Orienting faculty about medical student's perception: An essential yet missing area in curriculum development in new INI's (Institute of National Importance)

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Abstract: *Introduction:* Investigating educational environments in a newly established medical institution is imperative to promote effective learning and facilitate delivery of quality medical education. The current study assessed the student's perception and faculty feedback regarding educational environment in a newly established institute of national importance in India. *Methodology:* The current study was undertaken among two consecutive batches of students in three phases; Dundee Ready Educational Environment Measure (DREEM) questionnaire was administered to all the volunteering students followed by small group discussions of students. A faculty orientation session was conducted to invite their feedback on student's shared perception. *Results:* Response rate of 82.7% and high reliability coefficient (0.893) for DREEM's questionnaire was observed. Mean total DREEM score was 125.7±19.7. Mean scores of most of the items scored between 2 and 3. Students reported teaching learning activities to be interesting and teachers to be interactive with overall emphasis on practical learning. Strict discipline, continuous stress of academics and fewer opportunities to engage in extracurricular activities were identified as problem areas. The reported problem of students was acknowledged by faculty as essential areas to improve upon with advancing years. Need of strict discipline was considered essential by many faculty members. *Conclusions:* Defining of educational environment in a newly established institute requires orientation of course planner and faculty members about student's expectations. Planned academic schedule need to incorporate extra-curricular activities and time for self - study by students to enhance positive educational environment.

Keywords: DREEM, Perception, Learning, Students, Faculty orientation, Curriculum.

Introduction

Assessment of educational environment is an imperative tool to promote effective learning among young aspirants and to facilitate delivery of quality medical education [1-2]. Besides imparting knowledge and sharing expertise, learning of students is influenced by context and environment it is occurring, thus determining level of engagement, motivation and perception of relevance [3-4]. The Pradhan Mantri Swasthya Suraksha Yojana (PMSSY) aiming to correct the imbalances in the availability of affordable healthcare facilities in the different parts of the country lead to establishment of Institute of National Importance (INIs) with a vision to provide country wide quality medical education to young aspirants [5]. Various methodologies have been designed to investigative the educational environments, such as qualitative approaches or the use of quantitative tools like questionnaires and surveys. [6].

The current study was planned with an aim to assess educational environment in AIIMS, Jodhpur using Dundee Ready Educational Environment Measure (DREEM), a valid, reliable and culture free tool used globally and is acclaimed for providing a standardized way for international comparisons between medical schools besides enabling each institute to identify areas of concern as per students shared perception that medical course planners or educators might have unintentionally ignored [7-11].

Material and Methods

Study design: A cross sectional study was conducted.

Material/ Subjects: Dundee Ready Education Environment Measure (DREEM) questionnaire was used to assess perception of medical undergraduate students for two consecutive batches in institute. First academic session with a strength of 50 undergraduate medical students was initiated in year 2012 and was increased to strength of 100 students for subsequent academic years. Pilot testing of questionnaire in English language revealed poor comprehension among students and difficulty in conveying perceptions and thus it was translated in Hindi language. Validation of questionnaire was done by translating whole of Hindi translated DREEM's questionnaire back to English by the language experts not related to study. After making necessary rectifications in Hindi version, both English and Hindi version of all 50 items were administered to students. The study was done in three phases.

First phase: Consecutive batches of two academic years (third and fourth semester) were approached for the study. The investigators explained aims and objectives to students and invited them during working hours and in class room setting for filling paper based DREEM questionnaire in anonymous manner.

Second phase: Students were encouraged to voluntarily participate in small groups with peers of their choice and detail upon their perception, discuss their concerns and cite related incidents or examples in response to each item of the questionnaire and anonymously submit in form of free text comments. At the start of small group discussions (SGDs), all the participants were conveyed about essence of these sessions. Each session was moderated through participating students and no investigators were present throughout the sessions to facilitate unbiased communication by students.

Third phase: Faculty session was conducted where students' feedbacks were shared with faculty members and their feedbacks were invited. The feedbacks and opinion provided were recorded and collated to form the study reports.

