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Are Medical Graduates Adequately Trained? A Critical Viewpoint on Factors Influencing Medical Education in India

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Abstract With an unwavering motivation to improve the doctor-to-patient ratio, the Indian government has been taking initiatives to increase the establishment of medical colleges throughout the country, allowing more and more aspirants to pursue their goal of becoming trained medical doctors. The National Medical Commission (NMC), the regulatory authority of medical education (ME) in India has been busy trying to improve the standards of ME by implementing changes in the curriculum for undergraduate and postgraduate courses. Additionally, the National Eligibility-cum Entrance Test (NEET), a nationwide unified testing system, has been used to admit medical students to medical college courses. Although this all looks development in the right direction, several issues are plaguing the ME and health system including the standards of an Indian Medical Graduate (IMG), the functioning of both private and government medical institutions, faculty issues, and the overall educational environment prevailing in the country. This editorial discusses the current situation, the factors influencing medical training, and potential immediate measures required for holistic improvement.

Keywords: *Indian government, medical colleges, medical doctors, medical education, national medical council (NMC), Indian Medical Graduates (IMG), medical students, National Eligibility-cum Entrance Test (NEET)*

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1. Introduction

The Government of India (GoI) has been radically taking initiatives to increase the number of medical institutes, thereby allowing more admissions to the undergraduate (UG) medical course, the Bachelor of Medicine and Bachelor of Surgery (MBBS) degree as it is referred to in India. Simultaneously, medical colleges were approved to start postgraduate (PG) courses, increasing the number of PG seats. It has been observed that the number of medical colleges and the proportional medical seats have doubled since 2014 when 387 medical colleges were there, to the present day with more than 700 colleges [1]. These initiatives were directed to satisfy and improve the doctor-to-population ratio as prescribed by the World Health Organization (WHO). WHO suggests this ratio at 1:1000 for efficient public health management. Surprisingly, India has recently achieved a better doctor-to-population ratio of 1:900 [2]. According to the data on the WHO website, the number of doctors available per 10,000 population, in India stands at 7.265. This is considerably low compared to neighboring countries like China (25.183), Sri Lanka (11.924), Pakistan (10.842), and Nepal (8.674). However, this ratio is considerably better in Cuba (94.285), Sweeden (71.516), Greece (63.668), Argentina (40.818), Australia (39.812), Russian Federation (38.271), the United States of America (36.082), New Zealand (35.738), the United Kingdom (31.742), Saudi Arabia (30.768), and Japan (26.141) [3,4]. This augmented the rise in medical colleges and student admissions. The upsurge of medical colleges led to issues related to the functioning of medical colleges like faculty deficiencies, poor infrastructure and management, and an inferior educational environment (EE) [5].

The standards of medical education (ME) and the quality of Indian Medical Graduates (IMGs) have been under scrutiny for a long time. This is attributed to the colossal rise in medical colleges, which has compromised clinical training and skill development among medical graduates.

Therefore, it is essential to understand different elements/factors including the regulatory authority, teacher appointments, student admissions, course curriculum, clinical training, teacher attitudes, administration or management attitudes, student attitudes, societal influences, and research orientation, involved in ME that impact the quality of future medical professionals. (Figure 1)

