicted injury).

i. **Well-being -** A state in which individuals realize their own potential, can cope with the normal stresses of life, can work productively and fruitfully, and can contribute to their communities. It encompasses physical, mental, and social dimensions and is influenced by various factors, including socioeconomic status, education, employment, and access to healthcare.

2. Language Guidelines to Avoid Stereotypes and Stigma

When discussing suicide, it is crucial to use sensitive language. Whether engaging in conversations, supporting individuals with personal experiences, or addressing the topic professionally, our choice of words goes beyond mere correctness; it can significantly impact lives. As healthcare providers, we must carefully consider the language we use to avoid stigma. By using non-stigmatizing language, we can create an environment where individuals feel more at ease seeking help during their most vulnerable moments.

Our language can also offer hope and have a positive impact. (Table 2.1) It is important to note that discussing suicide with someone does not cause or worsen suicidal thoughts, nor does it prompt individuals to act on such thoughts. Instead, exploring suicidal behaviors or ideation presents an opportunity for intervention and harm prevention. Therefore, it is crucial to inquire about suicidal thoughts and plans, as this approach can help alleviate feelings of isolation and fear.

Table 2.1: Recommended Terminology and Terms to Avoid in Mental Health.

Avoid following terms	Use these words	Reason
Committed suicide	Death by suicide/ Died by suicide	"Commit" in relation to suicide implies that it is a sin or a crime, which reinforces the stigma that it is a selfish act and a matter of personal choice.
Successful suicide/ Completed Suicide	Death by suicide/ Died by suicide	The notion of a “successful” is inappropriate because it frames a very tragic outcome as an achievement or something positive
Suicide prone	At risk of suicide	It is not the individual but the circumstances
(Name) is suicidal	(Name) is thinking of suicide / experiencing suicidal ideas	We don’t want to define someone by their experience with suicide
He is schizophrenic She is bipolar He is mentally ill She is Psycho	People/persons with mental illness	We cannot equate someone’s identity to their diagnosis People aren’t their illness. They have an illness.
He is addict He is junky	Person/people addicted to (substance)	The illness does not define them

Remaining hopeful is key, as people can and do improve. Encouraging individuals to seek help is vital, as suicidal thoughts, ideas, plans, and attempts are signs of a desperate cry for help and indicate a need for assistance.

As a care provider, it is important to choose words thoughtfully and avoid anything that increases stereotypes, bias, or discrimination against individuals with mental illness and suicidal thoughts. Refrain from labelling individuals based on their diagnosis (e.g., "He is bipolar," "She is schizophrenic," "He is suicidal," etc.). It is essential to avoid using terminology that can stigmatize, incentivize, or glorify suicide.

Executive Summary

3. Executive Summary

Medical education is the mother of a country's healthcare system. The primary objective of a medical college is to provide education, knowledge, and skills. The provision of healthcare services is however a secondary function. This distinction is crucial, as the true essence of a medical college lies in its commitment to nurturing the next generation of compassionate and skilled healthcare professionals.

Pursuing a career in medicine is a challenging yet rewarding endeavour. It requires early commitment, continuous perseverance, intense dedication, and significant emotional and financial investments. Aspiring physicians face high stakes and significant responsibilities, navigating the stringent expectations of medical colleges, society, their families, and themselves. Despite these challenges, this path is essential for shaping the future of healthcare.

Given the pervasive stressors involved in medical training, it is not surprising that medical students and doctors are at an increased risk of psychological distress and mental ill health relative to the general population. This is not merely a national phenomenon but a global one. Existing global literature consistently recognizes that 30-40% of medical students report mental health problems. There is high prevalence of anxiety, depressive disorders, suicidal ideation, substance use disorders, as well as stress and burnout in this population. Hence, a national task force was set up to assess the mental health and well-being of medical students in India and to suggest remedial measures.

Initially, the Task Force conducted a comprehensive review of scientific literature, which revealed a significant gap in systematic research on the risk factors and effectiveness of interventions for medical students who attempt or complete suicide. Currently, recommendations can be informed by valuable insights from broader research, including studies on the general population, high-risk groups, and individuals with pre-existing mental health conditions. Given the paucity of literature on risk factors and intervention-based studies concerning medical students, the task force employed three crucial methods to gather comprehensive data. *First*, in-person visits to various medical colleges were conducted, where focused group discussions were held with stakeholders such as medical college administrators, heads of departments, and students. These discussions aimed to identify best practices and challenges in providing mental health support to medical students. *Second*, an online survey targeting undergraduate and postgraduate medical students, as well as faculty members, was conducted to collect a broad range of perspectives and insights on mental health and well-being. A total of 25,590 undergraduate students, 5,337 postgraduate students, and 7,035 faculty members responded to the online survey. *Third*, the task force engaged and interacted with the representatives of Federation of Resident Doctors Association India (FORDA), Resident Doctors Association (RDA) and Association of Doctors and Medical students (ADAMS) for suggestions. Additionally, the task force integrated insights from several pivotal documents and engagements, including the Parliamentary Standing Committee's Report on the Quality of Medical Education in India 2024 (Report 157), the Mental Health Policy (2014), the National Suicide Prevention Strategy (2022), the National Crime Records Bureau (2023), Medical Council of India (MCI) rules, National Medical Commission (NMC) regulations, best practices from various medical colleges, and other relevant government documents.

3.1 Recommendations that are Universally Applicable Across Medical Colleges and Institutions

The environment of medical colleges is vital for fostering a healthy academic and work culture for students, faculty, and staff. A proactive and compassionate approach from the administration can significantly impact the mental health of medical students. By prioritizing mental well-being, institutions contribute to the success and resilience of future healthcare professionals.

3.1.1 **Orientation Program at Joining:** A comprehensive orientation program within four weeks for undergraduate students and two weeks for postgraduate students upon joining is essential for new entrants. This program should introduce students to the medical profession, campus resources, and the importance of physical, mental, and spiritual health. By prioritizing mental health and familiarizing students with available support systems, this initiative aims to create a supportive and well-informed environment from the outset of their medical education.

3.1.2 **Involving Family Members:** Involving family members during the induction program and periodically, at least once a year, would help them understand the expectations and stressors faced by medical students. This understanding would enable families to provide effective support and enhance the ability of students to cope with academic and clinical demands.

3.1.3 **Anti-Ragging Measures:** Strict implementation of the National Medical Commission (NMC) regulations on ragging is mandatory. Medical colleges should have active anti-ragging cells with strict penalties for offenders to mitigate the stress induced by ragging.

3.1.4 **Awareness Campaigns and Education:** Regular programs should educate students and faculty about mental health issues and available resources. Mental health education should be integrated into undergraduate (UG) and postgraduate (PG) curricula through lectures, workshops, and seminars. It is recommended that medical teachers, students, and administration should undergo regular training in mental health, either through periodic in-person sessions or online via the Swayam portal. The training modules should cover mental health, stress management, building resilience, prevention of substance use, gatekeeper training, and basic counselling techniques. Specific emphasis should be placed on handling confidentiality matters concerning individuals with mental illness.

3.1.5 **Counselling Services:** Implementing a 24/7 support system, such as the Tele-MANAS initiative by the Union Ministry of Health & Family Welfare, is advisable. Medical colleges should have plans for referral, evaluation, management, and follow-up for students with mental illnesses. Confidential, accessible counseling services must be widely promoted. Medical colleges should consider appointing at least two counsellors for every 500 students. These counsellors should report directly to the Dean to ensure that preventive and promotive measures are actively implemented. Psychiatric referrals should only occur when the counsellors determine that a student requires psychiatric care.

3.1.6 **Staff/Students Clinic:** Medical colleges should provide free diagnostics and treatment, including medicines, for physical and mental health issues within the campus. Establishing separate wards, clinics, and investigation facilities for students ensures easy access to healthcare services.

3.1.7 **Work Environment:** Proper infrastructure and amenities are essential for maintaining the physical health and safety of medical students. This includes well-maintained hostels, clean washrooms, safe drinking water, quality food, security measures, recreational facilities, and reasonable fees.

3.1.8 **Hostel Mess:** To accommodate diverse cultural, religious, and dietary preferences, hostel messes should involve students in menu planning and quality control.

3.1.9 **Regulation of Duty Hours:** The National Task Force recommends, based on feasibility, resources, and relevance, that residents work no more than 74 hours per week, with no more than 24 hours at a stretch. This includes one day off per week, a 24-hour duty, and 10-hour shifts for the remaining five days. Ensuring 7-8 hours of daily sleep for medical students is crucial for their mental and physical health. Collaborative planning of duty hours by HODs, faculty, senior residents and residents, needs to be done. *It is imperative to recognize that post-graduates and interns primarily serve educational purposes rather than filling gaps in healthcare staffing.* Requests for leave should be judiciously considered and not unreasonably declined. If there is an increased clinical workload, the hospital/medical college should hire more senior residents and medical officers.

3.1.10 **Safe and Supportive Environment:** Medical students should have appropriate conditions during duty hours, such as comfortable rest areas, nutritious meals, and hydration facilities. Hospitals should provide regular breaks and ensure food availability in duty rooms.

3.1.11 **Supporting Families and Childcare:** Medical colleges could consider providing on-site childcare facilities, family accommodation for married students, and daycare services. Supporting pregnant and postpartum students with academic accommodations, aligning with the Maternity Benefit (Amendment) Act 2017, is also beneficial.

3.1.12 **Evaluation and Assessment Methods:** A fair and unbiased evaluation system is essential. Institutions may offer a mix of grading systems to reduce stress and promote a collaborative learning environment.

3.1.13 **Communication Feedback and Work Environment:** Regular feedback from faculty and students enhances trust and fosters a healthy work environment. Addressing issues related to workload, hierarchy, or mistreatment is important to maintain inclusivity and respect.

3.1.14 **Transparent and Responsive Grievance Redressal:** Clear grievance redressal systems should address harassment and psychological stress. Training faculty and administrators on mentorship, accountability, and anti-harassment policies is essential. A feedback and complaint box should be available in both the Director/Dean's office and the warden's office.

3.1.15 **E-Complaint Portal of NMC:** The NMC should establish a national portal for grievance redressal, enabling secure and efficient complaint handling. A dedicated grievance redressal cell within the NMC should manage the workflow and ensure timely resolutions.

3.1.16 **Mentor-Mentee Program:** Mentor-mentee programs, as per NMC regulations, provide guidance and professional development opportunities. These programs should involve regular meetings, training for mentors, and support for mentees to promote mental health and resilience.

3.1.17 **Removing Fees for Repetition of Semesters:** Abolishing fees for repeating semesters reduces economic burdens and stress. Transparent and standardized grading systems and an independent appeals process is essential.

3.1.18 **Teachers' Apprehension:** Creating a supportive environment for teachers is crucial. Clear protocols for handling student complaints, promoting professionalism, and addressing false complaints can enhance teacher engagement and satisfaction.

3.1.19 **Uniform PayScale, Retirement, Pension, and Rotational Headship (UPRPR):** Standardizing pay scales, retirement and rotational headship policies across institutions ensures equity and attracts high-quality faculty. Prohibiting private practice for medical teachers and providing non-practicing allowances can maintain the quality & integrity of education.

Uniform PayScale for Medicos (UPS for Medicos): In alignment with UGC pay scales and AICTE pay scales regulations, we propose AIIMS, New Delhi pay scale for all medicos. A uniform AIIMS, New Delhi pay scale structure for interns, postgraduate students, super-specialty students, and medical college teachers ensures equity and fairness in compensation, promoting job satisfaction and attracting high-quality faculty and students.

Uniform Retirement Policy (URP): The current retirement policy for medical faculty is inconsistent and disorganized. A standardized retirement policy nationwide, adopting the AIIMS, New Delhi retirement policy to be implemented.

Uniform Pension Scheme for all Medical Teachers: The implementation of a Uniform Pension Scheme for all medical teachers is essential to ensure their financial security post-retirement. Such a scheme will enable them to dedicate their efforts towards teaching, mentoring, and research without concerns about

their future. Therefore, it is imperative to introduce a New Pension Scheme across all medical colleges.

Uniform Policy of Rotation of Headship (URH): Implementing a rotational headship system for department heads is essential to introduce new ideas and practices, and prevent toxic environments under inefficient leadership.

3.1.20 **Reducing Access to Means for Suicide:** Implementing measures to limit access to dangerous means can prevent impulsive self-harm. Evaluating high-risk areas and enhancing security measures are essential.

3.1.21 **Family Vacation:** Medical colleges could consider granting a ten-day vacation at least once a year to both undergraduate and postgraduate medical students on a rotational basis. This vacation would allow students to meet their family members and foster family bonding.

3.1.22 **Gate-Keeper Training Program:** A Gatekeeper Training Program in medical colleges aims to establish a proactive network for identifying at-risk individuals and connecting them with professional help. This program involves comprehensive training for participants to recognize warning signs and refer students to mental health services. With the support of the Department of Psychiatry, local protocols should be developed, and the gatekeeper training program should be initiated across the campus, involving all stakeholders. This initiative is crucial for fostering a supportive environment and enhancing mental health awareness within the medical college community

3.1.23 **Increasing the Number of Postgraduate and Super-speciality Seats:** Expanding postgraduate medical seats addresses healthcare needs, enhances specialist care, and reduces student migration.

3.1.24 **Employing Adequate Number of Senior Residents:** Medical colleges should hire more senior residents based on workload and patient care demands.

3.1.25 **Policy Adjustments Regarding Bonds:** Abolishing seat leaving fees/bonds and a compulsory rural service bond is imperative. Medical students who abandon their seats after admission should be prohibited from applying to medical colleges for twenty-four months from the date of leaving. Additionally, medical colleges can fill the vacated seat (UG/PG) in the same category (Government/Management Seat) as the student belonged to in the next upcoming calendar year.

3.1.26 **Trial Observership/Externships/Residency:** A trial observership or residency period provides firsthand experience of the college and department environment, helping students make informed decisions about their choice of field and institution.

3.1.27 **Use of Technology in Training Medical Students:** Integrating technology, such as Virtual Reality (VR), Augmented Reality (AR), Artificial Intelligence (AI), and Machine Learning (ML), into medical training enhances learning experiences and prepares students for technological advancements in healthcare.

3.1.28 **Library Facilities:** Digitizing library facilities and creating online access systems support academic development. Establishing reading rooms in hostels and extending library hours accommodate diverse study preferences.

3.1.29 **Value-added Optional Courses:** Introducing optional courses in various subjects allows students to explore diverse interests and develop multidisciplinary skills, thereby enhancing their academic and professional growth. These courses can be credited or non-credited and may be accredited by the medical college, university, State Medical Council, or NMC, New Delhi. This approach aligns with the principles of the New Education Policy.

3.1.30 **Invited Guest Faculty**: Inviting part-time faculty from various fields enriches the educational experience by providing diverse perspectives and mentorship without administrative burdens.

3.1.31 **Clinical Linguistic Language Proficiency Policy:** A comprehensive policy for linguistic proficiency ensures effective communication with local clinical populations, enhancing patient care and professional development.

3.1.32 **Supplementary Exams:** Introducing supplementary exams reduces academic pressure and anxiety, providing a fairer assessment system and supporting student well-being.

3.1.33 **Announcing Exam Results Using Roll Numbers:** Using roll numbers to announce exam results enhances privacy, reduces stress, and promotes a fair academic environment.

3.1.34 **Addressing the 'Ghost Faculty' Problem:** Enhanced verification processes, regular inspections, and stringent penalties can address the ghost faculty issue, ensuring the integrity of medical education.

3.1.35 **Centre for Training of Medical Teachers (CTMT):** A comprehensive teacher training centre at both the national and regional levels is essential to elevate medical faculty into exemplary educators proficient in pedagogy, andragogy, online teaching, and various methods of imparting skills. Training medical teachers in stress management, mental illness, substance use, mental health first aid, and basic counselling techniques is essential.

3.1.36 **Career Counselling and Campus Recruitment:** Expanding career counselling to include diverse professional guidance and facilitating campus recruitment ensures medical students are well-prepared for various career paths.

3.1.37 **Establishing Health Universities:** Dedicated health universities or departments within general universities can ensure the effective implementation of NMC regulations and address the unique needs of medical education.

3.1.38 **Establishment of the Centre for ICARED:** A Centre for Innovation, Collaboration, Accelerator, Research, Entrepreneurship, and Medical Device Development (ICARED) fosters a culture of innovation and practical learning, preparing students for leadership in healthcare.

3.1.39 **Liaison with Local Organizations:** Medical colleges should liaise with professional organizations and community groups to develop a support network for students, enhancing their academic, professional, and personal development.

3.1.40 **Yoga in Promoting Mental Health:** Integrating yoga into students' lives can reduce stress, prevent mental illness, and develop resilience, promoting overall well-being.

3.1.41 **Specific Suggestions for Medical Students, Families, and Faculty:** Effective time management, social support, self-awareness, mindfulness, regular exercise, healthy habits, and seeking professional help are essential for maintaining good mental health. Family involvement and faculty support play crucial roles in student well-being.

3.1.42 **Mental Health and Wellbeing Committee -** At the national level, the Permanent Member of the National Medical Commission's (NMC) Ethics and Medical Registration Board (EMRB) should serve as the nodal person. At the medical college level, the Mental Health and Well-Being Committee needs to be structured as follows: the Dean must serve as the Chair, the Head of the Department (HOD) of Medicine, Surgery, Obstetrics and Gynaecology (OBG) to be designated as the Co-Chairs (three co-chairs), and the HOD of Psychiatry to act as the Member Secretary. Additionally, the HODs of each department should be members of this committee to ensure the implementation of these recommendations.

3.1.43 **Enhancing Physical Fitness and Sports Activities:** It is recommended that the college organize and maintain diverse sports activities, overseen by a sports Committee, with dedicated time allotted for physical activities.

3.1.44 **Sāmājika Sanskriti Campus Council:** The Sāmājika Sanskriti Campus Council aims to reduce social isolation and enhance well-being by supporting diverse social groups and activities within medical colleges. Headed by senior faculty and student representatives, it allocates resources for various cultural, recreational, and festival events. Regular evaluations and a quarterly newsletter foster community, making the educational environment more inclusive and engaging.

3.2 . Recommendation for High-Risk Group Identification and Referral

Implementing periodic faculty training and informal methods for early detection of at-risk students ensures timely intervention and support, enhancing student well-being and academic success.

3.2.1 **Peer Support System:** Task force proposes a comprehensive Peer Support Model in medical colleges, leveraging senior students to support juniors, aiming to improve mental health, provide academic and emotional support, and prevent suicide. The program includes safe spaces, anonymous reporting, professional support integration, mental health awareness campaigns, and suicide prevention workshops. Regular feedback and evaluations will ensure effectiveness and inform adjustments.

3.2.2 **Deaddiction Services:** Students dependent on substances should be encouraged to seek help while maintaining confidentiality rather than be reprimanded. This policy focuses on health and recovery, acknowledging that substance dependence is a health issue requiring professional intervention. Ensure that de-addiction services are readily accessible to students on campus will help address the problem in its initial stages.

3.3 Recommendation for Students with Mental Illness or Attempted Suicide

3.3.1 **Supportive and Inclusive Environment:** Every medical college must establish a Department of Psychiatry with sufficient psychiatrists, counsellors, nurses, and support personnel. A crisis intervention strategy shall be in place to inform and involve immediate family members during mental health crises such as attempted suicide and mental health emergencies. Creating a supportive environment with accessible mental health services, family involvement, and academic accommodations promotes the recovery and well-being of students with mental health issues. Offer necessary academic accommodations and support structures to assist students with mental health challenges.

3.3.2 **Fitness to Practice Protocol: Medical Students with Mental Illness:** Establishing a clear protocol for evaluating fitness to practice for medical students with mental illness ensures, patient safety and supports student well-being. An evaluation Committee should be formed to assess fitness to practice. The committee should comprise the following members: the Dean (as Chair), a psychiatrist, a faculty member from forensic medicine, the Head of the Department (HOD) of the concerned department, and a female faculty member. An appeal panel also needs to be established. There should be an aim to balance the rights and well-being of medical students with mental health issues against the imperative to maintain patient safety and quality care at the medical college.

3.3.3 **Mandatory Reporting of Suicidal Attempts and Death by Suicide:** Enforcing mandatory reporting of suicide attempts and deaths by suicide ensures data collection, accountability, and the development of targeted interventions for mental health support.

By implementing these recommendations, medical colleges can create a supportive, inclusive, and effective environment that enhances the mental well-being and academic success of medical students, ensuring a healthier future workforce.

Introduction

4. Introduction - Mental Health Continuum

Mental health exists on a spectrum, ranging from optimal mental wellness to severe mental illness, with varying degrees of mental distress in between. Understanding the distinctions between these concepts is crucial for promoting mental well-being and providing appropriate support and treatment for those in need. At one extreme of the spectrum lies mental wellness, while at the opposite end lies mental illness, as shown in figure no-5.1**.** Mental health means a state of well-being in which an individual realizes their own abilities, can cope with the everyday stresses of life, can work productively, and can contribute to their community(1). Mental health is the absence of mental disorders and encompasses emotional, psychological, and social well-being. It is an essential component of overall health. Mental health is affected by biological characteristics, social and economic circumstances, cultural gender norms, and the broader environment of individuals. Exposure to risk factors or stressors can result in a range of mental health problems.

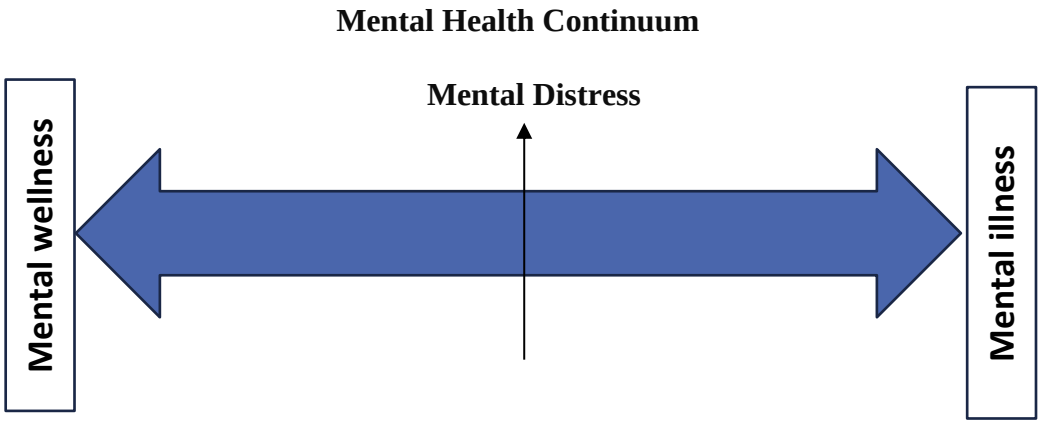


Figure 5.1: The Mental Health Continuum

Mental distress is a term used to describe a temporary state of emotional or psychological discomfort, which is often a normal response to stressful life events, such as loss, trauma, exams, failure, or significant life changes. Mental illnesses are conditions that are clinically diagnosable and have a significant impact on an individual's biological, social, occupational, academic, emotional, or behavioral functioning, often necessitating professional intervention.

The global prevalence of mental illness is a significant public health concern with a substantial impact on individuals, families, and societies. According to the World Health Organization (WHO), approximately 1 in 4 people across the globe will experience a mental health condition at some point in their lives (2).

In India, the National Mental Health Survey 2015-16 undertaken in 12 states reported that the overall weighted prevalence for any mental morbidity was 13.7% lifetime and 10.6% current mental health morbidity(3). The treatment gap for any mental disorder was reported to be as high as 83% in the general population(3). As per the Global Burden of Disease Study 1990–2017, one in seven Indians was affected by mental disorders of varying severity in 2017(4).

At any given time, an estimated 1 in 10 individuals in India will grapple with a diagnosable mental health condition

The National Survey on Extent and Pattern of Substance Use in India (2018), conducted by the Ministry of Social Justice & Empowerment, highlighted the significant problem of drug abuse in the country. The survey found that a large number of individuals were affected, with 2.9 crore people dependent on alcohol, 25 lakh dependent on cannabis, 28 lakh dependent on opioids, and 8.5 lakh children dependent on inhalants(5). These statistics underscore the importance of addressing mental health issues comprehensively and effectively.

4.1 Suicide

Globally, close to 800,000 people die by suicide each year, with about a third of these deaths occurring among young individuals. Suicide is the second leading cause of death among 15–29-year-olds(6). The World Health Organization estimates that one out of every 100 deaths are due to suicide. Additionally, it reports that globally, there may be 20 suicide attempts for every death by suicide(7, 8). However, under-reporting of suicide and attempted suicide is a significant issue worldwide due to stigma, legal and religious concerns, and incomplete or inaccurate reporting. This underestimation is also influenced by limited access to health care, restrictions on health insurance coverage, and refusal of life insurance policies(7).

Suicide is a complex interplay of personal, social, and biological factors, which is rarely caused by a single circumstance or event.

In India, which accounts for about 18% of the global population with its 1.4 billion inhabitants, suicide is a significant national public health concern, with 1.71 lakh suicides recorded in 2022 and a suicide rate of 12.4 per one lakh population as per National Crime Record Bureau Report 2023.

While suicide is not considered a disease, suicidal behavior encompasses a broad spectrum of actions and thoughts related to self-harm and death. This spectrum includes suicide, suicide attempts, deliberate harm, and wishes for death, both active and passive. Despite its prevalence, suicide remains a taboo topic in many societies, leading to stigma, misinformation, and inadequate support for those at risk (1).

Suicide is a complex issue with multifactorial causes, often resulting from a combination of biological, psychological, social, and environmental factors. Mental health disorders like depression, bipolar disorder, and substance abuse are major risk factors. However, suicide typically arises from a complex interplay of various factors, including genetics, social, cultural, economic, gender, and environmental influences. Trauma, sudden loss, broken families, relationship issues, financial loss, or significant life changes can also elevate the risk (9, 10). Addressing these multifaceted factors requires a comprehensive and holistic approach to suicide prevention(11, 12).

Addressing the array of biological, social, financial, environmental, and stress-related factors that contribute to suicide requires a comprehensive and multi-faceted approach.

In this regard, a few landmark initiatives have been undertaken by the government of India to shape mental health care in the country. Key initiatives like the Mental Health Policy in 2014, Mental Healthcare Act in 2017, Nasha Mukt Bharat Abhiyaan in 2020, Mental health and prevention of substance services have been added in the package of services under Comprehensive Primary Health Care under Ayushman Bharat at Health and Wellness Centres in 2021, National Suicide Prevention Strategy in 2022, The launch of the Tele-Mental Health Assistance and Networking Across States (Tele-MANAS) initiative on 10th October 2022 to provide access to mental health care services to all through a centralized, toll-free helpline (14416 or 1800-891-4416). Above initiative demonstrates the government's dedication to enhancing mental health services across the country.

The World Health Organization estimates that globally, there may be 20 suicide attempts for every death by suicide.

Recent preliminary reports and media coverage have highlighted the escalating mental health issues and increasing suicide rates in higher educational institutions, including medical colleges. Given their pivotal role in medical education, medical colleges should also serve as centers for awareness, education, wellness, and mental health care. The Government of India has taken proactive steps by forming the National Task Force on Mental Health and Well-being of Medical Students. The primary objective is to address the mental health and well-being of medical students, which will have a ripple effect in raising awareness about mental health among the general population, reducing the treatment gap, and preventing suicides. This initiative represents a crucial opportunity to develop healthier doctors, healthier citizens, and ultimately, a healthier nation.

Objectives

5. Objectives of the Task Force

5.1 Background*:* The journey of medical professionals is both arduous and profound, starting from the moment they decide to pursue a career in medicine, often influenced by personal ambition or familial pressure. The rigorous process of gaining admission into medical school demands exceptional dedication and marks just the beginning of a challenging career path. Upon entering medical school, students not only take on the role of future healers but also bear the expectations of their families. This transition can lead to an identity crisis as they move from being top achievers to competing among equally skilled peers.

Medical training demands, clinical responsibilities, financial burdens, and personal obligations, place significant stress on students. Rather than being an endpoint, graduation leads to the next challenge of postgraduate entrance exams, which are highly competitive and pivotal for their future roles as doctors. For postgraduate students, particularly women, the struggle extends beyond academics to balancing societal expectations of marriage against professional ambitions, often leading to severe personal conflicts and, tragically for some, to suicide. After postgraduate studies, the journey does not ease; further specialization deepens the commitment to a demanding medical career. As practicing doctors, they face a professional world fraught with corruption, fierce competition, and the ever-present risk of medical malpractice. While many doctors continue to push forward, overcoming these obstacles with resilience and dedication to the greater good, others find the pressures overwhelming and choose to step back.

This career trajectory for medical professionals is marked by continuous tests of endurance and sacrifice, reflecting a path of valor amid adversity. While many succeed and thrive, the journey remains a formidable challenge with significant personal sacrifices. In response to the importance of addressing mental health challenges among medical students, the National Medical Commission has established the National Task Force on Mental Health and Well-being of Medical Students. This task force aims to address the mental health needs of medical students and promote their overall well-being.

Suicide prevention, grounded in the principle that "Every Life Matters," begins with the efforts of medical colleges. However, the obligation to prevent such tragedies is a collective responsibility that extends to every member of society.

5.2 The Objective of this National Task Force*:* The Task Force will comprehensively review existing literature and data on mental health and suicide among medical students. It will analyse the contributing factors to these challenges and develop evidence-based strategies aimed at improving mental health and preventing suicides within this population. The objective is to provide recommendations that could be implemented to address these critical concerns

Embedded within the fabric of medical education is a profound creed: "Every Life Matters." This principle forms the bedrock of our approach to mental health, well-being, and suicide prevention among medical students. Addressing mental health and wellbeing among medical students offers a twofold benefit: it not only reduces needless tragedies within this group but also equips them to navigate the profound emotional challenges they will confront in their future medical careers. Implementing prevention strategies and nurturing the well-being of medical students is far from self-serving. It empowers them to become champions for mental health in their communities. As future doctors, they can be powerful advocates for early intervention, destigmatizing mental illness, and promoting overall well-being. This creates a ripple effect, fostering healthier communities, reducing treatment gap in mental illness and suicide rates. Thus, medical colleges shoulder a profound responsibility: to cultivate resilience in their students and shape them into advocates for of mental health and suicide prevention within society as a whole.

The task force is dedicated to identifying risk factors by reviewing the available literature and evaluating effective intervention strategies used worldwide in medical colleges. With a commitment to addressing systemic issues in healthcare and medical education, the task force prioritizes promoting wellness, preventing mental illness, and reducing deaths by suicide. These efforts aim to enhance the learning environment and foster a healthier atmosphere in medical colleges.

The National Task Force for Mental Health and Wellbeing is committed to creating a nurturing environment for medical students, fostering resilience, reducing stigma, and promoting mental health awareness to ensure their holistic development and success in both their personal and professional lives. Our mission extends beyond the academic halls to prevent suicide, decrease the mental health treatment gap for the public at large, and build a strong, holistic, and compassionate healthcare system for the country.

Scientific Background

6. Mental Health in Medical Students from a Global Perspective:

During medical education, students undergo a crucial transition from teenage to young adults, facing increasing responsibilities and societal, familial, and self-imposed expectations. This period of transformation involves self-discovery and identity formation, contributing significantly to stress. Medical training presents various challenges, including intense competition, emotional stress, financial burdens, interpersonal conflicts, ethical dilemmas, heavy workloads, limited personal time, and inadequate support, creating an environment conducive to mental health issues. (13-15). In a comprehensive systematic review and meta-analysis, researchers aimed to determine the prevalence of professional burnout among medical students. The prevalence rates varied significantly, ranging from 7.0% to 75.2%, influenced by factors specific to each country, the choice of assessment tools, and the criteria used to define burnout symptoms (16)

A meta-analysis conducted by Rotenstein et al. in 2016, which included 167 cross-sectional studies (n = 116,628) and 16 longitudinal studies (n = 5,728) from 47 countries, found that approximately 27% of medical students experienced depression during their medical education(17). Another meta-analysis, pooling data from 62,728 medical students and 1,845 non-medical students across 77 studies, reported a global prevalence of depression among medical students to be 28% (18). Similarly, a systematic review and meta-analysis of 41 studies (n = 36,608) from various regions worldwide reported a pooled prevalence of depression of 38%(19).

The prevalence of mental illness among medical students exceeds that of the general population. According to international literature, one out of three medical students have a diagnosable mental illness.

Jahrami and colleagues conducted an umbrella review involving 32 meta-analyses to ascertain the prevalence rates of self-reported psychological and behavioral symptoms among medical students. The combined analysis revealed an overall pooled prevalence rate of 30.3%. Among these symptoms, sleep problems had the highest reported prevalence at 42.0%, followed by stress at 41.7%, burnout at 35.8%, anxiety, and depression both at 32.5%, internet addiction at 26.0%, substance use at 25.2%, eating disorders at 9.8%, and suicidal thoughts/gestures/ acts at 8.9%. This evidence indicates that approximately one-third of medical students experience at least one of these problematic psychological and behavioral symptoms(20). Additionally, several studies have highlighted a high prevalence of depression, anxiety, and sleep disorders among medical students (21). Another systematic review analyzed data from 31 cross-sectional studies and 23 longitudinal studies, encompassing a total of 17,560 resident physicians, to estimate the prevalence of depression or depressive symptoms. The overall pooled prevalence

among resident physicians was 28.8%, varying from 20.9% to 43.2% based on the assessment tool. The prevalence showed an upward trend with each passing year (22).

A meta-analysis encompassing ten cross-sectional studies from China(23), which included a total of 30,817 Chinese medical students, was conducted. The findings revealed prevalence rates of 29% for depression, 21% for anxiety, 11% for suicidal ideation, and 2% for eating disorders. Subgroup analyses indicated no significant differences in the prevalence of depression and suicidal ideation across genders, nor were there significant differences in the prevalence of depression among different age groups. Similarly, another meta-analysis (24) focusing on Chinese medical students indicated a depression prevalence of 27% within this population. Somatic symptoms such as back pain, neck pain, headaches, sleep disturbances, and functional gastrointestinal disorders appear strongly correlated with mental ill-health in medical students and are likely highly prevalent.(25).

Another systematic review and meta-analysis was aimed at providing a thorough overview of the mental health problems (MHPs) faced by medical students in Brazil(26). The meta-analysis consolidated findings from 59 studies, which reported varying prevalence rates for different mental health problems (MHPs): depression was found in 30.6% of cases from 25 studies, common mental disorders in 31.5% from 13 studies, burnout in 13.1% from three studies, problematic alcohol use in 32.9% from three studies, stress in 49.9% from six studies, low sleep quality in 51.5% from four studies, excessive daytime sleepiness in 46.1% from four studies, and anxiety in 32.9% from six studies. Additionally, the analysis highlighted several factors contributing to these MHPs, including a lack of motivation, inadequate emotional support, and academic overload(26). Another meta-analysis, which included fourteen original studies, found that the pooled prevalence rate of Common Mental Disorders (CMDs) among undergraduate students at Brazilian medical schools was 43%(27). A meta-analysis from Brazil also reported that medical courses are associated with poor quality of life for medical students in the physical and psychological domains(28). The primary predictors of diminished Quality of Life (QoL) were consistently linked to being female gender and the duration of academic pursuit(29).

In light of the Internet's pivotal role in modern education and recreation, a meta-analysis was conducted to estimate the prevalence of Internet Addiction among medical students across diverse countries(30). The analysis encompassed 3651 medical students and revealed a pooled prevalence of 30% Internet Addiction, approximately five times higher than the general population. This underscores the urgency for medical educators and administrators to identify and intervene with students grappling with Internet Addiction. Along with this, the frequent occurrence of poor sleep quality among medical students is notable, correlating with numerous adverse health implications for students and potentially compromising patient care within medical colleges. A meta-analysis encompassing 57 studies involving 25,735 medical students unveiled a pooled prevalence of 52.7% for poor sleep quality, as assessed by the Pittsburgh Sleep Quality Index(31). Notably, poor sleep quality was most prevalent in Europe, trailed by the Americas, Africa, Asia, and Oceania across continents.

A systematic review involving 14 studies and 13,111 participants sought to explore mental health challenges among Asian medical students. The pooled prevalence of anxiety disorder was found to be 7%, depression was noted at 11.0%, and suicidal ideation was 3%(32). The low prevalence of mental health issues among Asian medical students can be attributed to several factors. Firstly, cultural stigma surrounding mental health may lead to underreporting,

as students may be reluctant to disclose their challenges. Secondly, students' exposure to psychiatry and medical psychology during clerkships equips them with knowledge for self-management. Lastly, proactive efforts by medical schools, such as enhanced mental health education and access to psychological counselling services, likely contribute to the low prevalence by providing robust support systems for students(32).

International studies reveal that medical students worldwide face numerous challenges that lead to stress, significantly contributing to mental health issues. Reports indicate that approximately 27% to 38% of medical students experience high prevalence rates of burnout, depression, anxiety, insomnia and other psychological symptoms. These findings underscore the urgent need for enhanced mental health support in medical education settings

6.1 Mental Health in Medical Students from India

Gaining admission into medical colleges in India is an intensely competitive process that demands significant commitment. Upon entering these institutions, students not only face the responsibility of future healers but also carry the burden of familial expectations, a pressure particularly pronounced in government medical colleges. These colleges, while providing extensive clinical exposure through large patient volumes, also introduce formidable challenges that can precipitate mental health issues (33). Research has shown an increase in mental health morbidity during medical training in India, with a jump from 2% pre-admission to 12% post-admission diagnoses. The first year is characterized by change and uncertainty, while the final year is marked by exam pressure and expectations(34).

A regional study from South India reported that 37% of medical students experienced depression, 51% anxiety, and 33% stress(35). Another study from North India found that 21.5% of students had a provisional diagnosis of depressive disorder, with 7.6% qualifying for major depressive disorder using the Patient Health Questionnaire (PHQ-9) (36). A systematic review was conducted to assess the prevalence of depression, anxiety, and stress among medical students in India, incorporating data from 44 studies. The prevalence of depression varied widely, from 8.5% to 71%, which can be attributed to variations in study methodology, assessment tools, cultural influences, stigma, and the unique challenges faced by this population(37). However, the pooled prevalence rates derived from a subset of these studies provided more focused estimates: depression was found to be 39% based on 16 studies with 3882 participants; anxiety was 35% from four studies including 686 participants; and stress was 51.3% from 28 studies encompassing 5354 students(37).

