

ASSESSMENT OF STUDENTS' PERCEPTION ABOUT EDUCATIONAL ENVIRONMENT OF A MEDICAL COLLEGE IN KERALA

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ABSTRACT

BACKGROUND

A study to assess the educational environment of a Medical College in Kerala to identify problem areas with a view to improve academic achievement of the students.

The aim of the study is to assess the students' perception about Educational environment of a Medical college in Kerala.

MATERIALS AND METHODS

Two batches of Medical students were randomly selected for doing the study using DREEM (Dundee Ready Educational Environment Measure) - a tool to measure educational climate.¹ Out of 200 students in these batches 150 students participated in the study. Those who were absent on the day of data collection and those who were not willing to participate were excluded from the study. The perception score is considered as positive if it is above 50% of the maximum possible score. When the score is between 25% and 50% it indicates that the educational environment needs improvement. Scoring below 25% indicates a very poor educational environment.

Settings and Design- A Cross Sectional study was conducted in one of the Medical Colleges in Kerala.

Statistical Analysis- Descriptive statistics and Chi-square test.

RESULTS

Most of the students participated in the study (77.33%) perceived their educational environment as positive. No significant difference was observed between male students and female students. Junior students' perception was significantly better when compared to senior students.

CONCLUSION

The educational environment of the medical college is perceived as positive by most of students.

KEYWORDS

Educational Environment, Students' Perception, Dundee Ready Educational Environment Measure (DREEM).

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BACKGROUND

Learning depends on the motivation and perception of relevance. These factors depend upon the previous experience of the learner. The context and environment where the learning takes place also influences the motivation for learning. Adult learning theories stresses the importance of setting the context or climate for learning, imparting knowledge and sharing expertise.² School environment refers to the social, academic and emotional contexts of a school—the "personality" of the learning context and how it is perceived by students, staff and community. Disciplinary policies, instructional quality, student and teacher morale influence this climate. Educational environment is everything that happens within the class room, departments, faculty

and institution both physically and psychologically.³ Learning environment includes all the components and activities occurring in the institution and is associated with academic achievement of students. A positive environment leads to student achievement through fun and learning, while a negative one hinders their accomplishments.⁴

Medical students face a change of environment from the day of admission. The perception of environment depends on cultural background of student, available educational facilities, quality of their faculty, curriculum, and students' expectations of their educational environment. Identifying the weakness of educational environment and understanding how students perceive the environment will help the institute to facilitate learning and to achieve better learning outcome.⁵ There is documented association between students' performance and their satisfaction.⁶ Teaching learning practices prevailing in the institution can be managed better by making necessary changes and remedies at appropriate situations with understanding of educational environment and students' expectations. Our study is conducted to assess the medical students' perception of educational environment in a medical college using Dundee Ready Educational Environment Measure

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(DREEM) and to compare the year and gender wise distribution of medical students' perception of educational environment based on DREEM score.

MATERIALS AND METHODS

A cross sectional study was conducted in one of the medical colleges in Kerala for assessing the perception of medical students during the period April 2016 to August 2016. Out of five batches of MBBS students two batches were selected randomly. Total number of students in these two batches is 200. Consent forms were distributed after a theory lecture class. Those students absent on the day of data collection and those who were not willing to participate were excluded from the study. Those persons who were willing to participate in the survey by returning the filled-up consent forms were provided with printed questionnaire containing the DREEM statements and demographic details such as age, gender and class of study. The filled-up forms were collected and analysed. Out of 200 students in the two batches only 150 students participated in the study.

The Dundee Reedy Education Environment Measure (DREEM) developed by Roff et al was used to collect perceptions of students. It is a tool developed in Dundee to measure the undergraduate educational climate of Health Professional schools.¹ It is a highly reliable and validated tool. DREEM contains 50 statements about topics relevant to educational climate. Each item coded 0 to 4 (4 - Strongly agree, 3 - Agree, 2 - Uncertain, 1 - Disagree and 0 - Strongly Disagree). Nine out of 50 statements contain negative statements and hence reverse coded. The DREEM inventory has a Maximum score of 200 representing ideal educational environment. It consists of 5 sub domains: Students' perception of learning, students' perception of teachers, student's academic self-perceptions, students' perception of atmosphere and students' social self-perception.¹ It is recommended as most suitable tool to evaluate the educational environment in undergraduate medical education institutions.