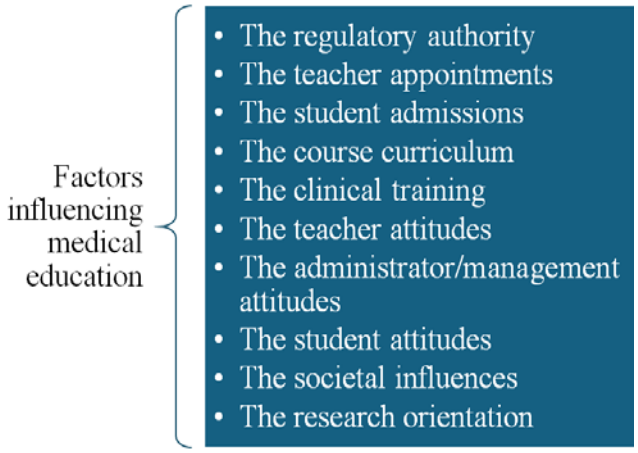

Figure 1. Factors influencing medical education

2. The Regulatory Authority

The National Medical Commission (NMC) is the regulatory body that regulates ME in India. Despite coming under the purview of the Ministry of Health (MoH), GoI, NMC carries out its work independently. NMC replaced a previously functioning regulatory authority, the Medical Council of India (MCI). MCI was labeled a corrupt entity due to its controversial decisions including the approval of medical institutions to admit MBBS students despite the infrastructure limitations and faculty deficiencies.

Although NMC took over the MCI, the ground-level scenario is similar. The major drawback of NMC is how it carries out college inspections. The NMC appoints inspectors who visit medical colleges and attached hospitals and do audits before approving or canceling yearly MBBS and PG admissions.

Strangely, medical institutions either get information about the potential NMC inspection from the NMC itself or through other illegal sources allowing them to prepare for the inspection. This includes writing fake medical records, making up the number of in-patients and out-patients, hospital admissions, and laboratory investigations.

In the majority of medical colleges, the NMC inspections are stage-managed. Despite NMC recognizing the inspections are being managed to satisfy all the requirements on the days of inspections and situations after the inspections change to status quo. NMC remains silent and has been taking no action against such medical colleges.

The NMC assessment of faculty promotions appears to be improper. This is evident from the fact that the NMC inspectors rely on the faculty or the college, who provide the proof of publication and indexing. The inspectors are less aware of the misleading journals that potentially display false indexing in PubMed. Moreover, the NMC inspection of the college is accomplished by fewer inspectors, making it difficult for them to evaluate hundreds of faculty members and the credibility of their positions and promotions. False publications, plagiarized articles, and ghostwritten publications are examples of faculty misconduct that the NMC should detect and penalize. This problem can be addressed by peer evaluation, where the NMC can take the help of subject experts to evaluate the authenticity of published papers based on which the faculty claimed the promotion.

The NMC must conduct uninformed and sudden inspections throughout the year to verify and confirm the college's claims regarding patients, faculty, and others. The NMC should punish colleges that fail to comply with the regulations, making sure these punishments do not affect the students.

NMC must publish faculty remunerations or salaries. The faculty in many Indian medical institutions are unstable for many reasons, salary being one of them. Since there is no uniformity in remunerations, faculty looking for higher pay move to other colleges for hikes. This, in turn, affects the students by exposing them to different teachers and instability.

The NMC must evaluate teacher appointments to improve faculty retention in colleges and universities. This can be done by regularizing salaries and providing provident fund facilities. The medical college teacher recruitments currently offer consolidated pay, which affects teachers' mindsets and results in frequent transfers and uncertainties. This further affects curriculum delivery and the overall standards of medical students.

Although medical colleges are affiliated with and come under the purview of a medical university, it appears that the university acts as a mute spectator rather than taking responsibility for ensuring everything is in order in the medical colleges. Interestingly, the university is focused on conducting the admissions and examinations and releasing the results.

Besides MBBS and medical PG courses, medical colleges run para-medical courses like the Bachelor of Science (B.Sc) in medical laboratory technology (MLT), anesthesia technology, and operation theatre technology. Strangely, the university recognizes these courses, despite being run in the same infrastructure utilized for the MBBS and PG courses. Although the university conducts inspections and identifies that the college has no separate campus, infrastructure, and facilities to run these courses, they turn a blind eye to this reality and grant approval. Such callous nature of the university administration results in the production of untrained or inadequately trained paramedical persons which again affects the function of the hospitals and patient management.

The increasing number of medical colleges and courses overburdens universities. Granting autonomy to medical colleges is a possible solution.