Recent meta-analyses further emphasize the high prevalence of depression among Indian medical students, with findings of 50% in one analysis of 5944 students (38) , and 40% in another, covering 7046 students (39). Despite this high prevalence of various mental illnesses, there is a notable treatment gap, driven by preferences for informal consultations, concerns about confidentiality, lack of time, a preference for self-diagnosis, fear of unwanted intervention, stigma, discrimination, potential career impact, and lack of awareness(40-43). Enhancing access to mental healthcare for medical students entails clarifying the information displayed on academic records, debunking prevalent myths surrounding mental healthcare, and fostering awareness about available resources. Additionally, students often seek care externally

due to concerns about their provider potentially being an academic preceptor within their institution(43).

The attitudes towards mental illness among medical students and interns remain largely negative, which could hinder their future roles as empathetic healthcare providers.(44-46). Please refer to Table No-1. Addressing these attitudes is critical, particularly during training, which offers a prime opportunity for fostering positive changes. Programs to overcome barriers to seeking mental health care are suggested to start early in training and persist throughout (47). This implies that certain barriers start and persist throughout medical school. Therefore, orientation programs that address these concerns must be initiated at the beginning of training and continued throughout medical school to result in a meaningful impact. A good time to have these programs would be within the first few weeks of every new academic session. Initiatives such as having separate student clinics by the psychiatry department in medical colleges to ensure confidentiality need to be strongly considered by the administration to optimize service utilization(33).

Despite the higher prevalence of depression and anxiety disorders among medical students, many are reluctant to seek treatment, contributing to a significant treatment gap. Studies suggest that up to 70-80% of medical students with mental health issues do not seek help or receive adequate treatment.

Integrating psychiatry into the MBBS curriculum is vital, not just for enhancing mental health care and averting suicide among medical students but also for its central role in providing comprehensive, holistic health care to the general public(48). This integration aids in diminishing stigma, facilitating early detection of mental health concerns, enhancing doctor-patient communication, tackling public health issues such as suicide, drug use, and depression, and nurturing the personal and professional growth of medical students(49).

Table 6.1. The Perceived Barriers Medical Students Face in Seeking Help.

Perceived Barriers by Medical Students to Seek Help
1) Stigma about seeking help for mental illness 2) Perceived weakness in personality 3) Preference for informal consultations 4) Concerns about confidentiality 5) Lack of awareness 6) Fear of unwanted intervention 7) Time constraints 8) Lack of convenient access to treatment 9) Preference to manage problems on their own

7. Attempted Suicide and Death by Suicide in Medical Students from a Global Perspective

Suicide research among medical students is a sensitive and often taboo subject, yet critical insights have been gained from various studies examining the spectrum from suicidal ideation to completed suicide. Research involving 4287 U.S. medical students across seven schools, including longitudinal data from five, found that approximately 50% of students experienced burnout, with 10% reporting suicidal ideation. A clear association was noted between burnout and an increased likelihood of subsequent suicidal ideation(50). Further, a systematic review including articles from 2011 identified 17 studies with 13,244 medical students globally, showing suicidal ideation prevalence ranging from 1.8% to 53.6%(51).

Meta-analytic methods have been utilized to evaluate the prevalence of suicidal attempts with greater accuracy. A meta-analysis incorporating 14 research articles worldwide reported a one-year prevalence of suicide attempts among medical students at 1.64%, and a lifetime prevalence at 2.19%. Notably, the prevalence of suicidal attempts was higher in medical studies conducted in low and middle-income countries compared to those in high-income countries(52). Another meta-analysis concerning 8585 African medical students across 14 studies revealed lifetime rates of 18.7% for suicidal ideation, 3.8% for making plans, and 5.5% for actual attempts(53). An umbrella review encompassing 32 meta-analyses reported a combined prevalence of 9% for suicidal thoughts, gestures, and acts among a host of psychological symptoms with a pooled prevalence of 30% (20). Another meta-analysis, which included 24 cross-sectional studies with 21,002 participants from 15 countries, found an overall suicidal ideation prevalence of 11.1% (17).

The prevalence of suicidal thoughts among medical students shows a wide range, from 6.0% to 43.0%, with annual suicide attempts at 1 to 5%. The rate of suicide is between 0.3 to 3 times higher than that of the general population.

Globally, suicidal ideation rates in medical students have been reported as varying broadly, with studies indicating a range from 6.0% to 43.0% (54, 55). Suicide attempt rates also vary significantly by region, as highlighted by research findings of 7.4% in Ethiopia (56), 5.5% in Africa(53), 6.4% in Turkey(57), 2.2% in Austria(57), 1.9% in the United States of America(58), and 1.4% in Norway(55). Such variability can be attributed to differences in medical training systems, course durations, and student demographics. The diversity in methodological approaches and definitions used to describe suicidal behavior across studies further complicates comparisons. Further, underreporting in suicidality complicates the

accuracy of these statistics(59). In summary, global data highlights that suicide and related behaviors are significant concerns among medical students. Studies reveal varying rates of suicidal ideation, attempts, and completions, with factors like stress, academic pressure, burnout, and mental health issues playing substantial roles.

Although suicide and suicidal behaviour are not diseases, they are important symptoms of a larger systemic issue that requires a comprehensive systemic overhaul

7.1 Attempted Suicide and Death by Suicide in Indian Medical Students

India faces significant challenges in obtaining accurate suicide statistics for medical students and physicians from the National Crime Records Bureau (NCRB) due to its reliance on passive surveillance data, which lacks comprehensiveness. The difficulty in collecting precise information about suicides among medical students stems from various factors, including limited resources, fear of litigation, concerns about the reputation of medical schools, inadequate record-keeping, and privacy issues. Currently, there is no robust method for collecting suicide-related data, leaving us reliant on secondary sources.

The National Medical Commission (NMC) has reported that in the past five years, 122 medical students (64 undergraduate and 58 postgraduate students) have died by suicide. This translates to an estimated 25-26 medical student suicide per year. However, when comparing NMC data with NCRB data for the general population, the suicide rate among medical students appears lower. According to the NCRB data for 2022, the suicide rate in India was approximately 12.4 per lakh population. Applying this rate to the medical student population of 600,000 (including undergraduate, postgraduate, and DNB students), we would expect about 74 deaths by suicide annually among medical students. Yet, the NMC data suggests only 24-25 medical student suicides per year. These discrepancies highlight the limitations of current data collection methods. The lack of a comprehensive and systematic data reporting system means that we often rely on secondary sources, such as media reports and internet sources, for information.

An interesting study on suicide was conducted by Chahal et al. (2022), which examined completed suicides within the allopathic medical community by analysing data from online news portals and other publicly accessible internet sources. This study covered the period from January 2010 to December 2019 and identified a total of 358 suicide deaths. Among these, 125 were medical students, 105 were residents, and 128 were physicians. The analysis revealed that academic stress was the predominant cause of suicide among medical students (45%) and residents (23%), while marital discord was more prevalent among physicians (26.7%). Additionally, mental illness was a significant contributing factor, accounting for 24% of medical student suicides and 20% of physician suicides (60). Estimating the suicide rate from the study data of 230 suicides over 10 years (125 undergraduate and 105 postgraduate students) indicates an average of 23 suicides per year. This rate is significantly lower than the expected rate of 74 deaths by suicide per year, based on the NCRB data, if we apply the general population's suicide rate of 12.4 per lakh to the medical student population of 600,000.

An exploratory study conducted using retrospective news content analysis from 2010 to 2014 identified 16 cases of medical student suicides, with 7 of them linked to actual or perceived poor academic performance(61). A similar retrospective study based on media reports spanning a decade (2009 to 2018) revealed a total of 196 reported cases of medical student suicides in India. Among these, 134 (69%) involved undergraduate students and 61 (31%) involved postgraduates. In both the first year and final year of MBBS, the rate of death by suicide was 30%, indicating a high-risk period for students (62).

A recent study involving 787 medical students found that 37% reported having suicidal thoughts, 11% planned suicide, 3% attempted suicide, and 7% assessed the future risk of suicidal behavior (63). Another cross-sectional study conducted among medical students in North India over two months in early 2021 gathered data from 531 participants using a self-administered questionnaire. It revealed that 19.6% of respondents exhibited suicidal behavior. The lifetime rates of suicidal ideation, plan, and attempt were 20.3%, 10.3%, and 2.3% respectively, with a 1-year prevalence of suicidal ideation at 33%. Factors significantly associated with higher suicidal behavior included depression, dissatisfaction with academic performance, and coping with mental disengagement (64).

The evidence from Indian studies on medical student suicides, primarily based on public records such as obituaries, police reports, and newspaper articles, is restricted to publicly available information. This approach may miss cases where causes of death are undetermined or suicides are not disclosed due to privacy, legal, or insurance reasons, leading to significant gaps in understanding suicide rates, risk factors, and intervention targets. However, the available data on suicide and mental health issues in medical students indicate that these are significant concerns worldwide. Studies show that medical students experience high levels of stress, burnout, and depression, which can increase their risk of suicidal ideation and behavior. Aligned with our core value that 'every life matters', addressing this issue can have broader implications for public health policy in preventing suicide. Hence, it is crucial to recognize the varying rates of suicidal attempts and completions among medical students. Understanding these variations is essential for developing targeted interventions and support systems to address the specific needs of at-risk medical students.

After a first suicide attempt, one in five individuals is at risk of making another attempt. The risk of repeat attempts is higher in the first 1 to 3 years.

8. Risk Factors for Mental Illness and the Suicidal Spectrum

Understanding the diverse risk factors impacting mental health and well-being is paramount. These factors span across biological, psychological, social, and environmental domains, each contributing uniquely to the overall mental health landscape. Recognizing these multifaceted influences is essential for developing effective interventions and support systems that foster psychological resilience and promote overall mental health. There is considerable overlap in the risk factors for mental health and well-being, mental distress, mental illness, attempted suicide, and death by suicide. Recognizing and addressing these multifaceted risk factors is essential for developing effective interventions and support systems that promote psychological resilience and overall mental health.

Mental health and well-being and suicide represent a complex interplay of biological, behavioral, environmental, and social factors and is a leading cause of death among adolescents and young adults. Timely intervention through the identification of these risk factors is crucial for prevention and management (65, 66). A comprehensive understanding of these factors is essential for addressing suicide effectively (67). However, the lack of systematic studies in medical students also gives us an opportunity in investing for more systematic studies examining the risk factors predicting mental illness and suicidal tendencies among medical students. Consequently, we are leveraging valuable evidence from studies conducted on the general population and high-risk populations.

There is considerable overlap in the risk factors for mental health and well-being, mental distress, mental illness, attempted suicide, and death by suicide. These interconnected factors underscore the complexity of mental health challenges and highlight the urgent need for comprehensive strategies.

The vulnerability to mental illness and suicide arises from an interaction between biological and environmental influences. Adverse conditions during early developmental phases, such as pregnancy and childhood, can lead to dysregulated gene expression, impacting neuronal networks and behavioral responses. This can increase susceptibility to mental health issues, addiction, and risky behaviors, thereby elevating suicide risk. It is imperative to grasp the complexities of these interactions to devise effective prevention strategies (68).

The risk factors for mental illness and suicide can be categorized into: –

a) Predisposing Biological Factors,

b) Environmental Factors, and

c) Immediate Triggering Factors (Precipitating Factors).

However, this classification is for our understanding only, as the interplay between these factors is complex and not always clearly defined in a water-tight compartment. Please refer Figure no-8.1 to learn more about the interaction of these risk factors.

8.1 Predisposing Biological Factors

Genetics: Increased understanding of how genetic alterations, expression, or suppression, along with regulatory systems, affect brain structure and function, can, directly and indirectly, predispose individuals to suicide risk through mental disorders, disruptions in higher mental functioning, and impulsive behavior (69-71)

Family History of Suicide: Research indicates that the risk of suicide among individuals with a family history of suicide is significantly higher compared to those without such a history. Exposure to suicide within the family creates a complex interplay of genetic predisposition and learned behaviors(70).

Personality Traits: Impulsivity, low frustration tolerance, impaired reward-seeking, and aggression can make stress responses difficult to manage, potentially leading to suicidal thoughts and actions(72, 73)

Disabilities: Disabilities can contribute to feelings of isolation, frustration, stress, systematic barriers, stigma, discrimination, socioeconomic disadvantages, and lowered self-esteem, contributing to a heightened risk of suicide among individuals with disabilities(74).

Major Physical Illnesses: Chronic pain, diminished functioning, and the emotional toll of serious illnesses can lead to depression or hopelessness. Suicide risk is notably increased due to a complex blend of psychological, physiological, and social factors (75, 76).

Existing Mental Disorders: Existing mental health disorders are strongly linked to an increased risk of suicide. Mental health conditions, especially major depression, bipolar disorder, anxiety disorders, certain personality disorders, and substance abuse, are among the strongest predictors of suicide. Effective intervention strategies typically involve a combination of medication, psychotherapy, and support systems to reduce symptoms and build coping strategies.(77-79).

8.2 Environmental Factors

Trauma or Abuse: Experiences of physical, sexual, or emotional abuse have profound, long-lasting negative effects on mental health, increasing suicide risk. Exposure to trauma often results in persistent psychological distress, challenges in managing emotions, the development of negative thought patterns about oneself and the world, and engagement in risky behaviors. These effects deeply penetrate the individual's overall well-being(80, 81).

Cultural and Religious Beliefs: Cultural and religious beliefs, norms, and values can shape individuals' perceptions of life, death, suffering, and the afterlife, impacting their attitudes toward suicide. They also play an essential role in planning interventions. (82-84)

Family Factors: Dysfunctional family environments marked by conflict, lack of support, and poor communication can contribute to emotional distress and suicide (85)

Social Isolation and Rejection: Feeling lonely, disconnected, and unsupported can create despair, especially for those with mental health vulnerabilities (86, 87)

Challenges with Sexual Orientation/Gender Identity: Discrimination, internal conflict, and lack of acceptance can lead to significant psychological stress (88, 89).

Bullying and Peer Conflict: Experiencing bullying, whether in person or online, is a major risk factor for suicidal thoughts and behaviors(85, 90).

Poor Coping Skills: Without healthy strategies for managing stress and difficult emotions, individuals may feel overwhelmed, increasing vulnerability (91-93).

Stigma and Barriers to Mental Health Care: Societal or internalized stigma can discourage adolescents from seeking help, and systemic barriers like lack of access to services can be detrimental (94).

Academic Pressure and Expectations: Intense pressure to excel academically, coupled with fear of failure, often self-imposed or disappointing parents and teachers, can lead to significant distress (15, 95).

Past History of Mental Illness and/or Suicide Attempts: A previous history of mental illness and past history of suicidal attempt is a strong predictor. The robust findings comes from that the history of past attempts predicts future attempts and completed suicides (96). People who have had an earlier suicide attempt are 20-30% more likely to reattempt. The increased risk of death by suicide is higher in the first 1 to 3 years after their first suicide attempt (97, 98)

There is a lack of systematic studies examining the risk factors predicting mental illness and suicidal tendencies among medical students. As a result, we are leveraging valuable evidence from studies conducted on the general and high-risk population

8.3 Immediate Triggers/Precipitating Factors

Financial Loss: Economic hardship can bring about overwhelming stress, especially for adolescents who may already feel burdened (99).

Sudden Loss or Grief: The death of a loved one, a breakup, or other significant relationship loss can trigger acute emotional pain and a sense of hopelessness (99)

Media Exposure: The media can play a complex role in shaping attitudes and behaviors related to suicide. However, sensationalized or irresponsible media reporting can also have adverse effects, such as glorifying suicide or providing detailed descriptions of suicide methods, which can increase the risk of copycat suicides, known as the "contagion effect."(100).

Mental Health Crisis: An exacerbation of an existing disorder or the onset of new symptoms or post-discharge from the hospital can lead to suicidal thoughts and behaviors (99).

Adverse Life Events: Experiences such as failing examinations, unemployment, legal trouble, or public humiliation can feel insurmountable, especially with limited coping skills and support (92).

To summarize, mental health & wellbeing and suicidal spectrum is a complex issue significantly affecting adolescents and young adults, primarily driven by a combination of biological, behavioral, environmental, and social risk factors. These factors include genetic predispositions, personality traits, family history, and existing mental disorders such as depression, anxiety, and substance abuse. Environmental influences such as trauma, cultural beliefs, family dynamics, and societal barriers also play critical roles in increasing suicide risk. Immediate triggers like financial stress, personal losses, and acute mental health crises can precipitate suicidal actions. Understanding and addressing these multifaceted risk factors are crucial for effective suicide prevention and intervention strategies.

8.4 Risk Factors Specific to Medical Students

The factors that heighten the risk of Mental illness and suicide among medical students can be divided into academic-related factors, such as failing grades, exam stress, and burnout, and non-academic factors, which include financial hardships, mental health challenges, and relationship issues (101). A recent systematic review and meta-analysis of 25 studies evaluating the risk factors for suicidal ideation and suicide attempts among medical students was conducted. The strongest risk factors for both suicidal ideation and suicide attempts among medical students were poor mental health outcomes, including depression, burnout, comorbid mental illness, and stress (102). Another meta-analysis and systematic review (21) evaluated the global prevalence and risk factors for mental health issues among medical students during the COVID-19 pandemic. Identified risk factors included being female, junior student, exposure to COVID-19, academic stress, history of psychiatric or physical disorders, economic trouble, fear of educational impairment, difficulties with online learning, fear of infection, loneliness, low physical activity, low social support, problematic internet or smartphone use, and young age. The findings emphasize the need for mental health services to support high-risk students and inform targeted interventions by colleges and health authorities.

A narrative review examined suicidality in medical students worldwide, highlighting the high rates of psychiatric disorders among this population and their correlation with elevated suicide rates. This review identified the following factors

a) structural aspects of medical schools (e.g., curricula, accommodation, social support),

b) interpersonal factors (e.g., social isolation, academic pressures),

c) unique aspects of medical training (e.g., simulation training, exposure to trauma) and

d) socio-cultural factors such as ragging and gender role expectations also play a role (15).

A web-based survey conducted by Marcon and his colleagues (149) aimed to identify factors linked to a history of suicide attempts among medical students. The study identified several significant risk factors, including female gender, homosexuality, low income, bullying by university peers, childhood or adult trauma, family history of suicide, recent suicidal ideation, daily tobacco use, and severe risk for alcohol abuse. On gender comparison, high-risk female medical students were more likely to feel worried, irritable, and stressed. In contrast, high-risk male medical students were more prone to having suicidal thoughts, intense anger, excessive drinking, and using recreational drugs or prescription medications without appropriate follow-up. Both genders showed no difference in their help-seeking behaviors (150)

A study conducted in an Indian medical college using a web-based survey questionnaire found that significant predictors of suicide ideation among students included being female, alcohol use, a history of facing abuse, academic stress, family-related stress, and relationship-related stress. Additionally, half of the students identified academic stress as a significant life stressor (103). Scientific evidence shows that medical students who attempt suicide are associated with poor academic performance, burnout, and mental health problems such as depression, anxiety, and other mental health problems (101, 104, 105). However, the paucity of global and national literature makes it challenging to comprehensively identify and address these risk factors, underscoring the need for more extensive research to develop effective prevention and intervention strategies that promote mental health and resilience.

The limited evidence regarding factors that heighten the risk of mental illness and suicide among medical students can be categorized into academic and non-academic factors. Academic-related factors include failing grades, exam stress, clinical work and burnout. Non-academic factors encompass financial hardships, family stress, and relationship issues.

8.5 Protective Factors

Social, family, and school connectedness, characterized by perceived caring, support, and quality communication, stands as a significant protective element against suicidal ideation and behavior in young individuals. (106). These close relationships with family, friends & community members can provide a sense of belonging and emotional support, reducing feelings of isolation and hopelessness. Religious or spiritual beliefs can offer solace, optimism, and a sense of purpose for specific individuals, thereby lowering the likelihood of suicide (82). McKinley and colleagues systematically reviewed the existing literature on factors influencing resilience among medical doctors. After reviewing and applying inclusion criteria, 24 studies were selected for a narrative synthesis. The analysis pinpointed several critical factors that contribute to resilience in medical professionals. These include demographic variables, personality traits, organizational and environmental influences, social support networks, leisure activities, experiences of overcoming past adversities, and targeted interventions designed to bolster resilience(107)

While most published studies on mental illness and suicide focus on identifying the socio-demographic and psychosocial characteristics risk factors, there is a notable absence of systematic research examining protective factors across populations. There is a lack of systematic, published studies among medical students. Additionally, there are no systematic studies investigating protective factors against mental illness, suicide risk, specifically in medical students. Therefore, investing in exploring these protective and resilient factors is crucial for preventing mental illness and reducing suicide rates in medical students. Therefore, it is necessary to extrapolate data from studies conducted in the general population. For risk factors, please see Figure no-8.1

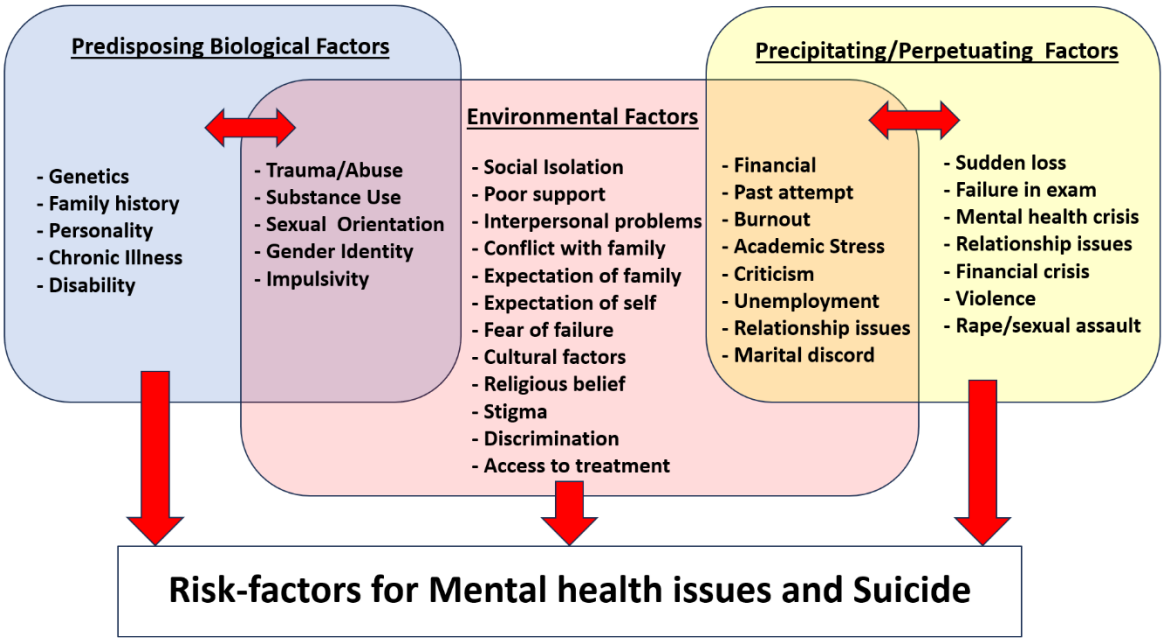


Figure 8.1: The Risk Factors for Mental Health Issues and Suicide, demonstrating that these Risks Arise not from a Single Factor but from a Complex Interplay of Various Elements

Understanding the risk factors for mental health, well-being, and suicide is crucial; they include mental health disorders, substance abuse, a history of trauma or abuse, past-history, significant life changes, and a lack of social support. Recognizing these factors will enable us to develop a comprehensive mental health care plan.

9. Evidence-Based Interventions

Interventions to Improve the Mental Health and Well-being of Medical Students

The literature on interventions that enhance medical students' mental health and well-being is relatively sparse. Most studies predominantly focus on a specific set of interventions, with no systematic evaluations of their overall effectiveness. Consequently, we have reviewed the available literature on these specific interventions only. The studies in medical students predominantly examined a specific set of interventions are: Mindfulness-Based Interventions (MBIs)(108, 109), physical activity and exercise regimens(110, 111), resilience training programs(112, 113), peer support systems(114, 115), and stress management strategies(116, 117). The attention to the mental health of medical students as a significant area of academic inquiry is a relatively recent development, and consequently, empirical studies focusing on mental health well-being intervention-based approaches are limited and need further exploration(118).

There is a significant gap in systematic research specifically addressing the effectiveness of mental health promotion and suicide prevention measures for medical students globally. The available evidence primarily stems from studies conducted on the general population, high-risk groups, and individuals with mental illness. However, these findings could potentially provide valuable insights for interventions aimed at medical students.

A systematic review aimed to uncover effective interventions within undergraduate medical education (UME) that enhance students' emotional well-being(119). Analysing twenty-eight articles encompassing 8224 participants, the review revealed limited evidence supporting several practices: adoption of Pass/Fail grading systems, implementation of mental health programs targeting stigma reduction and enhancing accessibility, integration of mind-body skills education/training programs, structuring the curriculum to include more clinical contact hours and problem-based learning, and establishment of small group-based faculty advisor/mentor programs. However, the study concluded that there is a need for high-quality medical education research to improve the emotional well-being of medical students.

9.1 Mindfulness-Based Interventions

McConville and colleagues (2017)(120) conducted a systematic review analyzing the impact of mindfulness interventions on health profession students through both randomized and non-randomized controlled trials, incorporating a total of 10 studies specifically focusing on medical students. The inclusion criteria were limited to studies that reported quantitative outcomes. Their findings indicate that mindfulness-based interventions significantly reduce stress, anxiety, and depression while enhancing mindfulness and mood among health

profession students compared to predominantly passive controls in the control groups. However, the results were not separately detailed for medical students. Another study by the Cochrane Review (121) encompassed randomized controlled trials examining mindfulness interventions aimed at medical students and junior doctors in their first three postgraduate years. The review specifically targeted psychological interventions primarily focused on teaching mindfulness principles for preventive purposes. The primary outcomes measured were anxiety and depression, while secondary outcomes included stress, burnout, academic performance, suicidal ideation, and quality of life. The review analyzed data from 10 studies involving a total of 731 participants. The findings revealed no significant evidence supporting the effectiveness of mindfulness-based interventions in reducing symptoms of anxiety or depression. Nonetheless, these interventions demonstrated a modest beneficial impact on reducing stress and alleviating burnout. A systematic review published in 2023(109) reported that students who engaged in mindfulness training experienced perceptible improvements in stress levels and symptoms of psychological distress. Additionally, these students noted enhanced perceptions of their health and overall psychological well-being.

A recent systematic review by Kaisti and his colleagues (2024)(108) aimed to collate and analyze the quantitative outcomes of mindfulness-based interventions (MBIs) on medical students by reviewing 31 articles that met specific inclusion criteria. Over half of the included studies were randomized controlled trials (RCTs), with interventions typically ranging from 4 to 10 weeks and based on established programs like Mindfulness-Based Stress Reduction or Mindfulness-Based Cognitive Therapy or their modifications. The findings revealed high satisfaction levels with the interventions and significant improvements in the intervention groups regarding reduced stress and distress symptoms and enhanced mindfulness compared to controls. These positive effects were maintained over follow-ups lasting months or years. Additionally, both controlled and uncontrolled studies showed statistically significant outcomes, reinforcing the potential of MBIs to improve medical students' well-being significantly. Further, recently, studies looked into the online delivery of MBIs for medical students(122).

9.2 Stress Management

The meta-analysis conducted by Yusoff Bahri (117) aimed to assess the impact of stress management interventions on the psychological health of medical students, specifically targeting general psychological distress, stress, anxiety, and depression symptoms. Only 13 articles met the inclusion criteria and were analyzed. The results from the meta-analysis indicated that stress management interventions have a moderate, statistically significant positive effect on the psychological health of medical students. Additionally, subgroup analyses revealed significant interactions based on the duration of the intervention and the research design used. Specifically, brief to medium-length interventions were more effective than those of longer duration, and randomized controlled trials (RCTs) yielded larger effects than non-RCTs. A systematic review of predominant interventions aimed at alleviating burnout among healthcare workers were predominately enhancements in communication skills, teamwork dynamics, participatory initiatives, and psychological interventions such as Yoga, meditation, and mindfulness(123). A systematic review suggests that yoga interventions

effectively manage stress among healthcare workers. Additionally, within the same review, medical students demonstrated enhanced emotional self-regulation and self-compassion scores following an 11-week yoga program(124).

9.3 Resilience Training

Resilience training programs are designed to enhance the ability of individuals, including medical students, to effectively manage and recover from stress, challenges, and adversities, which is particularly crucial given the high-stress nature of medical training. These programs initiate with educational workshops that focus on imparting knowledge about the science of stress and resilience, including the underlying neuroscience and identification of personal stress triggers, which is supported by studies showing the impact of education on improving resilience outcomes(125). Skill development is a core component of these programs, targeting essential areas such as problem-solving, emotional regulation, interpersonal communication, behavior modification, mindfulness and meditation, cognitive restructuring to alter maladaptive thought patterns, and effective goal-setting strategies. These skills are practiced through role-playing, simulations, and other practical exercises in a structured environment, which research has shown to enhance both the learning experience and the application of these skills in real-world settings(126). To ensure the longevity and adaptability of these benefits, resilience training programs incorporate follow-up sessions and continuous access to supportive resources, such as mobile apps. While resilience training programs have been implemented and supported by a growing body of literature highlighting their potential benefits, it is important to acknowledge that systematic, large-scale, longer-duration prospective studies proving their efficacy conclusively are still limited(127).

9.4 Online Interventions

Recent studies on online interventions for medical students have yielded initially promising outcomes(128). These online intervention programs offer significant advantages for mental health support. They are inherently flexible, providing access to resources and support anywhere and anytime. This especially benefits medical students who often face demanding schedules and high-pressure environments. This accessibility ensures that help is available when it's most needed, whether late at night or during breaks in a busy day. Moreover, the online format of these interventions can also enhance confidentiality and privacy, which are critical factors for individuals who may hesitate to seek face-to-face counselling due to stigma or fear of professional repercussions. A recent systematic review by Ungar and colleagues (2022)(128) included 11 studies and categorized them based on their focus areas: mental health literacy, mindfulness, Cognitive Behavioral Therapy, and peer support. Key findings include significant reductions in perceived stress from two programs, reduced burnout levels from another, and significant improvements in mindfulness, empathy, and resilience from one program. Additionally, two studies reported enhancements in coping strategies. Despite these positive outcomes, many reviewed studies lacked control groups, and only a few online programs demonstrated limited evidence of effectiveness. Further, medical students have identified digital mental health interventions as promising tools for preventing stress and

facilitating early intervention. However, they have expressed reservations about the effectiveness of these digital tools in managing severe mental disorders(129).

9.5 Yoga Intervention for Mental Health Promotion and Well-being

Yoga was developed primarily as a tool for self-mastery and spiritual progress. However, over the past few decades, the therapeutic applications of yoga in mental healthcare have been explored with promising results. Studies have also demonstrated biological mechanisms of action of yoga such as downregulation of HPA axis, enhanced vagal tone, better autonomic modulation, enhanced neuroplasticity and GABAergic tone (151). A recent systematic review and meta-analysis assessed the effects of yoga interventions on participants with major depressive disorder (MDD). This review included 34 randomized controlled trials (RCTs) involving 2,341 participants, 48.4% of whom were women. The duration of the yoga interventions ranged from 2 weeks to 28 weeks, with an average duration of 10.57 weeks. The authors concluded that yoga can improve depression and anxiety in patients with MDD and is safe, with wide patient acceptance (152). Similarly, another meta-analysis involving 38 RCTs evaluated the utility of yoga in alleviating anxiety symptoms. This analysis found that yoga practice had a large and statistically significant effect on anxiety symptoms compared to controls (153). Additionally, another meta-analysis included 42 RCT studies to assess the effect of yoga on stress and physiological markers of stress. The authors concluded that interventions including yoga, particularly yogasanas, were associated with reduced evening cortisol, waking cortisol, ambulatory systolic blood pressure, resting heart rate, high-frequency heart rate variability, fasting blood glucose, cholesterol, and low-density lipoprotein levels compared to active control (154).

One major limitation identified by systematic reviews of yoga studies is the heterogeneity of the interventions. Various schools of yoga emphasize different components, complicating the generalizability and scalability of these interventions. To address this issue, the Departments of Psychiatry, Telemedicine Centre, and Department of Integrative Medicine at the National Institute of Mental Health and Neurosciences (NIMHANS) have developed evidence-based generic yoga and tele-yoga programs for specific mental health conditions (155). The creation of these specific yoga modules involves a rigorous scientific process of validation and efficacy testing through clinical trials (156). During the validation process, traditional and scientific yoga literature is thoroughly reviewed, and the developed content is validated through interviews with yoga experts from various schools, including Art of Living, Isha Yoga, Patanjali Yoga, and Iyengar Yoga. Once content validation is complete, the module is tested for feasibility and efficacy (157-161). The tele-yoga modules are developed following the tele-yoga advisory issued by the Central Council for Research in Yoga and Naturopathy (CCRYN), Ministry of AYUSH, Government of India. Please see **Appendix-6** Yoga module prepared by the Department of Integrative Medicine at the National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore.

The literature review highlighted individual-level, mindfulness-based interventions for enhancing medical students' resilience, overlooking the impact of structural and systemic

stressors within the medical education system. While mindfulness-based interventions have shown efficacy in promoting mental health, focusing on individual interventions neglects significant organizational stressors. Medical training exposes students to organizational-level stressors, including those deeply ingrained in the system and others resulting from preventable failures, such as fostering a competitive culture and tolerating intimidation and bullying. Interventions targeting these organizational stressors are crucial for enhancing mental well-being among medical students. Thus, a comprehensive approach addressing individual and systemic factors is necessary for effective intervention.

There is a significant opportunity for more studies on risk factors for mental illness and suicide prevention among medical students. Consequently, we can utilize valuable data from studies conducted on the general population and high-risk populations.

9.6 Designing Interventions for Mental Health and Well-being

There is considerable literature documenting both the presence of mental health disorders and risk factors in young adults. The worldwide literature suggests numerous interventions, even though evidence on proven interventions specifically for medical students remains limited. The lack of scientific literature on evidence-based interventions to improve the mental health and well-being of medical students compels us to extrapolate evidence from studies on high-risk populations. In the absence of strong evidence-based data, the task force believes that suicide intervention studies from the general population offer valuable insights for planning interventions encompassing prevention, promotion, early identification, treatment, and rehabilitation. These elements are crucial, which is why this framework was chosen.

The World Health Organization (WHO) has spearheaded endeavours to address this concern, advocating for tailored national strategies across diverse cultural, economic, and social landscapes. Preventing suicide is one of the central parts of the WHO's operational program aimed at decreasing suicide rate across the globe. This commitment is exemplified by WHO's initiatives such as the "Health for All Strategy," "Global Trends in Suicide Prevention," SUPRE campaign (SUicide PREvention), and "LIVE LIFE Initiative for Suicide Prevention." (6, 8, 130). In the quest for effective suicide prevention initiatives, no single strategy stands above the others. Combinations of evidence-based strategies at the individual level, high-risk populations, and population levels should be tried.

Interventions for preventing suicide are categorized as

1) **U**niversal,
2) **S**elective, and
3) **I**ndicated strategies.

In simpler terms, these interventions are collectively called the **USI model.** (131). Please refer to Figure No-9.1

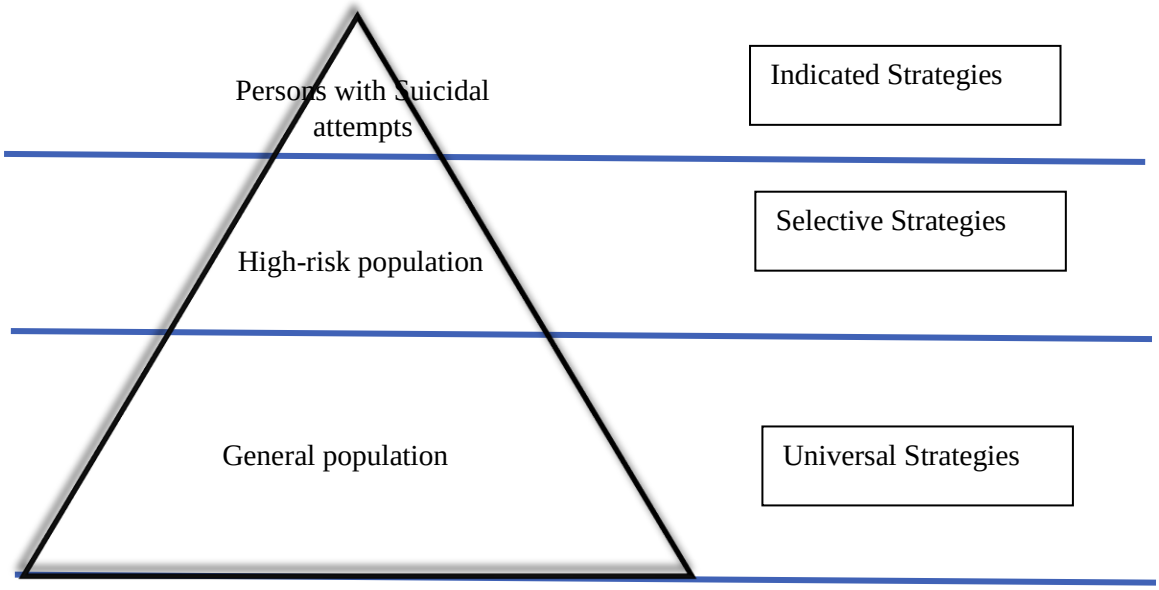


Figure 9.1. The USI Model (131)

Universal strategies encompass entire populations, aiming to boost awareness, remove barriers to care, and enhance social support. Selective strategies focus on high-risk groups, like individuals with mental health issues, substance abuse issues, past attempters, and recent life events, to minimize the likelihood of suicidal behavior by applying tailored interventions. Indicated interventions are proposed for those who have attempted suicide or exhibit suicidal ideation, providing crisis interventions and ongoing support (131)

Transposing the USI model to evidence-based mental health and wellbeing and suicide prevention interventions for medical students, these interventions can be formulated across three levels:

Universal Strategies - those encompassing the entire medical students' community,

Selective Strategies - those at risk (determined by critical time points or transitions - entry/ exam/ exit; adaptation/ adjustment challenges/ impaired coping/ re-evaluating course continuation, past history of suicide attempt, substance use), and

Indicated Strategies for those with mental illness or a recent history of attempted suicide.

