

Assessment of Leadership and Perceptions Regarding the Importance of Leadership among First year MBBS Students in Navi Mumbai: A Cross-Sectional Study

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ABSTRACT

Background: Leadership is increasingly recognized as a core competency for physicians which extends beyond clinical care, including team coordination, informed decision-making, and contribution to health system performance. As per NMC guidelines, the competency-based medical education recognizes leadership as an important role of the Indian Medical Graduate. In spite of the guideline's, limited data is available on how prepared is the undergraduate medical student to take Leadership roles

Methods: A cross-sectional study was conducted among first-year MBBS students at a private medical college in Navi Mumbai. Universal sampling was employed. Participants completed a pre validated, self-administered online questionnaire that has leadership awareness, perceived leadership attributes, understanding of Indian Medical Graduate roles, self-perceived preparedness for leadership responsibilities, and attitudes toward leadership training in undergraduate medical education. Data was entered into Microsoft Excel, and descriptive statistics

were used to summarize the variables as frequencies and percentages, which were presented in tables and charts.

Results: Out of 50 eligible students, 49 participated. Majority of the students were female 71.4%, and most of them were from urban backgrounds (96%). Majority (94%) of them considered leadership skills were essential for medical graduates. Leadership was most frequently understood as the ability to motivate individuals toward a common goal (91.8%). While fewer than half of the students (44.9%) felt somewhat prepared to assume leadership roles, 89.8% felt that leadership training was very important and to be included in the undergraduate curriculum. Teamwork, accountability, decision-making, and conflict management were commonly identified as core leadership attributes.

Conclusion: First-year MBBS students understand the importance of leadership concepts and recognize the relevance of leadership training in medical education. However, their readiness to undertake leadership roles remains limited. These findings show the need to incorporate structured leadership competency in undergraduate competency-based medical

education curriculum to perform their roles of Indian Medical Graduates as per NMC guidelines.

Keywords: Medical leadership, Undergraduate medical education, Indian Medical Graduate, Competency-based curriculum, Leadership training.

INTRODUCTION

Leadership is important but often overlooked. Indian medical graduates receive training in clinical knowledge and technical skills, but developing leadership qualities is very important to meet the increasing demands of a complex healthcare system. Medical graduates with leadership skills can effectively manage teams and resources, advocate for improvements in healthcare infrastructure, and support policy changes at both local and national levels. Successful public health campaigns, such as vaccination drives and TB control, need leaders who can mobilize communities, work with government agencies, and inspire trust and compliance among the public. Strong leadership allows doctors to work together with nurses, pharmacists, technologists, and administrators to enhance patient-centered care and outcomes.

Leadership has been defined as the ability to influence individuals or groups toward achieving shared goals while navigating change and complexity within organizational settings. In the healthcare, physicians are increasingly expected to assume leadership roles that extend beyond clinical knowledge to include team activities & coordination, quality improvement, and system-level stewardship^{1,2}.

Traditionally, leadership development has received less importance in undergraduate medical education, with greater focus placed on clinical competence and academic achievement³. Consequently, Medical Education worldwide now advocates early integration of leadership training into medical curriculum⁴.

In India, the introduction of competency-based medical education has formally

recognized the physician's role as a "leader and member of the healthcare team," along with the roles such as clinician, professional, communicator, lifelong learner, critical thinker and researcher^{5, 6}. The Attitude, Ethics, and Communication (AETCOM) module further reinforces leadership-related competencies, including teamwork, accountability, and ethical decision-making⁷. Despite these curricular reforms, there is research on assessing leadership awareness, preparedness, and perceptions among undergraduate medical students, particularly in the early years of training⁸. Understanding student's baseline perceptions is essential for creating effective leadership development interventions. Therefore, this study aimed to assess leadership, identify demographic and educational factors influencing leadership skills development and examine perceptions regarding the importance of leadership among first-year MBBS students in Navi Mumbai.

MATERIALS & METHODS

Study Design and Setting

A cross-sectional observational study was conducted at a Private Medical college located in Navi Mumbai, Maharashtra, India.

Study Participants

First-year MBBS students who had completed the Foundation Course were eligible to participate.

Sample Size and Sampling Technique

Universal sampling was employed. Of 50 enrolled students, 49 consented and were present at the time of data collection.

