

# Analyzing the Dreams Coming True for Young Undergraduates of DMCH, Laherisarai ,Darbhanga using DREEM Score

Rishabh Kumar Rana<sup>\*†</sup>, Sunil Kumar<sup>\*</sup>, Abhay Kumar<sup>\*</sup>, Veena Roy<sup>#</sup>, C. Roy<sup>‡</sup>

{<sup>\*</sup>Post Grad Students, <sup>#</sup>Tutor - Medical Officer - In charge of UTHC, <sup>‡</sup>Professor and Head of the Department} Department of Community Medicine, Laheriasari, Darbhanga, Bihar, INDIA.

<sup>†</sup>Corresponding Address:

[bakwasandsony@gmail.com](mailto:bakwasandsony@gmail.com)

## Research Article

**Abstract: Introduction** Poor maintenance, unclean surroundings, and lots of other issues are a sine qua non with majority of Government Medical Colleges across the state. Majority of times it is seen that hasty decisions are made in the 1<sup>st</sup> Professional Year i.e. in the 1<sup>st</sup> Semester itself. As the students start to live, learn and imbibe in the local culture and atmosphere their concerns are minimized and number of students leaving the course midway in 3<sup>rd</sup> semester lessens. This study aims to measure the reasons for this in, statistical terms using DREEM<sup>1</sup> (Dundee Ready Educational Environment Measure) Score. **Objective:** Analyze the level of satisfaction of undergraduate students after getting in the Medical College by assessing their Perception of the Educational Environment in the medical college through the DREEM Score. **Methodology** – A cross sectional study conducted in Darbhanga Medical College, Laheriasarai, Darbhanga Bihar. Data was collected using 50 item Dundee Ready Educational Environment Measure. . Total number of students was 170, 80 from 1<sup>st</sup> Semester and 90 from 3<sup>rd</sup> Semester. Study period was from September 2012- November 2012. The data obtained was analyzed using Medcalc . **Results:** According to DREEM Score, items having a mean score of  $\geq 3.5$  are positive points,  $\leq 2$  indicate problem areas, and between 2 and 3 are aspects of the study environment that could be improved. The 1<sup>st</sup> semester students scored less than 2 for 10 items (4, 9, 14, 25, 27,39, 42, 43, 48, and 49) and above 3 for 3 items (2, 10, and 19). 3<sup>rd</sup> semester students scored less than 2 for 10 items (3, 4, 9, 14, 17, 25, 27, 42, 48, and 49) and above 3 for 2 item (2 and 19). Scoring patterns in both the groups were similar except for 2 items (10 and 39). **Conclusion** - Considerations of climate in the medical school, along the lines of continuous quality improvement and innovation, are likely to further the medical school as a learning organization with the attendant benefits.

**Keywords:** DREEM Score, 1st Semester, 3rd Semester.

## Introduction

College building, its looks, décor and other infrastructure always plays an important part in shaping up the dreams for young aspiring Doctors. External looks are always of high impact in making a perception about the college. Alas!!! Poor maintenance, unclean surroundings, and lots of other issues are a sine qua non with majority of Government Medical Colleges across the state. The above stated problems are important determinants for of the

educational environment in the college. The young aspiring +2 students do all they can, to achieve their cherished dream to be a doctor. Once they clear the highly competitive exams and come in the colleges, many are dumbstruck with the pathetic state of hostels, campus, hospital wards, unclean surroundings, frequent news of clashes with local slum dwellers etc. The pathetic state of affairs many a times make them think in haste and they ultimately think to leave the chosen college, and prepare for one more year and change the college, preferably the state. The vacant seats are a huge concern to state exchequer, the student's valuable time, their efforts etc. Majority of times it is seen that hasty decisions are made in the 1<sup>st</sup> Professional Year i.e. in the 1<sup>st</sup> Semester itself. As the students start to live, learn and imbibe in the local culture and atmosphere their concerns are minimized and number of students leaving the course midway in 3<sup>rd</sup> semester lessens. This study aims to measure the reasons for this in, statistical terms using DREEM<sup>1</sup> (Dundee Ready Educational Environment Measure) Score, a validated universal diagnostic inventory for assessing the quality of educational environment.

## Objective

Analyze the level of satisfaction of undergraduate students after getting in the Medical College by assessing their Perception of the Educational Environment in the medical college through the DREEM Score.