The USI model provides a robust framework for structuring suicide prevention interventions tailored to the unique needs of medical students. This multi-tiered approach is particularly well-suited to the medical student community, where varying levels of stress and risk are prevalent.

9.6.1 For all Medical Students – Universal

Interventions at this level encompass the entire medical student fraternity. They aid in reducing suicide risk through various methods, such as restricting access to lethal means, conducting awareness campaigns and institutional programs to address bullying and support mental health, providing accessible mental health resources and care, organization staff sensitization, evolving pathways/systems of care and encouraging responsible media coverage of suicides(130).

Interventions to promote well-being are important among medical students to prevent suicide. This can be achieved through institutional changes, such as modifications in grading and classification systems, anti-ragging measures, group-based approaches focusing on stress management, mindfulness therapy, relaxation techniques, and psychoeducation (132). When examining research on suicide prevention among medical students, a meta-analysis indicated that the efficacy of relatively brief, individually focused, mindfulness-based interventions may exhibit greater effectiveness in reducing levels of anxiety, depression, and stress in medical students in the short term, potentially leading to a decrease in suicidal ideation and behavior (133).

Another meta-analysis highlighted the preventive benefits of in-class psychoeducation in reducing suicide rates in educational settings (134). Communication & mental health awareness programs are crucial in addressing stigma related to mental illness and promoting improved help-seeking behaviors among medical students(132). Thus, organization-led proactive initiatives mitigate overall suicide risk by creating awareness and enhancing help-seeking.

9.6.2 For Medical Students at Risk - Selective

Medical students with a potentially higher risk of suicide include individuals with mental illness and/or substance use, those from marginalized sections of society, those who have poor financial resources, those belonging to gender minorities, and those having interpersonal relationship issues and academic difficulties.

Early detection initiatives, especially screening programs, play a critical role in identifying individuals at risk(135). Providing access to mental health resources, such as counselling services, support groups, peer support interventions, and hotlines, is essential for improving and preventing suicide in students at risk (132, 136, 137). Targeted psychological interventions for students experiencing high levels of stress, academic pressure, or personal challenges play an important role(138). Mentorship programs such as PREVAIL and LET's CONNECT have demonstrated effectiveness in preventing suicide among people at risk and those with social problems (136, 139). Similarly, Gatekeeper training, as evidenced by several studies, has been shown to significantly enhance the competence and confidence of staff and teachers in managing suicidal students (140, 141).

9.6.3 For Medical Students with Attempted Suicide and/ or Mental Illness – Indicative

Medical students who have attempted suicide or have mental illness often require resources for intensive psychosocial and pharmacological interventions provided by the psychiatry department of medical colleges. Long-term psychosocial interventions, such as cognitive behavioral therapy (CBT), dialectical behavioral therapy (DBT), collaborative assessment and management of suicidality (CAMS), acceptance and commitment therapy (ACT), mentalization, and interpersonal psychotherapy, aim to address underlying mental health issues and improve coping skills over an extended period. In contrast, brief interventions like no suicide contracts, safety planning interventions, crisis response planning, attempted suicide short intervention programs (ASSIP), involving family members, and volitional help sheets focus on providing immediate support and resources during times of crisis (137, 142-145)

Additionally, pharmacological agents with potential effects on suicidal behavior, such as lithium, clozapine, ketamine, selective serotonin reuptake inhibitors (SSRIs), and buprenorphine, may be considered as part of a comprehensive treatment plan, particularly for individuals with severe psychiatric conditions(137). Implementing strict follow-up strategies, supervised medication, and family members' support, including regular monitoring of medical students with mental illness, plays a significant role in preventing suicide or suicide reattempts. Studies have shown that follow-up support, such as phone calls, crisis cards, emails, and postal cards after discharge, can significantly decrease the risk of suicide(146).

Currently, there is a lack of systematically conducted research assessing the efficacy of suicide prevention measures specifically tailored for medical students. Existing evidence stems from studies conducted within the general population, high-risk population, and persons with mental illness. However, the conclusions drawn from these studies may apply to medical students, encompassing all students, those identified as being at risk, as well as individuals with a history of attempted suicide or mental health concerns. Please refer to Table no-2, which outlines the applicability of the study findings in medical students. Additionally, the systematic review indicated evidence for various suicide prevention strategies according to the Oxford Centre for Evidence-Based Medicine (OCBEM) levels of evidence working Group. Levels of Evidence is published by OCBEM (2010).

9.7 Level of Evidence: Extrapolating from General Population Studies, High-risk Populations and Persons with Mental Illness

At present, there is a lack of systematic research on the effectiveness of mental health promotion, prevention of mental illness, and suicide prevention measures specifically for medical students worldwide. This gap in targeted research forces us to extrapolate findings from studies conducted on the general population. Although there is a lack of systematic research specifically in medical students, there are high-quality studies available on suicide prevention in the general population. These robust studies provide valuable evidence, compelling us to use their findings to inform our efforts in supporting medical students. By leveraging these well-established research insights, one can develop more effective strategies to address the unique challenges faced by medical students and improve their mental health outcomes.

The glaring absence of intervention studies to prevent mental illness and suicide in medical colleges across the globe highlights a severe neglect of medical students' health. This significant gap calls for immediate and substantial investment in research and resources to effectively tackle the mental health challenges faced by medical students, ensuring their well-being and success.

A systematic review conducted by Zalsman and his colleagues (12) assessed the effectiveness of suicide prevention strategies globally. The review highlighted evidence for measures such as restricting access to lethal means like analgesics, anesthetics, and hot spots for jumping, implementing school-based awareness programs to reduce suicide attempts and ideation, and pharmacotherapy such as clozapine and lithium, along with pharmacological and psychological treatments for depression, potential benefits of screening in primary care, general public education, and media guidelines for suicide prevention. The review noted encouraging preliminary findings but suggested further investigation was warranted for strategies like gatekeeper training, physician education, and internet and helpline support due to the paucity of randomized control trials.

Table 9.1 - Level of Evidence for Mental Health & Well-being and Suicide Prevention Strategies Extrapolating from General Population Studies to Medical Students (12)

Level of Evidence	Intervention
1. For all Medical Students	
Level 2a, 2c, 3b	**Restriction on Access to Suicide** Firearm restrictions Erection of barriers at jumping hot-spots for suicide Restriction to Pesticide/Regulation on Pesticide Restrictions on access to charcoal (Carbon Monoxide) Restrictions on barbiturate and caffeine tablet sales Restriction measures on hanging
Level 2a, 2c	**Media Role in Reporting of Suicide** Media reporting Media Blackout on Suicide Reporting
Level 2b	**Availability of Safety net of Mental Health Services** Means ensuring universal access to services, offering crisis intervention, implementing early screening and intervention, providing ongoing treatment, fostering community support, and raising awareness about mental health.

Level 1b, 2a, 2b, 2c	**School-based Awareness Programs for Adolescents** Awareness programs on Mental illness and suicide prevention
Level 2c	**Primary Care Physician Education** on Mental illness and suicide prevention
Level 2c, 2b	**Public Awareness Campaigns** **Community-based Screening and Follow-up**
2. For Medical Students at Risk:	
Level 1a, 3b	Psychosocial interventions Group therapy
Level 1b	Brief psycho-education for parents Assertive outreach intervention
Level 1a, 1b, 2a, 2b	Screening adolescents
Level 1b, 2a, 2b, 2c	Gatekeeper training program
Level 2b, 4	Crisis Helpline
Level 1b, 2b	Mobile Phone & Telephone Interventions
Level 2b	Internet chats-based interventions
Level 4	Collaborative assessment and management
Level 2b	Family crisis intervention
3. For Medical Students who have Attempted Suicide and/or have a Mental Illness	
Level 1a, 1b	Lithium Clozapine Quetiapine and atypical antipsychotics Ketamine SSRI Psychosocial interventions Brief intervention in the emergency room and follow-up contact Group therapy Integrative psychotherapy Intensive community-based management
Level 1b, 2b	Lithium and Valproic acid Antiepileptics and Lithium Management of mental illness at the primary care level Dialectical behavioral therapy Parental involvement therapy Brief parent-adolescent intervention Brief psycho-education for parents Integrative program (outreach, problem-solving, adherence, continuity) Postcard intervention
Level 1b, 2a	Cognitive Behavior Therapy

Level 1a, 1b, 2b, 4	Psychodynamic therapy Group DBT Family-based intervention Follow-up meeting Aftercare programme Chain of care intervention Collaborative intervention in primary care Management of depression in primary care
Level 1a, 2a, 2c	Community-based screening and intervention
Level 1b, 2b, 3a	Cognitive psychotherapy
Level 4	Collaborative assessment and management
Note: Oxford criteria (Centre for Evidence-Based Medicine, 2010) Level 1a: Systematic review (with homogeneity) of RCTs, 1b: Individual RCT (with narrow confidence intervals), 1c: All or none study, 2a: Systematic review (with homogeneity) of cohort studies, 2b: Individual Cohort study (including low-quality RCT), 2c: "Outcomes" research; Ecological studies, 3a: Systematic review (with homogeneity) of case-control studies, 3b: Individual Case-control study, 4: Case series and poor-quality cohort and case-control study, 5: Expert opinion without an explicit critical appraisal, based on bench research or "first principles"	

In another systematic review published by Mann John and his colleagues in 2021(147), the researchers emphasize that effective suicide prevention interventions include a broad array of strategies designed to mitigate risk and enhance safety. Key among these strategies are Awareness and education efforts focused on improving the knowledge and skills of general practitioners, educating young individuals, and training gatekeepers who are pivotal in identifying and responding to signs of suicidal behavior. Screening for individuals at high risk is crucial for early intervention. Therapeutic interventions include pharmacotherapy to manage underlying mental health conditions, various forms of psychotherapy such as Cognitive Behavioral Therapy (CBT) for individuals and groups, brain stimulation techniques like electroconvulsive therapy, and collaborative care models that ensure coordination between multiple healthcare providers. School-based and internet-based interventions extend the reach of preventive measures into educational settings and digital platforms, respectively. Follow-up care post-crisis involves contact interventions and active outreach to provide continued support. Additionally, restricting access to common means of suicide serves as a vital preventive measure. These comprehensive strategies are fundamental to effectively reducing the incidence of suicide.

Based on the above review, to effectively adapt suicide prevention strategies for medical students, it is crucial to implement a comprehensive approach that includes educational interventions, regular mental health screenings, easily accessible therapeutic options, and brief suicide prevention interventions for people at risk(142, 147).

Additionally, ensuring diligent post-crisis care and restricting access to potential means of suicide are essential. These targeted strategies address medical students' distinct challenges and bolster their overall mental health resilience.

In the absence of strong evidence-based data, the task force believes that suicide intervention studies from the general and high-risk populations provide valuable insights for planning interventions encompassing prevention, promotion, early identification, treatment, and rehabilitation. The evidence base for these interventions is limited in both size and quality. Most current interventions focus on training general practitioners, students, and staff in awareness, restricting access to potential means, identifying those at risk, implementing brief suicide prevention interventions, and ensuring post-crisis care.

The potential of digital interventions in the prevention of depression and suicide has been extensively explored. Self-guided digital interventions are gaining recognition as valuable tools for reaching individuals at risk of suicide who may not engage in traditional face-to-face therapy. Studies show that up to 70% of individuals contemplating suicide do not seek professional help. Digital platforms, whether web-based or app-based, offer a promising avenue to encourage help-seeking behaviors and provide earlier intervention, potentially diminishing the frequency and intensity of suicidal thoughts. A meta-analysis conducted by Torok Michelle and colleagues in 2020 (148) assessed the efficacy of these interventions, both direct (targeting suicidality) and indirect (addressing depression), in reducing suicidal ideation and behaviors. The findings suggest that directly targeted, self-guided digital interventions can significantly contribute to suicide prevention efforts and should be actively promoted across the internet and digital distribution platforms like app stores. While the individual effect size of these interventions may be small, their broad implementation could substantially impact the population level if widely adopted.

The critique of current research on suicide prevention underscores significant shortcomings, particularly in terms of statistical power, study duration, ethical challenges, and evidence quality. Given the complex and multifactorial nature of suicide, which often results in small effect sizes for interventions, there's a pressing need for more robust research designs, including randomized controlled trials (RCTs) with well-chosen comparator interventions(145). Furthermore, the absence of studies exploring integrated, multifaceted approaches is a critical gap. Comprehensive strategies are necessary to address the diverse factors contributing to suicidal behavior effectively. Another vital consideration is the lack of data on ancillary outcomes such as acceptability, attitudes, and adherence to interventions, which are crucial for ensuring that preventive measures are practical and sustainable. Additionally, including economic evaluations in these trials is essential to assess the cost-effectiveness and feasibility of interventions, facilitating their broader implementation and sustainability. Overall, enhancing the methodological rigor, extending follow-up periods, and broadening the scope of suicide prevention research to include economic and practical viability assessments will be

vital to developing more effective, acceptable, and implementable suicide prevention strategies.

Essentially, there is no one-size-fits-all solution for suicide prevention. Therefore, each community needs to tailor suicide prevention programs that are culturally sensitive, locally relevant, based on empirical evidence, and tailored intervention programs in India to mitigate suicide risk among medical students. Figure No-9.2 provides details of the suicide prevention interventions that can be delivered as well as the resource requirement at each level, i.e., for all medical students, those at-risk, and those having attempted suicide and /or with mental illness or substance use. By equipping medical educators and staff with the skills and confidence to identify and support at-risk students, these initiatives could create a safer and more supportive environment for medical students, thereby reducing suicide rates.

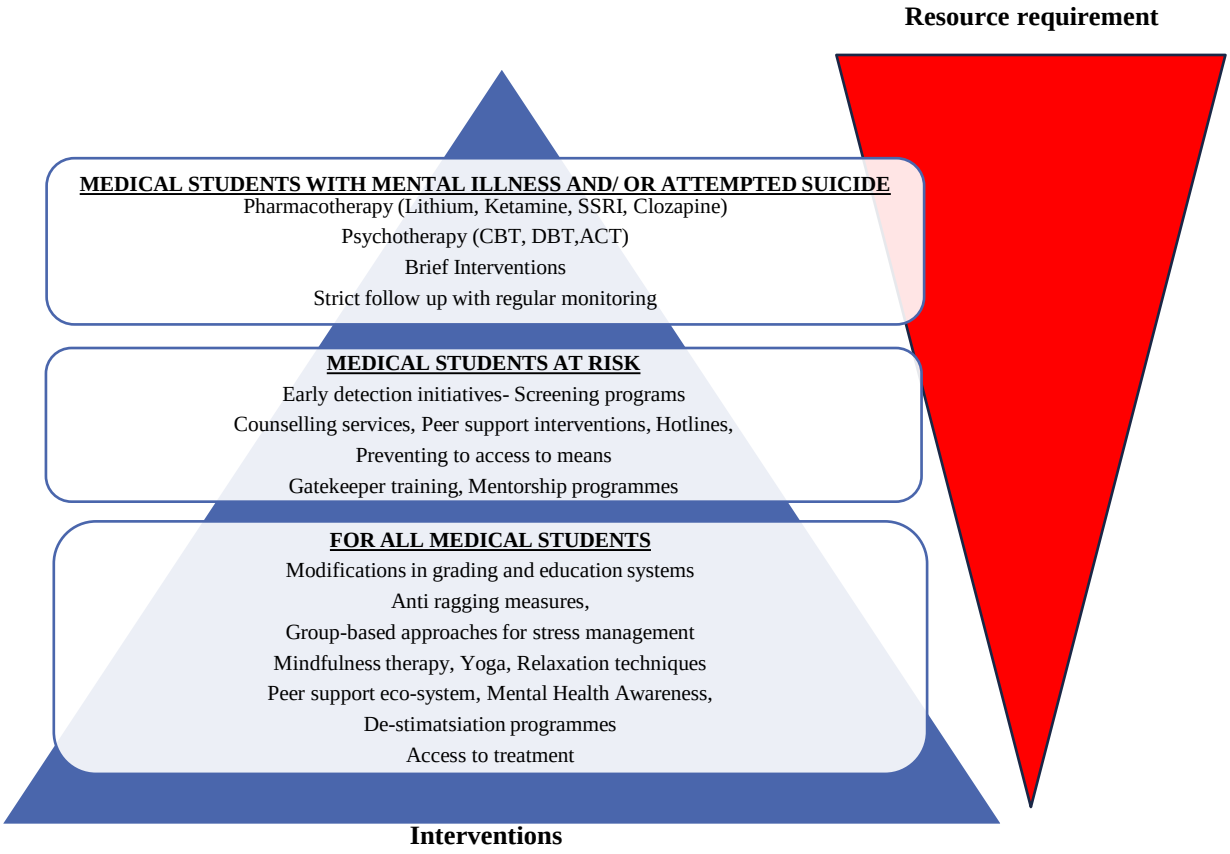


Figure 9.2 Mental Health & Well-being and Suicide Prevention Interventions; Resource Requirements for Medical Students

SSRI: selective serotonin reuptake inhibitors, CBT: Cognitive behavior therapy, DBT: Dialectical behavioral therapy, ACT: Acceptance commitment therapy

Survey and Interactions with Stakeholders

10. Survey and Interaction with Stakeholders: Observations and Results

Because of the paucity of literature regarding risk factors and intervention-based studies on medical students, the task force employed three important methods to gather comprehensive data.

First, the task force engaged in in-person visits to various medical colleges and held focused group discussions with various stakeholders, including medical college administrators, heads of departments, and students. These discussions aimed to identify best practices and challenges in providing mental health support to medical students.

Second, the task force conducted an online survey targeting undergraduate and postgraduate medical students, as well as faculty members, to collect a wide range of perspectives and insights on mental health and well-being. These combined approaches provided a thorough understanding of the current landscape and informed the development of effective interventions and support systems.

Third, the task force interacted with students, the medical students' associations, the junior resident's organization, and parents of medical students.

In-Person Visit to the Medical College by the Taskforce

The Task Force employed a comprehensive and interactive methodology to gather insights into the mental health and well-being of medical students nationwide. Task force members visited various medical colleges, engaging directly with administrators and heads of departments through focused group discussions (FGDs) to understand their best practices and challenges in supporting students' mental health. These discussions provided a detailed perspective on institutional efforts and identified areas needing improvement.

To further understand the mental health and well-being of medical students, FGDs were conducted with small groups of students from various years, under the guidance of a skilled moderator. Additionally, individual discussions were held to ensure confidentiality. The objective was to gather diverse perspectives and in-depth information on the student's experiences and challenges. Participants were randomly selected to represent different demographics within the medical student population. The moderator, experienced in facilitating discussions, used a specially designed discussion guide with open-ended questions to prompt conversation. The FGDs were held in a comfortable, neutral setting within the medical college, ensuring a distraction-free environment. Each session began with an introduction by the moderator, explaining the purpose of the discussion and assuring confidentiality to encourage open and honest sharing. Ice-breaker questions were used to make participants comfortable before delving into the main discussion.

During the discussions, students were encouraged to share their thoughts and experiences regarding their mental health and well-being. The moderator asked open-ended questions and used probing techniques to explore responses in more detail, ensuring a comprehensive understanding of the issues faced by the students. Important notes were taken by the moderator and other task force members. The FGDs provided rich, detailed information and multiple perspectives on the mental health challenges faced by medical students. This method proved

valuable in capturing the complex and varied experiences of students, highlighting areas for intervention and support to enhance their well-being.

In addition to undergraduate students, the task force also engaged with postgraduate students from various departments through FGDs. When a more private setting was deemed necessary, individual task force members conducted one-on-one interviews with postgraduate students to ensure confidentiality and gather in-depth insights. To encourage broader participation and input, the task force invited students to share their views and experiences via email. This approach ensured that students who might not feel comfortable speaking in groups could still contribute valuable information.

The task force's visits were thorough, including inspections of hostels, duty rooms, cafeterias, libraries, and other key areas within the medical colleges. This allowed the task force to gain a holistic understanding of the physical environments where students live and study, which are integral to their mental well-being. This multifaceted approach ensured a comprehensive assessment of the mental health support systems in place and identified opportunities for enhancing student well-being across medical institutions.

Online Survey

The National Task Force conducted an online survey aimed at understanding the mental health and well-being of undergraduate (UG) and postgraduate (PG) medical students, as well as faculty members of medical colleges. The primary objective of this survey was to gather comprehensive insights into the various stressors and challenges faced by medical students in their academic and personal lives. Recognizing the sensitive nature of the topic, the survey assured participants of complete confidentiality and provided the option to remain anonymous, encouraging honest and open feedback without fear of repercussions. A total of 25,590 undergraduate students, 5,337 postgraduate students, and 7,035 faculty members responded to the online survey.

The stress and reasons for stress experienced by undergraduate (UG) and postgraduate (PG) medical students vary considerably. To capture these differences, separate questionnaires were devised for UG and PG students. This approach helped us understand the distinct stressors and challenges faced by each group. Additionally, a separate questionnaire was drafted to invite faculty and administrators to share their perceptions of medical students' stress. This multi-faceted approach provided a comprehensive understanding of the stress landscape in medical education from both student and faculty perspectives.

The survey was meticulously designed to cover a wide range of domains that are crucial to the mental health and well-being of medical students. These domains included academics, exams, hostel living conditions, food quality, financial issues, family dynamics, relationship issues, experiences of ragging, and mental health concerns. By addressing these diverse areas, the survey aimed to capture a holistic view of the factors influencing the mental health of medical students.

The questionnaire incorporated a variety of question types to ensure comprehensive data collection. Closed-ended questions required respondents to choose from predefined options, enabling the collection of quantitative data and facilitating easy analysis. Open-ended questions allowed respondents to provide detailed, qualitative feedback, offering deeper insights into their personal experiences and concerns. Range responses used scales, such as Likert scales, to

measure the intensity or frequency of specific experiences or feelings, providing nuanced data on student well-being. Qualitative responses encouraged narrative answers, allowing participants to elaborate on their experiences and provide context to their answers

The survey was disseminated online, inviting participation from both UG and PG medical students, as well as faculty members. This inclusive approach ensured that perspectives from different stages of medical education and from those involved in teaching and mentoring were captured, providing a comprehensive understanding of the mental health landscape in medical colleges.

Meeting with Stake Holders

In addition to other efforts, the Task Force conducted online/in-person meetings with various associations and stakeholders to gather comprehensive insights and feedback. These meetings were attended by the representatives of Federation of Resident Doctors Association India (FORDA), Resident Doctors Association (RDA) and Association of Doctors and Medical students (ADAMS). Engaging with medical students' associations allowed the task force to understand the collective concerns, suggestions, and needs of the student body from their representatives. This provided valuable insights into the challenges faced by medical students and potential areas for improvement in their educational and support systems. Meetings with junior residents' organizations provided the task force with valuable insights into the experiences and perspectives of postgraduate students in medical colleges across the country. Their feedback was crucial in understanding the practical challenges and stresses of residency, including duty hours, work-life balance, and mental health support. Involving parents in these discussions provided a holistic view of the students' experiences from a familial perspective. Parents offered insights into the support systems needed at home and how institutions can better communicate and collaborate with families to support student well-being. Direct interaction with students was paramount. These meetings facilitated an open dialogue where students could voice their concerns, share their experiences, and suggest improvements. This direct feedback was invaluable in ensuring that the recommendations developed are student-centered and address the real issues faced by the student population. Additionally, the Task Force invited students to provide feedback via email. This approach allowed students who were unable to participate in online meetings to contribute their thoughts and experiences at their convenience. It also ensured that the Task Force received a wide range of perspectives and could address specific concerns raised by individual students. By incorporating feedback from these diverse groups, the Task Force ensured that the recommendations are comprehensive and consider the views of all relevant stakeholders. This multi-faceted approach to gathering input helped us develop a 360-degree comprehensive perspective and effective strategies to enhance the educational environment and support systems in medical colleges.

10.1 Group Discussion with Various Stake-Holders During the In-Person Visit and Online Consultation by the Task Force Members.

By adopting the aforementioned methodology and visiting numerous medical colleges, we discovered the following themes in various stakeholder meetings. Theme saturation indicates comprehensive coverage of the relevant issues. These themes highlight critical areas affecting the mental health and well-being of medical students

10.1.1 Under-graduate Students Reported

Mess: The quality and hygiene of food in the mess were significant concerns. Students emphasized the importance of nutritious and hygienic food for their overall well-being. Additionally, they highlighted the need for a 24/7 cafeteria within the campus, especially during exam periods when access to food at all hours is crucial. In some colleges, the mess was mandatory even for day boarders, restricting students' freedom to choose based on their dietary preferences and schedules. This compulsion imposed a financial burden on many students. They requested more flexibility in dining options, which they believed would have a positive impact on their mental health.

Hostel Rooms / Sharing Rooms: The condition of hostel rooms, the experience of sharing accommodations and lack of privacy were recurring themes. Overcrowded or poorly maintained rooms contributed to stress, while well-kept, private spaces were seen as beneficial.

Library (Space, Table, Online Access at Hostel): The availability of adequate study spaces, tables, and online resources within the campus and also in the hostel rooms was highlighted. Students valued quiet, well-equipped libraries and the ability to access online materials from their hostels.

Packed Academic Sessions: Jam-packed academic classes in the first year of MBBS are a common occurrence, often resulting in significant pressure and stress for first-year students. While this rigorous schedule aims to establish a solid foundation in medical knowledge, it can also lead to burnout if not properly managed. Balancing the demanding coursework with adequate rest and mental health support is essential for student well-being.

Teaching Ability of Medical Teachers: The poor teaching abilities of medical teachers were highlighted, with many relying on PowerPoint presentations that they merely read aloud during classes. There was a lack of interaction and discussion, leading students to question the value of such sessions and the effectiveness of the teachers. Many teachers did not even make eye contact with students during classes.

Auditorium: Many students noted the importance of having access to well-maintained auditoriums for academic and extracurricular events. These spaces contribute to a sense of community and provide venues for stress-relieving activities.

Sports Facilities: The availability and quality of sports facilities were frequently mentioned. Lack of dedicated time for sports/gym and not giving permission to attend for regular exercise was also a recurring theme. Students emphasized the need for adequate sports infrastructure to support physical fitness, which in turn benefits mental health.

Language Learning Policy - Weekly Class: The lack of inclusion of weekly local language learning classes was highlighted, particularly for students from diverse linguistic backgrounds. This policy can reduce language barriers and improve clinical performance of the students.

Assignments Issues: The management of assignments, such as logbook, case submission, including deadlines and workload, was frequently discussed. Students requested more balanced and realistic expectations to avoid undue stress.

No Break Between Exams: A recurring theme among many students was the lack of breaks between exams. This limited time for rest and study often adds to their stress and hampers their overall performance. As a result, they have requested at least a one-day break between exams to alleviate some of this pressure. Few students also mentioned the urgent need for provision of vacations (2weeks) immediately after exams was seen as a critical factor in allowing students to recuperate and reduce burnout.

Supplementary Exam: The management of supplementary exams, including scheduling and support for students who need to retake exams, was a recurring theme. Students called for more supportive policies.

Confidentiality for Accessing Mental Healthcare: Ensuring confidentiality when accessing mental health services was paramount. Students expressed the need for discreet and non-stigmatizing access to mental health resources.

Staff/Student Clinic: The availability of a staff/student clinic providing free diagnostic, treatment and medicine was important. Access to free or affordable healthcare within the campus was seen as a significant support system.

Psychiatrist Availability Within the Campus: The presence of a psychiatrist on campus was frequently mentioned. Immediate access to professional mental health care was considered crucial for timely support.

Hotline Contact: The establishment of a dedicated hotline for mental health crises was highlighted. This provided an immediate resource for students in distress.

Sensitivity Towards Students' Needs: A recurring theme was the overall insensitivity of the administration and faculty towards students' mental health needs. Students valued empathetic and responsive institutional practices and requested a change in the attitudinal perspective of the concerned administrators.

Career Options: Guidance and support for career planning and options were important. Students expressed the need for career counselling services to navigate their professional paths effectively.

10.1.2 Post-graduate Students Reported

Long and Multiple 24-Hour Duties: The demanding schedules, including long and multiple 24-hour duties (sometimes 3-5 consecutive duties), were significant stressors among the most PGs. These extended hours without adequate rest led to physical and mental exhaustion, negatively impacting their performance and health.

Non-Availability of Cafeteria During Night Duty Hours: The lack of a cafeteria accessible during working long duty hours was a major concern. Postgraduates often found it difficult to access nutritious meals during their shifts, impacting their health and ability to perform their duties effectively.

Stipend: The adequacy and timely disbursement of stipends were critical issues for postgraduate students. Financial stability is essential to reducing stress and enabling students to focus on their studies. Delays or inadequacies in stipends exacerbated financial strains, and seeking help from family members for financial support induced feelings of guilt, significantly impacting their mental well-being and academic performance.

Excessive Workload for Junior Students: Junior postgraduates were often subjected to excessive workloads and inhumane working conditions. They were frequently assigned menial tasks such as pushing trolleys, raising investigation requests, collecting reports, cleaning and bandaging wounds, making beds, and catheter insertion. This left them with little time for academic pursuits and reading.

Senior PG Students Bullying Junior PGs: Bullying by senior PG students was a recurring issue. This toxic environment hindered the professional and personal growth of junior students, creating a hostile and stressful working atmosphere.

Inadequate Time for Self-study: The hectic clinical workload left postgraduate students with little to no time for academic reading and research. This hindered their academic progress and professional development.

Faculty Insensitivity Towards PGs' Needs and Workload: Faculty insensitivity towards the needs and workload of postgraduates was a significant concern. There was a lack of understanding and support from the faculty regarding the immense pressures faced by PG students. Requests for leave were often refused, and PGs were looked down upon for making such leave requests. This lack of empathy and flexibility in granting leave further exacerbated their stress and burnout.

Poor Infrastructure and Facilities in Duty Rooms: Postgraduates reported poor infrastructure and facilities in duty rooms. Substandard living conditions during on-call hours made it difficult for them to rest and recuperate, further contributing to their stress levels.

Inadequate Family Rooms within the Campus: Many postgraduates highlighted the lack of adequate family rooms on campus. This inadequacy made it challenging for students with families to balance their personal and academic lives, adding to their stress and affecting their overall well-being.

Non-Availability of Faculty: A significant issue was the non-availability of faculty members, many of whom were reportedly engaged in private practice or were ghost faculty. The absence of clinical supervisors for guiding students negatively impacted the quality of medical education and support available to postgraduate students.

Thesis: Many students raised concerns about transparency in guide selection. They also highlighted the stress caused by insufficient time to draft their synopsis, collect data, and write their thesis. Some students questioned the guiding capabilities of their supervisors and requested dedicated and flexible time for thesis work, with a few even suggesting the possibility of eliminating the thesis requirement altogether.

10.1.3 Administrators and Faculty Reported

Faking Mental Health Issues by Students: Faking mental illness, stress, and suicidal ideas was a recurring theme noted by the faculty. Some students reportedly used these claims to avoid clinical and academic responsibilities, raising concerns about the authenticity of their issues and the resulting impact on their peers and staff. Some students exaggerate minor issues and present themselves as experiencing "stress with suicidal ideas and mental health issues" to avoid clinical and academic workload, such as postponing thesis synopsis submission, thesis

submission, seminars, case conferences, journal club, and avoiding taking cases. They have requested a protocol for assessing and accommodating such students from the Department of Psychiatry or administration.

Inadequate Faculty and Paramedical Staff: A recurring theme was the inadequate human resources available for clinical work and academic activities. This shortage exacerbates the workload on existing faculty, senior residents, and students, impacting the overall quality of education, research and patient care. They requested that the existing vacancies be filled and more senior residents be hired based on the department's workload. This autonomy should be granted to the Heads of Departments (HODs) to balance training medical students, transferring knowledge, imparting skills, and mentoring them effectively. A few of them suggested NMC to look into this matter seriously.

Inadequate Pay Scale: A recurring theme was concerns about the inadequate pay scales for teachers, senior residents, and postgraduate stipends. They emphasized that better compensation is crucial for attracting and retaining qualified professionals, ensuring quality education, and maintaining motivation among staff and students. Additionally, some faculty members have highlighted the issue of varying retirement ages across the country.

Stress Among Faculty: Another recurring theme was the perpetual stress among faculty members. They emphasized that while students come and go, faculty face continuous stress due to the demands of clinical work, academic activities, guiding students in thesis research, the need for publications, administrative tasks, medical negligence cases, violence from patients and their families, the threat of medico-legal cases, complaints by students, and other institutional responsibilities. Faculty reported experiencing burnout and a gradual loss of interest in teaching over time. They highlighted the lack of incentives for good teachers and the need for proper recognition of their contributions.

Rotational Headship: Some of the faculty raised the need for rotational headship, highlighting that a sense of toxicity and stagnation can develop in departments with perpetual Heads of Department (HODs). Rotational headship can provide several benefits, including bringing fresh perspectives, new leadership development, and new ideas to the department, which can enhance the overall academic and clinical environment. Faculty members advocating for rotational headship also emphasized the importance of mentorship and succession planning. By rotating leadership roles, experienced faculty can mentor emerging leaders, ensuring a smooth transition and continuity in departmental management.

Stress from Family Members of the Students: Many family members approach the department when their ward is not allowed to take exams due to insufficient attendance or when they fail exams. At times, they complain about the excessive workload. Many family members are unaware of the rigorous training, clinical responsibilities, and academic requirements of postgraduate students.

These themes collectively provide a comprehensive understanding of the multifaceted challenges and needs of medical students. Addressing these areas can significantly enhance their mental health and overall well-being, fostering a more supportive and nurturing educational environment.

10.2 Online Survey

The online survey results are organized into three distinct sections. Initially, we present the analysis of undergraduate (UG) students, followed by the analysis of postgraduate (PG) students, and finally, the analysis of faculty responses. This structured approach allows for a clear and comprehensive understanding of the experiences and perceptions of each group, providing valuable insights into the stress and challenges faced by medical students at different stages of their education, as well as the perspectives of faculty and administrators. A total of 25,590 undergraduate students, 5,337 postgraduate students, and 7,035 faculty members responded to the online survey.

Stakeholder	n
Undergraduate students	25,590
Post-graduate students	5,337
Faculties, Administrators and Wardens	7,035
Total Online Survey Responses Received	**37,962**

The online survey results were analysed using simple descriptive statistics. The results are presented as follows: initially, responses from undergraduate (UG) students are presented, followed by those from postgraduate (PG) students, and finally, responses from faculty members

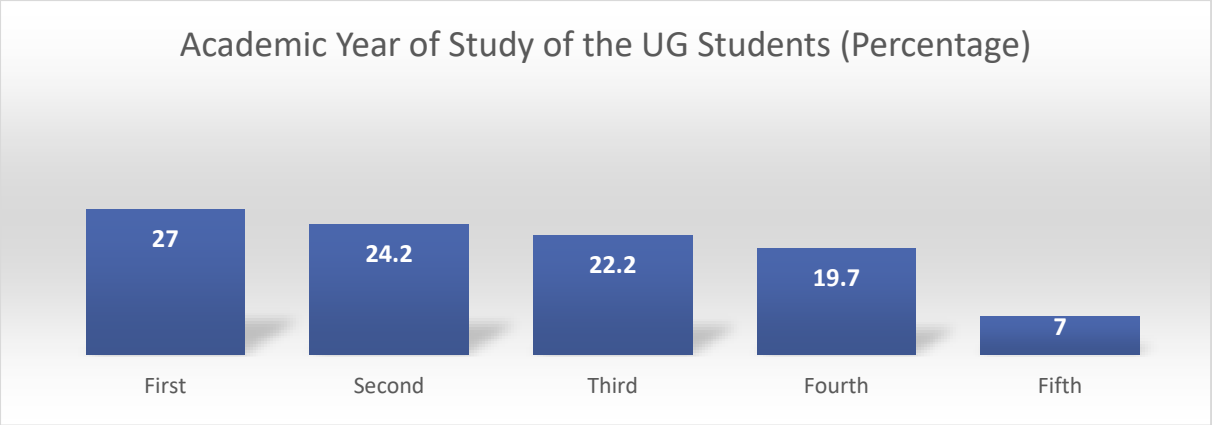
10.2.1 Analysis of Online Survey Responses from Undergraduate Students

Table 10.1: Demographic Characteristics of UG Medical Students

Socio-demographic parameters	Frequency (n) n=25590	Percentage (%)
Is your medical college located in the same state you belong to?		
No	5778	22.6%
Yes	19812	77.4%
Type of Residence:		
Hostel/Dormitory	19483	76.1%
Own Apartment/Shared Accommodation	1716	6.7%
Parents	3940	15.4%
Relatives/Extended Family	268	1%
Others	183	0.7%
Family Income (per annum):		
1-20L	22019	86%
21-40L	2456	9.6%

>40L	1115	4.3%
Family Structure:		
Joint Family	4218	16.5%
Single parent with joint family	363	1.4%
Single-parent Household	1842	7.2%
Two-parent Household	19013	74.3%
Others	154	0.6%
Where did you complete the majority of your school education?		
Rural Area	4067	15.9%
Semi-Urban Area	4770	18.6%
Urban Area	16753	65.5%
What was the primary medium of language in your school?		
English	21643	84.6%
Hindi	1328	5.2%
Other	2619	10.2%

Total 25,590 undergraduate medical students responded to the online survey. A significant proportion are in their early years of study, with 6,907 (27%) in the first year, 6,187 (24.2%) in the second year, 5,670 (22.2%) in the third year, 5,033 (19.7%) in the fourth year, and 1,793 (7%) in the fifth year. A majority of students, 19,812 (77.4%), attend medical colleges within their home state, while 5,778 (22.6%) study in different states. Regarding residence, 19,483 (76.1%) live in hostels or dormitories, 1,716 (6.7%) in their own or shared apartments, 3,940 (15.4%) with parents.



The majority come from families with an annual income of 1-20 lakhs (22,019, 86%) and two-parent households (19,013, 74.3%). Educational background of the UG indicate that 16,753 (65.5%) completed their schooling in urban areas, 4,770 (18.6%) in semi-urban areas, and 4,067 (15.9%) in rural areas. Finally, the primary medium of instruction in school was English for 21,643 (84.6%) students, Hindi for 1,328 (5.2%), and other languages for 2,619 (10.2%).

