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Research Article

# Assessment of Quality of Educational Environment across Public and Private Medical Colleges based on Medical Students Perceptions

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**Abstract:** ***Introduction:*** Objective: To compare students' perceptions of the educational environment between public and private sector medical colleges**Material & Method:** From December 2025 to March 2026, a cross-sectional study at two medical colleges of Punjab surveyed 424 MBBS students, equally split between public and private sectors and across first to fourth years. The 50-item DREEM questionnaire was administered under ethical approval with voluntary, confidential participation and supervised completion. Data were analyzed in SPSS v20 using Likert scoring with reverse coding for nine negative items. Mean scores were calculated for items, domains, and the total score. Scores ≥3.5 showed strengths, ≤2 flagged problems, and 2–3 indicated areas needing improvement.**Results:** Private Medical colleges obtained a slightly better overall mean score (113±22) than public institutions (109±25) among 424 respondents using the DREEM survey, indicating generally good attitudes in both. With the exception of Students' Academic Self-Perception, when public institutions outperformed private colleges (18±5 vs. 16±5), private medical colleges scored higher on the majority of subscales. In both categories, opinions of instruction, instructors, and environment were positive, with slightly higher ratings in private medical colleges. Both of the students' social self-perceptions were low, suggesting that they could do better. Poor memory confidence at private colleges and problems with stress support, boredom, and enjoyment outweighing stress in public medical colleges were among the main challenges.**Conclusion:** All areas of the educational environment in both public and private medical colleges have a great deal of room for development, but the low scores in the area of students' social self-perceptions require particular attention.

**Keywords**: Student perceptions, Dundee Ready Education Environment Measure, Public and Private Medical Colleges

## INTRODUCTION

The Educational Environment is the overall atmosphere of an academic institution that either directly or indirectly influences students' learning experiences. The curriculum, instructional methodologies, quality of faculty interactions, institutional restrictions, availability of academic resources, and general learning environment are some of its interconnected components. All of these factors have an impact on students' learning and performance as well as how they perceive their education. While a bad learning environment may lead to stress, disengagement, and subpar academic performance, a positive one improves students' motivation, engagement, contentment, and academic achievement [1]. Therefore, understanding and improving the educational environment is essential to ensuring high-quality education, particularly in challenging fields like medical education.

In educational research, structured assessment techniques are used to systematically measure how students perceive their learning environment. The Dundee Ready Education Environment Measure (DREEM) is among the most well-known tools. The 50 thoughtfully crafted items that make up the DREEM questionnaire evaluate several aspects of the learning environment, such as students' opinions of learning, instructors, academic self-perception, atmosphere, and social self-perception. Because each question is assessed,

researchers may provide a comprehensive quantitative assessment of students' perceptions of their learning environment. The instrument is especially appropriate for comparative research in medical education since it has undergone thorough validation and is regarded as dependable in a variety of institutional, cultural, and geographic contexts [2,3].

Since the DREEM questionnaire has previously been extensively used in Pakistani and foreign medical institutes, it was employed in this study without any alterations. The study, which involved one public and one private medical institution, was carried out at two medical universities. Assessing and contrasting student's opinions of their learning environments in these two contexts was the main goal. The study guarantees consistency and reliability in data collection by utilizing a standardized and proven tool like DREEM, enabling a significant comparison between the two groups [4].

Because both public and private medical colleges frequently differ in terms of facilities, instructional resources, class sizes, faculty availability, and learning opportunities, comparing them is very crucial. Students' academic experiences and satisfaction levels may be greatly impacted by these variations. The study attempts to determine the advantages and disadvantages of each institution's learning environment by examining student answers [5,6]. This entails identifying both areas that need development, such as student support systems, teaching quality, or institutional climate, and places where teaching techniques are beneficial [7].

In the end, the objective is to give administrators and designers of educational programs useful information. The findings may be utilized to create focused interventions and reforms meant to raise the standard of medical education. The study helps create an ideal learning environment that promotes successful learning, raises student happiness, and improves overall educational results for undergraduate medical students by identifying gaps and strengths in both public and private sector medical colleges.

# Material & Methods

Between December 2025 and March 2026, cross-sectional research was carried out at two medical colleges of Punjab, one in the public sector and the other in the private sector. The study comprised 424 undergraduate medical students in total. To accommodate for any missing or incomplete data, an extra 10% was added to the sample size, which was determined using an estimated 50% prevalence. The sample was split evenly between the two schools, with 212 individuals chosen from each college because each had an annual intake of 100 students. Students from the first, second, third, and fourth years of the MBBS program were further chosen at random and equally from each college; 53 students were chosen from each academic year.