Strangely, the NMC has been approving medical colleges before the construction of the buildings. The colleges and hostels are run in rented facilities and temporary establishments. Students pursuing MBBS in such colleges suffer from severe physical and mental trauma affecting their education and careers. (Figure 2)

The GoI and NMC should make sure that hospitals and medical facilities operate as non-profit entities. Strengthening healthcare institutions requires more resources, increased oversight for corruption, and ethical medical practice [6]. Changes must be implemented if the regulatory body supports raising healthcare standards in India and values ME's future.

It is recommended that NMC carry out sporadic, ill-informed, and unexpected inspections; offer pay scales rather than consolidated pay; grant autonomy; solicit regular input from students, faculty, and administration;

and penalize noncompliant colleges by reducing admissions or removing their recognition.

By putting the recommendations into practice, medical colleges will operate more smoothly, maintain faculty stability as fewer people transfer, take on more responsibility, detect shortcomings, make necessary adjustments without worrying about losing seats or recognition, and guarantee improved EE. (Figure 3)

Figure 2. Medical college functioning in a temporary establishment

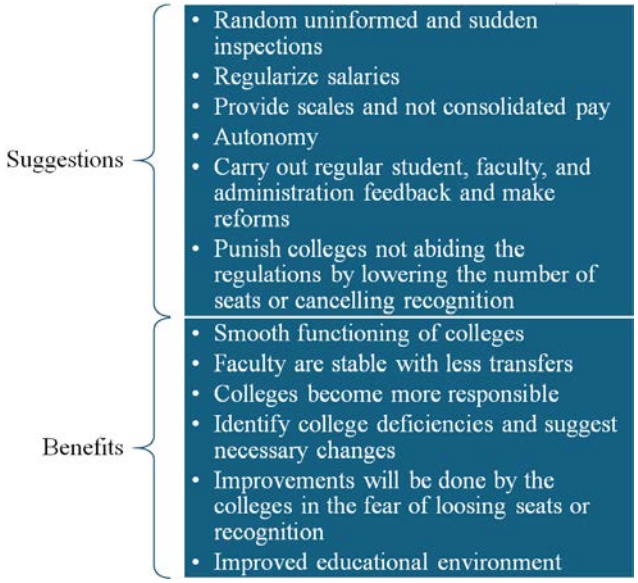

Figure 3. Suggestions and benefits to improve medical education quality

3. The Teacher Appointments

Like any other educational establishment, the NMC prescribes specific requirements for faculty appointments. Individuals with MBBS, the Doctor of Medicine (MD), and other higher degrees/qualifications are recruited as medical teachers. However, NMC allows the recruitment of non-medical (NM) persons with a Master of Science (M.Sc.), and Doctor of Philosophy (Ph.D.) in medical sciences, particularly in the pre-clinical and paraclinical or non-clinical subjects like anatomy, biochemistry, microbiology, physiology, and pharmacology as medical teachers. It is unclear if NM teachers were appointed to fill the deficiencies due to the unavailability of MD-qualified persons or if it was intended to utilize the NM teachers as subject experts with research aptitude. Interestingly, the deficiency of MD teachers in these subjects was due to the lack of interest among MBBS graduates. Further, this disinterest among MBBS graduates can also be attributed to the thought process that forces the majority of them to try for admission into clinical subjects that are more lucrative.

Despite the increase in medical colleges and PG seats, most MBBS graduates try for clinical subjects before settling for non-clinical subjects without much interest. Moreover, the increased MBBS and PG seats compromised the quality of students admitted into these courses. Although some MBBS graduates are willing to pursue non-clinical MD degrees, a majority of them do so after much compromise leaving them disinterested in their professional endeavors. These professors should now be viewed as unstable and possibly damaging to learners due to their careless attitudes.

NMC should prioritize teacher recruitment and ensure that teachers with the right mindset are preferred over others. Constant evaluation of medical teachers about their academic endeavors, like pursuing individual and collaborative research, publishing scientific papers, and motivating and creating research interest in MBBS and MD trainees is required.