Table 10.2: Environmental Parameters for UG Medical Students

Environment related parameters	Frequency (n)	Percentage (%)
Overall supportiveness of Family Environment:		
Extremely Unsupportive	1151	4.5%
Neutral	2550	10%
Supportive	8865	34.6%
Extremely Supportive	13024	50.9%
Within your home environment: Academic Pressure from Family:		
Always and Often	3960	15.5%
Sometimes	7735	30.2%
Supportive	7489	29.3%
Extremely Supportive	6406	25%
Financial Strain in the Family:		
Always and Often	4744	18.5%
Sometimes	8194	32%
Supportive	6860	26.8%
Extremely Supportive	5792	22.6%

Environmental support parameters indicate that the family environment is predominantly supportive, with 13,024 (50.9%) rating it as extremely supportive, 8,865 (34.6%) as supportive, and 1151 (4.5%) rating it unsupportive. Academic pressure from family is reported always or often by 3,960 (15.5%) students, sometimes by 7,735 (30.2%), while remaining feel supported and extremely supported in their home environments. Financial strain is experienced always or often by 4,744 (18.5%) students and sometimes by 8,194 (32%), while remaining feel supported and extremely supported regarding financial matters.

Table 10.3: Academic Parameters of UG Medical Students

Academic related parameters	Frequency (n)	Percentage (%)
How would you rate your overall academic workload?		
Light and too light	391	1.5%
Manageable	5410	21.1%
Manageable but heavy	14487	56.6%
Too heavy	5302	20.7%
On average, how many hours per week do you spend on studying and attending classes (outside of personal study)?		
Less than 20 hours	5000	19.5%
20-40 hours	9280	36.3%
40-60 hours	9381	36.7%
More than 60 hours	1929	7.5%
Exams adequately assess my knowledge and skills:		
Strongly disagree and Disagree	5866	22.9%
Neutral	9544	37.3%
Agree	8158	31.9%
Strongly agree	2022	7.9

The fear of failure negatively impacts my academic performance:		
Strongly Disagree	1305	5.1%
Disagree	3475	13.6%
Neutral	7606	29.7%
Agree and strongly agree	13204	51.6%
I feel constant pressure to achieve top grades		
Strongly Disagree	1482	5.8%
Disagree	4036	15.8%
Neutral	9689	37.9%
Agree and Strongly agree	10383	40.6%
I struggle to balance my academic work with my personal life and wellbeing		
Strongly Disagree	826	3.2%
Disagree	2734	10.7%
Neutral	7638	29.8%
Agree and strongly agree	14392	56.3%
Do you feel the present curriculum contribute to your stress?		
Extremely and significantly stressful	11186	43.7%
Moderately stressful	9664	37.8%
Slightly stressful	3982	15.2%
Not stressful	848	3.3%
Difficulty of Study material :		
Extremely and significantly stressful	8419	32.9%
Moderately stressful	10611	41.5%
Slightly stressful	5094	19.9%
Not stressful	1466	5.7%
Frequency of exams:		
Extremely and significantly stressful	9134	35.9%
Moderately stressful	9563	37.6%
Slightly stressful	4962	19.5%
Not stressful	1784	7%
Does the fear of failure lead to any of the following behaviours?		
Considering leaving the medical course	738	2.9%
Excessive perfectionism	1539	6%
Procrastination (avoiding or delaying tasks)	13448	52.5%
Skipping classes/assignments	1934	7.6%
Thoughts of self-harm	330	1.3%

The majority of students, 14,487 (56.6%), find their academic workload manageable but heavy, while 5,302 (20.7%) consider it too heavy, and only 391 (1.5%) find it light or too light. The fear of failure is a significant issue in UG, with 13,204 (51.6%) agreeing or strongly agreeing that it negatively impacts their performance. Furthermore, 10,383 (40.6%) students feel constant pressure to achieve top grades. Balancing academic work with personal life is a

struggle for 14,392 (56.3%) students. Medical curriculum-induced stress is a significant factor, with 11,186 (43.7%) finding it extremely or significantly stressful and 9,664 (37.8%) moderately stressful. The frequency of exams is extremely or significantly stressful for 9,134 (35.9%) and moderately stressful for 9,563 (37.6%).

Lastly, the fear of failure leads to various negative behaviors, including procrastination in 13,448 (52.5%) students, skipping classes or assignments in 1,934 (7.6%), excessive perfectionism in 1,539 (6%), considering leaving the course in 738 (2.9%), and thoughts of self-harm in 330 (1.3%). These findings underscore the significant academic pressures and stresses faced by medical students.

Table 10.4: Hostel and Library Parameters of UG Medical Students

Hostel related parameters	Frequency (n)	Percentage (%)
Overall condition of your hostel facilities (cleanliness, maintenance, etc)		
Very and moderately dissatisfied	10645	41.6%
Neutral	7926	31%
Moderately satisfied	5109	20%
Very satisfied	1920	7.5%
Do you have adequate privacy and personal space within your hostel room?		
No	8613	33.7%
Somewhat	6507	25.4%
Yes	10470	40.9%
Mess/Food Quality:		
Very and moderately dissatisfied	14294	55.9%
Neutral	6795	26.6%
Moderately satisfied	3371	13.2%
Very satisfied	1130	4.4%
Library Access and Resources:		
Very and moderately dissatisfied	5570	21.8%
Neutral	7832	30.6%
Moderately satisfied	7542	29.5%
Very satisfied	4646	18.2%

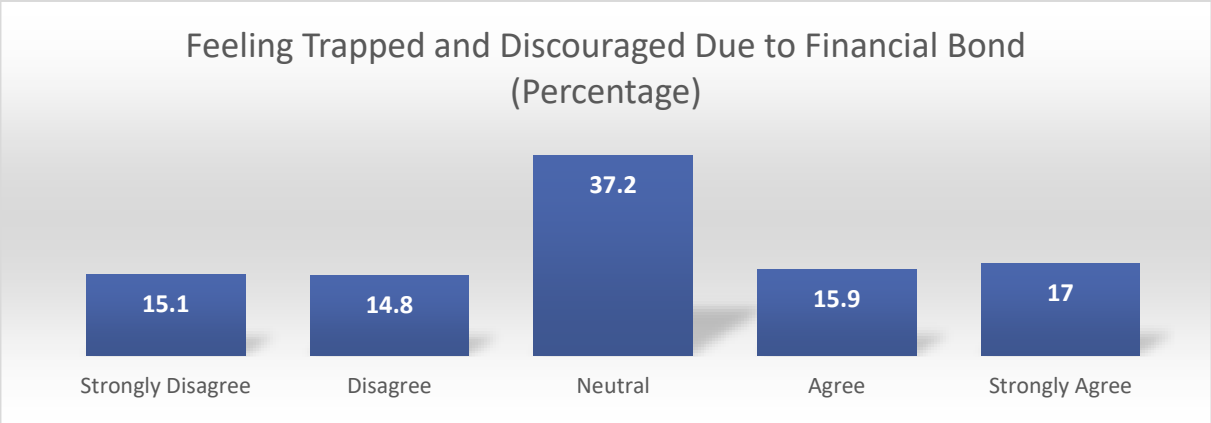
A significant portion of students, 10,645 (41.6%), are very or moderately dissatisfied with the overall condition of their hostel facilities, including cleanliness and maintenance. Regarding privacy and personal space within hostel rooms, 8,613 (33.7%) feel they do not have adequate privacy. The quality of food provided in the hostel mess is a major concern, with 14,294 (55.9%) students very or moderately dissatisfied.

Financial stress is a significant issue, with 8,663 (33.9%) students finding their finances extremely or significantly stressful and 6,971 (27.2%) moderately stressful. Educational loans or debt are held by 6,958 (27.2%) students, and among them, 5,416 (32.7%) feel extreme or significant pressure about repayment. Additionally, 10,445 (40.8%) students have financial dependents. The existence of a financial bond for leaving the medical course makes 8,412 (32.9%) students feel trapped and discouraged from leaving if unhappy.

Table 10.5: Financial Stress Related Parameters of UG Medical Students

Financial stress related parameters	Frequency (n)	Percentage (%)
How stressful are your finances (tuition, living costs, hostel etc.)?		
Extremely and significantly stressful	8663	33.9%
Moderately stressful	6971	27.2%
Slightly stressful	5176	20.2%
Not stressful	4780	18.7%
Do you have any educational loans or debt?		
No	18632	72.8%
Yes	6958	27.2%
If yes, how much pressure do you feel about repayment?		
Extreme and significant pressure	5416	32.7%
Moderate pressure	3663	22.1%
Slight pressure	2236	13.5%
No pressure	5266	31.8%
Do you have financial dependents (family members you support)?		
No	15145	59.2%
Yes	10445	40.8%
How frequently have you thought about leaving the MBBS course so far?		
Never	8797	34.4%
Rarely	5685	22.2%
Often and very often	4184	16.4%
Sometimes	6924	27.1%
Do you currently have any difficulties in the following relationships?		
Classmates	1256	4.9%
Family	2363	9.2%
Friends	3417	13.4%
Romantic Partner	3229	12.6%
Roommates	1234	4.8%

Thoughts of leaving the MBBS course was reported by 6,924 (27.1%) as sometimes, 5,685 (22.2%) as rarely, and 4,184 (16.4%) as often or very often. Difficulties in relationships were

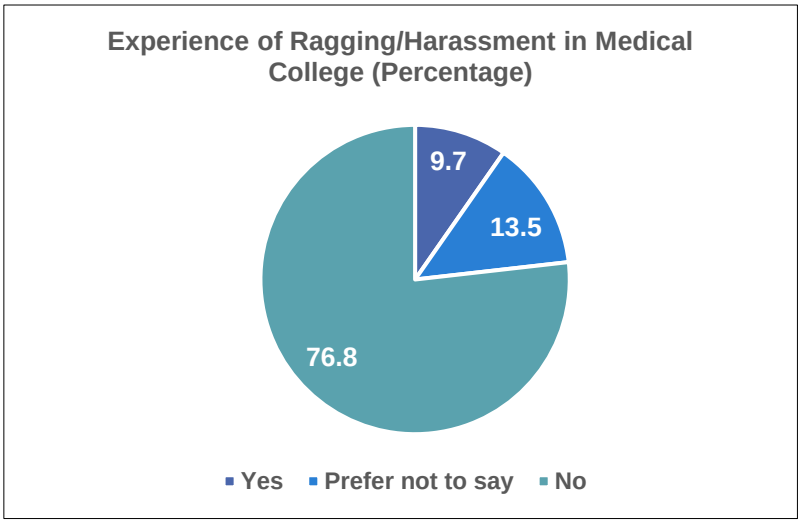


reported by 3,417 (13.4%) with friends, 3,229 (12.6%) with romantic partners, 2,363 (9.2%) with family, 1,256 (4.9%) with classmates, and 1,234 (4.8%) with roommates. These findings

highlight significant areas of stress and challenges faced by medical students, including financial pressures, feelings of entrapment, and relational difficulties.

Ragging

The analysis of ragging and stress-related parameters for 25,590 undergraduate medical students provides significant insights into their experiences and stress levels. A majority, 19,655 (76.8%), reported not experiencing or witnessing any form of ragging or harassment, while 2,486 (9.7%) confirmed such experiences.



Regarding institutional measures, 17,932 (70.1%) students believe their college has adequate measures to prevent and address ragging, while 3,618 (14.1%) disagree, and 4,040 (15.8%) are unsure. In terms of familial emotional support, only 1,232 (4.8%) extremely unsupportive. Regarding the friend-based emotional support, UG students reported that 2,602 (10.2%) extremely unsupportive. Feelings of loneliness or social isolation are common, with 8,962 (35%) experiencing them always or often and 9,995 (39.1%) sometimes. Social connectivity is an issue for many, as 8,265 (32.3%) find it difficult to make or maintain social connections and 6,089 (23.8%) somewhat difficult. When dealing with personal difficulties, 14,796 (57.8%) students have someone to confide in and 6,539 (25.6%) reported that they do not have any one.

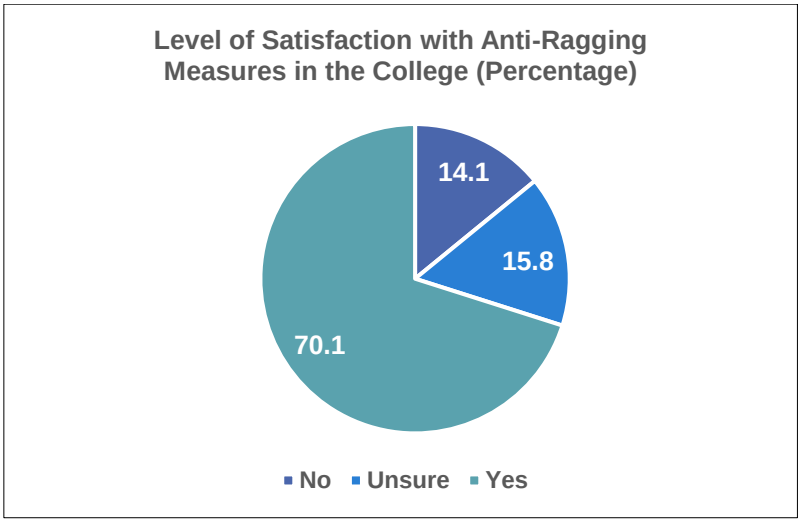
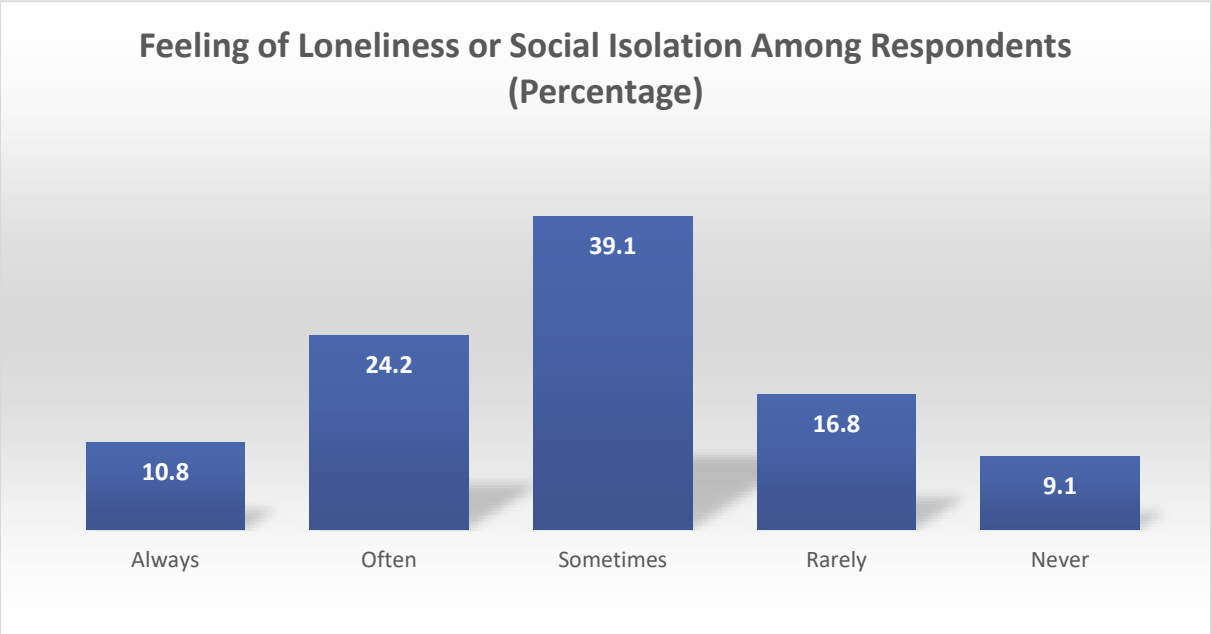


Table 10.6: Emotional Support and Thoughts-Related Parameters of UG Medical Students

Emotional support and thoughts related parameters	Frequency (n)	Percentage (%)
How would you describe the level of emotional support you receive from your family?		
Extremely Unsupportive	1232	4.8%
Neutral	4164	16.3%
Supportive	8626	33.7%
Extremely supportive	11568	45.2%
How would you describe the level of emotional support you receive from your friends?		
Extremely Unsupportive	2602	10.2%
Neutral	7907	30.9%
Supportive	9823	38.4%
Extremely supportive	5258	20.5%
Do you find it difficult to make friends or maintain social connections at medical college/hostel?		
No	11236	43.9%
Somewhat	6089	23.8%
Yes	8265	32.3%
Do you feel you have someone you can discuss in when you experience personal difficulties?		
No	6539	25.6%
Sometimes	4255	16.6%
Yes	14796	57.8%
How comfortable would you feel seeking help from a mental health professional (like a counsellor or therapist) if you needed it		
Somewhat and very Uncomfortable	5362	21%
Neutral	10696	41.8%
Somewhat Comfortable	6106	23.9%
Very Comfortable	3426	13.4%
When facing stress, what do you usually do?		
Self-harm	110	0.4%
Use substances (alcohol, drugs, etc.)	104	0.4%
Do you feel you have adequate knowledge and skills for managing stress in a healthy way?		
No	9319	36.4%
Yes	16281	63.6%
Rate the level of support you feel from: Family		
Extremely Unsupportive	903	3.5%
Neutral	3564	13.9%
Supportive	8648	33.8%
Extremely Supportive	12475	48.7%
Friends:		
Extremely Unsupportive	2339	9.1%
Neutral	7686	30%
Supportive	10091	39.4%

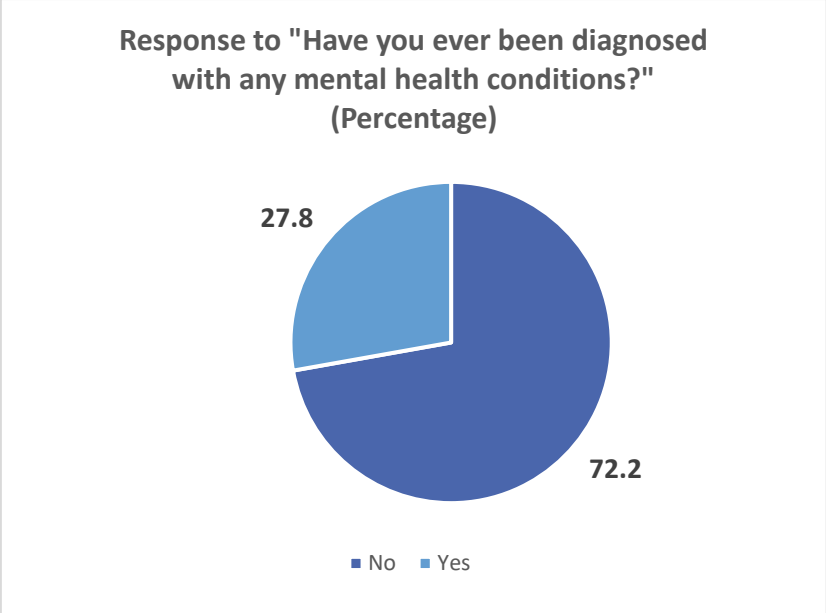
Extremely Supportive	5474	21.4%
Faculty/Mentors:		
Extremely Unsupportive	4664	18.2%
Neutral	10576	41.3%
Supportive	7504	29.3%
Extremely Supportive	2846	11.1%
How comfortable are you seeking support from the following people during times of stress or difficulty: Very and somewhat uncomfortable		
Parents/family	3139	12.3%
Friends/peers	3339	13%
Faculty/Mentors	7693	31.1%

Mental health conditions have been diagnosed in 7,115 (27.8%) students, with 3,780 (14.8%) having one condition, 1,851 (7.2%) having two, and 1,045 (4.1%) having three conditions.



Thoughts of self-harm or suicide in the last 12 months were reported by 4,139 (16.2%) students, with 1,305 (5.1%) seeking professional help. Comfort in seeking mental health professional support varies, with 3,426 (13.4%) feeling very comfortable, 6,106 (23.9%) somewhat comfortable, 10,696 (41.8%) neutral, and 5,362 (21%) somewhat or very uncomfortable.

Regarding adequate knowledge and skills for managing stress, 9,319 (36.4%) reported that feel they lack knowledge and skills to manage stress. Faculty or mentors are seen as extremely unsupportive by 4,664 (18.2%). Comfort in seeking support during stress from parents or family is somewhat or very uncomfortable for 3,139 (12.3%) students, from friends or peers for 3,339 (13%), and from faculty or mentors for 7,693 (31.1%).



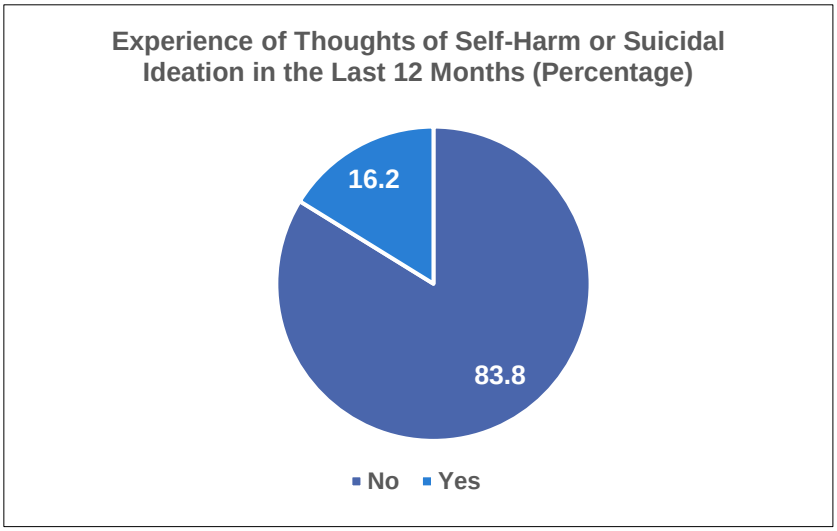


Table 10.7: Mentor-Mentee Program-Related Parameters of UG Medical Students

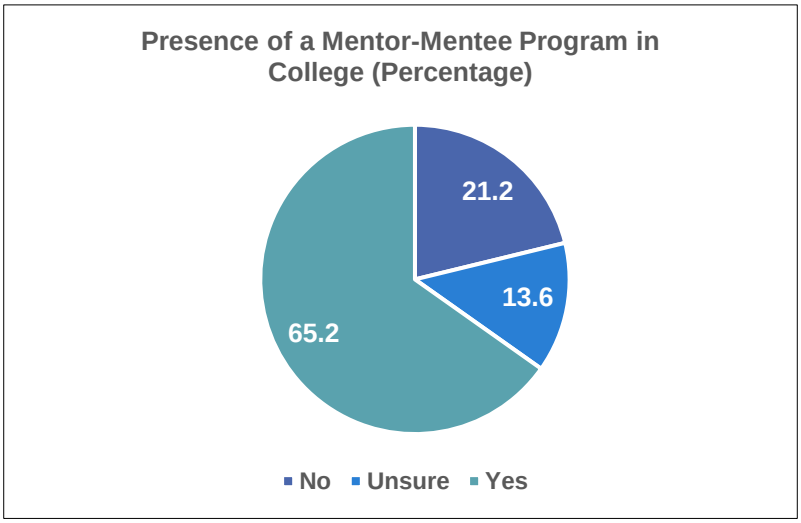
Mentor-mentee programme related parameters	Frequency (n)	Percentage (%)
If yes, have you been assigned a faculty mentor?		
No	4221	16.5%
Yes	15540	60.7%
How frequently do you meet or interact with your mentor?		
Every few months	3052	11.9%
Monthly	4858	19%
Weekly	2106	8.2%
Rarely	4951	19.3%
Never	5766	22.5%

How would you rate the effectiveness of your mentor-mentee relationship		
Very Effective	2511	9.8%
Somewhat Effective	4325	16.9%
Neutral	7381	28.5%
Very and somewhat Ineffective	5644	22%
Do you feel comfortable seeking mental health support (counselling, therapy, mentor support) if needed		
Very comfortable	3381	13.2%
Somewhat comfortable	7017	27.4%
Neutral	10140	39.6%
Somewhat and very uncomfortable	5052	19.8%
Are you aware of any mental health support services available within your medical college		
No	9341	36.5%
Unsure	5157	20.2%
Yes	11092	43.3%
If yes, how would you rate the following aspects of those services: Accessibility of mental health services		
Very and somewhat Inaccessible	3648	18.6%
Neutral	8438	43%
Somewhat Accessible	4205	21.4%
Very Accessible	3350	17.1%
Quality of mental health services:		
Very poor and poor	4808	18.8%
Average	11677	45.6%
Good	6927	27.1%
Excellent	2178	8.5%

A significant majority, 16,680 (65.2%), report that their college has a formal mentor-mentee program, while 5,420 (21.2%) state there is no such program, and 3,490 (13.6%) are unsure.

Among those whose colleges have a program, 15,540 (60.7%) have been assigned a faculty mentor, while 4,221 (16.5%) have not. Interaction frequency with mentors varies, with 5,766 (22.5%) never interacting, 4,951 (19.3%) interacting rarely, 3,052 (11.9%) every few months, 4,858 (19%) monthly, and 2,106 (8.2%) weekly. The effectiveness of the mentor-mentee relationship is rated as very effective by 2,511 (9.8%) students, somewhat effective by 4,325 (16.9%), neutral by 7,381 (28.5%), and very or somewhat ineffective by 5,644 (22%).

Awareness of mental health support services within their medical college is reported by 11,092 (43.3%) students, while 9,341 (36.5%) are unaware, and 5,157 (20.2%) are unsure. Accessibility of these mental health services is rated as very or somewhat inaccessible by 3,648 (18.6%) students and the quality of these services is perceived as very poor or poor by 4,808 (18.8%).



10.2.2 Analysis of Online Survey Responses from Postgraduate Students

The analysis based on the inputs provided by postgraduate students will be presented and discussed in the following order. A brief description of the socio-demographic profile, followed by family and academic concerns and perceptions about the facilities in the college and ecosystem there; a deep dive into perceived stress levels; mental health concerns and coping. 5,337 postgraduate students participated in the online survey. Among them, 2,623 were females, 2,576 were males, 6 identified as other genders, and 132 chose not to disclose their gender. The data distribution indicates a relatively balanced representation across the three years of the PG study: 1st year comprises 35%, 2nd year constitutes 29.6%, and 3rd year accounts for 32%. Additionally, 2.5% of the data was from students specializing in super-specialty fields. The majority of PG students were unmarried (57%), with notable proportions representing married (30%) and in-relationship statuses (12%). A majority of 85% of the students come from families with annual income of less than 20 lakhs.

Table 10.8 Demographic Characteristics of PG students

Variable	Frequency n=5337	Percent
Gender		
Female	2623	49.1%
Male	2576	48.3%
others	136	2.6%
Year of Study		
1st Year	1918	35.9%
2nd Year	1578	29.6%
3rd year	1705	31.9%
Other	136	2.5%
Marital Status		
Single	3051	57.2%
In a relationship	629	11.8%

Married	1624	30.4%
Separated	16	0.3%
Divorced	17	0.3%
Total Family Income		
1-20 lakh rupees per annum	4519	84.7%
21-30 lakh rupees per annum	446	8.4%
31-40 lakh rupees per annum	160	3.0%
41-50 lakh rupees per annum	78	1.5%
51 lakh and above rupees per annum	134	2.5%

Clinical and Academic Work: Regarding academic stress, 1095 (20%) of PG students find the current academic workload frequently challenging, 505(9.5%) too intense, while 1721(32%) report manageable academic stress levels. Close to half the PG students 2432(45%) expressed working for more than 60 hours a week with over 3020(56%) not getting their weekly offs. 42% of them attributed the source of their problems to be due to the college administration which could include patients and families while the remaining 50% were equally divided in the source of problems between faculty and seniors. 56% of them reported academic concerns due to the load and while 62% felt that the support that they got from their guide or teacher was adequate, 88% of them felt more support from faculty would help improve the academic experience. Tailored support strategies can help address the diverse needs of students and promote their overall well-being during their postgraduate studies. 38% of the PGs reported not having adequate time to rest, while 57% stated that they were denied their weekly off from duty as per the National Medical Commission (NMC) regulatory provisions.

A notable proportion of PG students (26%) expressed dissatisfaction with regular teacher attendance at the college, and 17% reported inadequate support by their guide during their thesis, emphasizing the importance of addressing this issue to uphold educational standards and support student learning effectively. The presence of "ghost faculty" in private medical colleges and instances of faculty engaging in private practice during working hours in government medical colleges are significant issues in the medical education sector. While implementing biometric attendance systems has significantly improved the situation, stricter action and more rigorous implementation are necessary to address these concerns effectively. These practices not only compromise the quality of education but also undermine the integrity of the medical profession.

Regarding academics, PG students reported that 20.52% find their academic stress frequently challenging, and 9.5% reported too intense. Discrimination can profoundly impact students' mental health, academic performance, and well-being. However, 68.80% of PG students reported not facing discrimination based on gender, ethnicity, religion, caste, geography, language, or other factors in their academic environment. But at the same time, a substantial percentage (31%) of students reported that they are experiencing discrimination, underscoring the need for institutions to implement more robust policies against discrimination and to foster an inclusive environment.

Exams: A significant majority of the PG students 4657 (87.3%) reported that they have not been asked for unreasonable favors in exchange for passing exams. However, a notable minority 680 (12.7%) indicated that they have encountered such unethical requests,

highlighting a concern about integrity within the academic environment. Even this 12.74% reporting for unfavorable demand can severely undermine the educational institution's integrity and potentially harm students' overall educational experience. They may also lead to long-term detrimental effects on future medical practitioners' professional and ethical standards. This issue highlights the need for stringent policies, transparent grievance mechanisms, and robust anti-corruption measures within academic institutions. It's crucial that students feel supported in reporting these issues without fear of repercussion.

Table 10.9. Problems Related to College and Administration

Variable	Frequency	Percent
Do faculty/teachers come to college regularly and engage in teaching?		
No	1363	25.5%
Yes	3974	74.5%
With whom do students in your hospital / college encounter problems most frequently?		
Admin and Other (Patients/patients relatives etc.)	2262	42.4%
Faculty members	1339	25.1%
Postgraduate seniors	1342	25.1%
Senior residents	394	7.4%
Do students in your institution face frequent problems with any specific aspect?		
Academics load	909	17.0%
Clinical Workload	1995	37.4%
Others	1573	29.5%
Thesis	860	16.1%
How would you describe the current academic workload at your college?		
Frequently challenging	1095	20.5%
Manageable	1721	32.2%
Occasionally challenging	1762	33.0%
Too Intense	505	9.5%
Too light	254	4.8%
Are you getting weekly offs as per the regulatory provisions?		
No	3020	56.6%
Yes	2317	43.4%
NOT answered	1218	22.8%
What are the approximate working hours you spent in a week		
upto 50 hours	773	14.5%
51 to 60 hours	800	15.0%
61 to 70 hours	657	12.3%
71 to 80 hours	652	12.2%

More than 80 hours	1123	21.0%
Don't wish to specify	1332	25.0%
Academic Load - Have you experienced stress due to academic demands?		
No	2319	43.55%
Yes	3018	56.5%
How would you rate the support you receive from your Guide / Teacher?		
Adequate	3358	62.9%
Inadequate	935	17.5%
Needs improvement	1044	19.6%
Would additionally support from colleagues or faculty improve your academic experience?		
No	640	12.0%
Yes	4697	88.0%
Have you ever been asked for unreasonable favours in exchange for passing exams?		
No	4657	87.3%
Yes	680	12.7%

Regarding Thesis-related Challenges: The responses indicate a fairly even split regarding challenges with thesis work, with 2764(51.8%) of the PG students experiencing challenges. This suggests that over half of the students face difficulties in their thesis work, which could encompass a variety of issues from data collection to writing and submission processes. The vast majority of students 4716 (88.4%) reported that their thesis guide did not try to exploit them for signing the thesis. However, there remains a concerning 621 (11.6%) who did experience exploitation, which is a serious issue regarding academic integrity and student treatment.

Table 10. 10. Thesis and Academic Work

Variable	Frequency	Percent
Challenges with Thesis Work-Have you faced any challenges with your thesis work?		
No	2573	48.2%
Yes	2764	51.8%
Additional Thesis Stressors - Would you like to share any specific stressors you encountered during your thesis work?		
No	4334	81.2%
Yes	1003	18.8%
Has your thesis guide tried to exploit you for signing the thesis?		
No	4716	88.4%
Yes	621	11.6%
Has your thesis guide intentionally delayed the submission of your thesis?		
No	4898	91.8%

Yes	439	8.2%
How much stress you felt due to the delayed thesis?		
Severe	1194	29.7%
Less	1860	34.9%
Moderate	2283	42.8%
Have your thesis guide asked you to manipulate thesis data to get standard outcome?		
No	4935	92.5
Yes	402	7.5
Assistance Needed for Thesis - How would you like to receive assistance for your thesis from the administration?		
Extra time	1109	20.8
Faculty guidance	1948	36.5
Financial support	678	12.7
Thesis removal	1249	23.4
Other	353	6.6
Access to Resources - Is obtaining necessary resources from the college library easy?		
No	1683	31.5
Yes	3654	68.5

A significant majority 4898 (91.8%) of the PG students have not experienced intentional delays in their thesis submissions by their guides. Nevertheless, 439(8.2%) reported such delays, which can contribute to increased stress and potentially impact their academic progress. The vast majority 4935 (92.5%) of students reported that they were not asked to manipulate thesis data by their guides, which is a positive indication of academic integrity. However, a small percentage 402 (7.5%) did encounter requests for data manipulation, suggesting ethical concerns within certain thesis supervisory relationships.

PG students expressed diverse needs for assistance with their thesis work. The most common request was for better faculty guidance 1948(36.5%), followed by the desire for thesis removal 1249(23.4%), indicating a significant portion who might prefer alternative evaluation methods. Extra time for thesis completion was also a notable need 1109 (20.8%), and some students sought financial support 678(12.7%), underscoring the varied challenges students face during their thesis phase.

Hostel and Food: A significant proportion of the PG students are not satisfied with the hostel facilities, with nearly 50% rating them as poor or extremely poor. The interaction between the student body and hostel management also needs improvement, with only 16% rating it as good or very good. A slight majority (53%) suggest that changes are needed in hostel management policies. This suggests that nearly half of the students are dissatisfied with their living conditions, potentially impacting their academic performance and overall well-being. Satisfactory living conditions are crucial for quality of life and academic success. Poor ratings

indicate that improvements are necessary to ensure that the hostel environment supports rather than hinders student learning and performance.

Table 10.11 Facilities Related to Hostel

Variable	Frequency	Percent
How satisfied are you with the overall facilities provided by the college?		
Extremely poor	730	13.7%
Poor	1504	28.2%
Satisfied	1858	34.8%
Good	899	16.8%
Very Good	346	6.5%
How satisfied are you with the cleanliness and variety of food items available in the cafeteria?		
Extremely poor	1181	22.1%
Poor	1641	30.7%
Satisfied	1544	28.9%
Good	709	13.3%
Very Good	262	4.9%
What is your opinion on the overall facilities available in the hostel ?		
Extremely poor	1152	21.6%
Poor	1494	28.0%
Satisfied	1672	31.3%
Good	763	14.3%
Very Good	256	4.8%
Are there any arrangements available for the students' families to stay on the campus at the time of their visit?		
No	3635	68.1%
Yes	1702	31.9%
Is there a mechanism for interaction between student and hostel management?		
No	1931	36.2%
Yes	3406	63.8%
How do you rate the kind of interaction exists between the student body and hostel management?		
Extremely poor	1059	19.8%
Poor	1696	31.8%
Satisfied	1729	32.4%
Good	624	11.7%
Very Good	229	4.3%
Do you think the environment of the hostel affects your academic performance?		
No	2106	39.5%
Yes	3231	60.5%

Ragging: A significant number of students 930(18%) reported that ragging was still there and hurt them. This underscores the ongoing issue of ragging within some academic environments. 1425 (27%) reported experiencing harassment from senior PG students in clinical settings, while 1669 (31%) reported similar experiences from faculty and senior residents.

Awareness of anti-ragging regulations is relatively high 4510(84%), but there is still a significant minority (nearly 20%) unaware of these regulations, which suggests the need for increased education and communication efforts. However, these measures alone are not enough, as indicated by the (18%) substantial proportion of students affected by ragging. This suggests a potential gap in the enforcement of these measures or in the effectiveness of the response systems. Educational institutions must maintain anti-ragging policies, actively enforce them, and ensure that students are both aware of and comfortable accessing support systems.

The respondents' analysis of self-care practices and stress management strategies demonstrates a wide range of approaches by PGs. The primary practices identified include conversing with friends or relatives (27.28%), spending quality time with loved ones (26.91%), taking trips (12.09%), pursuing personal hobbies (9.01%), and participating in sports or games (6.56%). Furthermore, additional responses encompass embracing spiritual practices, meditation, journaling, yoga, and undergoing stress management training

Table 10. 12 Harassment and Bullying

Variable	Frequency	Percent
Impact of Ragging or Bullying - How the experiences of ragging or bullying by senior students affected you?		
Not at all	2663	49.9%
Slightly	991	18.6%
Moderately	753	14.1%
Significantly	484	9.1%
Very Significantly	446	8.4%
Awareness of Anti-Ragging Measures - Are you aware of the anti-ragging cell in your institute?		
No	827	15.5%
Yes	4510	84.5%
Support Systems for Addressing Bullying - What support systems should be enhanced to address bullying more effectively?		
Anti-ragging committees	2217	41.5%
Counselling services	1842	34.5%
Hotline numbers	924	17.3%
Other	354	6.6%
Harassment in Clinical Settings - Do you experience harassment from senior PG students in clinical settings?		
No	3912	73.3%
Yes	1425	26.7%

Harassment from Faculty or Residents - Do you experience harassment from faculty or senior residents regarding clinical work?		
No	3668	68.7%
Yes	1669	31.3%

Family Stress: A considerable proportion of respondents, 2173 (41%), noted that family issues have impacted their focus on studies, highlighting the significant disruptive potential of familial challenges on academic performance. While 41% who are married or are in a relationship feels that the presence of a significant other in their lives helps them cope, (11%) of postgraduates reported that marital conflicts have worsened their stress levels. While the majority, 3902 (73%), do not perceive the necessity for additional support regarding family stress, a substantial minority, 1435 (27%), seek assistance, indicating a gap in existing support structures. Nevertheless, nearly half of the respondents, 2552 (48%), recognize the advantages of having family counselling services available on campus, underscoring the potential benefits of such provisions in alleviating stress and enhancing mental well-being.