The Dundee Ready Education Environment Measure (DREEM) questionnaire was used to gather data following ethical permission from the Ethical committee. Students were given a thorough description of the study's goals prior to data collection, and participation was entirely optional. To make sure that students understood the goal of the study, any questions or concerns were answered, with a focus on voluntary participation, confidentiality, and anonymity. To guarantee the highest response rate, a senior faculty member gave the questionnaire to the students at the conclusion of each lecture. Participants were told to do the questionnaire in 20 minutes and send it back right away. Students were instructed not to discuss their answers with one another while they were finishing in order reducing prejudice.

Using SPSS version 20, the gathered data was examined. The mean and standard deviation of each response were determined in order to apply descriptive statistics. In addition to the five domains, subscales, and total DREEM score, mean scores were calculated for individual items. The DREEM test has 50 items and a maximum score of 200, which stands for the perfect learning environment. A 5-point Likert scale, with 0 denoting "strongly disagree" and 4 denoting "strongly agree," is used to record responses. Nine of the questionnaire's items 4, 8, 9, 17, 25, 35, 39, 48, and 50 are negatively written, thus in order to assure appropriate interpretation, they are scored in reverse.

Interpretation of the results was based on mean item scores. Items with a mean score of 3.5 or above were considered strong positive aspects of the educational environment, indicating areas of strength. Items with a mean score of 2 or below were identified as problematic areas requiring immediate attention and improvement. Scores falling between 2 and 3 were interpreted as aspects that were neither clearly positive nor negative but represented potential areas for improvement and enhancement. This scoring system allowed the researchers to systematically evaluate students' perceptions and identify specific strengths and weaknesses in the educational environment of both medical colleges.

# Results

Using the DREEM inventory, 424 student answers were gathered. Half of the 424 students were from public medical colleges, while the other half were from private medical colleges. For both private and public medical colleges, the total mean score with standard deviation was 113±22 SD and 109±25 SD, respectively, indicating more positive than negative results. The aggregate score of private colleges was somewhat higher than that of public colleges. With the exception of

Student's Academic Self-Perception, where public colleges scored 18±5 and private colleges scored 16±5, private sector medical colleges performed higher on all DREEM subscales.

While identifying particular strengths and weaknesses within the learning environment, variations were seen in answers to individual items. The mean subscale score on the Student's Perceptions of Learning (SPL) was 27±8 in the public sector medical college and 29±6 in the private sector medical college, indicating a more favorable perception in both medical institutions. Both private and public medical colleges are making progress, as evidenced by the mean DREEM item-score on students' perceptions of course instructors being 25±5 and 23±7, respectively. In private medical colleges, the mean subscale score on students' academic self-perceptions was 16±5, indicating many negative aspects that should be taken into consideration. In public medical colleges, on the other hand, the score was 18±5, indicating that students are feeling more positive. The mean DREEM item score on students' perceptions of the atmosphere was 27±7 in private medical colleges and 26±8 in public medical colleges, indicating a more optimistic outlook. The average DREEM item-score on students' social self-perceptions was 16±5 in private medical colleges and 15±4 in public medical colleges, which is not too awful. In DREEM subscale "Students' Academic Self-Perception", item no 27 "I am able to memories all I need" was scored less than 2 in private sector medical colleges which indicates problem area. While In DREEM sub-scale "Students' Perceptions of Atmosphere" item no 42 "The enjoyment outweighs the stress of the course" was scored less than 2 in public sector medical colleges and in DREEM subscale "Students' Social Self Perceptions" item no 3 "There is a good support system for students who get stressed" and item no 14 "I am rarely bored on this course" was scored less than 2 in public sector medical colleges which indicates problem areas and public sector medical college should take this into considerate.