Data analysis: Data was analyzed by Statistical Package for Social Sciences (SPSS) version 20.0. (IBM Co., Armonk, NY) Fifty items in DREEM measure regarding five aspects of the educational

environment based on students' perception, which include students' perception of learning (SPoL), students' perception of teaching (SPoT), students' academic self-perception (SASP), students' perception of atmosphere (SPoA) and students' social self-perception (SSSP) [12].

Descriptive analysis was done for gender and semester of participants. Mean, standard deviation and standard error of the mean (with 95% confidence intervals) were generated for overall score and for individual sub-category. The scores for individual item were also computed. The normality of the distribution of the scores was assessed using a one sample Kolmogorov- Smirnov test. Student t test was computed for estimating statistical significance (p <0.05) between difference in means of both batches of students.

Levene's test for equality of variances was computed and for p <0.05, unequal variances value was considered for analysis. DREEM's enables assessing specific strengths and weaknesses within the educational climate through individual items score. Items with mean score of 3.5 or over are real positive aspects; with a mean of 2 or less indicate problem areas and items with a mean between 2 and 3 are aspects of the climate that must be enhanced [13]. Content analysis was done for the free text responses collected from students' small group discussions and feedback received from faculty members.

Ethical approval: Before commencing the study, ethical approval from AIIMS Jodhpur institutional ethical committee was taken and questionnaire was administered to only those students who submitted the informed consent, who were then also invited for small group discussions. Faculty members also who provided their informed consent were invited for orientation session.

Results

Response rate of 82.7% was observed as 125 out of 150 student's participated (3rd semester - 79 out of 99 and in 4th semester - 46 out of 50). All girls (54, 100%) participated while only 71 out of 95 boys (74.7%) responded to questionnaire. The reliability coefficient was

high as overall scale had alpha value of 0.893 and only minimally increases by 0.003 if 3 of 50 "item deleted" from total items. Except for SPL, none other domain exceeded the threshold (0.70).

In estimation of co-variation among the sub-scales, the co-relations between SASP and SPA were found to be highest (Pearson's correlation coefficient - 0.667, p=0.00) while less of co-

variance was observed for other sub scales (Pearson's correlation coefficient – 0.445 to 0.593, p=0.00) thus indicating dependent sub scales.

Semester analysis: Third semester students reported better perception compared to their seniors in 4th semester for all domains and overall scale (p<0.05) (Table 1).

Table-1: DREEM's sub scale and alpha values with interpretation semester and gender wise						
DREEM's Questionnaire (total score)	Overall score	3rdsem	5thsem	Effect size (Cohen's d ; eta r square)	Interpretation	p value
Overall (200)	125.7±19.7	130.9±18.9	116.7± 17.8	0.8;0.16	More Positive than Negative Education Climate	0.001
SPoL - students' perception of teaching/learning (48)	30.6 ±5.6	32.1 ± 4.9	28.2 ± 6.1	0.7; 0.09	A more positive perception	0.001
SPoT - students' perceptions of teachers (44)	28.4 ±4.6	29.5+ 4.4	26.5 ± 4.9	0.7; 0.09	Moving in the right direction	0.001
SASP - students' academic self-perceptions (32)	20.4 ±4.2	21.4+ 3.8	18.5 ± 4.4	0.7; 0.09	Feeling more on the positive side	0.001
SPoA - students' perception of atmosphere (48)	30.0 ±5.7	30.9+ 5.9	28.6 ± 5.3	0.4;0.04	A more positive attitude	0.032
SSSP - students' social self-perceptions (28)	16.3 ±4.5	17.1± 4.3	15 ± 4.6	0.5;0.04	Not too bad	0.009

Gender analysis: No statistically significant difference was reported except for better perception of atmosphere (SPoA) in female students as compared to male students (p<0.05). The sub scale mean scores and alpha values are described in Table 2. Overall score with mean 125.7 (S.D. - 19.7) and individual mean score for assessed domains revealed positive education climate and things moving in right direction.

None of the items scored more than 3.5 as the highest mean score for individual items was 3.4 (S.D. - 0.72) for "course organizers are knowledgeable" while the lowest observed mean score was 1.4 (S.D. - 1.0) for "teaching over emphasizes factual learning." Table 3 provides semester wise distribution of perception of students for each item of DREEM inventory.