Inclusion Criteria

- First-year MBBS students
- Willingness to provide informed consent
- Presence during data collection

Exclusion Criteria

- Students unwilling to participate
- Students absent during data collection

Data Collection Procedure

A cross-sectional study was conducted among first year MBBS students of Private Medical College, Navi Mumbai. The questionnaire consists of sections on various aspects like General information –age, gender, presence of a physician in family, area of residence of parents (city or village), board of pre -university schooling and language of instruction at school and current place of stay. Knowledge about leadership definition, Leadership attributes, Roles of an Indian medical graduate, need for leadership training in undergraduate medical education; students were asked if introducing leadership training into their medical curriculum would be important or unnecessary.

Students were assembled in a lecture hall and the purpose of the study was explained. The forms were then distributed to the students who gave consent through an informed consent to participate in the study. Confidentiality of the students was maintained and no individual identification was included in the questionnaire.

Statistical Analysis

Data was entered into Microsoft Excel. Descriptive statistical analysis was performed to summarize the study variables. The study variables were expressed as frequencies and percentages. These were presented using tables and charts wherever appropriate for interpretation.

Ethical Considerations

Ethical approval was obtained from the Institutional Ethics Committee. Participation was voluntary, and no personal identifiers

were collected. Anonymity and confidentiality were strictly maintained.

RESULT

A cross-sectional study was conducted among MBBS students who had completed the Foundation Course to assess the current level of leadership competencies, to identify demographic and educational factors influencing leadership skills development, to explore the perceived importance of leadership training among medical graduates.

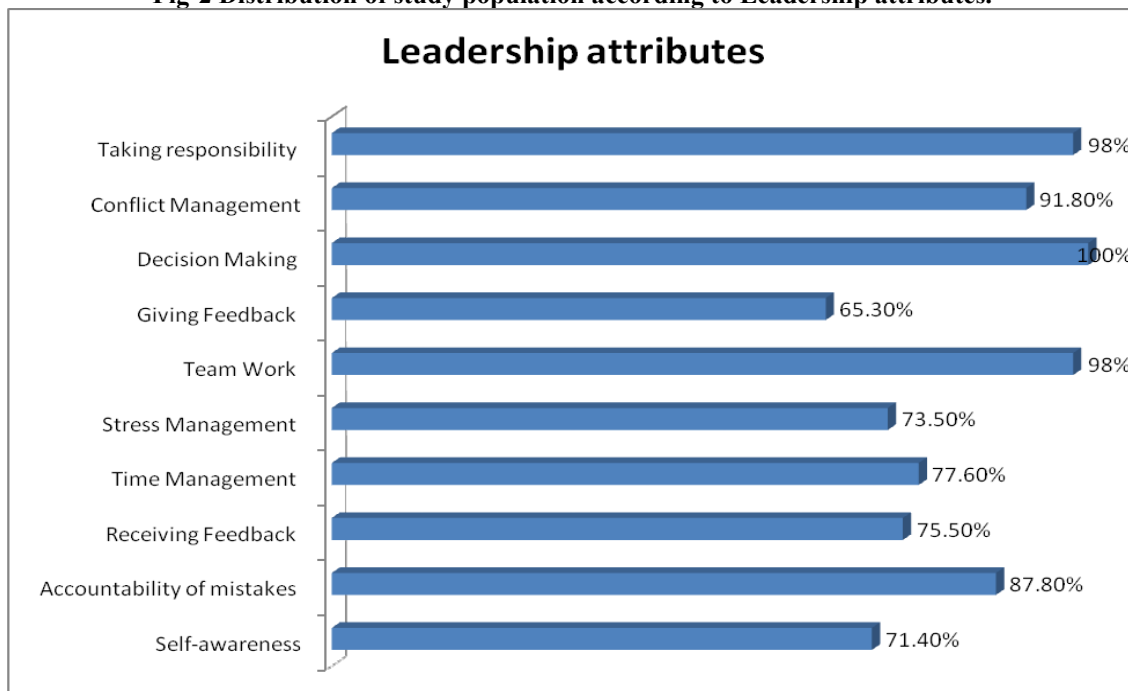
A total of 49 students participated in the study. The age of study population ranges from 17yrs to 20yrs with majority belong to 18yrs i.e.29 (59%). Most of the students are females i.e. 35(71.4%). Only 2 students come from rural areas & remaining 47 (96%) belong to urban areas. Majority of the study belong to nuclear family 36 (73.5%). Students are equally distributed regarding Board of School but with slight majority from State board (36.7%) then ICSE (32.7%) and CBSE (30.6%).