Table 10. 13. Family Stress and Other Variables

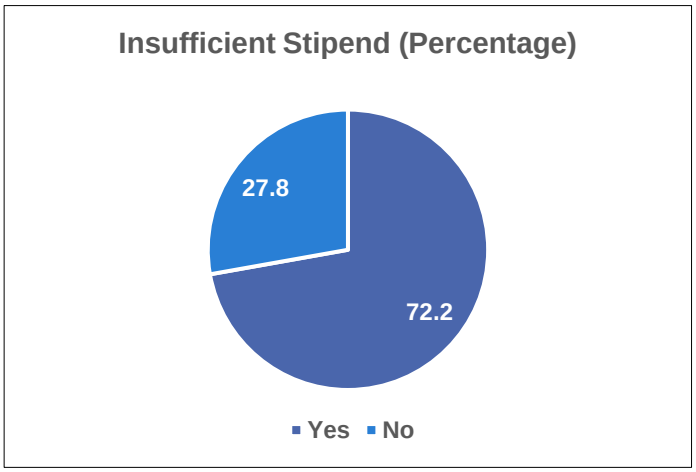
Variable	Frequency	Percent
Impact of Family Issues on Studies - Have family issues ever affected your ability to focus on your studies and clinical work?		
No	3164	59.3%
Yes	2173	40.7%
Need for Support with Family Stress- Do you need help managing stress related to family responsibilities?		
No	3902	73.1%
Yes	1435	26.9%
Need for Family Counselling on Campus - Would family counselling on campus be beneficial to you?		
No	2785	52.2%
Yes	2552	47.8%
Impact of Marital or Relationship Status - How has your marital or relationship status impacted your stress levels as a postgraduate student?		
Adversely	569	10.7%
Helps me cope	2194	41.1%
Not applicable (unmarried)	2574	48.2%

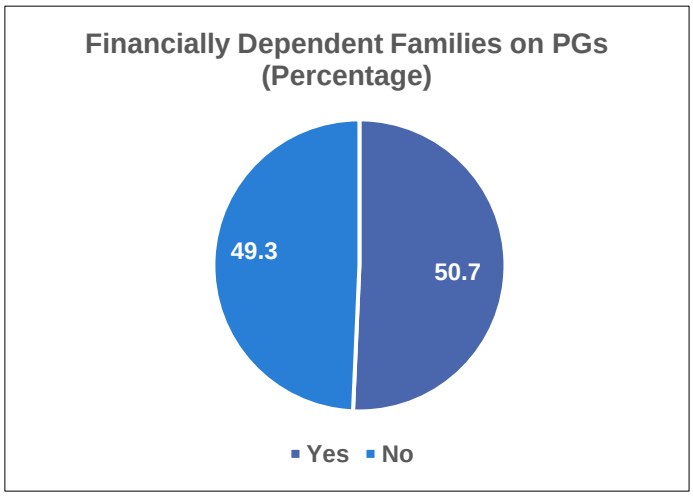
Financial Concerns: Most PG students fall into the lower to middle-income bracket (<20lakh Rs income per annum) 4519(84%), reflecting the economic background of a significant portion of the student body. A majority 3206 (60.1%) feel their stress and well-being are impacted by financial concerns, highlighting the need for increased support. A large majority 3851 (72.2%) find their stipend insufficient, pointing to a critical need for review and adjustment of stipend policies. While a majority 3115 (58.4%) receive their stipends regularly, a significant proportion 2222 (41.6%) do not, indicating potential areas for improvement. Nearly half 2708

(50.7%) of the PG students have financially dependent families, adding to their financial stress. Invariably, most of the PG students in the age group 25-29yrs had their families who were looking for financial assistance from the PGs, adding burden to them.

Table 10. 14. Finances Including Stipend

Variable	Frequency	Percent
Sufficiency of Stipend- Is the stipend you receive sufficient?		
No	3851	72.2%
Yes	1486	27.8%
Regularity of Stipend Payment-Is your stipend paid regularly by the institute?		
No	2222	41.6%
Yes	3115	58.4%
Family Financial Dependency-Is your family financially dependent on you?		
No	2629	49.3%
Yes	2708	50.7%





Perceived Stress Levels: Most students experience moderate to very high-stress levels (84%). However over 40% of them feel that this high perceived stress levels are a way to have the workload reduced. This underscores the need for effective stress management and mental health support structures within medical institutions. A significant majority of postgraduates, 3419 (64%), reported that workload adversely affected their mental health and well-being. Furthermore, 905 (17%) of postgraduates felt overwhelmed by their workload, while 1951 (37%) perceived it as challenging. They cited factors such as long daily working hours, continuous duty for 2-5 days, and inadequate infrastructure and support at their duty places as contributing stressors. Additionally, 1034 (19%) of postgraduates expressed the need to alleviate stress through substance use, including tobacco, alcohol, cannabis, and other drugs. Moreover, 1409 (26%) of PG students recognized a strong association between stress and substance use among postgraduates. Substance use as a coping mechanism is prevalent among a significant portion, with many acknowledging the link between stress and substance use. While 70% acknowledged that they do share their challenges with their family members, 69% also reported that they were concerned about how their family members would react to their challenges. A significant 36% of them felt that peer relationships did contribute to their stress levels though a lesser 21% acknowledged the need for support from their authorities in resolving relationship issues with their peers. Hence, there is an urgent need to take measures to educate the PGs and also implement measures to curtail the stress.

Table 10. 15. Stress and Workplace

Variable	Frequency	Percent
Is there a perception that some postgraduates claim excessive stress to reduce their workload?		
No	3186	59.7%
Yes	2151	40.3%
Sharing Challenges with Family or Spouse - Do you share academic or departmental challenges with your family or spouse?		
No	1481	27.7%
Yes	3856	72.3%
Concerns About Family Reaction - Are you concerned about how your family or spouse might react if you shared your problems with them?		
No	1669	31.3%
Yes	3668	68.7%
Peer Relationships - Have relationships with peers contributed to your stress levels?		
No	3437	64.4%
Yes	1900	35.6%
Need for Support in Resolving Interpersonal Issues - Do you need support from authorities to resolve interpersonal relationship issues?		
No	4235	79.4%
Yes	1102	20.6%

Mental Health & Suicide: The survey results reveal that 4518 (84.7%) of postgraduate students have not been diagnosed with any mental health condition, while 819 (15.3%) have been diagnosed with one. A notable percentage of the students suffer from mental illness 819 (15.3%), which could be exacerbated by the high levels of stress reported.

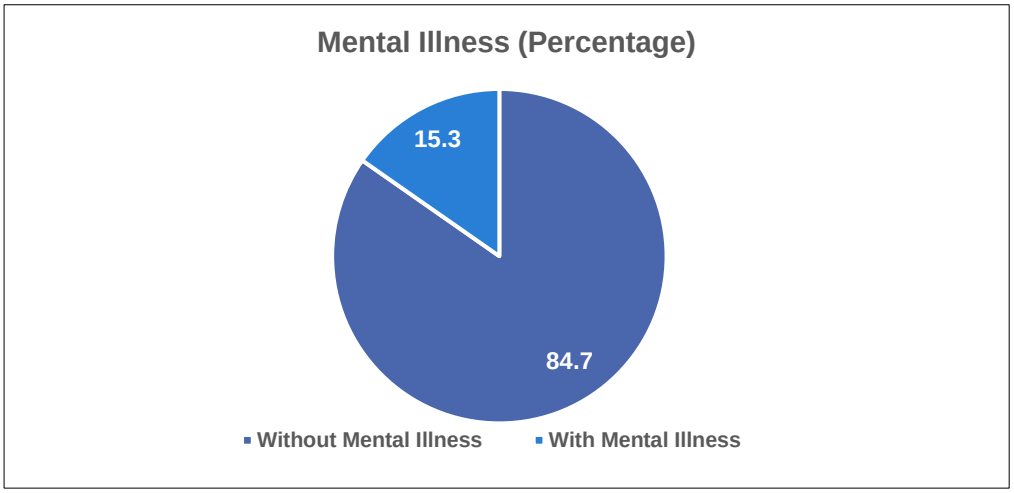
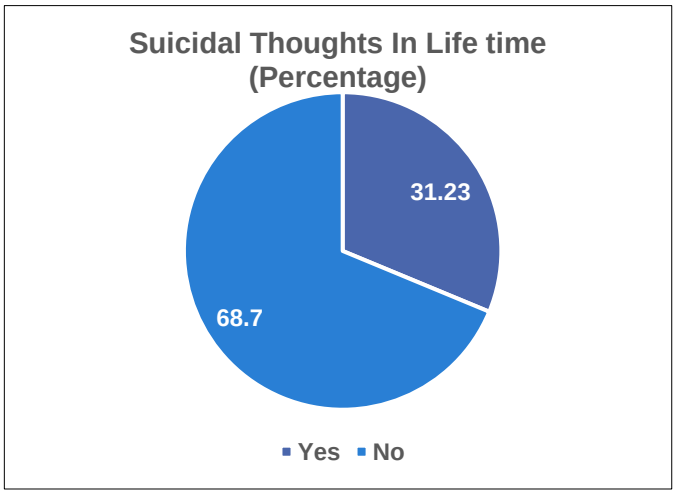


Table 10. 16. Mental Health and Suicide

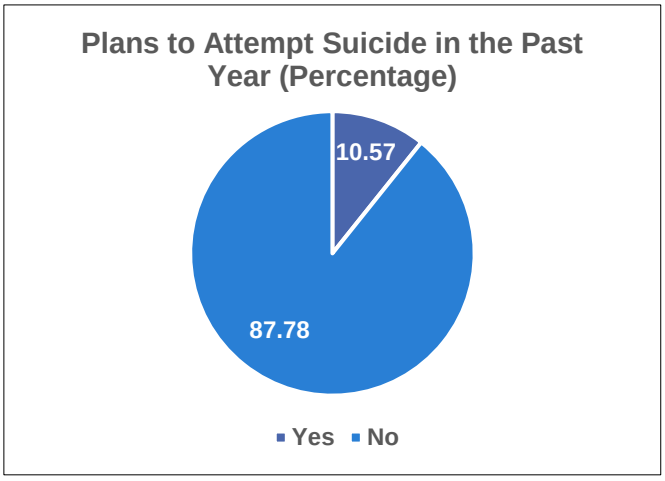
Comfort in Seeking Mental Health Help-Are you comfortable seeking help within your hospital for mental health-related issues?		
No	2222	41.6%
Yes	3115	58.4%
Challenges in Seeking Mental Health Help-What challenges might you face if you seek help for mental health issues within your hospital?		
Confidentiality concerns	2333	43.7%
Discrimination	575	10.8%
Impact on future job prospects	455	8.5%
Licensing issues	42	0.8%
Other	847	15.9%
Stigma	1085	20.3%
Experience with Suicidal Thoughts - Have you experienced thoughts of suicide in the past?		
No	3670	68.8%
Yes	1667	31.2%
Suicidal Plans -Have you made any plans to attempt suicide in the past year?		
No	4685	87.8%
Yes	564	10.6%
Don't wish to Specify	88	1.6%
Suicide Attempts-Have you attempted suicide in the past year?		
No	5100	95.6%
Yes	237	4.4%
Mental Illness Experience-Do you suffer from any mental illness?		

No	4518	84.7%
Yes	819	15.3%

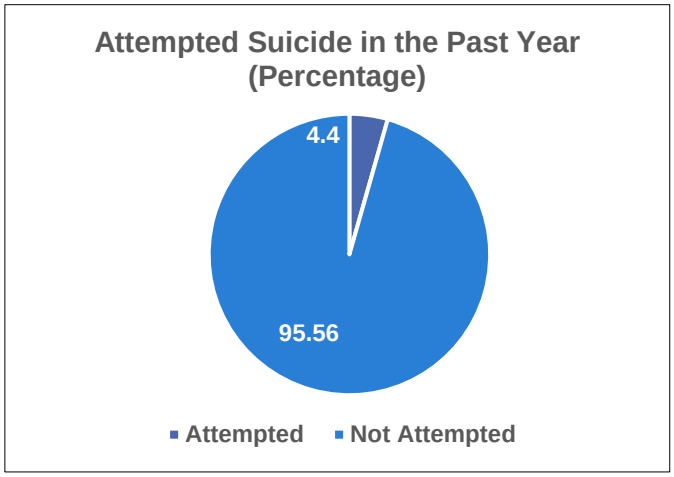
Among the respondents, 1,667 (31.23%) disclosed experiencing suicidal ideation in the past, with 3,670 (68.7%) reporting no such thoughts.



Moreover, 564 (10.57%) PG students indicated making plans to attempt suicide within the last year, while 4,685 (87.78%) did not report such plans.



Additionally, 237 (4.44%) PG students admitted to attempting suicide in the past year, while the majority, 5,100 (95.56%), did not report any suicide attempts during that period.

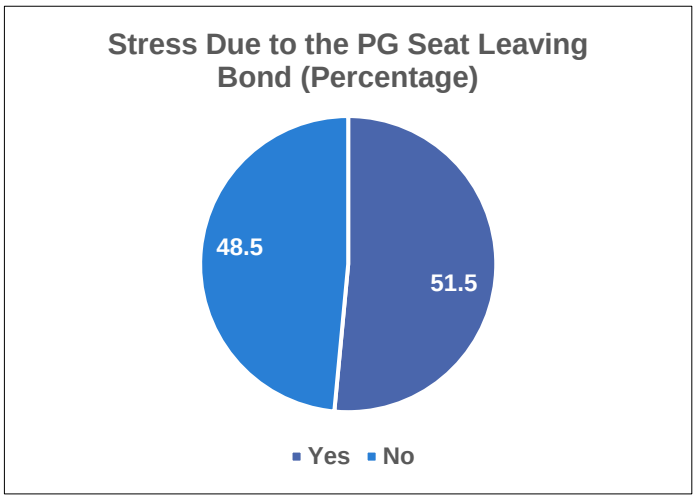


Seeking Help: More than half of the students are comfortable seeking mental health help, which is positive 3115 (58.37%). However, the relatively high percentage of students uncomfortable seeking help 2222 (41.63%) highlights potential barriers, such as stigma or lack of trust in the available services, which must be addressed to ensure all students can receive the support they need. On examining the landscape of seeking mental health assistance, several challenges emerge. Foremost among these are confidentiality concerns, cited by 43.71% of respondents, highlighting the pervasive fear of privacy breaches and its deterrent effect on seeking help. Stigma remains a significant barrier, with 20.33% expressing apprehension due to societal judgment and misunderstanding of mental health issues. Additionally, 15.87% of PG students cited unspecified challenges, indicative of various obstacles not explicitly categorized. Discrimination, accounting for 10.77%, underscores the persistent social biases faced by individuals seeking mental health support. Furthermore, concerns about the impact on future job prospects (8.53%) and licensing issues (0.79%) demonstrate the intricate interplay between mental health-seeking behaviors and professional livelihoods. If these are the concerns faced by future health care professionals themselves, their potential in influencing patients to seek help becomes a question that needs to be thought through.

Regarding PG Seat Leaving and Rural Service Bond: About half of the PG students 2747(51.5%) report stress due to the PG seat leaving bond, indicating a potential area for policy adjustments and less than half 1998 (37.4%) of the PG students report stress due to the rural service bond, affecting a substantial number.

Table 10. 17. Stress about Bond

Variable	Frequency	Percent
Do you feel stressed about the PG seat leaving bond in your college?		
No	2590	48.5%
Yes	2747	51.5%
Do you feel stressed about the rural service bond in your college?		
No	3339	62.6%
Yes	1998	37.4%



10.2.3 Analysis of Online Survey Responses from Faculty and Administrators

Total number of faculty who responded to the online survey were 7035 with a fairly even distribution between male 3395 (50.37%) and female 3282 (48.69%) respondents, with a small percentage preferring not to disclose their gender 57 (0.85%) and very few identified as others 6(0.09%). The data also reveals that predominance of faculty members 5816 (86.29%) in the survey, with a smaller representation from administrative roles 904 (13.41%) and wardens 20 (0.30%). This distribution highlights that the survey results are predominantly influenced by faculty viewpoints mainly.

Table 10. 18: Description of Socio-Demographic Characteristics of Faculty.

Socio-demographic parameters	Frequency (n)	Percentage (%)
Gender:		
Female	3282	48.7%
Male	3395	50.4%
Others	6	0.08%
Prefer not to say	57	0.85%
Position:		
Administrator	904	13.4%
Faculty	5816	86.3%
Warden	20	0.3%
Do you think students should be given protected leisure time or leave periods to relax?		
Not at all	359	5.4%
Moderate	1422	21.1%
Mostly	4959	73.5%
Do you think the academic schedule/atmosphere of your college is stressful for students?		
Not stressful	3254	48.3%
Moderately stressful	2066	30.7%
Very stressful	1420	21.1%

Do you feel that sometimes faculties themselves are responsible for avoidable mental stress to students?		
No	3290	48.8%
Yes	3450	51.2%

Challenges Dealing Depressed Students: Majority 5302 (78.66%) of respondents feel they have not encountered significant challenges in managing depression among students. However, there is still a significant minority 1438 (21.34%) who have faced difficulties. Qualitative data responses highlight several recurring themes: a) Reluctance and Denial: Students often do not want to discuss their issues or deny having problems, making it difficult for faculty to provide appropriate support, b) Non-compliance with Treatment: Some students do not follow through with recommended treatments or interventions, c) Academic Pressures: Depression linked to anxiety over exams and performance in studies is a significant concern, and d) Communication Barriers: A general lack of openness or communication about mental health issues.

A substantial proportion of respondents 2875 (42.66%) believe that their institutions lack a clear system for addressing depression among students.

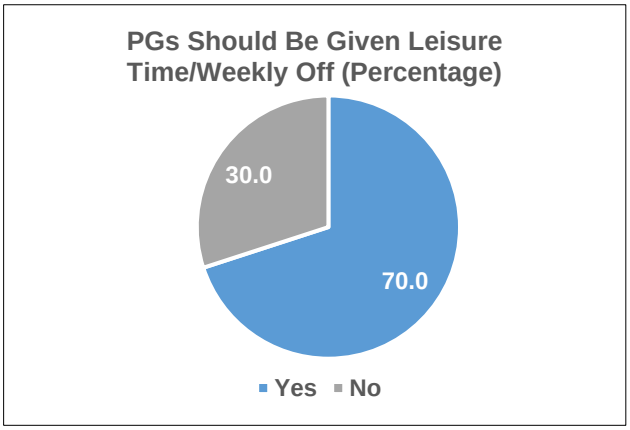


Table 10.19: Description of Challenges Faced by Faculty

Challenges faced by faculty	Frequency (n)	Percentage (%)
Have you faced any challenges in managing cases of depression among medical students?		
No	5302	78.6%
Yes	1438	21.4%
Do you share some examples of overcoming challenges with your students?		
No	2227	33.1%
Yes	4513	66.9%
Is there a clear system in place to address or tackle cases of depression among students in your college		
No	2875	42.7%
Yes	3865	57.3%

Stress Faced by the Faculty (educators): The distribution of responses to the question about how respondents rate their stress levels at their workplace revealed that the most common response is a moderate level of stress, with a rating of 5 (16.57%). Higher stress levels (ratings

of 7, 8, and above), which indicate more significant concerns, collectively account for a substantial proportion (29.66%). Lower stress levels (ratings of 1-4) collectively make up approximately 39.35%, indicating that a significant portion of the respondent's experience low to relatively manageable stress levels.

Volunteering Mentor-Mentee Program: The distribution of responses by the educators to the question about whether respondents would volunteer to be a mentor in a mentor-mentee program reveals a strong inclination towards volunteering as a mentor, with a remarkable 3062 (45.43%) of respondents choosing the highest commitment level. When considering the higher end of the scale (responses 8, 9, and 10), which indicate a strong likelihood of volunteering 69%, showcasing a widespread enthusiasm for participating in mentorship. At the other end of the spectrum relatively low numbers of educators (8%) showed resistance or reluctance towards mentoring,

Misuse of Mental Stress Label: The responses to the question about whether respondents think that students use mental stress as an excuse to get away from work or to avoid responsibilities. A significant proportion of respondents 3489(51.76%) believe to some extent that students might use mental stress as an excuse, while others 3251(48.17%) believe that these issues are genuine and not used as excuses. This clearly indicates that there is a clear need for enhanced awareness and training on mental health issues for faculty and administrators, alongside the development of clear guidelines for handling claims of mental stress. Institutions should also bolster their mental health support systems, encourage open dialogues about mental health to reduce stigma, and regularly assess student well-being.

Role of Stress in Medical Training: Regarding the whether respondents think a hectic schedule and mental stress are important for the proper training of medical professionals. A significant portion of respondents (22.88%) firmly believe that such stress is not important at all for training, which is the single most common response. However, there were (24.96%) believe that a hectic schedule and mental stress are considered important for the proper training of medical professionals. The data suggests that while a significant number of educators see some value in maintaining stress level optimal for training.

Improving Mental Health and Wellness of UG students: The survey results regarding measures to improve mental wellness in UG students, the educators believed that the most valued measure is focusing on good communication with faculty 4788(12.94%), closely followed by the provision of counselling services with 4759(12.87%). These top preferences highlight the critical role of direct support and open communication channels between students and faculty. Additionally, organizing cultural or sports events was highly regarded 4534 (12.26%), reflecting the significance of balancing academic work with recreational activities for mental well-being. Mentor-mentee programs and ensuring access to healthy food on campus also received substantial support, with responses just under 12%, emphasizing the benefits of guidance, mentorship, and physical health on mental wellness.

Other important factors include improving residential facilities 3999(10.81%), providing spaces for sports 3978 (10.75%), and offering financial support 2634(7.12%), each of which addresses different aspects of student life that contribute to overall mental health. Measures like a less intensive academic schedule and more off days, although supported to a lesser extent, still show a recognition of the need for rest and reduced pressure in the academic environment 1980(5.35%).

Table 10.20: Faculty Perception of Various College Activities

Various activities college	Frequency (n)	Percentage (%)
Do you think extracurricular events, wellness workshops, or recreational activities should be organized regularly at your college?		
Not at all	212	3.1%
Some times	931	13.3%
Mostly	5597	79.6%
Do you have a conversation about mental wellness and stress in college with your students?		
No	1389	20.6%
Yes	5351	79.4%
Are you able to express good ideas to improve the wellness and learning experience of your students to your superiors?		
Never	538	8%
Mostly	1512	22.3%
Always	4690	69.6%
Is there a clear system to address discrimination/bias that students may face due to their financial, social, cultural, or academic background etc.?		
No	3102	46.1%
Yes	3638	53.9%
How would you rate your stress levels at your workplace		
No/mild stress	2104	31.2%
Moderate	2300	32.7%
Extreme	2336	33.2%
Do you think you are in a position to impact the mental well-being of your students?		
Not at all/Occasionally	687	10.2%
Sometimes	1833	26%
Mostly	4220	60.1%
Do you think you have support from your superiors to initiate activities to promote mental wellness in your students?		
Not at all/Occasionally	854	4.5%
Sometimes	1684	23.9%
Mostly	4202	59.7%
Would you volunteer to be a mentor to a student as part of a mentor-mentee program?		
Not at all/Occasionally	565	8.4%
Sometimes	1023	15.2%
Mostly	5152	76.3%
Do you think students use mental stress to get away from work or as an excuse to shun work?		
Not at all/Occasionally	1410	20.9%
Sometimes	2599	38.5%
Mostly	2731	40.5%
Do you think a hectic schedule and mental stress are important for the proper training of medical professionals?		
Not at all/Occasionally	2589	38.4%
Sometimes	1893	26.9%
Mostly	2258	32.1%

Improving Mental Health and Wellness of PG Students: The survey results regarding measures to enhance mental wellness in PG students of various specialties the educators believed and endorsed, emphasizing good communication with faculty 4721(13.70%), underscoring the critical role of open dialogue and support between students and educators. Facilities that enhance daily living, such as good residential amenities 4062 (11.78%) and access to healthy food 4000 (11.60%) also ranked highly, reflecting the importance of a conducive living environment in supporting mental health. Counselling services are equally pivotal, receiving 4015 responses (11.65%), indicating a strong need for direct psychological support. The mentor-mentee program, favored by 3609 (10.47%), along with cultural and sports events, which received 3356 (9.74%), highlight the value of community and extracurricular engagement in fostering a balanced and supportive educational experience. Additionally, practical measures like post-night duty offs 3275 (9.50%) and less intensive schedules 1475(4.28%) are recognized for their role in preventing burnout, emphasizing the need for workload management in maintaining student well-being.

Table 10.21: Faculty Perception of Measures to Improve Mental Wellness

Which of the following measures do you feel will help improve mental wellness in UG students?		
Ensuring good healthy food on campus	553	8.2%
Financial support/special scholarships for students with limited resources	11	0.2%
Focus on good communication with faculty	225	6.7%
Good residential facility in the college	157	2.3%
Less intensive academic schedule	1980	29.4%
Mentor-mentee program	177	2.6%
Organization of cultural or sports events	2769	41.1%
Provision of counselling services	398	5.9%
More off days	401	5.9%
Others	69	1%
Which of the following measures do you feel will help improve mental wellness in PG students of your specialty?		
Ensuring good healthy food on campus	581	8.6%
Financial support/special scholarships for students with limited resources	17	0.3%
Focus on good communication with faculty	350	5.2%

Good residential facility in the college	177	2.6%
Less intensive academic schedule	1475	21.9%
Mentor-mentee program	143	2.1%
Organization of cultural or sports events	1152	17.1%
Provision of counselling services	314	4.7%
Post night duty offs	2241	33.3%
Others	290	4.3%

Recommendations

11. Recommendations to Improve Mental Health and Wellbeing

The task force has developed these recommendations with a dedicated commitment to enhancing mental health and preventing suicide among medical students. There is considerable literature documenting both the presence of mental health disorders and risk factors in young adults but limited in medical students. There are also numerous interventions suggested in the worldwide literature, although studies on proven interventions are limited. The scientific literature reveals a critical gap in systematic research on the effectiveness of interventions for medical students who attempt or complete suicide. Similarly, there is a scarcity of studies examining protective factors aimed explicitly at mitigating suicide risk among medical students. To fill the gap the national task force undertook various initiatives and deliberations to draft the following recommendations

A) National task force deliberations included integrating insights from several pivotal documents and engagements, including The Parliamentary Standing Committee's Report on the Quality of Medical Education in India 2024 (Report 157), The Mental Health Policy (2014), The National Suicide Prevention Strategy (2022), The National Crime Records Bureau (2023), Medical Council of India (MCI) rules, National Medical Commission (NMC) regulations, best practices from various medical colleges, and other relevant government documents.

B) To formulate the recommendations, the task force engaged in a multi-step, methodology. Initially, the Task force conducted formal meetings both in-person (face to face) and virtual (remote) and arrived at common grounds when-ever there was disagreement. Next, held focused group discussions with various stakeholders, including faculty, students, and college administration.

C) The task force carried out an online survey of stakeholders. A total of 25,590 undergraduate students, 5,337 postgraduate students, and 7,035 faculty members responded to the online survey.

D) In addition to other efforts, the Task Force conducted online and in-person meetings with various associations and stakeholders to gather comprehensive insights and feedback. These meetings were attended by the representatives of the Federation of Resident Doctors Association India (FORDA) and Resident Doctors Association (RDA). Engaging with associations medical students allowed the task force to understand the collective concerns, suggestions, and needs of the student body from their representatives. This provided valuable insights into the challenges faced by medical students and potential areas for improvement in their educational and support systems. Meetings with resident organizations helped the task force gain perspectives from postgraduate students who were directly involved in 24/7 clinical duties. Their feedback was crucial in understanding the practical challenges and stresses of residency, including duty hours, work-life balance, and mental health support.

Involving parents in these discussions provided a holistic view of the student's experiences from a familial perspective. Parents offered insights into the support systems needed at home and how institutions can better communicate and collaborate with families to support student

well-being. Direct interaction with students was paramount. These meetings facilitated an open dialogue where students could voice their concerns, share their experiences, and suggest improvements. This direct feedback was invaluable in ensuring that the recommendations developed are student-centered and address the real issues faced by the student population. Additionally, the Task Force invited students to provide feedback via email. This approach allowed students who were unable to participate in online meetings to contribute their thoughts and experiences at their convenience. It also ensured that the Task Force received a wide range of perspectives and could address specific concerns raised by individual students. By incorporating feedback from these diverse groups, the Task Force ensured that the recommendations were comprehensive and considered the views of all relevant stakeholders.

Online survey results were consistent with the global literature, an alarmingly high 27.8% of UG students and 15.3% of PG students voluntarily indicated having a diagnosed mental health disorder, and 16.2% UG students and 31.2% PG students reported having had suicidal ideation. This degree of MH disorders, and suicidal ideation combined with students with risk factors calls for an aggressive and rapid implementation of interventional programs.

Given the individualized nature of mental health issues and suicidality, a one-size-fits-all solution for suicide prevention is impractical. Addressing this complex challenge requires a sophisticated, multi-faceted approach tailored to meet the unique needs and circumstances of medical students in India. The recommendations include implementing comprehensive mental health programs, enhancing access to mental health services, promoting protective factors, and encouraging systematic studies focused on mental health improvement and suicide prevention specifically for medical students. The formulated set of recommendations is designed to be dynamic and responsive. Recognizing the evolving nature of the academic landscape and medical student needs, this document is intended to serve as a living guideline. It will be periodically updated based on new research findings and ongoing feedback from the medical community. This approach ensures that the recommendations remain relevant and are based on the most current evidence and best practices, thereby enhancing their effectiveness in addressing the complex issues of mental health and suicide prevention among medical students.

In case of any conflict with these recommendations and the NMC Act, 2019, Rules, and Regulations, it is imperative that the NMC Act, rules, and regulations prevail over these recommendations.

The Core Recommendations and Suggestions are Organized into Three Sections.

Section	Title
11.1	**Universal Recommendations** a) Medical Colleges b) Medical Students c) Family Members of Medical Students d) Faculty Members
11.2	**Identification of High-Risk Groups and Referral**
11.3	**Persons with Mental Illness and Attempted Suicide**

SECTION 11.1 - Universal Recommendations

i. MEDICAL COLLEGES

The environment in medical colleges is vital to building a healthy academic and work culture for students, faculty, and other staff. A proactive and compassionate approach from the administration can significantly impact the mental health of medical students. By prioritizing mental well-being, institutions can contribute more to the success and resilience of future healthcare professionals.

1. Orientation Program at Joining

A comprehensive five-day orientation program within four weeks for undergraduate students and two weeks for postgraduate students upon joining would greatly help the new entrants in setting expectations and helping prepare for the journey ahead. The orientation program could be done for a period of five days. Colleges could prepare a comprehensive orientation program focusing on, an introduction to the medical profession, access to various resources both within the campus and outside and the importance of nurturing physical, mental, and spiritual health. This can assist them in prioritizing their mental health and well-being from the beginning of their journey. It can also assist in familiarizing them with campus resources, and encourage them to seek help when needed. A guidebook created by students for students can serve as an 'Induction Manual,' providing a comprehensive overview of the campus, medical school, and hostel life, along with essential contact details such as the anti-ragging cell, helpline, resource centers, and counseling services. This resource would be invaluable for new students and can be distributed during the induction or orientation program.

2. Involving Family Members During the Induction Program and also Periodically at Least Once a Year

Involving family members of postgraduate (PG) and undergraduate (UG) medical students during the one-day induction program within their respective departments for PGs and at the

institute level for UGs is crucial. This approach would help family members understand the expectations, stressors, and support required by students to successfully navigate their courses. By gaining a comprehensive understanding of the academic and clinical demands, family members can provide more effective support from the home front. Recognizing the stressors faced by students enables families to create a supportive environment that mitigates stress and promotes well-being. Addressing both academic and personal needs through family involvement leads to a holistic approach to the education and well-being of medical students. These meetings can be conducted in-person or online to ensure broad participation. These parent-faculty meetings should be held at least once a year.

3. Anti-Ragging Measures

The stress induced by ragging must be mitigated. All medical colleges should strictly monitor the implementation of the National Medical Commission, Prevention and Prohibition of Ragging in Medical Colleges and Institutions Regulations, 2021. The UGC Anti-Ragging Cell, which provides assistance to victims of ragging needs to be in place. It operates a 24x7 toll-free helpline (1800-180-5522) and an online anti-ragging portal (www.antiragging.in) where students can confidentially report incidents of ragging would help the students. This information needs to be widely publicized in all medical colleges. Please refer Appendix -7 for more information.

4. Awareness Campaigns and Education

Medical colleges should consider organizing regular programs to educate students and faculty about mental health issues and available resources on campus, based on available resources. It is also recommended to consider integrating psychiatry as a compulsory subject in the undergraduate (UG) curriculum. As it is norm in medical colleges, that every PG Medical Student and Medical Teacher Should undergo training, in Basic Course in Biomedical Research (BCBR), Similarly every faculty and medical student should undergo training, Basics in Mental Health & Wellbeing. It is recommended that medical teachers, PG students, and administration undergo regular training in mental health, either through periodic in-person sessions or online such as the Swayam portal. The NMC will develop comprehensive modules covering mental health, mental illness, stress management, building resilience, prevention of substance use, gatekeeper training, suicide prevention, and basic counselling techniques. Specific emphasis should be placed on handling confidential matters concerning individuals with mental illness. Cultivating a culture that destigmatizes help seeking is paramount. Several days during the year offer an opportunity for colleges to enhance awareness of mental health and building resilience among students and staff.

a. National Doctor's Day – National Doctor's Day is celebrated in India on July 1 each year. Starting this year, the National Medical Commission (NMC) will annually select a theme for Doctor's Day celebrations, to be observed in all medical colleges. The theme for this year will be 'Mental Health and Well-being of Medical Students.' The celebration's focus can encompass various aspects, including resilience building, stress management, soft skills training, leadership development, entrepreneurship, medical innovation, spirituality, community service, yoga, and career advancement. Activities may include workshops and seminars led by mental health professionals and medical leaders, stress management techniques like mindfulness and relaxation exercises, and resilience training utilizing scenario-based learning.

b. World Mental Health Day - Observed on October 10th each year, it serves as an opportunity for medical colleges to engage in raising awareness about mental health issues and to mobilize efforts towards better mental health. Medical colleges can organize events, seminars, poster competitions, mass media competitions, and workshops focusing on various aspects of mental health, including early signs of mental illness, strategies for prevention, and available treatments.

c. World Suicide Prevention Day - World Suicide Prevention Day on September 10 is an opportunity for medical colleges to advance suicide awareness and prevention through seminars, campaigns, training, public engagements, and support initiatives.

d. Drug Prevention Day - It is a United Nations international day observed on June 26. Medical colleges have the opportunity to hold activities to raise awareness against the menace of drug abuse. It will help spread awareness and reduce stigmatization of those struggling with drug abuse and associated mental illnesses.

e. *Anti-Ragging Day:* It is celebrated on 12th August, and the emphasis can be on raising awareness about the detrimental effects of ragging and promoting a zero-tolerance policy. Educational sessions can cover laws and regulations against ragging, its psychological impact, and the importance of reporting incidents. Interactive workshops can educate students on handling and reporting ragging incidents, and awareness campaigns can utilize posters, videos, and social media content.

5. Counselling Services

A 24/7 Support System should be implemented across the campus. This can be done quickly by implementing the Tele Mental Health Assistance and Networking Across States (Tele-MANAS) initiative by the Union Ministry of Health & Family Welfare, New Delhi, using the toll-free number (14416) in all medical colleges. Extensive promotion of this number across campuses will allow more students to access the online counselling services provided by the MoHFW, New Delhi.

Medical colleges can consider appointing two counsellors for every 500 students, depending on available resources. Ideally, these counsellors would report directly to the Dean to ensure that preventive, promotive, and redressal measures are effectively implemented. Psychiatric referrals should only occur when the counsellors determine that a student requires psychiatric care. Every medical college should have a clearly formulated plan for referral, evaluation, management, and follow-up for students who suffer from mental illnesses. The mechanisms for referral and care should be widely disseminated and known to all faculty and administrators. A local 24X7 helpline is recommended to assist students in acute distress. Such services should be created in all medical colleges with the active participation of the Department of Psychiatry. The services created should create an environment to encourage students to seek help when needed and most importantly ensure confidentiality and easy accessibility. There should be a firewall (confidentiality) between counselling service providers and the medical college faculty and Admin. However, it is encouraged to have outside providers, outside clinics and hospitals in town.

6. Staff/Students Clinic

All medical students, both undergraduate (UG) and postgraduate (PG), should be provided free treatment including medicines for their physical and mental health issues within the medical college campus. Establishing separate wards, clinics, and investigation facilities specifically for students ensures easy access to healthcare services. Government medical colleges should offer these services without any charges, while private medical colleges should provide them for free or at a subsidized rate. This approach ensures that students receive the necessary healthcare without financial burdens, promoting their well-being and academic performance. It also fosters a supportive environment where charity and professional courtesy begin at home, emphasizing the institution's commitment to the health and success of its students. By addressing health issues promptly and effectively, medical colleges can help students maintain their physical and mental health, ultimately leading to better educational outcomes and a healthier future workforce.

7. Work Environment

It is of paramount importance that all medical institutions have proper infrastructure and amenities for medical students. These basic amenities are critical to maintain proper physical health, feel safe and secure and focus on the intense and demanding medical curriculum. The following table lists a few of these basic amenities that could be provided to all medical students.

