

## Original Research Article

# Evaluation of Educational & Social Environment among Undergraduate Medical Students

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### ABSTRACT

**Background:** A healthy and favorable educational and social environment in any institution is always a boon for overall growth of the institute and its students. For this, globally recognized DREEM questionnaire as quantitative analysis tool and Focused Group Discussion(FGD) as qualitative analysis tools are used to evaluate educational and social environment of undergraduate MBBS students.

**Material and Methods:** The present descriptive study was conducted by using DREEM questionnaire and Focused Group Discussion among the undergraduate MBBS students and faculty of Subharti Medical College, Meerut (UP).

**Results:** According to the Global educational environment index by DREEM analysis for undergraduate students fell into the third category across all domains (Student Perception of Learning, Student Perception of Teachers, Student Academic Self-Perception, Student Perception of Environment and Student Social Self-Perception). Total DREEM score obtained in our survey was 174.73 out of 250 (around 70%) which reflect that educational and social environment in the institute are at par with other medical colleges. Focused Group Discussion with students and teachers resulted in candid feedback related to confidence building, fruitful teaching, learning methods and feedback.

**Conclusion:** DREEM survey and FGD are very good tools for analysis of educational and social environment and can point out the lacunas and their remedies also.

**Keywords:** Educational and social environment, DREEM questionnaire, FGD.

### INTRODUCTION

A healthy educational and social environment is essential for all-round growth of undergraduate medical students. In any educational institute there is always scope for improvement in this aspect, provided that they have a regular system to identify and address the hidden drawbacks in their system. Producing competent doctors requires continuous significant efforts beyond increasing number of MBBS seats and buildings. Given the stressful nature of medical studies, the educational environment must be positive and conducive for learning. Key factors influencing the environment includes the role of teachers, academic content, assessment, learner's characteristics, proper handling of administrative issues etc.<sup>1</sup> MBBS students would not be proficient enough in term of knowledge, skills,

attitude and in communication skills if the institute is not able to establish a healthy educational and social environment. It is often observed that, many students experience anxiety, depression and could not perform up-to the full potential during their studies. This is reflected in their negative or reluctant feedback about experience during medical undergraduate period and after passing out, which can harm the reputation of the institution.

Time to time evaluation of the educational and social environment provides insights into the areas which require improvement to the management. Among various tools available to evaluate educational environment of an institute, Dundee Ready Educational Environment Measures (DREEM) is globally validated and widely used.<sup>2</sup> The DREEM consists of 50-question covering five areas: perceptions of learning, perceptions of teachers, academic

self-perceptions, perceptions of the environment and social self-perceptions.<sup>3-5</sup>

In addition, we conducted focused group discussions to include qualitative feedback from the different stakeholders of the institute. This allowed us to do an in-depth analysis of educational and social environment among the undergraduate medical students at the institute.

The findings may be helpful for the educational administrators to identify problem areas at the curricular or institutional level and implement appropriate changes. This may result in significant improvements in the learning environment and, therefore, student performance at the institute in future.<sup>6-9</sup>

## MATERIALS AND METHODS

A prospective, descriptive study was conducted at Subharti Medical College, Meerut, UP. Around 150 Undergraduate medical students and around 15 faculty members were included in the study. A prior permission was obtained from Institutional Ethics Committee to conduct the study.

Digital acknowledgement to fill the online survey form was considered as their consent to take part in the study. The original English-language version of the 50-item DREEM tool was incorporated in the Google form, and the link was shared via WhatsApp with students and faculty. Participants were requested to provide their responses within a one-week timeframe.

In DREEM survey, we received response in five sections: student's perceptions of learning, perceptions of teachers, academic self-perceptions, perceptions of the environment and social self-perceptions. Responses to each question in the DREEM survey was scored on a five-point Likert scale from 5 to 1 corresponding to "strongly agree", "agree", "uncertain", "disagree", and "strongly disagree", respectively. The maximum DREEM score was 250 which were distributed in five domains/sections. The global DREEM score 250 were classified into five categories on the basis of modified Educational Environment Index (Table-1). The 50 close-ended questions that measure five domains of educational environment and their score were used in the survey (Table-2).

Statistical analysis was done in MS Excel on the scores obtained through the survey. The mean scores capture the overall attitudes or perceptions concerning the overall and all five domains of the survey. A comparative analysis is also performed to have better understanding of the results. Further, for the better understanding of the subject we conducted a qualitative analysis through "Focused Group Discussions (FGD)". Based on the results of DREEM survey we first identified the problem areas, and then formulated open-ended questions for students and teachers

separately. Total six "Focused Group Discussions" with students and teachers were conducted based on these open-ended questions. This two-step approach, first, through the quantitative analysis of the DREEM survey responses, and second, qualitative analysis of the responses received from the FGD, helped us in (1) identifying the drawbacks/strengths in educational and social environment at the Institute, (2) understanding the gaps in teaching methodology which may be helpful in developing better and efficient teaching practices.