Majority of the students 46 (94%) thought that leadership skills were necessary. About 10 (20%) meant Leadership definition means all these to Orient a group of people to be productive, inspire a group of people to achieve a common goal and make them adhere to a bigger picture, manage people and problems in any way, Being the example others will follow, and take the lead and find solutions to every problem yourself as depicted in Fig -1. Majority of the students thought that Leadership by definition means Inspire a group of people to achieve a common goal and make them adhere to a bigger picture i.e. 45(91.8%).

Fig-1 Distribution of study population according to Leadership definition



Fig-2 Distribution of study population according to Leadership attributes.



Most of the students perceived that these are the attributes of Leadership as shown in fig - 2. All students 49 (100%) thought Decision Making as the attribute of leadership, then Team Work 48 (98%), Taking responsibility 48 (98%), Conflict Management 45 (91.8%), Accountability of mistakes 43 (87.8%), Time Management 38 (77.6%), Receiving Feedback 37 (75.5%), Stress Management 36 (73.5%), Self-awareness 35 (71.4%) and Giving Feedback 32 (65.3%).

Most of the students thought Leadership should be implemented in Company, Government administration, Hospital, University and School. Students were under impression that Leadership is important and implemented by all i.e. Executive officers, Heads of departments, Teachers, Professors, Interns, Residents, Students and Nurses. Students opined that Leadership skills in a physician will benefit to more to the team efficiency than to the patients.

After the Foundation course MBBS students understood that the Role of being Indian Medical Graduate is not just being Clinician

but also leader, communicator, lifelong learner, professional, critical thinker, and researcher.

Table -1 Distribution of study population according to perceptions about for leadership roles preparedness & leadership training importance in medical education.

| Leadership roles preparedness | Frequency (%) |
|--------------------------------|---------------|
| a. Very well prepared | 9(18.4%) |
| b. Somewhat prepared | 22(44.9%) |
| c. Neutral | 13(26.5%) |
| d. Somewhat unprepared | 5(10.2%) |
| Leadership training Importance | |
| a. Extremely important | 29(59.2%) |
| b. Very important | 15(30.6%) |
| c. Moderately important | 4(8.2%) |
| d. Slightly important | 1(2.0%) |

Table-1 shows the distribution of study population according to perceptions about how medical graduates are currently prepared for leadership roles and how important is leadership training in medical education. After Foundation course 22(44.9%) students were under impression that they were somewhat prepared for Leadership roles. Most of the Students understood the importance of Leadership training is very important i.e. 44 (89.8%).

DISCUSSION

The study aimed to assess the medical students regarding leadership awareness and perceptions among first-year MBBS students in the early phase of competency-based medical education. The study was done among first year MBBS students after the Foundation course who has understanding of the roles of Indian Medical Graduate.

Majority of the students 46 (94%) think that leadership skills were necessary. The high proportion of students recognizing leadership as essential aligns with prior studies demonstrating increasing awareness of non-clinical competencies among medical undergraduates^{2, 8}. In a study conducted by Ghita Hjiej et al among undergraduate medical students 44% of the participants have an idea about leadership whereas 29% were completely ignorant of its concept⁹.

About 10 (20%) perceived that Leadership definition means to orient a group of people to be productive, inspire a group of people to achieve a common goal and make them adhere to a bigger picture, manage people and problems in any way, being the example others will follow, and take the lead and find solutions to every problem yourself. Majority of the students 45(91.8%) perceived that Leadership by definition means to inspire a group of people to achieve a common goal and make them adhere to a bigger picture. In a study conducted by Ghita Hjiej et al among undergraduate medical students thought that Leadership by definition means to orient a group of people to be productive 126 (47.2%), inspire a group of people to achieve a common goal and make them adhere to a bigger picture 174 (65.2%), manage people and problems in any way 37 (13.9%), being the example others will follow 63 (23.6%) & take the lead and find solutions to every problem yourself 85 (31.8%)⁹.

Most of the students perceived that these are the attributes of Leadership i.e. Self-awareness, Recognizing and taking accountability of mistakes, Receiving Feedback, Time Management, Stress Management, Team Work, Giving Feedback, Decision Making, Taking responsibility and Conflict Management. Most of the students thought Leadership should be implemented in Company,

Government administration, Hospital, University and School. The majority of our participants understood the importance of leadership everywhere in all the institutions. According to Ghita Hjiej et al study 93% of the participants believed that companies are the main places where leadership can be implemented, followed by hospitals (82%), and government administrations (78%) and only 64% thought that leadership can also be applied at school⁹. The value of implementing leadership in educational institutions is now widely established and has to be more commonly visible to be endorsed by these institutions users such as medical students.