4. The Student Admissions

Admission into the MBBS course in India currently happens through a nationwide test called National Eligibility-cum Entrance Test (NEET). NEET was introduced in 2016, to replace state-wise entrance examinations for MBBS admissions. MBBS admissions follow caste criteria and reservations like any other educational system in India. This led to the admission of MBBS aspirants despite their low scores. Further, some aspirants are required to score higher marks to make the cut and obtain admission. This admission system steals many MBBS aspirants of their seats despite scoring better.

Furthermore, 15% of medical admissions are filled by students who pay huge donations. This method of admission will not guarantee the best students. The major drawback of the student admissions into MBBS in India is the entrance test-based selection which does not assess the students' attitudes.

In India MBBS as a career is generally chosen by the parents, who consider children pursuing MBBS would boost their social and financial status. This scenario is more common in families with wards who either completed or were admitted to MBBS. Only a small percentage of students have the right attitudes and are motivated to become doctors. Among these, only a few are inclined to serve people leaving others who pursue the degree for financial benefits.

A huge revamp in selecting students for admission into the MBBS degree is required. It is recommended that students be assessed based on the mindsets that influenced their career choices. Filtering out students who enter this profession for financial gains, societal benefits, and parental pressure is essential to produce more responsible doctors. In India, many medical doctors have been practicing medicine with the least concern about patients and are more inclined to get financial benefits. Many hospitals run syndicates by procuring capital benefits and partnering with pharmacy and diagnostic laboratories allowing all the parties involved in patient management to

benefit, thereby burdening patients.

5. The Course Curriculum

The NMC recently amended the curriculum desiring to produce efficient and skilled doctors called Indian Medical Graduates (IMGs). The new competency-based medical education (CBME) was intended to instill practical skills among IMGs. However, NMC had utterly failed to monitor the implementation of CBME. The student-centered exercises like the small-group discussions are rarely being conducted. Furthermore, practical elements like attitude, ethics, and communication (AETCOM) are being taught concentrating on the theoretical aspects rather than making it a functional exercise. This is majorly attributed to the callous nature of the institute's academic administration and the attitudes of medical teachers. It is important to understand that merely a modified curriculum cannot guarantee the quality of ME. It requires the sincere efforts of college management and dedicated teachers to improve the standards of ME. The drawbacks that contributed to a less successful implementation of CBME included a high faculty-to-student ratio, and infrastructural deficits [7].

Although faculty perceive CBME as an effective means to increase ME standards, they consider its implementation unfriendly. Strangely, faculty who received a CBME-based curriculum implementation support program (CISP) had similar reservations to those who did not receive CISP [8]. Successful implementation of CBME depends on faculty time commitment and logistical adequacies [9].

Another report from India that assessed faculty perceptions of CBME revealed that the faculty believes the unavailability of enough faculty members is the greatest hindrance [10].

The medical school curriculum in the United States of America (USA) consists of two phases, wherein phase 1 involves two years of basic sciences followed by two years of phase 2 meant for clinical sciences training. Further, these two phases are integrated in horizontal and vertical ways ensuring basic sciences training is integrated with clinical subjects and clinical training is integrated with basic sciences. This enables students to comprehend the knowledge of basic sciences concerning clinical sciences, thereby allowing them to acquire skills to treat and manage patients. A sixth degree of integrating the ME curriculum was recently suggested as an upgrade to improve the ME standards in the USA. This model incorporates six concepts for integrated curriculum including interdisciplinary, timing and sequencing, instruction and assessment, incorporation of basic and clinical sciences, knowledge and skills-based competency progression, and graduated responsibilities in patient care. The interdisciplinary concept allows the integration of basic subjects with clinical subjects enabling students to organize the knowledge gained through the process. Further, this allows students to find the relevance of the knowledge and skills obtained in basic and clinical sciences, promoting retention of the information and applying it during real-life situations [11].

