



STUDENT'S PERCEPTIONS OF THE EDUCATIONAL ENVIRONMENT AT A DENTAL COLLEGE OF JAMMU REGION, USING DUNDEE READY EDUCATIONAL ENVIRONMENT MEASURE (DREEM) INVENTORY

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ABSTRACT

Background- Now a days, there has been growing interest and rising concern regarding the role of learning environment in undergraduate dental education.

Aim- Aim of this study was to evaluate the students' perception of their learning environment in an Indian dental college.

Methods- 224 students were evaluated at Government Dental College, Jammu using Dundee Ready Education Environment Measure (DREEM), a validated tool to evaluate their learning environments.

Results- Total respondents were 224, among them 182 were male and 42 were female students. The total DREEM score of the student's was 127.70 / 200. The mean domain scores were 30.22 / 48, 27.18 / 44, 21.34 / 32, 32.05 / 48, and 16.91 / 28 in the domains of Student's Perceptions of Learning (SPL), Student's Perceptions of Teachers (SPT), Student's Academic Self-Perceptions (SASP), Student's Perceptions of Atmosphere (SPA) and Student's Social Self Perceptions (SSSP) respectively. Certain items scored less than 2. In the domain of Student's Perceptions of Learning (SPL), students opined that teaching overemphasized factual learning. In the domain of Student's Perceptions of Teachers (SPT), students were in the view that teachers ridicule them. In the domain of Student's Social Self Perceptions (SSSP), student's felt existence of good support system for stressed students.

Conclusion- The findings of this study can be utilized to create a better educational environment at Government Dental College, Jammu. Implementation of Problem Based Learning (PBL) sessions and integrated teaching are endorsed to create the better educational environment.

KEYWORDS : Educational environment, Teaching, Students, Learning.

INTRODUCTION

Now a days, there has been growing interest and rising concern regarding the role of learning environment in undergraduate dental education. The quality of undergraduate dental education is affected by several factors; one of the most important determinants of an effective undergraduate dental curriculum is its educational environment.¹ Learning environment in any dental college is found to be important in determining students' academic success.^{2,3}

Evaluation of the learning environment as a whole and identification of the lacunae becomes important as remedial measures can be implemented and gaps can be bridged only after this exercise. The educational environment and the valuable outcomes of students' achievement, satisfaction and success are interrelated.³ Study of the curriculum is dependent on a study of the environment.^{4,5} Curriculum's manifestation is the educational and organizational environment which encirclements everything occurring in the dental college. This study may provide valued information, which can be employed to improve the quality of educational environment in the dental college.

As per records, evaluation of educational environment of Government dental College, Jammu has not been studied till date. This is the first time a study of this kind is being undertaken in our college. Only a very few studies have been conducted on this topic and none from the state of Jammu and Kashmir. Thus this study was rolled out to evaluate the students' perception of their learning environment in a Indian dental college following traditional curricula.

METHODS

This study was conducted at a Government Dental College of Jammu during 2016-17 using pretested self-administered Universal diagnostic inventory, Dundee Ready Education Environment

Measure (DREEM), a tool to evaluate the learning environments of medical students. DREEM is a validated tool and it was developed by an international Delphi panel.⁶ DREEM was tested in Europe, Africa, Asia, Australia and America.⁷ It has been shown to be independent of culture, and its translated version in various languages has been used in many countries.⁸

DREEM is a 50 item inventory, consisting of 5 subscales.

- Students' Perceptions of Learning (SPL)-12 items; maximum score is 48;
- Students' Perceptions of Teachers (SPT)-11 items; maximum score is 44;
- Students' Academic Self-Perceptions (SASP)-8 items; maximum score is 32;
- Students' Perceptions of Atmosphere (SPA)-12 items; maximum score is 48;
- Students' Social Self-Perceptions (SSSP)-7 items; maximum score is 28.

The total score for all subscales is 200, indicating the ideal educational environment. The total score for all subscales is 200. The inventory consists of 50 items and each item scored on a five-point likert scale with 4 = Strongly Agree, 3 = Agree, 2 = Unsure, 1 = Disagree and 0 = Strongly Disagree. Nine of the 50 items (4, 8, 9, 17, 25, 35, 39, 48, 50) were negative and scored in reverse so that a higher score indicates a more positive reading.