Basic Amenities or Facilities to be Provided to Medical Students

- Proper hostels facility with preferably single occupancy
- Well-structured and maintained hostels with adequate ventilation, lighting and furnishings
- Proper clean washrooms
- Safe drinking water
- High food safety and quality standards with regular review of quality
- CCTV monitoring and proper security measures
- Establish common rooms, gyms, sports, and other recreational facilities
- Family quarters or suitable housing for married students
- Consider providing guest houses or rooms for visiting family members
- Reasonable fees for hostels
- No compulsory hostel or mess fees for day-boarders
- 24/7 cafeteria accessible to all hostel residents and duty doctors

8. Hostel Mess

Given the diverse cultural, religious, community, and dietary habits of students from various parts of the country joining medical colleges, it is recommended to enhance the hostel mess by involving students as prefects in planning their food preparation. Consider forming a mess committee that includes medical students (UG/PG) representing different backgrounds and regions to ensure effective implementation. This initiative can also include establishing multiple messes based on feasibility, students' active participation and economic viability (such as North Indian, South Indian, Vegetarian, Jain, etc.) to cater to various dietary

preferences and nutritional needs. Empowering students to take an active role in menu planning, quality control, hygiene, finance, and resource management can lead to a more inclusive and satisfying dining experience in the hostel mess.

To ease the financial burden on students, it is important to avoid forcing them to join the hostel mess. Allowing students the flexibility to choose whether to participate in the hostel mess or make alternative dining arrangements will help them manage their expenses more effectively. The administration may consider providing common resources such as refrigerators, cooking facilities, microwaves, mixers, stoves, and utensils to enable students to prepare their own meals. This provision will support students' diverse dietary needs and preferences, enhancing their overall living experience. This approach also encourages autonomy and respects individual preferences, contributing to a more supportive and inclusive campus environment.

9. Regulation of Duty Hours

Excessive duty hours pose risks to the physical and mental health of medical students and also compromise patient safety. To mitigate this, the government issued guidelines regulating resident doctors' duty hours (Ministry of Health and Family Welfare, Residency Scheme 1992 directive). According to these guidelines, resident doctors should generally not exceed 12 hours of continuous active duty per day and 48 hours per week. However, these guidelines were not implemented due to a shortage of human resources and other logistical reasons.

The National Task Force recommends, based on feasibility, resources, and relevance, that residents work no more than 74 hours per week, with no more than 24 hours at a stretch. This schedule includes one day off per week, one 24-hour duty, and 10-hour shifts for the remaining five days. It is also important for medical students to sleep at least 7-8 hours per day for optimal mental and physical health. Department Heads (HOD), faculty members, senior residents, and Junior Residents (JRs) can collaboratively plan duty hours and roster the duty into three shifts, or two shifts, or one shift based on human resource availability. Additionally, strict adherence to the National Medical Commission (NMC) regulations for a weekly one-day off is crucial. Implementing these measures, where feasible, will help protect the health of medical students and improve patient safety. It is imperative to recognize that post-graduates and interns primarily serve educational purposes rather than filling gaps in healthcare staffing.

10. Regulation of Type of Duty and Teamwork

Healthcare delivery is teamwork. In the West, one main reason for good quality of care is that each team member knows his/her task and responsibility, is well trained, and contributes to the system. Feedback from multiple quarters suggests that residents get an unfair share of work and duties. Many duties that do not fall into anyone's ambit or for which staff is lacking is thrust upon residents. It can include but is not limited to, collecting reports, going to blood banks, moving patient trolleys, filling various forms, arranging for free medications or finances for surgery, nursing care, sample delivery, other clerical work, and data entry.

Each medical institution should ideally have a clear policy of work profiles and distribution. Depending on available resources, it is beneficial to employ supportive staff such as phlebotomists, clerical staff, data entry operators, and hospital attendants to manage various supportive tasks. Training paramedical and supportive staff can enhance work quality, public satisfaction, and patient care, enabling medical professionals to concentrate on their primary responsibilities and perform at their best.

11. Safe and Supportive Environment for the Duty Students

The Task Force advises the administration to consider providing medical students with environment-appropriate conditions during their duty hours to ensure their well-being and optimal performance. This includes access to air conditioning, comfortable rest areas, nutritious meals, and proper hydration facilities. For example, well-equipped break rooms with comfortable seating, clean toilets, bathing facilities, changing rooms, and quiet spaces for rest can help students recharge. Additionally, providing healthy meal options in the hospital cafeteria ensures they receive adequate nutrition. Ensuring adequate lighting, ventilation, and ergonomic workspaces in clinical areas can prevent physical strain and fatigue.

If work hours are hectic, the hospital needs to consider providing appropriate support, such as arranging regular breaks and ensuring that food is available at the duty place or duty room. These measures, including access to nutritious meals, tea, and snacks directly in duty rooms, can help alleviate stress, prevent burnout, and support the overall well-being and effectiveness of medical students during their demanding duties. Implementing these supportive actions, where feasible, will enhance the working conditions and health of medical students, ultimately improving patient care.

12. Supporting Families and Childcare

It is important for all medical colleges and institutions with postgraduate students to have adequate infrastructure and policy to support families and childcare especially for the PG students. Medical colleges could consider providing on-site childcare facilities, family accommodation for married students or those with children, and daycare services. These amenities would help students manage both family and professional roles more effectively, reducing stress associated with child-raising and family obligations.

To provide a supportive, fair, and equitable environment that recognizes the unique needs of female medical students during pregnancy and postpartum, enabling them to continue their education while maintaining their health and the health of their babies. This support shall be implemented in line with the Maternity Benefit (Amendment) Act, 2017. Allow female students to postpone examinations and extend deadlines for assignments around their due dates. Provide options to complete missed coursework through alternative means, academic accommodation such as additional assignments, coursework flexibility, or clinical rotation. These provisions should be strictly implemented under the legal framework of the NMC Act, 2019, Rules, and Regulations. It is also important that there should not be any compromise on the quality and quantity (duration) of the training. Any break in the training needs to be compensated to complete the recommended period of training so that patient safety is not compromised in the long term.

13. Evaluation and Assessment Methods in Medical Colleges:

The exam evaluation of medical students should be fair and unbiased. While the traditional grading/marks-based system helps in providing regular feedback to students. It allows for distinctions between high achievers and others. However, it can also create a competitive environment and cause stress. The Pass/Fail System reduces pressure and competition among students. It can create a more collaborative learning environment. However, it may not provide detailed feedback on student performance. Institutions may offer the two systems knowing

their advantages and disadvantages. A mix of both systems can also be tried as it provides flexibility and balance. The National Medical Commission (NMC) must enact amendments to its relevant regulations to facilitate students taking exams in alternative centers, either within the same university or in Diplomate of National Board (DNB) exams.

14. Communication, Feedback, and Work Environment:

Administrative teams should maintain constant communication with faculty and students and encourage regular feedback. This will enhance the exchange of ideas and build trust to foster a healthy work environment. Regular assessments of the work environment should be conducted by gathering feedback from various quarters. It is essential to address any issues related to workload, hierarchy, or mistreatment, as these can foster mistrust and breed discontent among faculty and students. Administrators must ensure that the college atmosphere is inclusive and respects cultural, racial, caste, financial, and social differences. Clear mechanisms should be in place to promptly address any complaints of discrimination or bias. Additionally, a feedback and complaint box should be available in both the Director/Dean's office and the warden's office.

15. Transparent and Responsive Grievance Redressal in the Medical Colleges and Universities

A toxic educational environment, and harassment at medical college, hospital and/or hostel cause undue psychological stress, and negatively impacts the mental health of students. All colleges and institutions should have a clear grievance redressal system in place to address misuse of power, deter unprofessional behavior, and foster a respectful environment. This needs to be accompanied by proper training for faculty, administrators, and seniors on mentorship, accountability, leadership, and anti-harassment policies. Regular evaluations of faculty and seniors based on junior feedback, and third-party mentors may be implemented. For grave violations of ethical standards and personal boundaries like sexual harassment, there should be strict administrative regulatory oversight and a zero-tolerance policy.

16. E-complaint Portal of NMC

The National Medical Commission (NMC) should establish a national portal for grievance redressal called "e-Complaint," enabling students, faculty, and other stakeholders to raise complaints efficiently. This user-friendly portal, accessible via web and mobile applications, should feature secure login, standardized complaint submission forms, and options to upload supporting documents. A dedicated grievance redressal cell within the NMC, supported by adequate staff, will manage the workflow and deal with the complaints. Complaints will be acknowledged within 3 working days, reviewed within 14 working days, and resolved within 30 working days, with regular updates provided to the complainant. A detailed resolution report will be issued. The system will ensure transparency and accountability through periodic reports while maintaining confidentiality. Continuous improvement efforts, including training and awareness programs, will ensure the e-complaint system remains effective and responsive to emerging needs, enhancing trust and accountability within medical institutions.

17. Mentor-Mentee Program

This program was implemented as per Reg 14 of the National Medical Commission (Prevention and Prohibition of Ragging in Medical Colleges and Institutions) Regulations, 2021. Mentor-mentee programs in medical colleges are structured relationships between more experienced individuals (mentors) and less experienced individuals (mentees) designed to provide guidance, support, and professional development opportunities. These programs are crucial for the holistic development of medical students. These programs involve a matching process based on shared interests, regular meetings to discuss goals and challenges, and opportunities for skills development. Mentees benefit from networking opportunities and peer support, while mentors receive training on effective mentoring techniques. Monitoring and support ensure a successful and enriching experience for both parties.

All the mentors shall undergo training in mental wellness, mental health, and illness identification, providing the first line of psychological first-aid, referral, and monitoring the mentees. In post-graduation and super-specialization, the guide and co-guide of PG students could serve as their mentors. This explicit designation ensures that students have a defined and reliable support system, fostering a more structured and supportive academic environment.

18. Removing Fees for the Repetition of Semesters in Medical Colleges

Deliberately failing students to collect fees for semester repetitions is grossly unethical and have been brought to the notice of the Taskforce. There should be strict penalties for medical colleges found guilty of deliberately failing students for financial gain. Removing fees for repeating semesters in medical colleges is a potential strategy to reduce economic burdens on students who need to retake courses. This also helps reduce the stress associated with the financial burdens of repeating courses. Exam assessment shall include enforcing a transparent and standardized grading system, and establishing independent appeals process with external panellists to be considered in respective universities.

19. Teacher's Apprehension

Medical college faculty members are concerned about the potential fallout from student complaints, including harm to their professional standing, career progression, or legal repercussions. They often perceive a lack of backing from college administrations or regulatory bodies, intensifying their anxieties about repercussions from student grievances. The increasing focus on student feedback and satisfaction has heightened teachers' apprehensions about facing disciplinary measures or adverse outcomes due to student complaints. Consequently, teachers are frequently becoming disengaged from teaching and mentoring. This situation needs to be addressed across all medical colleges. Creating a supportive environment where teachers feel appreciated and supported is essential to improve this scenario. Establishing clear protocols for handling student complaints and disciplinary issues can give teachers assurance and clarity. Promoting professionalism and ethical behavior among teachers and students can cultivate a culture of respect and empathy. Instances of false or frivolous student complaints against teachers should be met with strict disciplinary actions.

20. Uniform PayScale, Retirement and Rotational Headship (UPRPR)

In alignment with the UGC pay scale and AICTE regulations, we propose establishing a standardized pay scale, service conditions, non-practicing allowance, education allowance, and qualification requirements for medical college teachers. This standardized pay scale should align with the current Pay Commission recommendations, ensuring uniformity and competitiveness across institutions nationwide. A uniform salary structure for interns, post-graduate students, super-specialty and medical college teachers across the nation ensures equity and fairness in compensation, promoting job satisfaction and attracting high-quality faculty. Standardized salaries simplify administrative processes, enhance transparency, and reduce potential unfair practices like ghost faculty.

Insufficient stipends that don't match living costs or workload, coupled with delays in payments, create significant financial instability for medical students. The lack of a uniform stipend policy leads to disparities between states and types of institutions (government vs. private). There should be a uniform policy for stipends across states and institutions to ensure fair compensation. Timely and regular payment schedules, potentially through direct payment systems for transparency, must be ensured. The stipend should be a living recommendation, adjusted according to market inflation. Implementing this policy is essential and should be done proactively, rather than waiting for students to go on strike to demand fair stipends. Strikes, Delays, and insufficient stipends can have serious consequences on the healthcare of the general population.

Teaching in a medical college is a dedicated profession and a significant responsibility. Faculty are involved in teaching (both undergraduate and postgraduate teaching), clinical work, and research. To ensure the highest quality of medical education, private practice for medical teachers should be prohibited. This measure will prevent any compromise in their teaching duties and maintain the integrity and quality of education provided to students. Hence, a non-practicing allowance should be included to compensate medical teachers who dedicate their time exclusively to teaching and academic duties, thereby enhancing their focus on education and research.

Uniform PayScale for Medicos (UPS for Medicos): Medical teachers should be recognized that they do teaching, clinical work and research and take part in both undergraduate and postgraduate teaching and thus need to be uniformly paid equivalent to the so-called "premier" institutions. To ensure the highest quality of medical education, private practice for medical teachers should be prohibited. Instead, interns, post-graduate students, senior residents, super-specialty students, and medical teachers should be compensated according to the AIIMS, New Delhi pay scale across all medical colleges, regardless of whether they are private, public, state, central, deemed university, or any other type of institution. This measure will prevent any compromise in their teaching duties, maintain the integrity of education, and ensure that educators are adequately rewarded for their commitment to academic excellence.

Uniform Retirement Policy: The current retirement policy for medical faculty across the nation is haphazard and disorganized. Therefore, the retirement policy should be standardized nationwide, adopting the AIIMS, New Delhi policy. This measure will prevent any compromise in teaching duties, maintain the integrity of education, and ensure that educators are adequately rewarded and provided with consistent retirement benefits for their commitment to academic excellence.

Uniform Pension Scheme for all Medical Teachers: The implementation of a Uniform Pension Scheme for all medical teachers is essential to ensure their financial security

post-retirement. Such a scheme will enable them to dedicate their efforts towards teaching, mentoring, and research without concerns about their future. Therefore, it is imperative to introduce a New Pension Scheme across all medical colleges.

Uniform Policy of the Rotation of Headship (HOD): Implementing a rotational headship system for department heads is essential to provide all faculty members with leadership opportunities, introduce new thoughts and practices, and prevent a toxic environment due to inefficient leadership. The Valiathan Committee (2006), Sujatha Rao Committee (2010), Sneh Bhargava Committee (2010), and Dr. M. K. Bhan Committee (2012) have all recommended rotational headship at the departmental level. This practice has been successfully implemented at the National Institute of Mental Health and Neuro Sciences (NIMHANS), Bangalore. Adopting NIMHANS, Bangalore - Rotation of Headship system nationwide will ensure a fair and consistent approach to leadership roles, enhance administrative efficiency, and promote collaborative governance in medical institutions.

21. Family Vacation

Medical colleges could consider granting a ten-day vacation at least once a year to both undergraduate and postgraduate medical students on a rotational basis. This break is aimed at fostering family bonding. Addressing family-related stressors identified in surveys and discussions, this vacation ensures students return refreshed and better able to focus on their academic responsibilities. However, this vacation should not interfere with completing the mandatory syllabus, clinical training, lab work, thesis, and curriculum. Any such interference will result in the mandatory training as per NMC guidelines taking precedence.

22. Reducing Access to Means for Suicide on Medical College Campuses

Implementing measures to limit access to potentially dangerous means, such as medications, sharp objects, and high places, can help prevent impulsive self-harm and support mental health. For instance, installing barriers or fences on rooftops and balconies can restrict access to these high-risk areas. Additionally, creating secure storage areas for medications with limited access and educating staff and students on safe storage and disposal practices can reduce the risk of misuse. Another innovative approach is the installation of ceiling fans with a safety design that includes a spring mechanism. This spring is designed to fail when it encounters excessive weight, causing the fan to lower and preventing potential hanging incidents.

The anti-Ragging Committee established under the NMC regulations will evaluate access points to high-risk areas like doors, windows, and gates. Additionally, it is essential to review current security measures, such as surveillance systems and locks, to ensure they effectively prevent unauthorized access. Assessing the physical environment and considering modifications, such as installing barriers or safety nets in high-risk areas, can also help reduce the risk of self-harm. These simple measures can help prevent impulsive acts of self-harm and promote mental health and well-being on campus.

23. The Gate-Keeper Training Program

The gate-keeper program attempts to reduce the incidence of suicide among medical students by creating a network of individuals who can identify at-risk individuals and connect them with professional help. It is suggested to select a diverse group of gatekeepers, including faculty members, medical students, administrative staff, senior residents, and health professionals within the college. Comprehensive training on the identification of suicide warning signs, communication skills, methods to approach at-risk students, and procedures for referring students to mental health services should be provided. It is important to conduct an initial intensive training session followed by periodic refresher courses. Training can be delivered through workshops, online modules, and scenario-based learning.

24. Increasing the Number of Postgraduate and Super-speciality Seats in India:

Much of the workplace stress comes from a lack of human and material resources. A mismatch between public expectation and health care delivery not only results in stress for providers but also exposes them to abuse and violence. A balance is required between the MBBS seats and post-graduation opportunities. A constant and regular review by the NMC, with blueprinting based on the nation's needs, disease epidemiology, and other inputs, is essential. This approach is crucial for developing specialties and courses to address the public healthcare needs of the country. Expanding opportunities for in-service candidates to pursue postgraduate education in medical fields such as DNB, MD, and MS can significantly enhance the healthcare system. Postgraduate programs should be initiated at various hospitals, including district hospitals, corporate hospitals, nursing homes, community health centers, and other similar facilities. Expanding the number of postgraduate medical seats in India is crucial for several reasons. It addresses the nation's healthcare needs by enhancing specialist care in rural areas, ensures specialized treatment for complex health conditions, and alleviates the workload of postgraduate students in medical colleges. Additionally, it helps mitigate corruption associated with demand and supply imbalances, supports planned research and innovation, and curtails the migration of students seeking medical education overseas. This expansion is vital for strengthening the overall healthcare infrastructure and capacity in India

25. Employing an Adequate Number of Senior Residents

Medical colleges should evaluate the need for hiring more senior residents based on various critical factors, including workload, patient footfall, the number of operations, emergency cases, labor cases, and teaching responsibilities. For surgical branches, obstetrics and gynaecology, emergency, and other highly demanding departments, the Head of Department (HOD) should request the authorities or management to increase the number of senior residents. By assessing these elements, medical colleges can ensure they have an adequate number of senior residents to handle the demands of patient care effectively. This approach not only improves the quality of medical care provided to patients but also enhances the training and support for postgraduate students, particularly during duty hours and bedside training. Additional senior residents can offer more personalized guidance, reduce the burden on existing staff, and ensure that postgraduate students receive comprehensive, hands-on experience. This leads to better-prepared medical professionals and ultimately improves the overall healthcare system. Furthermore, having sufficient senior residents helps maintain a balanced workload, preventing burnout, and ensuring a sustainable and supportive learning environment.

26. Policy Adjustments Regarding Bonds

The policy requiring students to pay a bond if they vacate their medical college seats (both UG and PG) was implemented when medical seats and doctors were scarce. However, with the current availability of medical seats and doctors for hiring, it is high time to reconsider this policy. The financial pressure imposed by the seat-leaving bond creates a punitive environment that detracts from the overall educational experience. States continue to rely on this compulsory method to compensate for inadequate investment in health resources, playing with the lives of medical students, and public health safety at large. This approach should be avoided as a perpetual solution, as it places undue strain on public health and fails to address the root issue of resource allocation in the healthcare system. States must invest adequately in health infrastructure to sustainably meet public health needs without relying on compulsory service bonds. To alleviate the financial burden on students and foster a more nurturing educational setting, it is proposed to abolish both the seat leaving and compulsory rural service bond.

Removal of Seat Leaving Bond: Abolish the policy that requires students to pay a bond if they vacate their medical college seats (both UG/PG seats), thus alleviating financial pressure and fostering a more nurturing educational setting. Instead, consider implementing a rule prohibiting medical students who abandon their seats after admission from applying to medical colleges for twenty-four months from the date of leaving the medical college. This would serve as a deterrent without imposing financial hardships.

Additionally, medical colleges can fill the vacated seat (UG/PG) in the same category (Government/Management Seat) as the student belongs to in the next upcoming calendar year. This approach maintains fairness while addressing the issue of seat abandonment effectively. If seats are frequently abandoned in a particular institute or department, the NMC should conduct a review to assess the environment of that institution or department. This ensures that systemic issues are identified and addressed, maintaining the quality and attractiveness of medical education. The NMC can take appropriate measures to alleviate such situations

Removal of Compulsory Rural Service Bond: The compulsory rural service bond was initially established to address the shortage of doctors by mandating service in underserved areas. However, with the current adequacy of medical professionals and improved availability of healthcare resources, it is appropriate to reevaluate this policy. Transitioning from compulsory service to a system of positive incentives is recommended. Alternatives include higher pay for service in rural areas, granting grace marks, providing reservations in postgraduate or super-specialization seats for those who complete their rural service, offering adequate incentives, income tax rebates, and excellent facilities. This approach aims to create a more encouraging and supportive environment for fulfilling public health service requirements, moving away from the current compulsory methods that may not effectively motivate medical professionals.

Both the compulsory rural service bond and Seat leaving bonds should be reconsidered and removed at the earliest opportunity. Furthermore, any unethical practices, such as withholding documents or refusing to declare student results due to non-payment of bonds, are not supported by the NMC. Appropriate actions will be taken against entities engaging in such practices.

27. Trial Observership/Externships/Residency

A trial observership (for UGs) or residency (for PGs) period would provide medical aspirants with firsthand experience of the college, medical/speciality field, and department environment. This exposure enables them to make informed decisions about their choice of field, institution, and specialization. By experiencing the day-to-day workings of a medical program, students can gain a realistic understanding of the workload, responsibilities, and challenges they will face, helping them assess their readiness and commitment to the chosen field. This is an optional policy for the students but mandatory for the institutions to offer this program based on the available resources.

During the trial period, students can evaluate their compatibility with the faculty, peers, and overall institutional culture. The trial period may include clinical rotations, interactions with faculty and current residents, participation in academic activities, and exposure to the administrative aspects of the residency program. This comprehensive experience can lead to higher satisfaction and reduced attrition rates, as students are more likely to remain in a program where they feel comfortable and supported. Engaging in a trial residency allows students to familiarize themselves with the academic and clinical expectations of the program, enhancing their preparedness and confidence when they begin their formal residency.

The trial residency could be structured as a short-term program of not more than six weeks per specialty, without any pay for this period (trial residency) or without any pay of fees to the medical college (trial observership) but subject to availability. This duration is sufficient for students to gain meaningful insights about the UG/PG program and the chosen medical specialty.

28. Use of Technology in Training Medical Students

Integrating technology into medical student training involves the adoption of Virtual Reality (VR) and Augmented Reality (AR) simulations, as well as the application of Artificial Intelligence (AI) and Machine Learning (ML). Enhancing e-learning platforms with advanced learning management solutions and incorporating telemedicine modules are also crucial. Furthermore, expanding the use of online learning platforms and Massive Open Online Courses (MOOCs) provides flexible educational opportunities. These initiatives aim to modernize medical education by making it more interactive, personalized, uniform, and efficient, preparing students for future technological advancements in healthcare. These platforms enable medical students to access courses from leading institutions, offering them a wide range of expertise and perspectives. The National Medical Commission (NMC) should develop policies that support integrating these technologies into medical education, including investing in IT infrastructure, training educators for online teaching, and establishing partnerships with technology providers.

29. Library Facilities

Enhancing library facilities for medical students is crucial for supporting their academic and professional development. Consider digitizing the library and creating an online library system that students can access from their hostel rooms, providing easy, round-the-clock access to essential resources. This phased approach to digitization will ensure a smooth transition and continuous availability of up-to-date medical literature, journals, and research databases. Establishing reading rooms in hostels will create dedicated, quiet spaces for students to study

without needing to leave their accommodation. Additionally, extending the working hours of the physical library will accommodate those who prefer traditional study environments, ensuring that all students have ample opportunities to access the materials they need. By implementing these improvements, medical students will have enhanced support for their studies, promoting a more flexible, resource-rich learning environment.

30. Optional Courses

In alignment with the National Education Policy of India, various optional courses can be offered to interested students through in-person, online, or mixed methods. These courses can cover a wide range of subjects, including AI, coding, mechanical engineering, architecture, finance, administration, medico-legal studies, ethics, humanities, history, social media, photography, mass media, journalism, dance, arts, research, yoga, Ayurveda, and more. Such courses can be initiated in collaboration with various institutes, colleges, and other establishments. Importantly, these courses are optional, allowing students to explore diverse interests and enhance their multidisciplinary knowledge and skills.

By offering optional courses for developing acumen provides numerous benefits, including enhanced multidisciplinary knowledge, skill development, career flexibility, personal growth, innovation, interdisciplinary collaboration, lifelong learning, academic and professional networking, and alignment with national educational goals. These courses empower students to explore their interests, develop into holistic cognitive individuals, and thrive in a dynamic and interconnected world.

31. Invited Guest Faculty

All medical colleges are encouraged to invite part-time faculty from various fields, not necessarily doctors. These experts can include engineers, lawyers, policymakers, financial experts, data analysts, sports personalities, philanthropists, spiritual leaders, and more. Part-time faculty members, who are leaders in their respective fields, do not need to fulfil the NMC faculty requirements and will not be counted towards the NMC's student/faculty ratio for full-time teaching faculty. Their primary role will be to guide and handhold students and young faculty, providing valuable insights and expertise to enhance the educational experience and professional development within the institution.

This initiative allows students and young faculty to benefit from the insights and mentorship of established leaders, enhancing the quality of education and research. It broadens students' learning experiences with diverse perspectives and cutting-edge knowledge, while invited faculty focus solely on teaching and mentoring without administrative burdens. Offering an honorary for the expert’s time makes this approach cost-effective. Invited guest faculty do not contribute to meeting the National Medical Commission (NMC) norms for student-to-faculty ratios. This program provides valuable networking opportunities, aiding career development and enriching the educational environment.

32. Clinical Linguistic Language Proficiency Policy

Many undergraduate and postgraduate medical students pursue their courses outside their home states and may not be well-versed in the local language of the state where their medical college

is located. This language barrier can pose significant challenges in learning from and interacting with the clinical population. To address this issue, a comprehensive clinical linguistic language proficiency policy will be adopted by all medical colleges. This policy will include instruction in the local language to ensure all UG and PG students achieve the linguistic proficiency necessary for effective clinical practice in OPD and IPD. These Clinical linguistic proficiency classes *will be held on holidays and optional*, but all students (students from other states who cannot speak the local language) will be encouraged to participate to maximize their clinical training and professional development.

These clinical linguistic proficiency classes enable healthcare providers to accurately gather patient information, understand patient histories, symptoms, and concerns, and deliver clear and comprehensible instructions regarding treatments, medications, and follow-up care. Additionally, it enhances patient comfort and trust by allowing providers to communicate in the patient's native language, fostering better engagement and adherence to medical advice. Clinical linguistic proficiency also facilitates improved collaboration with local healthcare staff and colleagues, ensuring efficient and effective clinical operations. Furthermore, it allows healthcare providers to appreciate and integrate cultural and social contexts into patient care, thereby improving the overall quality and relevance of medical services.

33. Supplementary Exams to be Reintroduced at the University Level

To alleviate stress among medical students, universities should introduce supplementary exams. The demanding nature of medical education often leads to heightened stress, anxiety, and mental health challenges. Offering supplementary exams provides students who may not perform well initially with a second chance, thus reducing the academic pressure and anxiety associated with one-time high-stakes testing. These exams encourage deeper learning and knowledge retention, essential for their future practices. Supplementary exams also offer a fairer assessment system, accommodating students who may face extenuating circumstances during the primary exams. Additionally, this approach signals that universities support their students' educational success and well-being, creating a more positive academic environment. Implementing regular supplementary exam periods, providing clear information about these opportunities, and offering additional academic support can further enhance student performance and retention. By integrating supplementary exams into the academic structure, universities can reduce student stress, improve academic outcomes, and support a healthier learning environment, thus promoting overall success in medical education.

34. Announcing Exam Results Using Roll Numbers only

Announcing exam results using roll numbers instead of names is a practice aimed at enhancing privacy and reducing stress among students. By using roll numbers, students’ identities are protected, ensuring that their academic performance remains confidential. This prevents potential embarrassment or stigma for those who may not have performed as well as expected. Additionally, it reduces direct peer comparison, alleviating feelings of inadequacy or competition among students. Universities will make all attempts that the results should be published securely, either on notice boards or through digital platforms, using only roll numbers. Using roll numbers also minimizes the risk of bias or discrimination based on students' names, which might reveal their ethnicity, gender, or socio-economic background. This promotes a fair and unbiased academic environment.

35. Centre for Training of Medical Teachers (CTMT)

Establishing a Centre for Training of Medical Teachers (CTMT) at the national level is imperative to enhance medical faculty's capabilities in pedagogy, online teaching, and skill impartation. This program will encompass diverse teaching methods, technology integration, effective assessment, and communication skills. Ethical training covering professional ethics, research ethics, and cultural competence is essential for managing diverse student and patient populations.

The CTMT will centralize resources, offering standardized, high-quality training through workshops, certification courses, and seminars. It will foster collaboration among educators and facilitate research in medical education, elevating the nationwide standard. The focus will extend to online teaching methods, digital video creation, and Learning Management Systems (LMS), enhancing educators' digital instructional proficiency. Additionally, the phased establishment of regional centers nationwide will extend training of teachers in medical colleges. This initiative ensures continuous education and training accessibility, ultimately improving healthcare delivery nationally.

36. Addressing the 'Ghost Faculty' Problem

To tackle the "ghost faculty" issue in medical institutions, the government should implement a multi-faceted strategy that includes enhanced verification processes like biometric attendance linked to a centralized database, regular inspections and audits, and secure reporting mechanisms for transparency. Introduce stringent penalties for institutions found guilty of maintaining ghost faculty. These could range from financial penalties to restrictions on admissions or even loss of accreditation. At the same time, penalizing the 'ghost faculty' by imposing a loss of license to practice. Additionally, policy reforms and regulation support are essential to address underlying systemic issues, complemented by initiatives for capacity building that improve recruitment and retention of genuine faculty by offering better working conditions and professional development opportunities. These measures will ensure the integrity of medical education and uphold educational standards.

37. Career Counselling and Campus Recruitment

Career counselling for medical students should be expanded to include guidance from professionals in diverse sectors, broadening their career horizons. Corporate professionals can teach business skills in healthcare management, while pharmaceutical representatives can highlight opportunities in drug development, clinical trials, and marketing. Policy makers can offer insights into health policy and public health administration, and IAS/IPS officers can discuss roles in public health and safety. MBA leaders can provide knowledge on hospital management and entrepreneurship, and hospital administrators can explain various clinical and non-clinical roles. To facilitate the transition from education to employment, campus recruitment should be encouraged by the State health department and private sectors, highlighting job opportunities in public and private healthcare. Job fairs, workshops, and mentorship programs involving alumni can prepare students for the job market, helping them build networks and explore diverse career paths. This comprehensive approach ensures that medical students are well-prepared for various professional avenues, contributing to a dynamic healthcare workforce.

38. Establish Health Universities

To facilitate the implementation of the National Medical Commission (NMC) recommendations, the following steps are recommended to all States for transitioning from general universities to dedicated medical/health universities or establishing a dedicated department for medical colleges within general universities. This facilitates the implementation of the National Medical Commission (NMC) requirements, recommendations, guidelines, regulations, and other policies and addresses the challenge of universities struggling to keep up with the pace of medical college rules and regulation requirements, a strategic and comprehensive approach is essential. Universities must ensure strict adherence to the NMC Act, rules, and regulations by aligning their charters, policies, and administrative structures with NMC. Especially in the North Eastern States, a collaborative effort to amalgamate resources from several states to form a single, unified health university can be highly beneficial. This regional One Health University would streamline the implementation of medical education regulations, enhance resource sharing, and improve the overall quality of medical training and research in the region.

39. Establishment of the Centre For ICARED

Centre for **I**nnovation, **I**ncubation, **C**ollaboration, **A**ccelerator, **R**esearch, **E**ntrepreneurship, and **M**edical Device Development

In today's rapidly changing healthcare landscape, medical schools must stay abreast of technological advancements and ensure that students can apply their knowledge in practical settings. The proposed center for ICARED at the medical colleges will be a hub for turning new ideas into real-world health solutions and preparing students to be leaders in medical innovation. The healthcare industry is in constant flux, necessitating relentless innovation and the capacity for swift adaptation and learning. Despite these demands, there remains to be a noticeable delay in applying medical research to practical applications. By establishing a dedicated center like ICARED within medical colleges, one can cultivate an environment that encourages innovation and entrepreneurship among medical students and faculty. This center will play a pivotal role in transforming new ideas into effective solutions, thereby significantly contributing to medicine.

Objective of the ICARED

1) Cultivate Innovation: Develop a culture of innovation at the medical college to foster creativity and new ideas.

2) Enhance Practical Learning: Integrate entrepreneurship into the curriculum to improve the practical learning experiences of students.

3) Forge Partnerships: Establish relationships with industry leaders, healthcare providers, and research institutions to enhance learning and collaboration opportunities.

4) Create Collaborative Platforms: Provide a platform for students, staff, and faculty to work together on research projects with industry partners.

5) Encourage Entrepreneurial Mindsets: Foster entrepreneurial thinking among medical students to prepare them for innovative roles in healthcare.

6) Strengthen Research Collaboration: Facilitate comprehensive research partnerships with medical colleges, engineering colleges, startups, industries, corporates, and pharmaceutical companies.

7) Promote Medical Innovation: Support the creation and development of new medical devices and technologies.

8) Incubate and Accelerate Projects: Provide incubation and acceleration programs to nurture promising projects and help them reach market readiness.

9) Support Early-stage Innovations: Assist early-stage innovations in developing into viable products, providing necessary resources and support

Engaging Stakeholders: The initiative will involve both internal and external stakeholders to foster a comprehensive ecosystem for innovation. Internal stakeholders from the academic community will participate in mentoring and research, while external partners from the healthcare industry, investment sectors, and regulatory bodies will provide the necessary collaboration, funding, and guidance to ensure compliance and commercial viability.

Integration Into the Current Medical College Structure: The centre will be seamlessly integrated into the existing infrastructure of the medical college, with specifically allocated spaces for laboratories and office areas. There will be a curricular integration to provide students with credits for their involvement in the centre's activities, enriching their educational experience. Additionally, faculty members will play a significant role, serving in advisory capacities and actively participating in research and development projects.

Establishing the Centre for ICARED will position medical colleges at the forefront of medical innovation and entrepreneurship. It will provide invaluable resources and support for aspiring innovators and entrepreneurs, driving medical technology and education advancement. Implementing the ICARED program in medical colleges may involve signing a Memorandum of Understanding (MoU) between medical colleges and other disciplinary institutes such as Engineering Colleges, Management Colleges, Indian Institutes of Technology (IITs), Biotechnology Institutes, Law Colleges, Corporates, Pharmaceuticals, and other relevant industries to create a collaborative framework.

ICARED initiative will benefit students and faculty through comprehensive training programs, research opportunities, understanding market needs, and personality development initiatives. Further, it also will provide specialized training to enhance technical, legal, and research skills; fostering interdisciplinary research projects and promoting innovation; arranging internships and industry exposure for students and faculty; organizing workshops, seminars, and guest lectures focused on professional development and leadership.

This innovative concept should be implemented in a phased approach over a period of five to ten years, beginning with institutions of national importance. Following initial implementation and thorough evaluation, the program should be expanded to encompass all medical colleges and universities. If broad implementation proves challenging, establishing regional centers in collaboration with nearby medical colleges would be an effective alternative to ensure widespread access and resource-sharing.

40. Liaison with Local Organizations for Supporting Medical Students

To create a supportive environment for medical students, medical colleges should actively liaise with local branches of professional organizations and community groups such as the Indian Medical Association (IMA), National Medicos Organization (NMO), Local and State Level Psychiatry Associations, Rotary Clubs, Lions Clubs, and other non-governmental organizations (NGOs). The primary objective is to establish a robust support network for medical students, enhancing their academic, professional, and personal development.

Medical colleges can partner with these organizations to develop mentorship programs where experienced medical professionals guide and support students throughout their academic and career journeys. Workshops and seminars on various topics such as career development, stress management, leadership skills, and professional ethics can be organized in collaboration with the National Medicos Organization and the Indian Medical Association. Additionally, engaging students in community service projects and health camps organized by these organizations will provide practical experience and foster a sense of social responsibility. Networking events and forums can be facilitated, allowing students to interact with professionals from different fields and broaden their professional connections. This network not only aids in their academic and professional development but also ensures their overall well-being, preparing them to become competent and compassionate medical professionals.

41. Yoga in Promoting and Preventing Mental Illness and Developing Resilience for Medical Students and Medical Teachers

Yoga is increasingly recognized as an effective practice for promoting mental health, preventing mental illness, and developing resilience among medical students. Regular yoga practice reduces stress and anxiety, enhances mood through the production of endorphins, and improves mindfulness by helping students stay present and focused. Yoga also plays a crucial role in preventing mental illnesses by addressing early signs of mental distress and equipping students with healthy coping mechanisms to manage the pressures of medical education. Its holistic approach integrates physical, mental, and emotional health, promoting a balanced lifestyle that can prevent mental health issues from developing. Furthermore, yoga contributes to resilience by enhancing emotional regulation, physical strength, and mental toughness. It helps students respond to stressors calmly, promotes a healthy body that supports a healthy mind, and encourages introspection and self-awareness.

Medical colleges can integrate yoga into students' lives by organizing regular classes, workshops, and seminars, providing resources for self-practice, including yoga in the curriculum, and creating a supportive environment that emphasizes the importance of self-care. Yoga is a powerful tool for medical students to enhance their emotional well-being, develop resilience, and maintain a balanced and healthy lifestyle. Medical colleges can play a key role in facilitating this integration and ensuring students benefit from yoga practices. In this endeavor, the Departments of Psychiatry, Telemedicine Centre, and Integrative Medicine at the National Institute of Mental Health and Neurosciences (NIMHANS) have developed generic yoga and tele-yoga programs tailored for specific mental health conditions. Please see Appendix - 6 for more details.

42. Enhancing Physical Fitness and Sports Activities

To foster physical fitness, sports, teamwork, and overall well-being among students, it is recommended that the college organize and maintain a diverse range of sports activities. This initiative could be overseen by a sports committee comprising faculty, administrative staff, and student representatives, with support from a dedicated Sports Coordinator. It is essential to regularly maintain and update sports facilities and equipment to ensure safety and quality standards are met. An inclusive sports calendar should offer various activities, encouraging participation from all students and promoting fair play and teamwork. Additionally, dedicated time should be allotted for sports and physical activities within the academic schedule. Annual sports competitions and events should be organized to cultivate a competitive spirit and recognize outstanding performances. Establishing feedback mechanisms is crucial for continuously improving the sports program and ensuring it meets the evolving needs of the student body. This holistic approach will significantly contribute to the overall development and well-being of the students.