Integration of any kind is not implemented sincerely in Indian medical institutions. This has resulted in students' failure to develop an improved understanding of prevailing public health threats like tuberculosis and hepatitis viruses, among others.

The developments in ME in countries like the USA indicate that the Indian ME requires an enhanced curriculum to produce skilled IMGs. Achieving this is no cakewalk unless a concerted effort to address multiple influencing factors as discussed in this communication.

6. The Clinical Training

According to the old NMC regulation, a medical college hospital must have four patients visiting the outpatient department (OPD) per admitted student (student-to-patient ratio of 1:4) with a doubling of this number/ratio by the time the student enters the final year of study [12].

The establishment of medical colleges in rural areas contributed to improved access to health facilities. Despite this, probably due to a lack of proper awareness, and misconceptions, people fail to seek medical attention. This has forced college management to arrange transportation and offer free consultations with physicians. Furthermore, poor people and those who are economically weak are provided free and discounted treatment by the college management and government with schemes like Arogya Sri. This ensured the availability of patients in the hospital. Medical students who pass first-year MBBS are posted in the hospital and undergo mandatory rotatory clinical postings. Many medical students intentionally skip these postings due to several factors like overcrowding, and lack of monitoring.

Students' transition from pre- and paraclinical training to clinical training is perceived as extremely stressful and challenging. The reasons for this perception include workload, knowledge gap, inadequacy, incompetence, and professional socialization. Communicating with peers and seniors has been instrumental in reducing the anxiety and stress associated with clinical training [13].

Students entering the clinical training phase should develop personal, social, and professional attributes that prepare them to become future doctors. Students are motivated by the patient’s perception of them as student doctors. Students are required to develop work-life balance, adapt to hospital environments, and acquire clinical competencies. They should give away the clinician-centered attitude, create a patient-centered attitude, and become efficient physicians [14].

Emergency medicine (EM) deals with patients who present to the hospital with visible and invisible injuries requiring immediate treatment and management that minimizes morbidity and mortality. Creating supportive learning environments and devising strategies to lower distress among learners posted in departments like EM are important in reducing student stress [15].

Inadequate clinical training of undergraduate (UG) and PG students in many medical colleges significantly impacts patient care and learning experiences. When students aren't well-prepared, it can reduce the quality of care offered to patients, which may, in turn, discourage patients from seeking care at these institutions. This decline in patient numbers can further reduce students'

clinical exposure, creating a negative cycle.

Some solutions to this issue include enhanced hands-on practical training opportunities under supervision to ensure students develop the skills needed for high-quality patient care. Structured mentorship programs by assigning experienced and interested doctors as mentors to guide students through real-life cases and providing feedback may be beneficial. Simulation-based learning through incorporating advanced simulation tools can prepare students for clinical scenarios before interacting with real patients.

Furthermore, collaboration with local hospitals can help medical colleges establish partnerships with public and private hospitals with higher patient volumes, allowing students to gain clinical exposure.

Regular evaluations and feedback from faculty can ensure that students meet essential competencies, improving care quality and student confidence. Enhancing student clinical training could improve patient care and build trust with the community. This would encourage more patients to visit these facilities and contribute to a more robust learning environment.

7. The Teacher Attitudes

Almost 50 years ago, it was suggested that the improvement in ME depends on the teacher's attitude toward teaching and their genuine concern about student learning [16]. Being a medical teacher is an extremely demanding and complex job. Medical teachers should understand that they are not only information providers to students but also role models guiding them through their academic pursuits [17].

Medical teachers play different roles including clinical teaching, role modeling, lecturing, curriculum planning, curriculum assessment, and mentoring. Students regard clinical teachers, role models, and lecturers more highly than those who play other listed roles [18].