Table-2: DREEM sub scale, Item mean scores and alpha values (Individual item wise)				
Item with mean score above 3	**Mean**	**S.D.**	**Item – total correlation**	**Item – subscale correlation**
The teachers are knowledgeable	3.4	0.7	0.4	0.5 (SPTe)
I am confident about my passing this year	3.1	0.8	0.4	0.4 (SASP)
The teachers have good communication skills with patients	3.1	0.8	0.3	0.4 (SPTe)
The teachers are well prepared for their teaching sessions	3.1	0.7	0.4	0.3 (SPTe)
Item with mean score less than 2				
The teachers are authoritarian*	1.5	1.0	0.3	0.2 (SPTe)
I am rarely bored on this course	1.7	1.1	0.3	0.3 (SSSP)
The teaching over emphasizes factual learning*	1.4	1.0	0.02	0.05 (SPL)
I am able to memorize all I need	1.7	1.0	0.5	0.5 (SASP)
Item with mean score between 2 and 3				
I am encouraged to participate during teaching sessions	2.7	0.85	0.4	0.5 (SPL)
There is a good support system for students who get stressed	2.1	1.1	0.5	0.3 (SSSP)
I am too tired to enjoy this course*	2.2	1.2	0.1	0.2 (SSSP)
Learning strategies which worked for me before continue to work for me now	2.3	1.2	0.3	0.3 (SASP)
The teachers espouse a patient centered approach to consulting	2.7	0.8	0.1	0.2 (SPTe)
The teaching is often stimulating	2.7	0.85	0.4	0.4 (SPL)
The teachers ridicule the students*	2.4	1.0	0.4	0.4 (SPT)
The atmosphere is relaxed during clinical ward teaching	2.9	0.8	0.3	0.3 (SPA)
This course is well timetabled	2.8	1.0	0.3	0.3 (SPA)
The teaching is student centered	2.7	0.85	0.4	0.4 (SPL)
I have good friends in this course	2.9	1.0	0.4	0.4 (SSSP)
The teaching helps to develop my competence	2.8	0.78	0.5	0.5 (SPL)
Cheating is a problem on this course*	2.1	1.2	0.01	0.01 (SPA)
My social life is good	2.7	1.0	0.5	0.5 (SSSP)
The teaching is well focused	2.9	.8	0.4	0.5 (SPL)
I feel I am being well prepared for my profession	2.6	1.0	0.5	0.4 (SPL)
The teaching helps to develop my confidence	2.5	0.9	0.5	0.5 (SASP)
The atmosphere is relaxed during lectures	2.7	0.9	0.3	0.3 (SPA)
The teaching time is put to good use	2.7	0.9	0.5	0.5 (SPL)
Last year's work has been a good preparation for this year's work	2.4	1.1	0.5	0.4 (SASP)
I seldom feel lonely	2.2	1.3	0.4	0.4 (SSSP)
The teachers are good at providing feedback to students	2.4	0.9	0.3	0.3 (SPTe)
There are opportunities for me to develop interpersonal skills	2.7	0.9	0.4	0.4 (SPA)