## Methodology

A cross sectional study conducted in Darbhanga Medical College, Laheriasarai , Darbhanga ,Bihar . Data was collected using 50 item Dundee Ready Educational Environment Measure. The study was approved by the ethical committee. The DREEM items were administered to the undergraduate students in the 1<sup>st</sup> and the 3<sup>rd</sup> Semesters. Total number of students was 170, 80 from 1<sup>st</sup> Semester and 90 from 3<sup>rd</sup> Semester. Study period was

from September 2012- November 2012. The data obtained was analyzed using Medcalc (version 8.12). Student t test was done to find out the difference between the mean scores,  $P < 0.05$  was considered as statistically significant.

## Results

Total participation of students was 92.3%. The mean (Standard Deviation) age of the participants were 20.03 (1.14) with 52% males and 48% females. The differences in the mean DREEM domain scores for both the groups are shown in Table 1. As is evident from table 1 students in 3<sup>rd</sup> semester were having better mean scores. The mean DREEM scores were 116/200 for 1<sup>st</sup> semester students and 130/200 for the 3<sup>rd</sup> semester students. Over all DREEM domain score were found to be higher for 3<sup>rd</sup> Semester students. Table 2 shows about 18 items were having a statistically significant difference in the scores obtained by 1<sup>st</sup> and 3<sup>rd</sup> semester students. Table 3 is an attempt to find factors according to age, sex, type of residence, socioeconomic status etc. A Multiple logistic Regression analysis model was applied for students getting more than 110 as the mean score. It gave only two factors of statistical significance 1. Students from the rural setting and 2. The Students from SESIV (Modified B.G Prasad up to Aug 2012). According to DREEM Score, items having a mean score of  $\geq 3.5$  are positive points,  $\leq 2$  indicate problem areas, and between 2 and 3 are aspects of the study environment that could be improved. The 1<sup>st</sup> semester students scored less than 2 for 10 items (4, 9, 14, 25, 27, 39, 42, 43, 48, and 49) and above 3 for 3 items (2, 10, and 19). 3<sup>rd</sup> semester students scored less than 2 for 10 items (3, 4, 9, 14, 17, 25, 27, 42, 48, and 49) and above 3 for 2 item (2 and 19). Scoring patterns in both the groups were similar except for 2 items (10 and 39).

## Discussion

In our study we saw, as the students start to live in the college, imbibe in the local milieu, interact among their peers, the DREEM scores start to improve. All students perceived the teaching is too teacher centered, teachers getting angry in the classes, they were too tired to enjoy their course, were not able to memorize all they need. However, Most of students opined that they were encouraged to participate in the class, teachers were knowledgeable in their subjects, teaching was focused, and it helped in developing their confidence and competence. With regard to the individual subscales, perception of learning was the area that showed greatest disparity between genders. Mean scores on this subscale were more than two points higher for females than males. This suggests that the female students perceived factors such as curriculum, structure, focus and goals more positively than their male counterparts. There is long-standing evidence that males and females typically exhibit different learning styles, which could partly explain differences in the way learning, and the environments generally, are perceived in the present study<sup>2</sup>. The greatest difference between the two groups was in their perception of learning, for which 3<sup>rd</sup> semester students produced a mean score higher than 3<sup>rd</sup> semester. Findings similar to this has been quoted elsewhere in other studies<sup>3,5-12</sup>. **Conclusion** - Considerations of climate in the medical school, along the lines of continuous quality improvement and innovation, are likely to further the medical school as a learning organization with the attendant benefits<sup>4</sup>. The students perceived the environment of the college in a positive way only after living one year in the campuses, going to classes, interacting with the peers, going towards etc. Lots of areas like the traditional teaching method, poor hostels, lawlessness, slums etc around the hostel campuses, unclean surroundings, all need to be addressed so that when the young undergraduates come they feel good about it rather than having a feeling of shattered dreams!!!!

**Table 1:** Comparison of mean DREEM domain scores among undergraduate students of 1st and 3<sup>rd</sup> semester in Darbhanga Medical College, Laheriasarai, Darbhanga, Bihar.

Domain	1 <sup>st</sup> Semester	3 <sup>rd</sup> Semester	Interpretation
Students perception of learning (SPL)	18/48	28/48	Moving in the right direction
Students perception of teachers (SPT)	20/44	27/44	Moving in the right direction
Students academic self-perception (SASP)	18/32	20/32	Feeling more on the positive side
Students perceptions of atmosphere (SPA)	19/48	29/48	Moving in the right direction
Students social self-perceptions (SSSP)	13/28	16/28	Not too bad
Total DREEM item score for the group	113/200	120/200	More positive than negative

**Table 2:** Comparison of mean (SD) DREEM scores where significant differences were observed between 1<sup>st</sup> and 3<sup>rd</sup> semester medical students (N=170)