A good medical teacher must have better communication skills. Additionally, students had positive opinions about teachers who are good planners, and examiners, and have respect for learners [19]. According to students, essential qualities in a medical teacher include subject expertise, understanding students, sharing life experiences, and self-sacrifice among others [20].

In the opinion of medical instructors, among the various attributes mentioned above, excitement was deemed crucial [21]. Teachers with non-verbal communication skills like those who keep eye contact and make facial, and hand gestures find more acceptance among students than strict teachers who judge them [22].

Teachers displaying smiles and enthusiasm and encouraging student participation in class with non-verbal signs like thumbs-up create a favorable student learning environment [23,24,25].

Medical teachers should pursue research activities that enable them to update their knowledge. Furthermore, faculties have recently been depending on the PowerPoint presentations provided by the book publishers, making their class preparation limited to a single textbook. This kind of classroom teaching will not help ignite enthusiasm among students and cause disinterest in the lectures.

Medical teachers appear extremely complacent, unworried about students' future, and only concentrate on passing the years and earning promotions. Moreover, their orientation is examination-centric rather than propelling students to acquire sufficient knowledge and become better doctors. This teacher's attitude can severely affect the students during training and career afterward [26].

Some qualified graduates are only listed on the paper but do not participate in teaching activities. This is one of the several reasons why curriculum delivery is affected. Additionally, this teacher's attitude deprives other qualified applicants of their jobs. NMC must identify and punish all the parties involved in practices compromising ME and EE. (Figure 4)

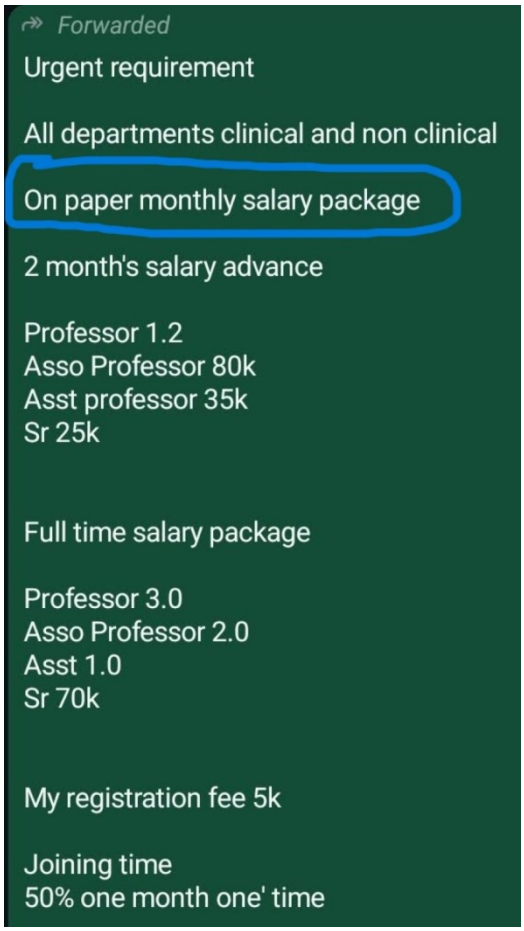

Figure 4. An advertisement revealing on paper faculty recruitment

8. The Administrator/Management Attitudes

The administrators' attitudes are crucial to planning and implementing strategies to improve EE and enable students to develop into competent professionals [27]. A recent study from Korea assessed the administrators of medical schools and identified that the administrative personnel have high job satisfaction. However, the study noted some concerns plaguing administrators like organizational support, work overload, faculty issues, and communication gaps. Further, this study proposed administrators implement programs like improved staff treatment, better resource allocation, training, and creating communication channels to build better EE [28].

The medical school dean significantly influences the quality of ME and EE. Deans with a vision and collaborative attitudes often assist the medical school growth. Further deans must be well qualified to show direction to the faculty members for an institution to achieve its vision. A dean is a leader who should work without egos and extract the best from others to benefit the institution [29].