The score is considered as either positive or negative when the score is more than or less than 50% of the maximum possible score. A score less than 25% of maximum possible scores, is considered as an indication of very poor educational environment.

Ethics

The study is approved by Institutional Ethics Committee. After providing participant information sheet and getting consent the questionnaire was distributed among the students who were willing to participate in the study.

Analysis of Data

Total score, scores of sub-domains such as Students' perception of learning, Students perception of course organisers, Students' academic self-perception, Students' Perception of atmosphere and Students' social self-perception were analysed by using Microsoft Excel. The educational environment of the medical college is interpreted based on perceived scores of students. Comparison between DREEM scores categorisation and

gender, year of study were carried out using Chi Square Test.

RESULTS

Of the 200 students 150 (75%) students participated in the study.

Gender	Seniors	Juniors	Total
	N (%)	N (%)	N (%)
Males	14 (22.95)	17 (24.64)	31 (23.85)
Females	47 (77.05)	52 (75.36)	99 (76.15)
TOTAL	61	69	130 (100.00)

Table 1. Distribution of Students Based on Gender & Class

*Out of 150 only 130 reported their gender. Most of the participants were females. Almost equal number of students participated in each class.

The Total DREEM Score of students ranged from 65 to 148 With Median score (Inter-quartile range) was 117 (103-128). Total score of males ranged from 70 to 138 and females ranged from 65 to 148. Median score of both males and females were 117. Inter-quartile ranges of males and female was (104-126) and (103-129) respectively.

Sub Domains	Ideal score	Median	Inter-quartile range
Students' Perception of Learning	48	28	24-31
Students' Perception of Teachers	44	26	22-28
Students' Academic Self-perception	32	19	16-20
Students' Perception of Atmosphere	48	28	23-30
Students' Social Self-perception	28	17	15-19

Table 2. Distribution of DREEM Sub-Domain Scores

*All the 1st quartile values were positive except students' perception of atmosphere.

Sub Domains	Ideal Score	Gender	Median	Inter-quartile range
Students' Perception of Learning	48	Male	28	23-31
		Female	28	24-31
Students' Perception of Teachers	44	Male	26	22-28
		Female	25	22-28
Students' Academic Self-perception	32	Male	19	17-20
		Female	18	16-21
Students' Perception of Atmosphere	48	Male	27	23-30
		Female	28	23-31
Students' Social Self-perception	28	Male	18	15-19
		Female	17	15-19

Table 3. Gender Wise Comparison of Sub Domain Scores

*The median score of students' perception of learning is same in both sexes. In all other sub domains except

students' perception of atmosphere the median scores were higher among males.

DREEM Sub domains	Year of Study	Ideal Score	Median	Inter-quartile range
Students' Perception of Learning	Seniors	48	25	21-30
	Juniors	48	30	26-32
Students' Perception of Teachers	Seniors	44	25	21-28
	Juniors	44	26	23-28
Students' Academic Self Perception	Seniors	32	18	15-21
	Juniors	32	19	17-20
Students' Perception of Atmosphere	Seniors	48	26	21-30
	Juniors	48	29	24-31
Students' Social Self Perception	Seniors	28	17	14-19
	Juniors	28	18	16-19
TOTAL SCORE	Seniors	200	110	94-126
	Juniors	200	121	111-129

Table 4. Batch Wise Comparison of DREEM Sub Domain Score of Study

*Median Score of students' perception of all the sub domains was higher in the junior students.

Most of the students perceived their educational environment as positive. None of the students perceived their education environment as very poor.