Item with mean score between 2 and 3	Mean	S.D.	Item – total correlation	Item – subscale correlation
I have learnt a lot about empathy in my profession	2.9	0.8	0.3	0.3 (SASP)
The teachers provide constructive criticism here	2.5	0.9	0.4	0.4(SPTe)
I feel comfortable in teaching sessions socially	2.7	0.8	0.5	0.5 (SPA)
The atmosphere is relaxed during seminars / tutorials	2.7	0.9	0.4	0.5 (SPA)
I find the experience disappointing*	2.5	1.0	0.5	0.6 (SPA)
I am able to concentrate well	2.1	1.1	0.5	0.6 (SPA)
The teachers give clear examples	2.8	0.8	0.4	0.5 (SPTe)
I am clear about the learning objectives of the course	2.9	0.8	0.4	0.4 (SPL)
The teachers get angry in teaching sessions*	2.2	1.0	0.3	0.4 (SPTe)
My problem solving skills are being well developed here	2.4	0.8	0.4	0.4 (SASP)
The enjoyment outweighs the stress of the course	2.1	1.2	0.4	0.4 (SPA)
The atmosphere motivates me as a learner	2.6	0.9	0.5	0.4 (SPA)
The teaching encourages me to be an active learner	2.6	1.0	0.6	0.6 (SPL)
Much of what I have to learn seems relevant to a career in healthcare	2.9	0.8	0.3	0.2 (SASP)
My accommodation is pleasant	2.3	1.4	0.3	0.2 (SSSP)
Long term learning is emphasized over short term learning	2.4	1.1	0.4	0.4 (SPL)
The teaching is too teacher centered*	2.0	1.0	0.2	0.3 (SPL)
I feel I am able to ask the questions I want	2.2	1.1	0.08	0.02 (SPTe)
The students irritate the teachers*	2.2	1.1	0.04	0.01 (SPA)
*- reverse scoring was done.				

Table-3: Item scores semesters wise for five aspects of student's perception on educational environment				
Item No. 1	Students' perception of teaching/learning	Semesters		P value
		3rd	5th	
1	I am encouraged to participate during teaching sessions	2.9 (0.8)	2.5 (0.9)	0.03
7	The teaching is often stimulating	2.9 (0.8)	2.4 (0.8)	0.007
13	The teaching is student centered	2.7 (0.9)	2.7 (0.8)	0.93
16	The teaching helps to develop my competence	2.9 (0.7)	2.6 (0.8)	0.002
20	The teaching is well focused	3.1 (0.7)	2.6 (0.8)	0.001
21	I feel I am being well prepared for my profession	2.9 (0.9)	2.3 (1.0)	0.001
24	The teaching time is put to good use	2.8 (0.9)	2.6 (0.9)	0.363
25	The teaching over emphasizes factual learning	1.4 (1.0)	1.5 (0.9)	0.345
38	I am clear about the learning objectives of the course	3.0 (0.7)	2.6 (0.9)	0.034
44	The teaching encourages me to be an active learner	2.7(0.9)	2.4 (1.0)	0.104
47	Long term learning is emphasized over short term learning	2.7 (0.9)	1.9 (1.3)	0.001
48	The teaching is too teacher centered	2 (0.9)	2(1.1)	0.85

Item No.2	Students' perception of teachers	3rd	5th	P value
2	The teachers are knowledgeable	3.6 (0.5)	3.1 (0.9)	0.001
6	The teachers espouse a patient centered approach to consulting	2.8 (0.7)	2.6 (0.8)	0.124
8	The teachers ridicule the students	2.5 (0.9)	2.3(1.1)	0.129
9	The teachers are authoritarian	1.5 (1.0)	1.5 (1.0)	0.642
18	The teachers have good communication skills with patients	3.2 (0.7)	2.9 (0.9)	0.035
29	The teachers are good at providing feedback to students	2.4 (0.9)	2.5 (0.8)	0.474
32	The teachers provide constructive criticism here	2.6 (0.9)	2.4 (0.8)	0.09
37	The teachers give clear examples	2.9 (0.8)	2.6 (0.8)	0.07
39	The teachers get angry in teaching sessions	2.3 (0.9)	2.0 (1.2)	0.08
40	The teachers are well prepared for their teaching sessions	3.1 (0.7)	3.0 (0.8)	0.23
49	I feel I am able to ask the questions I want	2.3 (1.1)	1.8 (1.2)	0.06
Item No. 3	Students' academic self -perception	3rd	5th	P value
5	Learning strategies which worked for me before continue to work for me now	2.5 (1.1)	1.9 (1.2)	p=0.002
10.	I am confident about my passing this year	3.2 (0.65)	2.9 (0.9)	0.022
22	The teaching helps to develop my confidence	2.9 (0.7)	2.3 (0.9)	0.061
26	Last year's work has been a good preparation for this year's work	2.6 (1.0)	2.1 (1.1)	0.01
27	I am able to memorize all I need	2.0 (1.0)	1.4 (1.1)	0.001
31	I have learnt a lot about empathy in my profession	3.1 (0.7)	2.8 (0.8)	0.026
41	My problem solving skills are being well developed here	2.4 (0.8)	2.4 (0.8)	0.93
45	Much of what I have to learn seems relevant to a career in healthcare	3.0 (0.8)	2.9 (0.8)	>0.05
Item No. 4	Students' perception of atmosphere	3rd	5th	P value
11	The atmosphere is relaxed during clinical ward teaching	2.9 (0.8)	2.8 (0.6)	0.381
12	This course is well timetabled	2.9 (1.1)	2.7 (1.0)	0.226
17	Cheating is a problem on this course		2.4 (1.1)	0.017 (sig)
23	The atmosphere is relaxed during lectures	2.6 (0.9)	2.7 (0.8)	>0.05
30	There are opportunities for me to develop interpersonal skills	2.9 (0.9)	2.4 (0.9)	<0.05
33	I feel comfortable in teaching sessions socially	2.8 (0.8)	2.5 (0.9)	>0.05
34	The atmosphere is relaxed during seminars / tutorials	2.8 (0.8)	2.5 (1.0)	>0.05
35	I find the experience disappointing	2.7 (0.9)	2.2 (1.0)	<0.05
36	I am able to concentrate well	2.3 (1.1)	1.7 (1.1)	0.05
42	The enjoyment outweighs the stress of the course	2.0 (1.2)	2.3(1.3)	>0.05
43	The atmosphere motivates me as a learner	2.7(0.9)	2.4 (0.9)	>0.05
50	The students irritate the teachers	2.3 (1.1)	1.9 (1.2)	<0.05