A dean functions as a leader of leaders. To become a dean a person must have leadership qualities including good communication skills. The appointing authorities must ensure the presence of the aforementioned qualities while selecting a candidate for the dean post [30].

There is a debate about who should become a dean, whether a researcher, an academician, or a clinician. Irrespective of the subject specialty, a dean should possess professional leadership skills, and have management, diplomatic, and interpersonal skills [31].

The dean should be trained in leadership, financial, and resource management. Furthermore, the dean must have medical expertise, and competencies like health professional training, and organizational management [32].

According to the management chair, the dean must have a strategic vision, and integrity in words and deeds, explain the reasons for their decisions, give feedback, admit flaws, and be open to discussing sensitive topics [33].

We currently notice college administrators functioning as puppets in the hands of management. Such behaviors create a wrong image of the administrators in the eyes of students resulting in disrespect.

9. The Student Attitudes

The scientific advancements achieved in medicine over the past century significantly influence the professional training of students. The developments in diagnosis and therapy negatively influenced bedside clinical skills. Increased patient loads and administrative burdens on physicians hamper patient-doctor relationships. Today's trainee medical students are exposed to physicians treating their patients as mere objects and not as humans, showing the least sensitivity towards them. Bedside teaching has been affected due to the disinterest among students, teachers, and sometimes both [34].

NMC recommends horizontal and vertical integration of subjects to teach MBBS students. The horizontal integration infers teaching a topic of interest (For example: tuberculosis for second MBBS students integrating microbiology, pathology, and pharmacology) integrating all the subjects of MBBS in a particular phase, like subjects in MBBS second year. Vertical integration refers to integrating subjects in different phases of MBBS like first, second, third, and final years to teach a particular topic of interest (For example: diabetes for final MBBS students integrating biochemistry, pathology, medicine, and community medicine). Recently, it was revealed that approximately 50% of students were not interested in vertical teaching [35]. This indicates the student attitude, failing to understand the importance of vertical integration which is vital to capture the clinical aspects of a topic that helps them acquire skills to diagnose, treat, and manage patients. Furthermore, this student attitude confirms their exam-oriented nature preferring to concentrate on the subjects in the current phase.

10. The Social Influences

The impact of social behavior on rising medical professionals has largely been neglected, especially in India and similar countries. Understanding the influence of medical professionals' behavior on students' attitudes in an institution is extremely important [36]. According to the student's perception, a surgeon with an appropriate attitude, interaction skills, and good teaching skills creates a better environment enabling them to learn efficiently in an operation theatre [37].

Teaching is an important profession within the ME system. Teachers must ensure they behave in a way that allows students to craft their professional identity. Social interactions help students identify role models and mentors enabling them to acquire knowledge and skills to think, act, and feel like a physician. The ME should emphasize providing greater logic and clarity of educational activities, professionalism, and professional behavior to budding physicians [38].

Morning reports have been conceived as essential elements ensuring socializing and communication platforms for students and teachers [39]. Morning reports are a congregation of doctors and learners involved in patient care discussing their progress. They have been identified as discussion forums that facilitate formal and informal learning [40].

Developing emotional harmony as a to-be physician helps students build hope for their patients and retain a passion for their profession. These qualities are even more essential for doctors stationed in intensive care units (ICUs) where seriously ill patients undergo treatment [41].

11. Research orientation

Research interest among UG students is influenced by the lack of motivation to pursue research activities and the existing EE in the institutions. Students' research interest generally depends on the availability of influencing faculty members and self-motivation. Barriers to research include lack of interest and awareness, time, financial limitations, and patient-related aspects [42].

Low confidence, negative attitude, and lack of awareness about the research methods significantly influence scientific research practice among undergraduates. Conducting education and training programs could improve students' attitudes toward research activities [43].