The questionnaire was distributed to the students in the classrooms by the authors themselves just after the completion of classes following a brief explanation of the purpose of the study including anonymity and the importance of voluntary-based participation. The time allocated for the completion of the questionnaire was 40 minutes. Every effort was made to counsel students so that

maximum students participate in the survey. The study adhered to the tenets of the Declaration of Helsinki for research in humans. Permission of Institutional ethics committee (IEC) was sought before the commencement of the study. Informed consent was obtained from the study participants. Attempts were made to contact every student. However those students who could not be contacted after three attempts and those not consenting were excluded from the study.

For statistical analysis of the data, for the whole 50-item inventory, scores for categorized domains and each item was both expressed as Mean \pm Standard Deviation (SD). Data was analyzed using the Statistical software. Conclusions were drawn using appropriate statistics like mean, standard deviation, and proportions.

RESULTS

Total respondents were 224, among them 182 were male and 42 were female students. The total DREEM score of the student's was 127.70 / 200. The mean domain scores were 30.22 / 48, 27.18 / 44, 21.34 / 32, 32.05 / 48, and 16.91 / 28 in the domains of Student's Perceptions of Learning (SPL), Student's Perceptions of Teachers (SPT), Student's Academic Self-Perceptions (SASP), Student's Perceptions of Atmosphere (SPA) and Student's Social Self-Perceptions (SSSP) respectively. (Table I)

Table I: Subscale and total DREEM mean and percentage score in all students

Domain of DREEM	Maximum score	Mean	Percent of perception
Domain 1: Student's Perceptions of Learning (SPL)	48	30.22	62.96%
Domain 2: Student's Perceptions of Teachers (SPT)	44	27.18	61.77%
Domain 3: Student's Academic Self-Perceptions (SASP)	32	21.34	66.67%
Domain 4: Student's Perceptions of Atmosphere (SPA)	48	32.05	66.77%
Domain 5: Student's Social Self-Perceptions (SSSP)	28	16.91	60.39%
Total DREEM score	200	127.70	63.85%

Certain items scored less than 2. In the domain of Student's Perceptions of Learning (SPL), students opined that teaching overemphasized factual learning. In the domain of Student's Perceptions of Teachers (SPT), students were in the view that teachers ridicule them. In the domain of Student's Social Self-Perceptions (SSSP), student's felt existence of good support system for stressed students. (Table II)

Table II: Item mean score in all students

Domain	Item no.	Item	Mean
1.SPL	1	I am encouraged to participate in classes	2.70
	7	The teaching is often stimulating	2.62
	13	The teaching is student centred	2.62
	16	The teaching helps to develop my competence	2.40
	20	The teaching is well focused	2.52
	22	The teaching helps to develop my confidence	2.65
	24	The teaching time is put to good use	2.89
	25	The teaching overemphasizes factual learning	1.79
	38	I am clear about the learning objectives of the course	2.71
	44	The teaching encourages me to be an active learner	2.68
	47	Long term learning is emphasized over short term learning	2.44