Item No. 5	Students' social self-perceptions	3rd	5th	p
3	There is a good support system for students who get stressed	2.3 (0.9)	1.8 (1.2)	0.05
14	I am rarely bored on this course	1.8 (1.1)	1.6 (1.2)	0.05
4	I am too tired to enjoy this course	2.4 (1.1)	2.0 (1.3)	0.09
15	I have good friends in this course	3.1 (0.9)	2.8 (1.1)	0.14
19	My social life is good	2.8 (0.9)	2.6 (1.2)	0.272
28	I seldom feel lonely	2.2 (1.3)	2.4(1.3)	0.487
46	My accommodation is pleasant	2.5(1.3)	1.8 (1.5)	0.01

Student's Small Group Discussions (SGDs): A total of 9 group discussions were conducted where students in a group of 7-10 gathered in an informal setting during their free periods or after working hours and discussed their perception in response to each item. The students were encouraged to discuss the reasons associated to items to which they strongly agree, agree, disagree or strongly disagree or have no specific opinion. All the students were motivated to freely express their views and in case of any difficulty or confusion, the designated facilitator or recorders were asked to contact investigator who were readily available for any clarifications. The positive attributes and problem areas revealed by students is given in Table 4.

Table-4: Positive attributes and problem areas of Educational environment expressed by students in Small Group Discussions (SGD)	
Students' perception of teaching/learning	
Positive areas	**Problem areas**
A. Teaching process	A. Teaching process
- Interactive and interesting sessions	- All what is taught cannot be practically related
- Ongoing sessions linked to previous sessions	- Few teachers do not teach well and at times in spite of the scheduled class , teaching sessions were cancelled
- Both traditional style and technology used	
- Teaching slots are effectively utilized to impart training	
B. Assessment process	B. Assessment process
- Rewards offered on good performance	promote short term learning, exams oriented teaching promotes cramming habits
- Bad performance is criticized	theory is needed to pass the exams and get good grades but don't understand its practical application for being a good doctor
- Confident of being trained as good doctors	
C. Facilitators of student participation	C. Barriers of student participation
- Friendly approach of senior teachers	- Depends on teacher and subject as some lectures are boring while some are interesting and inspiring
- Almost everyone is involved during the process of teaching	- Some teachers suppress ideas and thoughts during discussion
- Attending classes enable learning	- Teachers move at their own pace during teaching sessions without clearing basics
- Encouraged for self –study	