Students were under impression that Leadership can be applied by all i.e. Executive officers, Heads of departments, Teachers, Professors, Interns, Residents, Students and Nurses. Most participants felt that leadership mainly concerned people with the status of administrative manager or having the attributes of seniors in a clinical team, such as the professor. But only few of them also associated leadership with “lower” statuses in the hierarchical scale such as the student or the nurse, which underlines a deep ignorance of the leadership attributes and uses. Participants of Ghita Hjiej et al study were under opinion that leadership was an asset of executive officers or head departments (89%), followed by teachers and professors (76%), students and nurses by only 48% and 46% of our participants, respectively. Being a physician with leadership skills was believed to be beneficial mainly for the team efficiency (87.6%), and for a better relationship with colleagues (75%). Only 34.5% believed that leadership skills of the physician would be beneficial for the patient⁹.

Students opined that Leadership skills in a physician will benefit to more to the team efficiency, than to the patients. In a study conducted by Ghita Hjiej et al among undergraduate medical students 52% of respondents thought that leadership is not to be expected from medical students, and

65% did not know that leadership in healthcare would benefit the patient⁹.

After the Foundation course MBBS students understood the Role of being Indian Medical Graduate is not just being Clinician but leader, communicator, lifelong learner, professional, critical thinker and researcher. After Foundation course students were under impression that they were somewhat prepared for Leadership roles. Most of the Students understood the importance of Leadership training is very important i.e. 44 (89.8%). 93% of the participants in a study conducted by Ghita Hjiej et al among undergraduate medical students found it important to have leadership training included in their curriculum⁹.

Although students displayed strong conceptual understanding of leadership and its attributes, only a minority felt well prepared for leadership roles. This gap between awareness and preparedness has been reported in both Indian and international contexts, suggesting that theoretical exposure alone may be insufficient for leadership skill acquisition^{3, 4}. Experiential learning, mentorship, and structured training modules have been shown to significantly improve leadership competence and confidence among medical students^{10, 11}.

The finding that students perceived leadership skills as benefiting team efficiency more than direct patient outcomes reflects a limited understanding of the indirect yet critical impact of leadership on patient safety and quality of care. Effective clinical leadership improves communication, reduces medical errors, and enhances patient satisfaction. In a study conducted by Senthil Kumar et al 82% of the respondents felt that leadership skills were of similar importance to clinical knowledge and skills for being an exceptional physician, while 7% felt leadership skills were more important¹².

The strong endorsement for leadership training underscores the readiness of students to engage in formal leadership development initiatives. Integrating

leadership training in Competency based Medical Education along with AETCOM and clinical postings may bridge the preparedness gap and support holistic professional development.

CONCLUSION

The study showed that MBBS students clearly understood the importance of leadership skills in medical education. Most of the students felt that leadership is necessary for an Indian Medical Graduate. Majority of the students perceived that Leadership by definition means to inspire a group of people to achieve a common goal and make them adhere to a bigger picture. The students perceived that these are the attributes of Leadership i.e. Self-awareness, Recognizing and taking accountability of mistakes, Receiving Feedback, Time Management, Stress Management, Team Work, Giving Feedback, Decision Making, Taking responsibility and Conflict Management.

They also believed that leadership is needed in hospitals, educational institutions, government sectors, and other organizations. According to them, leadership should not be limited to senior authorities but practiced by doctors, teachers, residents, interns, nurses, and even students.

After completing the Foundation Course, students understood that the role of an Indian Medical Graduate is not only to be a clinician but also a leader, communicator, professional, lifelong learner, researcher, and critical thinker. However, less than half of the students felt that they were somewhat prepared for leadership roles. Even though most of them said leadership training is very important, they may need more structured and practical training to feel confident in taking up leadership responsibilities.

In conclusion, the study shows that students value leadership skills and recognize their importance in medical practice. There is a need to strengthen leadership training in the medical curriculum so that future doctors are better prepared to lead healthcare teams

and contribute effectively to the health system.

Limitations

This study has limited generalizability as it was conducted in a single institution, included a small sample size, and relied on self-reported perceptions that may be influenced by social desirability bias.

Declaration by Authors

Ethical Approval: Approved

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