## RESULTS

**Table-1: Modified Educational Environment Index Framework used in the analysis**

Student Perception of Learning (SPL) 0-60		Student Perception of Atmosphere (SPA) 0-60	
0-15	Very Poor	0-15	Terrible environment
16-30	Teaching is viewed negatively	16-30	Many issues which needs change
31-45	More positive perception	31-45	More positive attitude
46-60	Teaching highly thought of	46-60	Good feeling overall
Student Perception of Teacher (SPT) 0-55		Student Social Self-Perception (SSSP) 0-35	
0-14	Terrible	0-9	Miserable
15-28	Need of retraining	10-18	Not a nice place
29-42	Moving in right direction	19-27	Not too bad
43-55	Model teachers	28-35	Very good socially
Student Academic Self-Perception (SASP) 0-40		Students Perceptions of Educational Environment (SPEE) 0-250	
0-10	Feeling of total failure	0-62.5	Very poor
11-20	Many negative aspects	62.51-125	Plenty of problems
21-30	Feeling more on positive side	125.01-187.5	Positive than Negative
31-40	Confident	187.51-250	Excellent

**Table-2: Results of DREEM survey for evaluation of educational and social environment**

As per DREEM Questionnaire	Number of items	Maximum scores	Mean scores	Remark
SPL	12	12 x 5=60	41.86	More positive perception
SPT	11	11 x 5=55	39.96	Moving in right direction
SSSP	07	7 x 5=35	22.77	Not too bad
SASP	08	8 x 5=40	28.23	Feeling more on right side
SPE	12	12 x 5=60	41.91	More positive attitude
SPEE	50	50 x 5=250	174.73	Positive than negative

**Table-3: Comparative chart of global DREEM score in few medical colleges**

S. No.	College Name	Total= 250 (mean)
1	Mona M Soliman et.al. King Saud University Medical College, Saudi Arabia (2017) <sup>10</sup>	171.32
2	Sukanta Tripathi et.al., Army College of Medical Science, New Delhi. (2013) <sup>11</sup>	159.25
3	N Asha Rani et.al. Adichunchanagiri Institute of Medical Science. BG Nagra. Javarannahalli, Karnataka (2018) <sup>12</sup>	157.28
4	Monika Gupta et.al., Government Medical College and Hospital, Chandigarh (2018) <sup>13</sup>	148.28
5	Government Medical College, Azamgarh, U.P. (2023) <sup>9</sup>	171.09
6	Subharti Medical College, Meerut (present study) (2024)	174.73

**Table-4: Focused group discussion responses from students**

Open ended question	Responses by majority of students
How teachers can help to develop confidence among students?	<ul style="list-style-type: none"> <li>- By encouraging students to ask questions</li> <li>- By not humiliating in the class, if we cannot answer</li> <li>- Give rewards to correct answer</li> <li>- Friendly behavior, approachable</li> <li>- Interactive sessions</li> <li>- By more seminars and Small Group Discussion</li> <li>- Avoid partiality between students</li> </ul>
How teaching can become more fruitful?	<ul style="list-style-type: none"> <li>- Include clinical and practical as part of lesson</li> <li>- Pictorial form of study to build concept</li> <li>- Explain the topic by videos or flow charts</li> <li>- Less use of power point presentation</li> <li>- More use of smart board/Black board</li> <li>- Teaching time should not be more than 40 minutes, rest for the revision.</li> </ul>
Which types of learning should be encouraged and why?	<ul style="list-style-type: none"> <li>- Facts can be learnt, teach complex topics in the class</li> <li>- Case based studies</li> <li>- Practical and skill-based learning</li> <li>- Concept based learning as facts no matter how well learnt, will be forgotten sooner or later</li> <li>- Do not force to mug up facts</li> <li>- Avoid factual learning as it does not allow mental development and has no role in real life situation</li> </ul>
How and when you want feedback?	<ul style="list-style-type: none"> <li>- Google form based feedbacks</li> <li>- Anonymous</li> <li>- After every examination/every 3 months</li> </ul>
How can we eliminate the general feeling of loneliness?	<ul style="list-style-type: none"> <li>- By making friends and developing habits</li> <li>- By encouraging Recreational activity</li> <li>- By small group activity, not according to roll numbers</li> <li>- By social and extra-curricular activity</li> <li>- By connection with the God</li> <li>- By organizing fests and cultural activities</li> </ul>
Your suggestions to improve problem- solving skills.	<ul style="list-style-type: none"> <li>- By MCQ test and self-directed learning</li> <li>- By making problematic questions</li> <li>- By Team based learning</li> <li>- More clinical exposure under supervision of faculty</li> </ul>