Students' perception of teachers	
Positive attributes	**Problem areas**
A. <u>Characteristics as teachers</u>	A. <u>Characteristics as teachers</u>
– Come prepared for lectures; extremely knowledgeable; good clinical acumen; solve doubts readily or if unaware do it in next sessions	- Some teachers speak so harshly and criticize us in a manner that makes us feel depressed or mocked at
– Mostly the sessions are conducted in calm and relaxed manner ; teachers get angry only when students cross limits or irritate them	- Few teachers comment on student's personal life
B. <u>Teaching process</u>	B. <u>Assessment process</u>
– Comprehensive teaching ; providing information from multiple sources	- Handwriting is considered as important criteria for giving marks
– Efforts are made to give good explanations of concept	- Sometimes we feel few students get more marks because of biased behavior of teachers
– Feedback : Regular feedback provided about performance in exams, practical training sessions and during our interaction with patients	- Emphasis is mainly on facts based learning
C. <u>Characteristics as clinicians</u>	C. <u>Characteristics as clinicians</u>
– Explain disease to patients, hear their problems, ask them for their voluntary consent while involving them in clinical teaching sessions; take all measures to help and comfort patient during clinical sessions	– Not all teachers are good with communication skills and are not patient friendly
– Patients appear satisfied; teachers effectively communicate with patient by talking in their local language and solving their doubts; considerate clinicians	D. <u>Characteristics as administrators</u>
	– Rules and regulations are applied in everything, even in small things; most teachers (seniors) are very strict; feel restricted because of many useless rules ;Our opinions and suggestions are asked for but are never considered
Students' academic self -perception	
Positive attributes	**Problem areas**
A. <u>Teaching content</u>	A. <u>Failure of learning strategies</u>
- Case oriented learning, video assisted learning , practical examples help in developing confidence	- Pressure of covering vast syllabus in limited time; unable to memorize for long term
- Clinical sessions are interesting and motivate us to learn.	- learning requires lot of cramming; not aware which topics are more important from exam point of view
	B. <u>Poor time management</u>
	- not much time is available for self –study
	- student presentations and not many holidays during or before exams leads to poor revision; students are forced to attend all lectures
	C. <u>Redundant portions of curriculum</u>
	- Animal experiments and multiple lab formulations are no more used but we are still assessed on these aspects

	D. Teaching content
	- Teachers are mainly focused on covering course; not many opportunities of practical interactions
	- "With increasing patient load, less time is spent on each patient, thus soft skills are not discussed properly any more"

Students' perception of atmosphere	
Positive attributes	**Problem areas**
A. Faculty attitude	A. Hostel and campus environment
– Teachers are friendly; discuss cases properly and solve our queries	– Healthy interaction is not being promoted between seniors and juniors; Initially lot of scare caused due to alleged ragging has made us uninterested to get friendly with our juniors
– "Comfortable to discuss things with teachers without any fear in most of the classes"	
	B. Inadequate supportive mechanism
B. Environment in class	– At times we don't feel psychologically and emotionally stable;
– Few instances have occurred where students have created nuisance in class and irritated teachers like students whisper during lectures or sleep in post lunch sessions	C. Lack of extra- curricular activities
	- Not many opportunities present for our overall development;
	- studying is emphasized mainly and other aspects of our life are not catered to which disappoints us
	- " many students have left prestigious college to join here which they feel was a wrong decision"

Students' social self- perception	
Positive attributes	**Problem areas**
A. Mentorship program	A. Hostel life:
- Relieve stress and enhance teacher student interaction	- limited means to enjoy
	- lot of restrictions are imposed
	- Unaware of anything outside our campus
	- Strict discipline limit free interaction among peers
	- Interfering and ridiculing attitude of authorities on personal issues is seen
	B. Lack of extra- curricular activities
	- Tired as load of studies is very much
	- Monotonous routine
	- Personal life is not enjoyable
	- No mechanism to relieve from the stress of academics

Positive attributes reported by students: During small group discussions, students reported teaching learning activities to be interesting and interactive; themselves to be engaged and motivated and teachers to be dedicated. Effective use of teaching learning aids, meticulous planning and delivery of teaching learning sessions, patient centric approach, clinical correlation of theoretical concepts, calm and relaxed approach while solving doubts by faculty was appreciated by students.