2.SPT	48	The teaching is too teacher centred	2.20
	2	The teachers are knowledgeable	2.92
	6	The teachers are patient with patients	2.61
	8	The teachers ridicule the students	1.88
	9	The teachers are authoritarian	2.35
	18	The teachers have good communication skills with patients	2.65
	29	The teachers are good at providing feedback to students	2.59
	32	The teachers provide constructive criticism here	2.24
	37	The teachers give clear examples	2.85
	39	The teachers get angry in class	2.28
	40	The teachers are well prepared for their class	2.37
	50	The students irritate the teachers	2.44
3.SASP	5	Learning strategies which worked for me before continue to work for me now	2.75
	10	I am confident about my passing this year	2.97
	21	I feel I am being well prepared for my profession	2.52
	26	Last year's work has been a good preparation for this year's work	2.64
	27	I am able to memorize all I need	2.35
	31	I have learned a lot about empathy in my profession	2.73
	41	My problem-solving skills are being well developed here	2.76
4.SPA	45	Much of what I have to learn seems relevant to a career in medicine	2.62
	11	The atmosphere is relaxed during the ward teaching	2.42
	12	This college is well time-tabled	2.75
	17	Cheating is a problem in this college	2.48
	23	The atmosphere is relaxed during lectures	2.72
	30	There are opportunities for me to develop inter-personal skills	2.65
	33	I feel comfortable in class socially	2.82
	34	The atmosphere is relaxed during tutorials/seminars	2.74
	35	I find the experience disappointing	2.87
	36	I am able to concentrate well	2.34
	42	The enjoyment outweighs the stress of studying medicine	2.76
	43	The atmosphere motivates me as a learner	2.65
	49	I feel able to ask the questions I want	2.85
5.SSPS	3	There is a good support system for students who get stressed	1.92
	4	I am too tired to enjoy the course	2.43
	14	I am rarely bored on this course	2.04
	15	I have good friends in this college	2.65
	19	My social life is good	2.79
	28	I seldom feel lonely	2.82
	46	My accommodation is pleasant	2.26

DISCUSSION

We made an attempt to evaluate the students' perception of their learning environment in a dental school following traditional curricula in the state of Jammu and Kashmir. The DREEM domains are measure of the overall motivation and learning attitude of the individual. Five subscales or domains of DREEM were interpreted, which define the weakness or strength of educational environment.

In our study, overall DREEM score for all students were found positive (127.70/200, 63.85%). There have been hardly any study on the students' perceptions of the dental college environment till date. Mayya SS et al, Abraham R et al and Kiran HS et al reported DREEM scores as 107/200, 117/200, and 121.5/200 respectively from

various parts of India.⁹⁻¹¹ The DREEM scores for medical schools globally have been reported from Nigeria as 118 / 200, in Nepal as 130 / 200, in Pakistan as 125 / 200 and in UK as 139 / 200.¹²⁻¹⁴

We observed that Students' perceptions of learning was 62.96% i.e. more positive perception, students' perceptions of teachers was 62.96% i.e. moving in right direction, students' academic self-perception was 66.67% i.e. feeling more on positive side, students' perceptions of atmosphere was 66.77% i.e. there are many issues need to change and students social self-perception was 60.39% i.e. they are enjoying the place. It can be stated that all the students agreed a more positive approach regarding their perception of learning, moving in right direction for perception of teachers, feeling more on the positive side for their academic self-perception.

In this study it was observed that highest score was obtained in student's perceptions of atmosphere (66.77%) and lowest score in students' social self-perceptions (60.39%). A study from Trinidad¹ found highest score in students' academic self-perceptions and lowest in student's social self-perceptions whereas another study from Saudi Arabia found lowest score in students' academic self-perceptions and in student's perceptions of learning and atmosphere.¹⁵

Our study tool is able to pick up the gaps existing within the educational environment hampering optimal teaching and learning.¹⁶ Scores lower than 2 in individual item could be due to curriculum content overload, teachers attitude towards student, stressful environment and too much formative assessment system. The atmosphere represents the actual educational environment for learning of students and thus the dynamism of curriculum may influence atmosphere of learning. Any item with a mean of 2 or less should be examined more closely as they indicate problem areas.¹⁷

In the domain of Student's Perceptions of Learning (SPL), students opined that they are encouraged to participate in classes and teaching is well focused but more importance was given on factual information. Teaching should be student centered rather than teacher centered. This observation is of paramount importance for the teachers so as to modify their teaching style. This is also important observation for planners involved in up-gradation of teachers. Teachers should be sent to attend Basic and Advanced Training Courses in Medical Education at various designated nodal centers across the country in a phased manner. In the domain of Student's Perceptions of Teachers (SPT), students were in the view that teachers ridicule them. This can create an artificial gap between teachers and students. Learning environment should be a student friendly then only we can expect maximum output from our students.

CONCLUSIONS

The findings of this study can be utilized to create a better educational environment at Government Dental College, Jammu. Targeted approach is desired in identified areas to make the learning experience more pacifying educational environment for our students. Implementation of Problem Based Learning (PBL) sessions and integrated teaching are endorsed to create the better educational environment.

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