**Table-5: Focused group discussion responses from teachers**

Open ended question	Responses by majority of teachers
How teachers can make teaching interesting?	<ul style="list-style-type: none"> <li>- By giving real life examples and cracking jokes related to topic</li> <li>- By including flow charts, videos and diagrams</li> <li>- By giving day to day examples and interactive</li> <li>- By clearing slightest doubts</li> <li>- By subject related riddles</li> <li>- Break monotony</li> </ul>
What is the best way and time to give feedback to students?	<ul style="list-style-type: none"> <li>- In small groups of students</li> <li>- On regular basis, after every activity if possible</li> <li>- Individually in private if possible</li> <li>- Informal on daily basis</li> <li>- Formal after every examination specially after first terminals</li> </ul>
How teachers can contribute to relax the environment for students?	<ul style="list-style-type: none"> <li>- Short breaks in between the long teaching sessions</li> <li>- By telling short stories/jokes related to the topics</li> <li>- By creating friendly environment</li> <li>- Teacher himself/herself should be cheerful and relax</li> </ul>
How teachers can prepare students to cope up the loneliness?	<ul style="list-style-type: none"> <li>- By extracurricular and cultural activities</li> <li>- Art of living session can be included</li> <li>- Effective mentor- mentee program</li> <li>- By group activities</li> </ul>
Which type of learning you will encourage?	<ul style="list-style-type: none"> <li>- Counseling session should be conducted</li> <li>- Interactive learning with small group discussion</li> <li>- Mixture of factual and concept base learning</li> <li>- No rote learning</li> </ul>

## DISCUSSION

The present study was conducted to evaluate the educational and social environment for undergraduate medical students at Subharti Medical College, Meerut. The study used DREEM questionnaire consisting of 50-questions to do a quantitative analysis and used Focused Group Discussions for the qualitative analysis. This comprehensive approach provided the clear picture of teaching-learning environment of the institute from both students and teachers' view point, highlighting both the drawbacks and potential remedies.

The educational environment index is calculated based on the DREEM scores, further it is also categorized in different domains and compared with other studies (Table-3). According to the educational environment index, the DREEM analysis for undergraduate students fell into the third category across all domains (Tables 1 & 2). The results were as follows:

- Student Perception of Learning (SPL): Positive perception
- Student Perception of Teachers (SPT): Moving in the right direction
- Student Academic Self-Perception (SASP): Generally, positive
- Student Perception of Environment (SSE): Positive attitude
- Student Social Self-Perception (SSSP): Not too bad

Total DREEM score obtained in our survey was 174.73 out of 250 (around 70%) which reflect that educational and

social environment in the institute is at par with various medical colleges (Table-3).

Focused group discussion on the open-ended questions among the students resulted in candid feedback (Table-4). The key responses were as follows:

- *Confidence Building*: Majority of students advocated for friendly atmosphere in class, impartial behavior from teachers, interactive teaching in small groups with encouragement to ask questions. They expect rewards for correct/accurate answers and no humiliation for wrong answers.
- *Fruitful Teaching*: Students prefer blackboard/smart board teaching over only power point presentations. Students feel that more use of videos, flow charts, pictorial presentation based on clinical and skill aspect of the medical education would make teaching more impactful.
- *Learning Approach*: Students expect more emphasis on concept-based teaching which is expected to improve their understanding on complex topics.
- *Regularity in Feedback*: Preferably individually, personal on google form and after every examination.
- *Combating Loneliness*: Students opined that by making friends, by involving in extra-curricular and recreational activities and getting involved in small group activities like sports, literature clubs etc. they can combat their loneliness.
- *Problem Solving Skill Development*: More clinical exposure under faculty supervision and by solving problem-based case and MCQs will improve their problem-solving skills.

Similarly Focused group discussion was held with teachers and their responses were noted which gave valuable insight in educational environment (Table-5). The key responses were as follows:

- *Making Teaching Interesting*: Avoid monotony by using videos, flow charts with giving real life examples and light discussions in between the teaching related to the topics.
- *Effective Feedback Mechanism*: In small group, personally if possible, and after every activity, especially after examinations.
- *Relaxing the environment*: By maintaining a cheerful attitude and friendly atmosphere which would eliminate student hesitancy.
- *Combating Loneliness*: By implementing the mentor-mentee program and promoting cultural activities, introduction of programs like “Art of Living”.
- *Learning Style*: Concept based factual interactive learning in small groups.

## CONCLUSION

With the help of DREEM survey and FGD, now we can identify the lacunae and their solutions in our institute. Although Global DREEM score of our institute is at par

with other medical colleges, even then there is much scope for further improvement. Definitely we will try to achieve category IV (Excellence) of Global DREEM score. We can achieve this by making a mixture of factual and concept based interactive and interesting small group teaching with active involvement of teachers as well as students.

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