43. Sāmājika Sanskriti Campus Council

To mitigate social isolation and enhance the well-being of medical students, it is crucial to implement a policy supporting the establishment of diverse social groups within medical colleges. These groups could cater to various interests, including arts, cultural activities, and academic special interest groups, ensuring every student finds a community. The Sāmājika Sanskriti Campus Council could be headed by two senior faculty members (at least one female senior faculty) and include three representative medical students from all batches of the year. Local and professional organizations such as NMO, IMA, Lions club, Rotary club, and so forth can be involved in organizing these activities.

Dedicated resources and spaces may be allocated for these activities, with funds available for social, recreational, and leisure events such as wellness lectures, movie nights, one-day picnics, drama, singing, dancing, drawing, painting, poster-making, multimedia projects, karaoke, skits, and rangoli. Celebrations of festivals like Ganesh Chaturthi, Deepavali, Dussehra, Holi, Christmas, and so forth should also be organized by this council. These activities help reduce stress and build strong social networks, addressing common causes of suicidal ideation such as feelings of alienation and disconnection.

Additionally, the policy should include regular evaluations and feedback mechanisms to continuously improve social group initiatives. A quarterly newsletter featuring student contributions on various topics such as interests, sports, travels, books read, and movies watched can foster a sense of community and shared interest. By integrating social group participation into the educational framework and adapting to student needs, medical colleges can create a more inclusive and engaging environment that reduces isolation and enhances the overall educational experience.

11.1.2 SPECIFIC SUGGESTIONS FOR MEDICAL STUDENTS

The changing times and newer challenges that healthcare providers face today require that medical students learn to face these challenges and emerge as leaders after their training. This is only possible with adequate attention to mental wellbeing. A few suggestions to develop and maintain good mental health are as follows.

Effective Time Management: Much stress results from unfinished assignments and poor time management. It is suggested that students develop habits that are in keeping with the requirements of their curriculum. They should prioritize tasks, create schedules, and allocate time for study, self-care, and leisure activities.

Avoid Overloading: Many students have very high expectations of themselves and always wish to perform with perfection. Excessive competition can also result in undue stress. It is suggested that students should set realistic expectations and focus on learning rather than perfection.

Social Support: Students should be encouraged to connect with peers, family, and mentors. That way they gate emotional support and learn to handle unfamiliar challenging situations. Students should seek guidance from experienced mentors and seniors. They can get coping ideas by discussing challenges and coping strategies with experienced mentors.

Self-awareness: Students should recognize situations that cause stress or anxiety. Identifying triggers allows them to develop effective coping mechanisms

Practice Mindfulness/Meditation: Practicing mindfulness or some form of meditation or prayer is a very effective way to improve emotional well-being. Many studies have shown that mindfulness is an effective stress reduction technique that can promote overall happiness. Inculcating such routines in daily routine can be very helpful.

Regular Exercise, Sports Activity or Yoga: Physical activity improves health, well-being, and improves mental attitude and leaves the student feeling positive. A regular exercise routine can be very useful in improving mental well-being also.

Healthy Sleep and Eating Habits: Students should prioritize restful sleep and a balanced nutrition. They should avoid excessive caffeine and irregular eating patterns.

Other Relaxing Activities: students should take time to prioritize self-care activities such as reading, listening to music, or spending time outdoors with friends.

Seeking Professional Help: Medical students should seek professional help to tide over difficult periods and also if they find it difficult to cope with the demands of the course.

Enhanced Civic Responsibility of Students Towards Infrastructure and Resources: It is essential to recognize that medical students, who will be responsible for the health and lives of many patients in the future, also need to develop a strong sense of civic responsibility and accountability towards the proper utilization of infrastructure and resources provided to them. They must take equal responsibility in maintaining the cleanliness of the premises and shared spaces, a practice successfully inculcated in developed countries. This sense of civic duty towards fellow students will aid in better integration with peers from diverse backgrounds and contribute to their development as more competent professionals and responsible citizens.

11.1.3 SPECIFIC SUGGESTIONS FOR FAMILIES

Families play a significant role in contributing to mental health of medical students. Knowing what medical students go through helps families provide empathetic support during their tenure.

Educating about the Stress: Parents needs to be respectfully and sensitively educated on the pressure their child may feel from their expectations (academic achievement, choice of specialty, financial contribution, marriage and so forth etc). Some strategies that families can adopt to support the student include the following;

Communication: It is vital for families to maintain regular and open communication. While meeting parents of medical students', medical teachers should emphasize that family support is essential to help students cope with stress. Regular conversations with trusted family members can help them feel supported and valued.

Support system: Families should encourage the student to connect with peers and mentors. If possible, they can facilitate interactions and support introvert students to socialize. A supportive environment at home is crucial for the mental health of students.

Self-development: Families should encourage and support students to form good habits. These include a regular routine of exercise, prayer, yoga, meditation, good food habits, sleep, leisure activities among others. Families can also help the student plan and prioritize tasks to manage their workload.

Proactive collaboration: Collaboration between the families of medical students and medical teachers is vital for the holistic education and professional development of the students. Establishing a liaison allows for open communication regarding the student's progress, challenges, and goals. By working together, families and teachers can provide comprehensive support to the students, addressing both academic and personal needs. This partnership fosters a supportive learning environment that nurtures the students' growth and success in their medical careers.

Professional help: Families should keep an eye on adverse situations and symptoms that suggest poor coping and need for professional help.

Families Should be Aware of Signs of Distress. Some of these may Include:

Withdrawal: If a student withdraws from social interactions.

Behavioural changes: Drastic changes in mood, eating habits, or sleep patterns.

Difficulty in Academics: Difficulty coping with academics or academic decline.

Absenteeism: Unexplained absenteeism

Substance Use: Using alcohol or drugs to cope.

Warning thoughts: Any suggestion of self-harm or suicidal ideation.

11.1.4 SUGGESTION FOR FACULTY

Faculty members are in a unique position to positively impact students' mental health. By promoting a supportive and positive environment, they contribute significantly to students' overall well-being. Here are some strategies they can adopt:

Guide: Medical faculty should be approachable and accessible so that students know that they can seek guidance or discuss their concerns. Such an open-door policy helps students voice their concerns and relieve their stress.

Curriculum and Academics: A regular review and feedback system of academic curriculum can help faculty identify stressors. Faculty should also keep an oversight on duty distribution and workload on students under their supervision. They can help them design a curriculum and reduce unnecessary stress in student's schedule. When required academic feedback should be provided in a constructive manner. Offer feedback that highlights strengths and areas for improvement. Faculty need to set realistic expectations from students. Faculty should focus on learning and growth rather than unattainable theoretical standards.

Role Model: Faculty can model healthy coping behaviors for students to learn. Model resilience to challenges and share personal experiences of overcoming challenges with students.

Grant of Leave: Leave should not be unreasonably denied. Many students experience anxiety about not being granted leave even when they genuinely need it, which can lead to increased frustration and a sense of suffocation

Encourage Self-development in Students: Medical teachers should encourage and support students to form good habits. They can raise awareness about the importance of regular routine of sleep, healthy eating, exercise, prayer, meditation, leisure activities among others. They can volunteer for the gate-keeper program and also assist in regular organization of wellbeing promotion activities. Faculty are in the best position to teach students how to plan and prioritize tasks to manage their workload.

Empowering Medical Teachers: In India, medical college teachers often lack training in managing student stress and understanding psychiatric disorders. They must undergo training in counselling, recognizing mental illness, assessing suicide risk, and stress management. This training should include stress management techniques, counselling skills, mental health first aid, identifying mental illness and substance use, and assessing for suicidal risk. Equipping teachers with these skills is vital for early detection and intervention, ultimately promoting the mental well-being of medical students. The mechanisms of providing counselling Services in collaboration with the Department of Psychiatry services should be in place and used as required. Faculty should ensure tackle any stigma and normalize help-seeking in students in distress.

Teacher's Well-being: In today's world, medical teachers face immense pressure from juggling various roles such as teaching, training, clinical work, research, and administrative duties. Consequently, prioritizing their mental health and well-being becomes paramount. Regular training sessions aimed at stress management, self-care practices, mental health awareness, and incorporating yoga are crucial for ensuring their overall wellness. By investing in their well-being and acquiring the necessary skills, medical educators can effectively support their students and cultivate a healthier academic environment.

SECTION 11.2 - High-Risk Groups Identification and Referral

To enhance the well-being and academic success of medical students, it is imperative to implement a comprehensive policy for periodic faculty training focused on identifying students at risk. With the help of the Department of psychiatry, local protocols should be prepared and integrated into the gatekeeper program for all the stakeholders to be done so that proper identification of high-risk students is done. The section on highlight risk factors that predispose a medical student to mental illness and suicide is presented in figure-8.1.

This protocol should mandate regular workshops and training sessions for faculty members, equipping them with the skills to recognize and address early signs of distress among students. Informal methods for early detection of at-risk students should be implemented to avoid discrimination. The focus should be on indirect parameter monitoring. Faculty training should emphasize recognizing critical risk factors, including academic decline, frequent absenteeism, changes in behavior, financial struggles, coping with the sudden death of a family member, relationship issues, substance use, violence, deliberate self-harm attempts, and behavioral problems within the college, campus, or hostel environment. Training programs for faculty should be comprehensive, including role-playing scenarios to practice identifying and responding to distressed students, expert talks from mental health professionals on common issues and effective intervention strategies, and analysis of case studies to understand the complexities of student distress.

Teachers should be mindful that medical students experiencing difficulties in any of the following areas **(5A's)** should be kept under close observation:

1. Academic decline or difficulty
2. Addiction (Substance and non-substance)
3. Actions (Behavioural changes)
4. Absenteeism &
5. Asocialization (withdrawal from social activities)

The role of the Head of Department (HOD) is crucial in overseeing the implementation of this policy. The HOD should ensure that faculty members and also himself/herself attend training sessions, facilitate communication between faculty and support services, and monitor the effectiveness of the intervention strategies. Additionally, the HOD should provide guidance and support to faculty in handling sensitive situations involving student distress.

To maintain the privacy and confidentiality of students, it is critical to establish an effective and confidential reporting system. This system should enable faculty to discreetly refer students to relevant support services including referral to the psychiatry department, while ensuring that student privacy is maintained throughout the referral and support process.

Accommodative measures should also be considered to support at-risk students. This might involve offering flexible academic schedules, providing additional academic resources or tutoring, and allowing for temporary adjustments to attendance requirements. It is essential to create an environment where students feel comfortable seeking help and where their needs are met without fear of judgment or repercussions. To ensure the policy's effectiveness, it is important to continuously assess and improve the training programs and support services. This

can be achieved through feedback loops, where feedback is collected from faculty and students to refine the training sessions and support systems, and periodic reviews of the policy to reflect current best practices and emerging needs. Engaging stakeholders, including faculty, students, mental health professionals, and administrative staff, in the development and implementation process is crucial for the policy's success.

Initiating mentor-mentee programs with high-risk medical students can provide additional support and guidance, which may be crucial for their well-being and success. These programs can offer personalized attention, help navigate challenges, and provide a supportive environment to promote mental health and resilience. All faculty who volunteers for the mentor-mentee program should also be trained to identify the high-risk student.

11.2.1 Medical Students Dealing with Substance Abuse

Students dependent on substances shall be encouraged to seek help rather than face reprimand. The focus of this policy is on health and recovery, acknowledging that substance dependence is a health issue requiring professional intervention. Ensure that deaddiction services are readily accessible to students within the campus. Additionally, providing access to confidential support services, such as counselling and rehabilitation programs, can help students manage their substance use disorders effectively. Organize regular educational programs and workshops to raise awareness among the student body, faculty, and staff about substance use disorders, the importance of seeking help, and the support systems available.

The administration and treating team should encourage the involvement of family members in the treatment, where appropriate, to provide a network of support that is often critical in recovery. Provide resources and guidance to families on supporting their loved ones during recovery.

Medical students struggling with substance use may experience impaired judgment, decreased motor skills, and compromised decision-making abilities, which can jeopardize the quality of care they provide to patients in the medical college. If any concerns are raised regarding the fitness to clinical practice by supervisors or fellow students, Fitness to Practice Protocol: Medical Student with Mental Illness shall be followed as mentioned in the following section.

11.2.2 De-addiction Services

Medical colleges should establish outpatient (OP) and inpatient (IP) de-addiction clinics to provide comprehensive care and support for students dealing with addiction. The OP clinic, conveniently located on campus, should be equipped with consultation and counselling rooms, and staffed by a multidisciplinary team, including psychiatrists, counsellors, social workers, and nurses. It should offer services such as assessment, counselling, therapy, medication management, and educational workshops on addiction prevention. A robust referral system for internal and external resources should be in place, ensuring holistic care for students.

The IP clinic of 5 to 10 beds should be housed in a dedicated ward within the medical college hospital, offering comfortable accommodations and recreational facilities. These facilities may be housed separately from the psychiatry ward to avoid stigmatization. It should provide round-the-clock medical support, including detoxification, therapy, holistic treatments, educational programs, and family involvement in the treatment process. Structured follow-up care and reintegration support are essential components, helping students transition back to academic

and social life while preventing relapse. These clinics will enhance the educational environment, equip future healthcare professionals with practical addiction treatment skills, and create a supportive, stigma-free atmosphere for students to seek help, ultimately leading to better recovery outcomes and improved overall well-being.

11.2.3 **Peer Support System**

To establish a structured peer support system in medical colleges, leveraging the experience and insights of senior students to support juniors, we propose a comprehensive Peer Support Model. This model aims to improve mental health, provide academic and emotional support, and prevent suicide among medical students. The core of this model is a Peer Support System, where senior students with empathy and strong communication skills are selected and trained. These senior students receive training on mental health awareness and basic counselling skills. Junior students are paired with senior students based on shared interests, academic backgrounds, and personal preferences, facilitating regular meetings to discuss academic progress, personal challenges, and overall well-being.

Training and workshops are integral, covering mental health training, recognizing signs of distress, providing emotional support, and developing skills in active listening and stress management. Additionally, creating a supportive environment includes safe, non-judgmental spaces for juniors to share concerns and an anonymous reporting system to express issues without fear of stigma.

Professional support integration involves a clear referral system for senior students to connect juniors with professional counselling services when necessary. Collaboration between peer support and mental health services ensures comprehensive support. Regular mental health awareness campaigns, seminars, and activities will reduce stigma and promote seeking help, alongside specific suicide prevention workshops. Feedback and evaluation are essential. Regular feedback from both senior and junior students will assess effectiveness and inform adjustments. Periodic evaluations of the program's impact on well-being and academic performance will be conducted using surveys and mental health assessments.

Implementation begins with planning and design, forming a committee of faculty members headed by the dean, faculties of the department of psychiatry, head of the departments and student representatives to develop guidelines and protocol. A pilot phase will test feasibility with a small group, gathering data and feedback to refine the model. Full implementation across all departments and batches will follow, with continuous support and supervision from faculty and psychiatry department. Ensuring sustainability involves securing long-term funding and regularly updating training materials and protocols.

Expected outcomes include improved mental health and well-being of juniors, reduced stress-related issues and burnout, enhanced academic performance and personal development, and a lowered risk of suicide. This model aligns with the New Education Policy's emphasis on holistic education and well-being, providing a structured framework to foster a supportive and nurturing environment in medical colleges.

SECTION 11.3 - Persons with Mental Illness and Attempted Suicide

11.3.1 Supportive and Inclusive Environment

To Foster a Supportive and Inclusive Environment that Encourages Recovery and Well-Being among Students with Mental Illness.

This policy is committed to creating a supportive and inclusive environment that promotes the recovery and well-being of students experiencing mental health issues. Recognizing families' vital role, this policy facilitates access to treatment and family involvement in the treatment process in alignment with the Mental Healthcare Act 2017.

Provide Accessible Mental Health Services: Ensure mental health services are readily available and accessible on campus. Ensure every medical college has a fully functional Department of Psychiatry dedicated to providing quality psychiatric care to medical students and patients at associated hospitals. These services shall be free of cost to the medical students (UG/PG).

Mental Health Services: Every medical college must establish a Department of Psychiatry with sufficient psychiatrists, counsellors, nurses, and support personnel. Staffing levels should be based on the student body's size and the associated hospital's patient population to ensure adequate care availability. The Department of Psychiatry will offer a comprehensive range of psychiatric services, including but not limited to diagnosis, treatment, counselling, and ongoing management of mental health conditions. Particular emphasis will be placed on student mental health, including preventive services, awareness programs, workshops, crisis intervention, drug abuse prevention, counselling, and wellness programs.

Mental Health and Wellbeing Committee: At the national level, the Permanent Member of the National Medical Commission's (NMC) Ethics and Medical Registration Board (EMRB) will serve as the nodal person. At the medical college level, the Mental Health and Well-Being Committee will be structured as follows: the Dean will serve as the Chair, the Heads of the Department (HOD) of Medicine, Surgery, Obstetrics and Gynaecology (OBG) will be designated as the Co-Chairs (three co-chairs), and the HOD of Psychiatry will act as the Member Secretary. Additionally, the HODs of each department will be members of this committee to ensure the implementation of these recommendations.

Support Academic Success: Offer necessary academic accommodations and support structures to assist students with mental health challenges. There will be a straightforward process in which the Head of the Department (HOD) of Psychiatry or the senior faculty of the psychiatry department will evaluate the student's mental health progress and recommend their application for academic accommodations based on mental health conditions. These requests will be made in accordance with the rules & regulations established by the National Medical Commission (NMC) regulations.

Family Involvement in Treatment: Encourage and facilitate the involvement of family members in the treatment process. A crisis intervention strategy shall be in place to inform and involve immediate family members during mental health crises such as attempted suicide and mental health emergencies. Offer counselling sessions to guide family members on effectively and respectfully supporting their loved ones.

Confidentiality: Strict adherence to confidentiality and protecting the personal information of all individuals receiving care per the Mental Healthcare Act 2017. Disclosures of a student's mental health status to administration should only occur under specific conditions:

1. Patient Safety: If the student's mental health condition might compromise the safety of patient care within a clinical setting.

2. Student Safety: If the student's mental health directly threatens their safety or well-being.

In this regard, the HOD of Psychiatry is tasked with evaluating whether a student's mental health condition may compromise patient care in a clinical setting or pose a direct threat to the student's own safety. All disclosures must be justified based on a qualified mental health professional's clear, current, and documented assessment. Ensure that all actions taken under this policy comply with the Mental Healthcare Act 2017. Provide specific training for college administration who might receive mental health information about the student. Educate administration on the procedures and responsibilities involved in receiving and handling disclosures, emphasizing the importance of confidentiality as per the Mental Healthcare Act of 2017

11.3.2 Fitness to Practice Protocol: Medical Student with Mental Illness

This protocol aims to balance the rights and well-being of medical students with mental health issues against the imperative to maintain patient safety and quality care at the medical college. Hence, these guidelines help to balance the risk.

1. *Evaluation Committee Composition:* An evaluation panel will be formed when concerns about a student's fitness to practice arise. The committee will comprise the following members: the Dean (as Chair), a psychiatrist (within the institute), a faculty member from forensic medicine, the Head of the Department (HOD) of the concerned department, and a female faculty member.

2. *Family Involvement:* The involvement of a family member in the evaluation process is considered essential, as it can significantly support the student's welfare and recovery. They will provide care, follow-up, rehabilitation, and recovery.

3. *Sources of Information:* The evaluation will consider multiple sources, including self-reports, faculty observations, academic and clinical performance, and professional mental health assessments, ensuring a comprehensive understanding of the student's situation. If the treatment has occurred outside the medical college, all medical records and fitness to rejoin medical education certificate by the treating psychiatrist will be submitted by the student to the Evaluation Committee.

4. *Decision-Making Process:* Decisions regarding a student's fitness to practice will be reached by consensus within the panel, with a balanced focus on both the student's well-being and the safety of patients. Possible outcomes include no action, therapeutic interventions, adjustments to academic or clinical duties, or, if necessary, temporary suspension from patient-related activities. Students who require support will receive a personalized plan, including mental health therapy, modifications to academic and clinical responsibilities, and ongoing assessments to monitor progress. Adjustments will be made to ensure they are reasonable and do not significantly hinder the student's educational progress.

5. *Worst Case Scenario:* In instances where a student's illness is characterized by severe mental illness, frequent relapses, poor treatment adherence or potential for violence, with substantial concerns about patient safety, these issues must be documented. Based on this documentation, there may be a decision to temporarily or permanently suspend the student from engaging in patient-related clinical activities. Temporary suspension aims to safeguard patient and student safety while allowing students time to seek treatment and manage their condition. In cases where permanent suspension is deemed necessary, the student may complete their education and receive their degree, but they will not be eligible to practice medicine. This ensures ongoing safety while still allowing the student to achieve academic completion.

6. *Confidentiality:* All aspects of the fitness to practice evaluations will be handled with strict confidentiality. Disclosure of information will be limited to individuals directly involved in the evaluation or the implementation of accommodations.

7. *Appeal Process:* Students retain the right to appeal any decisions about their fitness to practice. The appeals process will be transparent and timely, conducted by an alternative panel consisting of different members, except for the assessing psychiatrist, to maintain continuity in understanding the student's medical background. This alternative panel will include the Dean, the HOD of Forensic Medicine, the three HODs from any clinical department, a senior female faculty member, an advocate, a social worker, and a faculty member from the SC/ST community.

11.3.3 Mandatory Reporting of Suicidal Attempt and Death by Suicide:

Mandatory reporting of suicide attempts (requiring hospitalization) and deaths by suicide involving medical students and faculty of medical colleges should be enforced through regulations by the National Medical Commission (NMC). This measure aims to ensure that such incidents, whether occurring within or outside the campus, are promptly reported to the NMC with detailed accounts of possible causes. Integrating mandatory reporting into NMC regulations will enable the collection of accurate data, facilitating the identification of patterns and risk factors associated with these tragic events. This data is crucial for developing targeted interventions and preventive strategies. The reporting requirements will also promote accountability and transparency, ensuring that institutions are held responsible for the well-being of their community members.

Report Submission on Attempted Suicide:

- The head of the institution should be accountable for accurate reporting. The medical college must submit a brief report within 2 weeks of any attempted suicide, whether it occurs within or outside the campus, to the NMC.

Report Submission on Death by Suicide:

- Within 2 weeks of a death by suicide, occurring within or outside the campus, the medical college is required to submit a brief report to the NMC.

- The NMC may conduct an official visit to the medical college within two weeks of receiving the report of death by suicide.

- A psychological autopsy will be conducted by the HOD of Psychiatry and HOD of Forensic Medicine or their designated representatives. The resulting report must be submitted to the NMC within a timeframe of 3 months.

- A national-level suicide registry for medical students and medical professionals should be initiated by the National Medical Commission (NMC) in a phased manner. This critical initiative aims to systematically collect and analyse data on suicides within these high-risk groups. The registry will serve as a comprehensive database, capturing demographic details, academic pressures, mental health histories, and other relevant factors contributing to suicides. A well-maintained suicide registry can save lives by providing the data needed to implement evidence-based prevention programs and support services tailored to the needs of medical students and professionals.

To facilitate implementation, the NMC may develop a regulatory framework outlining reporting procedures and timelines, establish a standardized reporting mechanism, and ensure the confidentiality and sensitivity of handled information.

The recommendations provided by the Task Force, if implemented in their true spirit, will extend beyond ensuring the successful completion of medical school and residency training for young doctors. The objective is to cultivate professionals who are morally and ethically grounded, emotionally intelligent, flexible, adaptable, and resilient. Additionally, it aims to promote cultural competence by valuing diversity and inclusion, fostering spiritual awareness and compassion, encouraging a willingness to embrace vulnerability, and dedicating efforts to character building that transcends medical education, ultimately contributing to the upliftment of society.

> *"A difficult medical student is simply a student in a difficult situation who needs assistance and care from the teacher. By adopting this perspective, we can approach them with a non-judgmental attitude, compassion, kindness, understanding, and empathy"*

12. Summary and Concluding Remarks

The comprehensive recommendations aimed at improving the mental health and well-being of medical students in India. Key areas of focus include creating a supportive academic and work environment, involving family members in student induction programs, implementing strict anti-ragging measures, and conducting regular mental health awareness campaigns. It also emphasizes the importance of accessible counselling services, proper infrastructure, and amenities in medical colleges. Additionally, it highlights the need for a balanced workload, fair compensation, and support systems for students with mental health issues.

12.1 Conclusions

The well-being of medical students is paramount to ensuring they can effectively transition into compassionate and competent healthcare professionals. Addressing the mental health challenges faced by medical students requires a multi-faceted approach that involves proactive measures from medical college administrations, structured support systems, and active involvement of families. Implementing these recommendations will not only enhance the educational experience of medical students but also contribute to the overall improvement of the healthcare system by fostering a resilient and well-supported future workforce.

12.2 Way Forward

Medical education is the foundation of a country's healthcare system. The future of medical education requires a concerted effort to address the mental health and well-being of medical students.

- **Establish Centralized Reporting Systems:** Develop a robust, centralized system for reporting and monitoring suicides.
- **Implement Regular Training Programs:** Conduct regular training sessions for faculty to identify and support students at risk. Emphasize the importance of early detection and intervention for mental health issues.
- **Enhance Mental Health Services:** Expand mental health services, including 24/7 counselling support and easily accessible de-addiction clinics within medical colleges. Utilize telemedicine services like Tele-MANAS to provide widespread mental health support.
- **Promote a Supportive Environment:** Create an inclusive, respectful, and safe environment in medical colleges by implementing strict anti-ragging measures, providing proper infrastructure, and offering flexible academic schedules for students in distress.
- **Family Involvement:** Actively involve families in the support system of medical students, particularly during induction and crisis situations, to provide a strong emotional support network.
- **Regulate Work Hours and Fair Compensation:** Ensure fair distribution of duty hours and provide adequate compensation through uniform stipend policies based on AIIMS,

New Delhi pay scale. This will help reduce stress and financial burden on medical students. Hire an adequate number of Senior Residents to meet the demands of clinical work.

- **Policy Adjustments Regarding Bonds:** Abolishing seat leaving fees/bonds and a compulsory rural service bond is imperative. The government should offer positive incentives that can reduce financial pressure and encourage public health services.

- **Leverage Technology:** Integrate advanced technologies like Virtual Reality (VR), Augmented Reality (AR), and Artificial Intelligence (AI) into medical education to enhance learning experiences and prepare students for future healthcare challenges.

- **Foster Innovation and Career Development:** Establish centers like ICARED to promote innovation and entrepreneurship among medical students. Enhance career counselling and campus recruitment efforts to broaden students' career horizons.

- **Address Systemic Issues:** Increase postgraduate medical seats, employ adequate senior residents, and implement policies to address the 'ghost faculty' problem such as uniform pay scale, uniform retirement policy based on AIIMS, New Delhi, Rotational Headship and New Pension Scheme. Inviting honorary faculty from various fields enriches the educational experience at the medical college. This will improve the overall quality of education and healthcare services.

- **Continuous Evaluation and Improvement:** Regularly assess the implementation and effectiveness of these recommendations through feedback from students, faculty, and stakeholders. *At the national level* - The Permanent member of the NMC's EMRB will serve as the nodal person, and *at the medical college level* - the Dean will be designated as the nodal officer, and HOD of Psychiatry as a member secretary for implementing these recommendations at each medical college. Continuously refine strategies to meet emerging needs and best practices.

The core mission of every medical college is education. While providing healthcare services and conducting research are important, these activities should primarily serve the purpose of training and educating students, not filling gaps caused by a lack of resources in the public healthcare system. By addressing both systemic and risk factors, medical colleges can create a healthier, more supportive environment that promotes the well-being of their students and reduces the risk of suicide. These efforts should focus on enhancing the learning experience and fostering a healthier environment in medical colleges. By adopting the recommended comprehensive measures, medical colleges can create a healthier, more supportive environment for medical students, ultimately leading to better mental health outcomes and a stronger healthcare system in India.

References and Annexures

13. References

1. World Health Organization. Mental health investment case: a guidance note. 2021.

2. World Health Organization. World mental health report: Transforming mental health for all. Geneva. 2022.

3. Gautham MS, Gururaj G, Varghese M, Benegal V, Rao GN, Kokane A, et al. The National Mental Health Survey of India (2016): Prevalence, socio-demographic correlates and treatment gap of mental morbidity. International Journal of Social Psychiatry. 2020;66(4):361-72.

4. Sagar R, Dandona R, Gururaj G, Dhaliwal R, Singh A, Ferrari A, et al. The burden of mental disorders across the states of India: the Global Burden of Disease Study 1990–2017. The Lancet Psychiatry. 2020;7(2):148-61.

5. Ambekar A, Agrawal A, Rao R, Mishra AK, Khandelwal SK, Chadda RK. Magnitude of substance use in India. New Delhi: Ministry of Social Justice and Empowerment, Government of India. 2019;23.

6. World Health Organization. National suicide prevention strategies: Progress, examples and indicators. 2018.

7. World Health Organization. Suicide worldwide in 2019: global health estimates. 2021.

8. World Health Organization. Live life: an implementation guide for suicide prevention in countries. 2021.

9. Turecki G, Brent DA. Suicide and suicidal behaviour. The Lancet. 2016;387(10024):1227-39.

10. Wasserman D. Oxford textbook of suicidology and suicide prevention: Oxford University Press; 2020.

11. Van Der Feltz-cornelis CM, Sarchiapone M, Postuvan V, Volker D, Roskar S, Grum AT, et al. Best practice elements of multilevel suicide prevention strategies. Crisis. 2011.

12. Zalsman G, Hawton K, Wasserman D, van Heeringen K, Arensman E, Sarchiapone M, et al. Suicide prevention strategies revisited: 10-year systematic review. The Lancet Psychiatry. 2016;3(7):646-59.

13. Adhikari A, Dutta A, Sapkota S, Chapagain A, Aryal A, Pradhan A. Prevalence of poor mental health among medical students in Nepal: a cross-sectional study. BMC medical education. 2017;17:1-7.

14. Duarte D, El-Hagrassy MM, e Couto TC, Gurgel W, Fregni F, Correa H. Male and female physician suicidality: a systematic review and meta-analysis. JAMA psychiatry. 2020;77(6):587-97.

15. Watson C, Ventriglio A, Bhugra D. A narrative review of suicide and suicidal behavior in medical students. Indian journal of psychiatry. 2020;62(3):250-6.

16. Erschens R, Keifenheim KE, Herrmann-Werner A, Loda T, Schwille-Kiuntke J, Bugaj TJ, et al. Professional burnout among medical students: systematic literature review and meta-analysis. Medical teacher. 2019;41(2):172-83.

17. Rotenstein LS, Ramos MA, Torre M, Segal JB, Peluso MJ, Guille C, et al. Prevalence of depression, depressive symptoms, and suicidal ideation among medical students: a systematic review and meta-analysis. Jama. 2016;316(21):2214-36.

18. Puthran R, Zhang MW, Tam WW, Ho RC. Prevalence of depression amongst medical students: A meta-analysis. Medical education. 2016;50(4):456-68.

19. Jia Q, You D. Mental health among medical students during COVID-19: A systematic review and meta-analysis. Frontiers in Psychology. 2022;13:846789.

20. Jahrami H, AlKaabi J, Trabelsi K, Pandi-Perumal SR, Saif Z, Seeman MV, et al. The worldwide prevalence of self-reported psychological and behavioral symptoms in medical students: An umbrella review and meta-analysis of meta-analyses. Journal of psychosomatic research. 2023:111479.

21. Peng P, Hao Y, Liu Y, Chen S, Wang Y, Yang Q, et al. The prevalence and risk factors of mental problems in medical students during COVID-19 pandemic: A systematic review and meta-analysis. Journal of affective disorders. 2023;321:167-81.

22. Mata DA, Ramos MA, Bansal N, Khan R, Guille C, Di Angelantonio E, et al. Prevalence of depression and depressive symptoms among resident physicians: a systematic review and meta-analysis. Jama. 2015;314(22):2373-83.

23. Zeng W, Chen R, Wang X, Zhang Q, Deng W. Prevalence of mental health problems among medical students in China: A meta-analysis. Medicine. 2019;98(18):e15337.

24. Jin T, Sun Y, Wang H, Qiu F, Wang X. Prevalence of depression among Chinese medical students: A systematic review and meta-analysis. Psychology, health & medicine. 2022;27(10):2212-28.

25. Sperling EL, Hulett JM, Sherwin LB, Thompson S, Bettencourt BA. Prevalence, characteristics and measurement of somatic symptoms related to mental health in medical students: a scoping review. Annals of Medicine. 2023;55(2):2242781.

26. Pacheco JP, Giacomin HT, Tam WW, Ribeiro TB, Arab C, Bezerra IM, et al. Mental health problems among medical students in Brazil: a systematic review and meta-analysis. Brazilian Jour Psychiatry. 2017;39:369-78.

27. Soares SJB, Fernandes CFG, Tabalipa R, Kogima F, Jubini MAM, Dias IMV, et al. Common mental disorders among medical students: systematic review and meta-analysis of Brazilian studies. Sao Paulo Medical Journal. 2022;140:615-22.

28. Martins CK, Cruz JC, Dellalibera-Joviliano R. Quality of life in Brazilian medical students: a systematic review and meta-analysis. Trends in Psychiatry and Psychotherapy. 2024;46:e20220497.

29. Solis AC, Lotufo-Neto F. Predictors of quality of life in Brazilian medical students: a systematic review and meta-analysis. Brazilian Journal of Psychiatry. 2019;41:556-67.

30. Zhang MW, Lim RB, Lee C, Ho RC. Prevalence of internet addiction in medical students: a meta-analysis. Academic Psychiatry. 2018;42:88-93.

31. Rao W-W, Li W, Qi H, Hong L, Chen C, Li C-Y, et al. Sleep quality in medical students: a comprehensive meta-analysis of observational studies. Sleep and Breathing. 2020;24:1151-65.

32. Cuttilan AN, Sayampanathan AA, Ho RC-M. Mental health issues amongst medical students in Asia: a systematic review [2000–2015]. Annals of translational medicine. 2016;4(4).

33. Jena S, Tiwari C. Stress and mental health problems in 1st year medical students: a survey of two medical colleges in Kanpur, India. Int J Res Med Sci. 2015;3(1):130-4.

34. Philip S, Molodynski A, Barklie L, Bhugra D, Chaturvedi SK. Psychological well-being and burnout amongst medical students in India: a report from a nationally accessible survey. Middle East Current Psychiatry. 2021;28(1):54.

35. Kumar SD, Kavitha H, Kulkarni P, Siddalingappa H, Manjunath R. Depression, anxiety and stress levels among medical students in Mysore, Karnataka, India. Int J Community Med Public Health. 2016;3(1):359-62.

36. Sidana S, Kishore J, Ghosh V, Gulati D, Jiloha R, Anand T. Prevalence of depression in students of a medical college in New Delhi: a cross-sectional study. The Australasian medical journal. 2012;5(5):247.

37. Sarkar S, Gupta R, Menon V. A systematic review of depression, anxiety, and stress among medical students in India. Journal of Mental Health and Human Behaviour. 2017;22(2):88-96.

38. Dutta G, Rajendran N, Kumar T, Varthya SB, Rajendran V. Prevalence of depression among undergraduate medical students in India: A systemic review and meta-analysis. Cureus. 2023;15(1).

39. Dwivedi N, Sachdeva S, Taneja N. Depression among medical students of India: Meta-analysis of published research studies using screening instruments. Indian Journal of Social Psychiatry. 2021;37(2):183-90.

40. Arun P, Ramamurthy P, Thilakan P. Indian medical students with depression, anxiety, and suicidal behavior: why do they not seek treatment? Indian journal of psychological medicine. 2022;44(1):10-6.

41. Gramaglia C, Zeppegno P. Medical students and suicide prevention: training, education, and personal risks. Frontiers in psychology. 2018;9:364959.

42. Menon V, Sarkar S, Kumar S. Barriers to healthcare seeking among medical students: a cross sectional study from South India. Postgraduate medical journal. 2015;91(1079):477-82.

43. Berliant M, Rahman N, Mattice C, Bhatt C, Haykal K-A. Barriers faced by medical students in seeking mental healthcare: A scoping review. MedEdPublish. 2022;12.

44. Chawla JM, Balhara YPS, Sagar R. Undergraduate medical students' attitude toward psychiatry: A cross-sectional study. Indian journal of psychiatry. 2012;54(1):37-40.

45. Khandelwal S, Workneh F. Perception of mental illness by medical students. Indian Journal of Psychological Medicine. 1986;9(1):26-32.

46. Kodakandla K, Nasirabadi M, Pasha MS. Attitude of interns towards mental illness and psychiatry: A study from two medical colleges in South India. Asian journal of psychiatry. 2016;22:167-73.

47. Menon V, Sarkar S, Kumar S. A cross-sectional analysis of barriers to health-care seeking among medical students across training period. Journal of Mental Health and Human Behaviour. 2017;22(2):97-103.

48. Das A, Krishnan V, Dhiman V, Rohilla JK, Rawat VS, Basu A, et al. Need and learnings from having psychiatry as major subject during medical graduate examination. Indi Jour Psychiatry. 2020;62(6):723-7.

49. Kishor M, Gupta R, Ashok M, Isaac M, Chaddha RK, Singh OP, et al. Competency-based medical curriculum: Psychiatry, training of faculty, and Indian Psychiatric Society. Indian Journal of Psychiatry. 2020;62(2):207-8.

50. Dyrbye LN, Thomas MR, Massie FS, Power DV, Eacker A, Harper W, et al. Burnout and suicidal ideation among US medical students. Annals of internal medicine. 2008;149(5):334-41.

51. Coentre R, Góis C. Suicidal ideation in medical students: recent insights. Advances in medical education and practice. 2018:873-80.

52. Tsegay L, Abraha M, Ayano G. The global prevalence of suicidal attempt among medical students: a systematic review and meta-analysis. Psychiatric quarterly. 2020;91(4):1089-101.

53. Kaggwa MM, Najjuka SM, Favina A, Griffiths MD, Mamun MA. Suicidal behaviors and associated factors among medical students in Africa: A systematic review and meta-analysis. Journal of Affective Disorders Reports. 2023;11:100456.