Peers who place more emphasis on exams than on the value of developing one's knowledge and skills have had a significant impact on medical students in India. Although, in recent times the students have been showing some interest in doing research, a majority of them are doing so to satisfy the requirement of the United States Medical Licentiate Examination (USMLE) or other factors and not by self-interest. The Indian Council for Medical Research (ICMR) invites annual scholarship-based short-term student (STS) projects to encourage UGs to pursue research. The unavailability of motivating and guiding

faculties may be a potential reason for students' disinterest in pursuing ICMR-STS. Further, it may be noted that the institution also should support student research by granting financial aid. Moreover, research inclination may be negatively influenced by overcrowding of students resulting in severe competition in research and other extracurricular activities forcing many of them to back off.

The greatest barrier to research inclination among UG students is attributed to the lack of role models in the form of peers and teachers. Over the years, it affected the mindsets of medical students against pursuing research. Some self-motivated students from different medical institutions have been taking the initiative to develop a research mindset among UGs [44].

The regulatory authority, management, students, and faculty must understand that research is an integral part of ME and indispensable during education and later in a professional career [45].

12. Revolution

The repercussions of NMC's decisions to grant admissions to medical colleges with serious infrastructural and faculty deficiencies have emerged recently. This is evident in student protests in a government medical college in Kumuram Bheem Asifabad, Telangana, India. This medical college was established and granted admission in 2023 with a 100-student intake. The government assured students of improved faculty and infrastructure from the inception, highlighting the deficiencies that existed even before the functioning of the college. However, it was revealed that the faculty and other deficiencies were not addressed, instigating students to protest. A major concern raised by students during their agitation was the non-availability of qualified and experienced teachers and classes being frequently canceled or taken by inexperienced interns and senior residents. The second-year students designated to undergo rotatory clinical department postings claimed that some departments, like obstetrics and gynecology, dermatology, and ophthalmology, have not yet been established. Furthermore, students complained about the lack of supply of cadavers essential to learning dissection, inadequate lab equipment, and poor maintenance of classrooms and restrooms [46]. (Figure 5)

Figure 5. Medical students protesting against faculty and infrastructural deficiencies [46]

Some of the issues requiring immediate GoI and NMC actions include colleges functioning in sheds, warehouses, and temporary establishments; faculty shortages; access to patients and surgeries; faculty attendance manipulated using fake fingerprints; and on-paper faculty recruitments, among several other issues [47].

The nation's declining ME quality has raised concerns. Twenty-five years ago, parents and children who wanted to become engineers or doctors were given special recognition and respect in society. Things have radically altered in the modern era, especially for engineering graduates. It appears that ME is heading in the same way, which is alarming and will affect the state of public health in the country.

13. Suggested Reforms

Indian education system appears to be flawed concentrating more on the theoretical aspects and ignoring practical applications. Student admission to MBBS follows school education, limiting their preparedness to pursue ME and the medical profession. In the USA, for admission to medicine, students must complete a four-year B.Sc honors degree. Furthermore, admission requirements include an admission test, proof of voluntary social work, medical apprenticeship, and interviews. This allows a comprehensive evaluation of students taking medical admission compared to what happens in India. GoI must immediately stop approving medical colleges and devise strategies to improve the standards in existing colleges. The entry process must be reviewed to ensure the admission of deserving candidates.

14. Conclusions

The available evidence suggests that the GoI and the NMC initiatives to increase medical colleges and student admissions are affecting the quality of ME. The GoI and the NMC should understand that quality is paramount in ME and in producing medical doctors. A mere increase in medical institutions and boosting MBBS and PG admissions will not guarantee the quality of healthcare intended to be provided to people. India has already been experiencing detrimental effects when quantity was perceived as a parameter as evidenced by the increase in graduates with an engineering degree. Similar consequences will ensue with MBBS and MD degree holders if quantity is preferred over quality. There is evidence suggesting non-uniformity in the functioning of medical colleges. Lack of monitoring and complacency of all the parties involved in ME appears to be the root cause for the current status. A multi-dimensional approach focusing on the factors that potentially influence ME may contribute to the enhanced quality of IMGs.

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