Domain Item	1 <sup>st</sup>	3 <sup>rd</sup> semester	P value
<b>1: Students perception of learning (SPL) 12 items</b>			
7. Teaching is often stimulating	2.02 (1.02)	2.26 (0.92)	0.01
25. Teaching overemphasizes factual learning	1.75 (0.96)	1.52 (1.27)	0.04
38. I am clear about the learning objectives of the course	2.35 (0.99)	2.36 (0.91)	0.03
48. Teaching is too teacher centered.	1.18 (1.02)	2.29 (0.91)	0.03
<b>2: Students perception of teachers (SPT) 11 items</b>			
6. Teachers espouse a patient centered approach to consulting	2.42 (0.95)	2.66 (0.96)	0.015
9. Teachers get angry in teaching sessions	1.4( 1.03)	1.8( 0.94)	0.002
<b>3: Students academic self-perception (SASP) 8 items</b>			
5. Previous learning strategy continues to work for me now	2.27 (0.97)	2.48 (0.95)	0.04
10. I am/was confident of passing this year	3.17 (0.92)	2.93 (0.94)	0.01
22. I feel I am being well prepared for my profession	2.15 (0.94)	2.54 (0.83)	0.001
26. Last year's work has been a good preparation for this year's work	2.01 (1.04)	2.25 (1.08)	0.02
41. My problem solving skills are being well developed	2.08 (0.96)	2.39 (0.96)	0.002
<b>4: Students perception of atmosphere (SPA) 12 items</b>			
11. Atmosphere is relaxed during teaching	2.05 (0.90)	2.60 (0.95)	0.014
36. I am able to concentrate well	2.14 (1.01)	2.35 (0.95)	0.03
43. Atmosphere motivated me as a learner	1.92 (1.05)	2.29 (0.96)	0.01
50. I feel able to ask questions I want	1.54 (1.04)	1.89 (0.92)	0.04
<b>5: Students social self-perceptions (SSSP) 7 items</b>			
3. There is a good support system for students who got stressed	1.01 (0.57)	1.82 (0.95)	0.04
4. I am too tired to enjoy this subject	1.54 (1.13)	1.85 (1.16)	0.009
46. My accommodation is pleasant	1.4 (1.12)	1.9 (1.81)	0.025

**Table 3. The Multiple Logistic Regression analysis trying to implore the factors which decided the scores obtained.**

The Mean score >110 Depended on

Factors	R score	p value
Students From Rural Setting	0.923	p<0.001
Students From SES Four	0.1548	p<0.05

*Modified B.G Prasad.SES scale up to Aug 2012*

## References

1. Roff S. The Dundee Ready Education Environment Measure (DREEM)-a generic instrument for measuring students' perceptions of undergraduate health professions curricula. *Med Teach*. 2005;27:322-5.
2. Entwistle NJ, Ramsden P. *Understanding student learning*. London: Croom Helm; 1983.
3. Till H. Identifying the perceived weakness of a new curriculum by means of the Dundee Ready Education Environment Measure (DREEM) Inventory. *Med Teach*. 2004;26:39-45.
4. Genn JM. AMEE Medical Education Guide No 23 (Part 1): curriculum environment, climate, quality and change in medical education—a unifying perspective. *Med Teach*. 2001;23:337-44.
5. Salvatori P. Meaningful occupation for occupational therapy students: a student-centered curriculum. *Occupational Therapy International*. 1999;6:207-23.
6. Button D, Davies S. Experiences of encouraging student-centered learning within a wellness-orientated curriculum. *Nurs Educ Today*. 1991;16:407-12.
7. Health Professions Council of Australia Ltd. The allied health professional workforce in Australia: challenges and opportunities. [cited 2011 June]; Available from: [http://www.ahpa.com.au/pdfs/submission\\_08.05.pdf](http://www.ahpa.com.au/pdfs/submission_08.05.pdf).
8. McMeekan J. Physiotherapy education – what are the costs? *Aust J Physiother*. 2008;54:85-6.
9. Wray N, McCall L. 'They don't know much about us': educational reform impacts on students' learning in the clinical environment. *Adv Health Sci Educ*. 2009;14:665-76.
10. Roff S, McAleer S, Harden RM, Al-Qahtani M, Ahmed AU, Deza H, et al. Development and validation of the Dundee Ready Education Environment Measure (DREEM). *Med Teach*. 1997;19:295-9.
11. Denz-Penhey H, Murdoch C. A comparison between findings from the DREEM questionnaire and that from qualitative reviews. *Med Teach*. 2009;31:449-53.
12. Zamzuri AT, Ali AN, Roff S, McAleer S. Students' perceptions of the educational environment at dental training college, Malaysia. *Malaysian Dent J*. 2004;25:15-26.