54. Goebert D, Thompson D, Takeshita J, Beach C, Bryson P, Ephgrave K, et al. Depressive symptoms in medical students and residents: a multischool study. Academic medicine. 2009;84(2):236-41.

55. Tyssen R, Vaglum P, Grønvold NT, Ekeberg Ø. Suicidal ideation among medical students and young physicians: a nationwide and prospective study of prevalence and predictors. Journal of affective disorders. 2001;64(1):69-79.

56. Desalegn GT, Wondie M, Dereje S, Addisu A. Suicide ideation, attempt, and determinants among medical students Northwest Ethiopia: an institution-based cross-sectional study. Ann of General Psychiatry. 2020;19:1-8.

57. Eskin M, Voracek M, Stieger S, Altinyazar V. A cross-cultural investigation of suicidal behavior and attitudes in Austrian and Turkish medical students. Social psychiatry and psychiatric epidemiology. 2011;46:813-23.

58. Blacker CJ, Lewis CP, Swintak CC, Bostwick JM, Rackley SJ. Medical student suicide rates: a systematic review of the historical and international literature. Academic medicine. 2019;94(2):274-80.

59. Sampson H, Rutty G. Under-reporting of suicide in South Yorkshire (West): a retrospective study of suicide and open verdicts returned by HM Coroner, 1992–1997. Journal of clinical forensic medicine. 1999;6(2):72-6.

60. Chahal S, Nadda A, Govil N, Gupta N, Nadda D, Goel K, et al. Suicide deaths among medical students, residents and physicians in India spanning a decade (2010–2019): An exploratory study using on line news portals and Google database. International journal of social psychiatry. 2022;68(4):718-28.

61. Pruthi S, Gupta V, Goel A. Medical students hanging by a thread. Education for Health. 2015;28(2):150-1.

62. Chaudhary SS, Misra SK, Nagargoje MM, Verma A. A review of 196 suicides among medical students in India from year 2009 to 2018. MRIMS Journal of Health Sciences. 2019;7(4):102-10.

63. Garg S, Kharb A, Bansal K. What covariates drive medical students to the brink of suicidal ideation, plan, and attempt? A double-centric cross-sectional study in a resource-constrained rural setting in North India. Indian journal of psychiatry. 2023;65(4):431-42.

64. Garg S, Chauhan A, Singh S, Bansal K. Epidemiological risk factors of suicidal behavior and effects of the components of coping strategies on suicidal behavior in medical students: A North-Indian institution-based cross-sectional study. Journal of Neurosciences in Rural Practice. 2022;13(03):382-92.

65. Ati NA, Paraswati MD, Windarwati HD. What are the risk factors and protective factors of suicidal behavior in adolescents? A systematic review. Journal of child and adolescent psychiatric nursing. 2021;34(1):7-18.

66. Junior ARC, de Guadalupe Correa JFD, Lemos T, Teixeira EP, de Souza MdL. Risk factors for suicide: systematic review. Saudi Journal for Health Sciences. 2020;9(3):183-93.

67. De La Garza ÁG, Blanco C, Olfson M, Wall MM. Identification of suicide attempt risk factors in a national US survey using machine learning. JAMA psychiatry. 2021;78(4):398-406.

68. Favril L, Yu R, Uyar A, Sharpe M, Fazel S. Risk factors for suicide in adults: systematic review and meta-analysis of psychological autopsy studies. BMJ Ment Health. 2022;25(4):148-55.

69. Edwards AC, Ohlsson H, Mościcki E, Crump C, Sundquist J, Lichtenstein P, et al. On the genetic and environmental relationship between suicide attempt and death by suicide. American Journal of Psychiatry. 2021;178(11):1060-9.

70. Kendler KS, Ohlsson H, Sundquist J, Sundquist K, Edwards AC. The sources of parent-child transmission of risk for suicide attempt and deaths by suicide in Swedish national samples. American journal of psychiatry. 2020;177(10):928-35.

71. Ruderfer DM, Walsh CG, Aguirre MW, Tanigawa Y, Ribeiro JD, Franklin JC, et al. Significant shared heritability underlies suicide attempt and clinically predicted probability of attempting suicide. Molecular psychiatry. 2020;25(10):2422-30.

72. da Mota MSS, Ulguim HB, Jansen K, de Azevedo Cardoso T, de Mattos Souza LD. Are big five personality traits associated to suicidal behaviour in adolescents? A systematic review and meta-analysis. Journal of affective disorders. 2023.

73. Kumar P, Srivastava S, Mishra PS, Sinha D. Suicidal ideation among adolescents—the role of sexual abuse, depression, and impulsive behavior. Frontiers in psychiatry. 2021;12:726039.

74. Collie A, Gray SE. The relationship between work disability and subsequent suicide or self-harm: A scoping review. PLOS global public health. 2022;2(12):e0000922.

75. Pakniyat-Jahromi S, Korenis P, Sher L. Pain and suicide: what should we tell our trainees? Acta neuropsychiatrica. 2022;34(3):127-31.

76. Rogers ML, Joiner TE, Shahar G. Suicidality in chronic illness: An overview of cognitive–affective and interpersonal factors. Journal of clinical psychology in medical settings. 2021;28(1):137-48.

77. Fu X-L, Qian Y, Jin X-H, Yu H-R, Wu H, Du L, et al. Suicide rates among people with serious mental illness: a systematic review and meta-analysis. Psychological medicine. 2023;53(2):351-61.

78. Harvey SB, Epstein RM, Glozier N, Petrie K, Strudwick J, Gayed A, et al. Mental illness and suicide among physicians. The Lancet. 2021;398(10303):920-30.

79. Rizk MM, Herzog S, Dugad S, Stanley B. Suicide risk and addiction: the impact of alcohol and opioid use disorders. Current addiction reports. 2021;8:194-207.

80. Angelakis I, Austin JL, Gooding P. Association of childhood maltreatment with suicide behaviors among young people: a systematic review and meta-analysis. JAMA network open. 2020;3(8):e2012563-e.

81. Nabinger AB, Panzenhagen AC, Dahmer T, Almeida RF, Dias AU, Pereira BFB, et al. Early-life trauma, impulsivity and suicide attempt: a systematic review and meta-analysis. Trends in psychiatry and psychotherapy. 2024(AheadOfPrint):0-.

82. Alonzo D, Gearing R. Suicide across Buddhism, American Indian–Alaskan native, and African traditional religions, atheism and agnosticism: An updated systematic review. Journal of religion and health. 2021;60(4):2527-46.

83. Leung TI, Snyder R, Pendharkar SS, Chen C-YA. Physician suicide: a scoping literature review to highlight opportunities for prevention. Global Psychiatry. 2020.

84. Stack S. Contributing factors to suicide: Political, social, cultural and economic. Preventive medicine. 2021;152:106498.

85. Cuesta I, Montesó-Curto P, Metzler Sawin E, Jiménez-Herrera M, Puig-Llobet M, Seabra P, et al. Risk factors for teen suicide and bullying: An international integrative review. International journal of nursing practice. 2021;27(3):e12930.

86. Cheek SM, Reiter-Lavery T, Goldston DB. Social rejection, popularity, peer victimization, and self-injurious thoughts and behaviors among adolescents: A systematic review and meta-analysis. Clinical Psychology Review. 2020;82:101936.

87. Motillon-Toudic C, Walter M, Séguin M, Carrier J-D, Berrouiguet S, Lemey C. Social isolation and suicide risk: Literature review and perspectives. European psychiatry. 2022;65(1):e65.

88. de Lange J, Baams L, van Bergen DD, Bos HM, Bosker RJ. Minority stress and suicidal ideation and suicide attempts among LGBT adolescents and young adults: a meta-analysis. LGBT health. 2022;9(4):222-37.

89. Surace T, Fusar-Poli L, Vozza L, Cavone V, Arcidiacono C, Mammano R, et al. Lifetime prevalence of suicidal ideation and suicidal behaviors in gender non-conforming youths: a meta-analysis. European Child & Adolescent Psychiatry. 2021;30:1147-61.

90. Li C, Wang P, Martin-Moratinos M, Bella-Fernández M, Blasco-Fontecilla H. Traditional bullying and cyberbullying in the digital age and its associated mental health problems in children and adolescents: a meta-analysis. European child & adolescent psychiatry. 2022:1-15.

91. Ayer L, Stevens C, Reider E, Sims B, Colpe L, Pearson J. Preventing youth suicide: Potential "crossover effects" of existing school-based programs. Prevention science. 2023;24(2):382-92.

92. Howarth EJ, O'Connor DB, Panagioti M, Hodkinson A, Wilding S, Johnson J. Are stressful life events prospectively associated with increased suicidal ideation and behaviour? A systematic review and meta-analysis. Journal of Affective Disorders. 2020;266:731-42.

93. Kedar T. Suicide and suicide risk factors: A literature review. Asian Journal of Nursing Education and Research. 2021;11(3):441-6.

94. Rátiva Hernández NK, Carrero-Barragán TY, Ardila AF, Rodríguez-Salazar JD, Lozada-Martinez ID, Velez-Jaramillo E, et al. Factors associated with suicide in physicians: a silent stigma and public health problem that has not been studied in depth. Frontiers in psychiatry. 2023;14:1222972.

95. Steare T, Muñoz CG, Sullivan A, Lewis G. The association between academic pressure and adolescent mental health problems: A systematic review. Journal of affective disorders. 2023.

96. de la Torre-Luque A, Pemau A, Ayad-Ahmed W, Borges G, Fernandez-Sevillano J, Garrido-Torres N, et al. Risk of suicide attempt repetition after an index attempt: a systematic review and meta-analysis. General hospital psychiatry. 2023;81:51-6.

97. Cedereke M, Monti K, Öjehagen A. Telephone contact with patients in the year after a suicide attempt: does it affect treatment attendance and outcome? A randomised controlled study. European Psychiatry. 2002;17(2):82-91.

98. Vaiva G, Ducrocq F, Meyer P, Mathieu D, Philippe A, Libersa C, et al. Systematic telephone contacting of patients leaving the emergency department after a suicide attempt: does it affect the one-year outcome? Syscall, a randomized controlled study. BMJ. 2006;332:1241-5.

99. Ryan EP, Oquendo MA. Suicide risk assessment and prevention: challenges and opportunities. Focus. 2020;18(2):88-99.

100. Niederkrotenthaler T, Braun M, Pirkis J, Till B, Stack S, Sinyor M, et al. Association between suicide reporting in the media and suicide: systematic review and meta-analysis. Bmj. 2020;368.

101. Mirza AA, Baig M, Beyari GM, Halawani MA, Mirza AA. Depression and anxiety among medical students: a brief overview. Advances in Medical Education and Practice. 2021:393-8.

102. Seo C, Di Carlo C, Dong SX, Fournier K, Haykal K-A. Risk factors for suicidal ideation and suicide attempt among medical students: A meta-analysis. PloS one. 2021;16(12):e0261785.

103. Desai ND, Chavda P, Shah S. Prevalence and predictors of suicide ideation among undergraduate medical students from a medical college of Western India. medical journal armed forces india. 2021;77:S107-S14.

104. Dias AR, Fernandes SM, Fialho-Silva I, Cerqueira-Silva T, Miranda-Scippa Â, Galvão-de Almeida A. Burnout syndrome and resilience in medical students from a Brazilian public college in Salvador, Brazil. Trends in psychiatry and psychotherapy. 2022;44:e20200187.

105. Wang J, Liu M, Bai J, Chen Y, Xia J, Liang B, et al. Prevalence of common mental disorders among medical students in China: a systematic review and meta-analysis. Frontiers in Public Health. 2023;11:1116616.

106. Wasserman D, Carli V, Iosue M, Javed A, Herrman H. Suicide prevention in childhood and adolescence: a narrative review of current knowledge on risk and protective factors and effectiveness of interventions. Asia-Pacific Psychiatry. 2021;13(3):e12452.

107. McKinley N, Karayiannis PN, Convie L, Clarke M, Kirk SJ, Campbell WJ. Resilience in medical doctors: a systematic review. Postgraduate medical journal. 2019;95(1121):140-7.

108. Kaisti I, Kulmala P, Hintsanen M, Hurtig T, Repo S, Paunio T, et al. The effects of mindfulness-based interventions in medical students: a systematic review. Advances in Health Sciences Education. 2024;29(1):245-71.

109. da Silva CCG, Bolognani CV, Amorim FF, Imoto AM. Effectiveness of training programs based on mindfulness in reducing psychological distress and promoting well-being in medical students: a systematic review and meta-analysis. Systematic reviews. 2023;12(1):79.

110. Henning MA, Tae Joo P, Moir F, Krägeloh C, Mysko Christopher, Hobson Jennifer, et al. Integrating mindfulness and physical exercises for medical students: A systematic review. OBM Integrative and Complementary Medicine. 2018;4:1-30.

111. Bitonte RA, DeSanto DJ. Mandatory physical exercise for the prevention of mental illness in medical students. Mental illness. 2014;6(2):43-4.

112. Cochrane Developmental P, Group LP, Kunzler AM, Helmreich I, König J, Chmitorz A, et al. Psychological interventions to foster resilience in healthcare students. Cochrane Database of Systematic Reviews. 1996;2020(7).

113. Rogers D. Which educational interventions improve healthcare professionals' resilience? Medical teacher. 2016;38(12):1236-41.

114. Moir F, Henning M, Hassed C, Moyes SA, Elley CR. A peer-support and mindfulness program to improve the mental health of medical students. Teaching and learning in medicine. 2016;28(3):293-302.

115. Moir F. Empowering Medical Students to Improve Their Mental Health: ResearchSpace@ Auckland; 2013.

116. Buizza C, Ciavarra V, Ghilardi A. A systematic narrative review on stress-management interventions for medical students. Mindfulness. 2020;11:2055-66.

117. Yusoff MSB. Interventions on medical students' psychological health: a meta-analysis. Journal of Taibah University Medical Sciences. 2014;9(1):1-13.

118. Moss SJ, Wollny K, Amarbayan M, Lorenzetti DL, Kassam A. Interventions to improve the well-being of medical learners in Canada: a scoping review. Canadian Medical Association Open Access Journal. 2021;9(3):E765-E76.

119. Wasson LT, Cusmano A, Meli L, Louh I, Falzon L, Hampsey M, et al. Association between learning environment interventions and medical student well-being: a systematic review. Jama. 2016;316(21):2237-52.

120. McConville J, McAleer R, Hahne A. Mindfulness training for health profession students—the effect of mindfulness training on psychological well-being, learning and clinical performance of health professional students: a systematic review of randomized and non-randomized controlled trials. Explore. 2017;13(1):26-45.

121. Sekhar P, Tee QX, Ashraf G, Trinh D, Shachar J, Jiang A, et al. Mindfulness-based psychological interventions for improving mental well-being in medical students and junior doctors. Cochrane Database of Systematic Reviews. 2021(12).

122. Yogeswaran V, El Morr C. Effectiveness of online mindfulness interventions on medical students' mental health: a systematic review. BMC Public Health. 2021;21:1-12.

123. Aryankhesal A, Mohammadibakhsh R, Hamidi Y, Alidoost S, Behzadifar M, Sohrabi R, et al. Interventions on reducing burnout in physicians and nurses: A systematic review. Medical journal of the Islamic Republic of Iran. 2019;33:77.

124. Cocchiara RA, Peruzzo M, Mannocci A, Ottolenghi L, Villari P, Polimeni A, et al. The use of yoga to manage stress and burnout in healthcare workers: a systematic review. Journal of clinical medicine. 2019;8(3):284.

125. Mugford H, O'Connor C, Danelson K, Popoli D. Medical students' perceptions and retention of skills from active resilience training. Family Medicine. 2022;54(3):213-5.

126. Peng L, Li M, Zuo X, Miao Y, Chen L, Yu Y, et al. Application of the Pennsylvania resilience training program on medical students. Personality and Individual Differences. 2014;61:47-51.

127. Kunzler AM, Helmreich I, König J, Chmitorz A, Wessa M, Binder H, et al. Psychological interventions to foster resilience in healthcare students: a cochrane review. BJPsych Advances. 2022;28(4):208-.

128. Ungar P, Schindler A-K, Polujanski S, Rotthoff T. Online programs to strengthen the mental health of medical students: A systematic review of the literature. Medical education online. 2022;27(1):2082909.

129. Dederichs M, Weber J, Pischke CR, Angerer P, Apolinário-Hagen J. Exploring medical students' views on digital mental health interventions: a qualitative study. Internet Interventions. 2021;25:100398.

130. Nordentoft M. Crucial elements in suicide prevention strategies. Progress in Neuro-Psychopharmacology and Biological Psychiatry. 2011;35(4):848-53.

131. Goldsmith S, Pellmar T, Kleinman A, Bunney W. Reducing suicide: A national imperative. Pub: National Academies Press. Washington DC. 2002.

132. Frajerman A. Quelles interventions pour améliorer le bien-être des étudiants en médecine? Une revue de la littérature. L'Encéphale. 2020;46(1):55-64.

133. Witt K, Boland A, Lamblin M, McGorry PD, Veness B, Cipriani A, et al. Effectiveness of universal programmes for the prevention of suicidal ideation, behaviour and mental ill health in medical students: a systematic review and meta-analysis. BMJ Ment Health. 2019;22(2):84-90.

134. Nawaz RF, Anderson JK, Colville L, Fraser-Andrews C, Ford TJ. Interventions to prevent or manage self-harm among students in educational settings–a systematic review. Child and adolescent mental health. 2024;29(1):56-69.

135. Young C, Juliani M. Universal brief mental health screenings for first-year medical students: a 6-year retrospective of the Keck checks program. Academic Medicine. 2023;98(7):782-7.

136. Bowersox NW, Jagusch J, Garlick J, Chen JI, Pfeiffer PN. Peer-based interventions targeting suicide prevention: A scoping review. American journal of community psychology. 2021;68(1-2):232-48.

137. Turecki G, Brent DA, Gunnell D, O'Connor RC, Oquendo MA, Pirkis J, et al. Suicide and suicide risk. Nature reviews Disease primers. 2019;5(1):74.

138. Regehr C, Glancy D, Pitts A. Interventions to reduce stress in university students: A review and meta-analysis. Journal of affective disorders. 2013;148(1):1-11.

139. King CA, Gipson PY, Arango A, Foster CE, Clark M, Ghaziuddin N, et al. LET's CONNECT community mentorship program for youths with peer social problems: preliminary findings from a randomized effectiveness trial. Journal of community psychology. 2018;46(7):885-902.

140. Hashimoto N, Suzuki Y, Kato TA, Fujisawa D, Sato R, Aoyama-Uehara K, et al. Effectiveness of suicide prevention gatekeeper-training for university administrative staff in J apan. Psychiatry and Clinical Neurosciences. 2016;70(1):62-70.

141. Hashimoto N, Takeda H, Fujii Y, Suzuki Y, Kato TA, Fujisawa D, et al. Effectiveness of suicide prevention gatekeeper training for university teachers in Japan. Asian journal of psychiatry. 2021;60:102661.

142. Doupnik SK, Rudd B, Schmutte T, Worsley D, Bowden CF, McCarthy E, et al. Association of suicide prevention interventions with subsequent suicide attempts, linkage to follow-up care, and depression symptoms for acute care settings: a systematic review and meta-analysis. JAMA psychiatry. 2020;77(10):1021-30.

143. Gysin-Maillart A, Schwab S, Soravia L, Megert M, Michel K. A novel brief therapy for patients who attempt suicide: A 24-months follow-up randomized controlled study of the attempted suicide short intervention program (ASSIP). PLoS medicine. 2016;13(3):e1001968.

144. Group CCMD, Hawton K, Witt KG, Taylor Salisbury TL, Arensman E, Gunnell D, et al. Psychosocial interventions for self-harm in adults. Cochrane database of Systematic reviews. 1996;2021(9).

145. Menon V, Vijayakumar L. Interventions for attempted suicide. Current opinion in psychiatry. 2022;35(5):317-23.

146. Ghanbari B, Malakouti SK, Nojomi M, Alavi K, Khaleghparast S. Suicide prevention and follow-up services: a narrative review. Global journal of health science. 2016;8(5):145.

147. Mann JJ, Michel CA, Auerbach RP. Improving suicide prevention through evidence-based strategies: a systematic review. American journal of psychiatry. 2021;178(7):611-24.

148. Torok M, Han J, Baker S, Werner-Seidler A, Wong I, Larsen ME, et al. Suicide prevention using self-guided digital interventions: a systematic review and meta-analysis of randomised controlled trials. The Lancet Digital Health. 2020;2(1):e25-e36.

149. Marcon G, Massaro Carneiro Monteiro G, Ballester P, Cassidy RM, Zimerman A, Brunoni AR, von Diemen L, Hauck S, Passos IC. Who attempts suicide among medical students? Acta Psychiatr Scand. 2020 Mar;141(3):254-264

150. Pospos S, Tal I, Iglewicz A, Newton IG, Tai-Seale M, Downs N, Jong P, Lee D, Davidson JE, Lee SY, Rubanovich CK, Ho EV, Sanchez C, Zisook S. Gender differences among medical students, house staff, and faculty physicians at high risk for suicide: A HEAR report. Depress Anxiety. 2019 Oct;36(10):902-920

151. Bhargav H, George S, Varambally S, Gangadhar BN. Yoga and psychiatric disorders: a review of biomarker evidence. International Review of Psychiatry. 2021 Feb 17;33(1-2):162-9.

152. Wu Y, Yan D, Yang J. Effectiveness of yoga for major depressive disorder: A systematic review and meta-analysis. Frontiers in psychiatry. 2023 Mar 23;14:1138205.

153. Zoogman S, Goldberg SB, Vousoura E, Diamond MC, Miller L. Effect of yoga-based interventions for anxiety symptoms: A meta-analysis of randomized controlled trials. Spirit in Clinical Practice. 2019;6(4):256.

154. Pascoe MC, Thompson DR, Ski CF. Yoga, mindfulness-based stress reduction and stress-related physiological measures: A meta-analysis. Psychoneuroendocrinology. 2017 Dec 1;86:152-68.

155. Kumar V, Jagannathan A, Bhargav H, Varambally S, Gangadhar BN. Generic yoga modules for clinical and research settings need of the hour. International journal of yoga therapy. 2021 Jan 1;31(1):25.

156. Katla N, Ramsahaye A, Thulasi A, Ilavarasu J, Jagannathan A, Bhargav H, Varambally S, Gangadhar N. Yoga module development and validation: A systematic review with methodological guidelines. International Journal of Yoga. 2022 Sep 1;15(3):175-86.

157. Bhargav Hemant, Vijaya Raghavan, Naren P Rao, et al. Validation and efficacy of a tele-yoga intervention for improving psychological stress, mental health and sleep difficulties of stressed adults diagnosed with long COVID: a prospective, multi-center, open-label single-arm study. Frontiers in Psychology. 2024; In press.

158. Iyer S, Bhargav H, Bhat R. Understanding the Barriers to Implementing Tele-Yoga Intervention for Stress Management in Post-Graduate University Students: A Qualitative Study. Advances in mind-body medicine. 2024;28(1):9-14.

159. Jasti N, Bhargav H, George S, Varambally S, Gangadhar BN. Tele-yoga for stress management: Need of the hour during the COVID-19 pandemic and beyond?. Asian Journal of Psychiatry. 2020 Dec;54:102334.

160. More P, Kumar V, Rani MU, Philip M, Manjunatha N, Varambally S, Gangadhar BN. Development, validation, and feasibility of a generic yoga-based intervention for Generalized Anxiety Disorder. Complementary Therapies in Medicine. 2021 Dec 1;63:102776.

161. Naveen GH, Rao MG, Vishal V, Thirthalli J, Varambally S, Gangadhar BN. Development and feasibility of yoga therapy module for out-patients with depression in India. Indian Journal of Psychiatry. 2013 Jul 1;55(Suppl 3):S350-6.

Annexure -1

Building Resilience After Tragedy

When a tragic event like suicide occurs within the confines of a medical college, the repercussions ripple far beyond the immediate circle of the individual involved. The aftermath demands a delicate and compassionate approach towards the emotional well-being of other students. This event can profoundly impact the emotional well-being of students, and may even cast a shadow over their studies and future careers. Recognizing this, the debriefing process becomes not just a reactionary measure, but a crucial intervention aimed at addressing the emotional fallout and equipping future doctors with the coping mechanisms they will undoubtedly need in their professional lives.

One of the key elements in managing such a situation is prompt response. Initiating debriefing sessions as soon as possible after a suicide can provide timely support to students, helping them process their emotions and begin the healing process. These sessions should be led by mental health professionals, such as psychiatrists, who are experienced in handling such delicate situations. Their guidance can ensure that the debriefing process is conducted with care and sensitivity. During these sessions, it is important to provide accurate information about the circumstances of the suicide, thereby dispelling rumours and fostering clarity amidst confusion. Acknowledging and validating students' feelings of shock, grief, confusion, and any other emotions they may be experiencing is essential. Creating a safe and comfortable environment where students feel free to express their thoughts and emotions is paramount.

Sl No	Building Resilience after the Tragedy: An Opportunity to Intervene
1	After the legal procedures is over, form a debriefing team (including psychiatrist, forensic HOD, dean, HOD and other administrators., who are well versed in grief and debriefing) and plan for a debriefing session with students.
2	Organize group debriefing sessions for affected individuals to express their thoughts and feelings, so that it helps them to process their emotions and begin the healing process
3	Provide accurate information about the circumstances of the suicide, thereby dispelling rumours and fostering clarity amidst confusion
4	Validate the emotions student’s community such as denial, shock, anger, sadness, frustration and so forth
5	Provide information about available support services. Provide resources for coping with grief and loss like helpline and counselling services.
6	Offer individual grief counselling for those who are affected severely.
7	Plan gatekeeper training program (if not done) by developing peer support system. Review the current support system inside the campus
8	Normalize help seeking behaviour

Encouraging peer support can also be beneficial. Facilitating opportunities for students to share their experiences and provide support to each other can help create a sense of solidarity and community. It is also important to normalize help-seeking behavior, emphasizing the importance of seeking professional help if students are struggling to cope with their emotions. Providing information about available mental health resources on campus can be helpful in this regard.

Additionally, educating students on healthy coping strategies and self-care techniques can empower them to manage their emotions and stress levels effectively. Follow-up support should also be provided for students who may need additional help coping with the loss. Keeping an eye on the mental health of students in the weeks following the suicide and offering additional support as needed is crucial.

In conclusion, debriefing sessions following a suicide in a medical college should be conducted with great care and sensitivity. They not only provide support to students in their time of need but also serve as an opportunity to teach and inculcate coping mechanisms that will serve them well in their future careers as doctors.

Annexure-2

Legal Considerations of Suicide Attempts - Enhancing Support for Individuals in Crisis

Teachers at medical colleges confront a significant dilemma when a student reveals thoughts of self-harm, suicide attempts, or mental health problems. Medical faculty lack training in psychiatry, leading to uncertainty about how to address these situations. They may also experience their own anxiety and emotional challenges in dealing with these issues and determining the best way to support their students. While they are eager to assist, they are also aware of the limitations of their role and the potential legal implications if any untoward incident occurs.

Attempted suicide was considered a crime in India under Section 309 of the Indian Penal Code. However, this provision was decriminalized by the Mental Healthcare Act, 2017. The Sec 115 (1) of the Act say that “Notwithstanding anything contained in section 309 of the IPC any person who attempts to commit suicide shall be presumed, unless proved otherwise, to have severe stress and shall not be tried and punished under the said Code” This section clearly states that, they will not be prosecuted or punished under the IPC 309 Code, emphasizing a shift towards recognizing attempted suicide as a sign of distress rather than a criminal act.

The Sec 115 (2) of Mental Healthcare Act, 2017 further mentions that “the appropriate Government shall have a duty to provide care, treatment, and rehabilitation to a person, having severe stress and who attempted to commit suicide, to reduce the risk of recurrence of attempt to commit suicide.” So, it is the duty and responsibility of the concerned government to provide appropriate treatment for those who attempt suicide.

The ongoing discourse on the Bharatiya Nyaya Samhita Act, 2023 (BNS Act, 2023) reflects a broader understanding of suicide as a mental health issue rather than a criminal act. The offense of 'attempt to commit suicide' has been removed in the BNS Act, 2023. Efforts are being made to align legal frameworks with contemporary Mental Healthcare Act, 2017 perspectives, emphasizing support, treatment, and prevention over punishment.

However, the BNS Act, 2023, retains few sections and have introduced a new provision regarding abetment of suicide.

Retained sections are –

a) Section 86 addresses the abetment of suicide by a husband driving his wife to commit suicide.
b) Sections 107 and 108 cover general abetment of suicide.

New Section introduced is -

a) Section 226 introduces penalties for attempting to commit suicide with the intent to compel or restrain any public servant from discharging their official duties.

As mentioned above, several critical points require consideration for providing care and registering medico-legal case. Hence, following shall be kept in mind:

a) Prioritizing emergency healthcare is paramount.

b) Involving family members in the treatment of attempted suicide is crucial.

c) Medico-Legal Case Registration – In instances of attempted suicide involving foul play, abetment, or medical instability, it is necessary to register a Medico-Legal Case. The table below can assist in determining when to register an MLC

Foul play (suspiciousness)	Capacity to consent	Medically Stable	MLC registration
Not Known	Present	Yes	Based on the person's report
Not Known	Present	No	Register MLC
Not Known	Absent	No	Register MLC
Present	Not applicable	Not applicable	Register MLC
In Case of any Doubt Register MLC			

Annexure -3

Common Myths of Attempted Suicide and Death by Suicide

	Myths	Facts
1	Asking someone directly about their suicidal thoughts may potentially trigger a suicidal attempt.	Inquiring about suicidal thoughts is beneficial as it offers individuals a valuable opportunity to share their feelings and provides a window of opportunity for intervention.
2	People who talk about suicide are often not severe and are unlikely to attempt it	People who discuss suicide are experiencing profound distress, so it is crucial to take them seriously.
3	Someone who has attempted suicide will never try again.	A previous suicide attempt is a recognized risk factor and will increase with each subsequent attempt.
4	If a person is serious about killing themselves, then there's nothing you can do	Suicidal ideation is often temporary; support and understanding can make a critical difference.
5	You have to be mentally ill or weak to think about suicide	Suicidal thoughts can arise due to life's challenges or stress
6	People who express suicidal thoughts are not severe and are only seeking attention.	Most individuals experiencing suicidal thoughts are seeking relief from their pain rather than a desire for death itself.
7	Asking about suicide is not advisable as it might plant the idea in someone's mind to attempt it.	Open discussions about suicide can provide relief and offer an opportunity for intervention.
8	It is not always easy to recognize when someone is feeling suicidal.	People may show signs of suicide risk, which can vary widely; being observant is crucial.
9	People who die by suicide are selfish or weak.	Suicide often stems from intense emotional pain, a sense of hopelessness, and a cry for help

Annexure-4

Five-Day Orientation Program on Mental Health Education and Training

Day 1: Introduction and Overview

Introduction to Mental Health and Illness
Common Mental Health Disorders
Understanding Mental Distress: Causes and Symptoms
Differentiating Normal Stress and Mental Distress
Promoting Mental Wellness: Self-Care and Resilience
Techniques for Maintaining Mental Wellness
Workshop: Self-Care Techniques (Relaxation and Mindfulness)

Day 2: Stress Management and Coping Mechanisms

Understanding Stress: Types and Impact
Physiological and Psychological Impact of Stress
Stress Management Techniques
Time Management and Organizational Skills
Cognitive-Behavioral Strategies
Workshop: Practical Stress Management (Role-Playing Scenarios)
Group Discussion: Sharing Stress Management Strategies

Day 3: Suicide Prevention and Gatekeeper Training

Recognizing Suicide Risk: Warning Signs and Risk Factors
Assessing Suicidal Ideation
Intervention Strategies for Suicide Prevention
Approaching and Communicating with At-Risk Individuals
Safety Planning and Referral
Gatekeeper Training: Role of Gatekeepers in Mental Health
Active Listening and Empathetic Communication
Workshop: Role-Playing Interventions

Day 4: Mental Health First Aid and Peer Support Systems

Principles of Mental Health First Aid
Assessing Risk
Listening Non-Judgmentally
Mental Health First Aid
Steps to Provide Immediate Support
Building Peer Support Networks
Establishing and Maintaining Support Groups
Training Peer Supporters
Group Activity: Developing Peer Support Strategies

Day 5: Practical Applications and Wrap-Up

Implementing Mental Health Programs
Strategies for Integrating Mental Health Initiatives into Curricula
Best Practices from Various Institutions
Evaluation and Continuous Improvement
Assessing the Effectiveness of Mental Health Programs

Feedback Mechanisms and Continuous Improvement
Workshop: Developing an Action Plan for Mental Health Initiatives
Closing Session: Reflections and Future Directions
Participant Reflections on the Program

This schedule ensures a comprehensive and balanced approach to mental health education, addressing key topics and practical applications each day to equip participants with essential knowledge and skills. However, the above curriculum can be modified as per the local requirements.

Annexure - 5

Indian Suicide Prevention Resources

Organization	Description	Contact Details
Tele Manas (National Helpline)	A national tele-mental health program providing psychological support across India. Help Available 24/7	Phone: 14416
Suicide Prevention India Foundation (SPIF)	Offers training programs, workshops, and social media outreach for suicide prevention.	Website: www.spif.in
I Call Helpline (Mumbai)	Provides emotional support and counselling, operational Monday to Saturday from 8 am to 10 pm.	Phone: 022-25521111
Roshni Helpline (Telangana)	Offers free and confidential support from 9 am to 11 pm, known for volunteer training.	Phone: 040-66202000
Sneha Suicide Prevention Helpline (Tamil Nadu)	Available nationwide, providing 24/7 emotional support and the option for anonymity.	Phone: 044-24640059

Global Suicide Prevention Resources

Resources	Description	Website
World Health Organization (WHO)	Promotes coordinated global efforts in suicide prevention, emphasizing the LIVE LIFE approach.	www.who.int
International Association for Suicide Prevention (IASP)	Facilitates international collaboration and evidence-based actions to reduce suicide incidents.	www.iasp.info
National Institute of Mental Health (NIMH)	Leads suicide research initiatives and provides resources aligned with the National Strategy for Suicide Prevention.	www.nimh.nih.gov
Samaritans	Focuses on the importance of language and communication in suicide prevention, providing resources for supportive conversations.	www.samaritans.org
The Lifeline Canada Foundation	Lists mental health centres and suicide prevention initiatives in Canada, emphasizing targeted support.	thelifelinecanada.ca
The National Suicide Prevention Conference (UK)	Brings together professionals and communities in the UK to share insights and strategies on suicide prevention.	nspconference.co.uk
CDC Guidance for Community Response to Suicide Clusters	Offers guidelines for addressing suicide clusters, emphasizing proactive preparation and community engagement.	www.cdc.gov

Annexure-6

Brief Yoga Modules for Mental Health & Well-being

The Departments of Psychiatry, Telemedicine Centre, and Integrative Medicine at the National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore have developed evidence-based generic yoga and tele-yoga programs tailored for specific mental health conditions. Below are YouTube links for specific yoga practice modules. Please find the YouTube Links for Specific Yoga Practices for Medical Students.

1) Brief Yoga Intervention for Stress Management for daily practice: duration 30 minutes

   Link: https://youtu.be/AnaG04oq4k8?si=J9_HSVCr_3QxVuEs

2) Yoga Intervention for Stress Management – Longer version for weekly practice: duration 50 minutes

   Link: https://youtu.be/ro3-znvPVYY?si=T5CEkSJ4WYFidb-6

3) Brief Yoga intervention for overcoming low mood: duration 30 minutes

   Link: https://youtu.be/lv0yLTcU4z0?si=I_TzKM_zz3DEQxF2&t=4

4) Brief Yoga intervention for managing anxiety and improving quality of sleep: duration 30 minutes

   Link: https://youtu.be/PQApWqEM-4I?si=cpKGKck5K-g_217O

5) Brief Yoga intervention for physical fitness: duration 30 minutes

   Link: https://youtu.be/lmBhBEPQDYw?si=maekXo-746n6fU_2

Annexure-7

National Medical Commission, Prevention and Prohibition of Ragging in Medical Colleges and Institutions Regulations, 2021

The National Medical Commission (NMC) enacted the Prevention and Prohibition of Ragging in Medical Colleges and Institutions Regulations, 2021, to create a safe and conducive environment for medical students across India. These regulations are designed to eradicate the practice of ragging and ensure that medical institutions foster an atmosphere of respect, dignity, and mutual understanding among students.

The regulations mandate proactive measures for preventing ragging, including the establishment of anti-ragging committees and squads, conducting awareness programs, and promoting a culture of inclusivity and respect. Institutions are required to provide robust support systems, such as counselling services, a 24x7 helpline, and a dedicated anti-ragging cell to handle complaints and provide immediate assistance.

The regulations stipulate stringent disciplinary actions against those found guilty of ragging, including suspension, expulsion, and legal proceedings, while ensuring transparency and fairness in disciplinary processes. Medical institutions must submit regular compliance reports to the NMC, detailing measures taken to prevent ragging and outcomes of reported incidents. The NMC monitors these reports to ensure adherence to the regulations.

For more information visit this website:
https://www.nmc.org.in/ActivitiWebClient/open/getDocument?path=/Documents/Public/Portal/NmcGazette/231281.pdf

The UGC Anti-Ragging Cell

The Anti-Ragging Cell of the University Grants Commission (UGC) is a dedicated entity established to combat and prevent the menace of ragging in higher education institutions across India. This cell operates under the guidelines set by the UGC and the Supreme Court of India, aiming to create a safe and secure environment for students.

The UGC Anti-Ragging Cell, which provides assistance to victims of ragging.

a) It operates a 24x7 toll-free helpline **- 1800-180-5522**

b) An online anti-ragging portal: **www.antiragging.in**

where students can confidentially report incidents of ragging. This information needs to be widely publicized in all medical colleges.

,

सत्यमेव जयते

Tele MANAS
National Tele Mental Health Programme
14416

National Tele Mental Health Program of India

"Supporting Healing Hands & Hearts"

Mental Health Support for Healers
Call Tele MANAS

TOLL FREE **14416**

24/7

SCAN ME

to know more about Tele MANAS