DREEM sub domains	Students' Perception	Seniors N (%)	Juniors N (%)	TOTAL N (%)	χ^2	P-value
Students' Perception of Learning	Positive	36 (51.43)	69 (86.25)	105 (70.0)	21.55	0.0001
	Negative	34 (48.57)	11 (13.75)	45 (30.0)		
Students' Perception of Teachers	Positive	44 (62.86)	65 (81.25)	109 (72.67)	6.35	0.011
	Negative	26 (37.14)	15 (18.75)	41 (27.33)		
Students' Academic Self Perception	Positive	44 (62.86)	61 (76.25)	105 (70.0)	3.18	0.07
	Negative	26 (37.14)	19 (23.75)	45 (30.0)		
Students' Perception of Atmosphere	Positive	41 (58.57)	59 (73.75)	100 (66.67)	3.87	0.049
	Negative	29 (41.42)	21 (26.25)	50 (33.33)		
Students' Social Self Perception	Positive	52 (74.28)	70 (87.50)	122 (81.33)	4.29	0.038
	Negative	18 (25.72)	10 (12.50)	28 (18.67)		
TOTAL SCORE	Positive	47 (67.14)	69 (86.25)	116 (77.33)	7.775	0.005
	Negative	23 (32.86)	11 (13.75)	34 (22.67)		

Table 7. Batch wise comparison of students' perception of educational environment

*The proportion of senior students' perception about their educational environment as positive was significantly lower than junior students. In students' academic self-perception no significant difference was found between seniors and juniors.

DISCUSSION

In the present study, more students expressed positive perception about their educational environment. Similar findings were observed in several studies conducted among medical students. Studies showing higher positive perception in India are those conducted at Kasturba Medical College,⁷

DREEM Scores	Positive No (%)	Negative No (%)
TOTAL SCORE	116 (77.33)	34 (22.67)
Students Perception of learning	105 (70.00)	45 (30.00)
Students' Perception of Teachers	109 (72.67)	41 (27.33)
Students' Academic Self perception	105 (70.00)	45 (30.00)
Student's perception of Atmosphere	100 (66.67)	50 (33.33)
Students' Social Self perception	122 (81.33)	28 (18.67)

Table 5. Distribution of perception of educational environment

*The highest proportion of students perceived their educational environment as positive in students' Social self-perception and the lowest in students' perception of atmosphere.

Students' Perception	Males N (%)	Females N (%)	Total N (%)	χ^2	P-value
Positive	26 (83.87)	74 (74.75)	100 (76.92)	1.107	0.29
Negative	5 (16.13)	25 (25.25)	30 (23.08)		
Total	31	99	130		

Table 6. Comparison of students' Perception of their educational environment and gender

No significant difference was observed between male and female students based on their perception of educational environment.

Melaka Manipal Medical College,⁸ Medical college in Western Maharashtra,⁹ University of Delhi¹⁰ and Medical college in North India.¹¹ Studies conducted in Bangladesh,⁶ Netherlands,¹² Pakistan,⁴ Malaysia¹³ and Saudi Arabia^{14,15} also showed higher proportion of positive perception. Higher

proportion of students expressed negative perception in studies conducted in Morocco¹⁶ and Iran.¹⁷

In this study, no significant difference was observed between positive perception and gender. Similar result was reported from a study conducted in Saudi Arabia.¹⁴ The study conducted in Kasturba Medical College Belgaum⁷ showed significant difference in perception between male and female medical students.

In the present study, the proportion of positive perception of educational environment was significantly lower among senior students than junior students. In a study conducted in India, clinical students were having lower positive perception of educational environment compared to first year students.⁸ In another study conducted in Iran,¹⁷ higher DREEM score was observed in Clinical courses than Preclinical courses.

CONCLUSION

Most of the students perceived their educational environment as positive. No significant difference was observed between males and females in this study. The difference of perception between seniors and juniors was found to be significant. Significant association was observed in all sub domains except Students' academic self-perception.

Recommendations

Further studies to find out the reasons for lower positive perception among senior students have to be undertaken. Interventions to improve the teaching environment of clinical subjects are recommended.

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