**Table 1: Guideline to interpret the DREEM scores**

| **Score** | **Interpretations** |
|---|---|
| 0-50 | Very Poor |
| 51-100 | Plenty of Problems |
| 101-150 | More positive than negative |
| 151-200 | Excellent |
| **Subscales Interpretation** | |
| Student's Perception of Learning | 12-0 Very Poor |
| | 24-13 Teaching is viewed negatively |
| | 36-25 A more positive perception |
| | 48-37 Teaching highly thought |
| Students' Perception of Course teachers | 11-0 Abysmal |
| | 22-12 In need of some retraining |
| | 33-23 Moving in the right direction |
| | 44-34 Model course teachers |
| Students' Academic Self Perceptions | 8-0 Feelings of total failure |
| | 16-9 Many negative aspects |
| | 24-17 Feeling more on the positive side |
| | 32-25 Confident |
| Students' Perception of Atmosphere | 12-0 A terrible environment |
| | 24-13 There are many issues which need changing |
| | 36-25 A more positive attitude |
| | 48-37 A good feeling overall |
| Students' Social Self Perceptions | 7-0 Miserable |
| | 14-8 Not a nice place |
| | 21-15 Not too bad |
| | 28-22 Very good socially |

**Table 2: Overall Mean Scores with Standard Deviation on Subscale**

| **DREEM Subscale** | **Private Medical College** | | **Public Medical College** | |
|---|---|---|---|---|
| | Mean | SD | Mean | SD |
| Students Perception of Learning | 29 | 6 | 27 | 8 |
| Students Perception of Course teachers | 25 | 5 | 23 | 7 |
| Students' Academic Self-Perception | 16 | 5 | 18 | 5 |

| | | | | |
|---|---|---|---|---|
| Students' Perceptions of Atmosphere | 27 | 7 | 26 | 8 |
| Students' Social Self Perceptions | 16 | 5 | 15 | 4 |
| Overall Mean & Standard Deviation Score | 113 | 22 | 109 | 25 |

**Table 3: Year-wise Mean Scores with Standard Deviation on Subscale**

| DREEM Subscale | Private Medical College | | | | Public Medical College | | | |
|---|---|---|---|---|---|---|---|---|
| | Prof 1 | Prof 2 | Prof 3 | Prof 4 | Prof 1 | Prof 2 | Prof 3 | Prof 4 |
| | Mean | Mean | Mean | Mean | Mean | Mean | Mean | Mean |
| Students Perception of Learning | 29.2 | 30.0 | 27.9 | 29.8 | 26.7 | 26.5 | 28.7 | 25.6 |
| Students Perception of Course teachers | 24.9 | 25.1 | 24.7 | 25.3 | 23.5 | 23.1 | 24.2 | 22.5 |
| Students' Academic Self-Perception | 15.5 | 16.2 | 17.3 | 14.7 | 20.5 | 21.0 | 19.1 | 21.1 |
| Students' Perceptions of Atmosphere | 27.0 | 27.6 | 25.6 | 27.8 | 26.3 | 26.0 | 28.0 | 24.9 |
| Students' Social Self Perceptions | 16.0 | 16.5 | 15.4 | 16.6 | 14.2 | 14.4 | 15.7 | 14.2 |

## DISCUSSION

A top-notch educational setting in a medical school can help its students acquire the skills required for their chosen field [8,9].DREEM is a useful technique that may be used in both undergraduate and graduate settings to assess an institution's learning environment objectively. As evidenced by the study conducted in India, it may also be utilized cross-sectionally to evaluate the educational environments of two institutions serving similar programs and student levels [10,11]. In our study the overall score mean was 113± 28 SD for private medical college and 109 ± 33 SD for public sector medical college, which means more positive than negative but was far from excellent [12].A corresponding study undertaken in six medical colleges across Pakistan also found that their Overall mean score 105.0±25.8 was more positive than negative [13]. The results are also favorably comparable to another study undertaken in public sector medical colleges of Punjab where a mean score of 115 was reported [14].There is no clear cutoff of recommended DREEM score for an institution in literature but clearly higher is better and should be strived for. The DREEM score from the medical institutes relates favorably to the published studies from medical colleges of Pakistan. DREEM mean scores from our neighboring countries have been reported as 99.6 from Iran and 107.4 from Sri Lanka [15-17]. While the institutes with student centered programs from countries like United Kingdom have re-ported good perception of educational environment with scores of 139.

According to reports, the DREEM mean scores from our neighboring countries are 107.4 from Sri Lanka and 99.6 from Iran [15-17]. With scores of 139[18], institutions with student-centered programs from nations like the UK have reported positive perceptions of the educational environment. Research indicates that in order for students to effectively regulate their cognitive load, the burden of their studies must be adequately handled. To keep the students interested and involved during classes, a variety of teaching techniques may be used [19,20]. The stress associated with medical education may also be reduced by participating in extracurricular activities throughout the academic session. Improvements to these problems will improve medical institute learning environments.

## CONCLUSION

All areas of the educational environment in both public and private medical colleges have a great deal of room for development, but the low scores in the area of students' social self-perceptions require particular attention.

**Conflict of Interest:** None

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