"We are proud to have the academic life offered to us in terms of interesting teaching methods, updates on latest available information, concern of our teachers about our studies and well – being"

Mandatory hostel for students and mentorship program (each faculty acting as a mentor for group of students) was considered helpful by students as it facilitate teacher- student interactions regarding personal, social and psychological concerns as they can reach out to each other and their teachers even beyond working hours. Few students even conveyed that "criticism by teachers for bad performance" and "strict measures and punishments toward unprofessional behavior of students" is essential for good teaching learning environment.

Poor performing aspects reported by students: Problem areas expressed by students during SGDs were that all teachers do not contribute effectively towards teaching learning activities; are not patient centric; ridicule students and are not effective communicators. Too many rules to ensure discipline and strict punishment imposed on all students because of wrongdoings of few students was reported to spoil the learning environment.

"Students feel that they will get scolded without any reasons so they have started thinking, why don't we do something and then get scolded"

Students felt stressed and burnt out as they are unable to manage their schedule because of continuous teaching sessions, limited hours of self -study; need of multiple rounds of revision and disconnect between theory and practical application of knowledge in few subjects.

"Medical curriculum appears to have a mixture of relevant and irrelevant components"

Over emphasis on factual knowledge, vast syllabus and strict assessment by faculty lead to performance dissatisfaction. Few conveyed that remote location of hostel premises from main city makes them feel isolated and disconnected to routine life. The score of items between 2 and 3 reflect that students are increasingly looking forward for more practical based approach, techniques which help in long term learning,

definite ways of relaxation and entertainment and institute remedial actions are needed in this regard.

Feedback of faculty members: About 23 out of 60 faculty members participated and were apprised of students 'perception about educational environment. Out of 23 faculty, 18 were of view that student's feedback should be taken into account while framing both academic and extra- curricular activities. Designing of assessment methods based on teaching learning objectives and in a manner which discourages short term learning was felt by all the participating faculty members. Eight teachers conveyed that they will plan their teaching learning activities more meticulously and will also gather feedback from students after their sessions. Few (3 / 23) of the faculty reported that as it is a new college and thus strict rules are essential to maintain decorum. It was suggested by 2 faculty members that more activities need to be designed to ensure expression of student's creative talent along with academic performance.

Discussion

Many new medical colleges are being established throughout the country with a vision to provide quality medical education. This study is a first attempt to assess educational climate of newly established institute and regular such efforts to gather and evaluate students' feedback will enable both course organizers and individual teachers to effectively relate to students and motivate them to become better learners. The identified institute is currently in a process of designing and adopting student centered curriculum and is keen to introduce educational innovations to provide better educational environment and teacher- student interaction. Overall reported positive perception and of things moving in right direction must encourage course planners to engage more effective ways towards teaching learning activities.

As per Shankar et al, high response rate (80%) reflect student's willingness to provide feedback about their curriculum [14]. The overall mean score of 124 reflect positive educational environment and is higher or comparable to mean scores reported from

other medical colleges (107.4/ 200 and 117/200) in India [15-17]. (Table 5) Students'perception of learning (SPoLmean score: 30.6), perception of teachers (SPoTmean score: 28.4), academic self-perception (SASP mean score: 20.4) and

perception of atmosphere (SPoA: 30.0) was found to be positive and their social self-perception could be graded as not too bad (SSSP: 16.3).

Table-5: Comparative review of DREEM scores with current study						
Studies	**Overall**	**SPoL**	**SPoT**	**SASP**	**SPoA**	**SSSP**
Current study	125.7	30.2	27.6	20.4	29.0	15.9
Karim J (2015) [15]	108.7	25.2	24.6	18.4	26.2	14.3
Ahmad (2015) [16]	92.2	19.4	21.0	16.8	21.3	9.7
Sunkad (2015)[17]	122.4	29.8	25.7	20.5	29.0	17.3

Student's inability or difficulty to cope with demanding schedule of medical studies is well reported. [3-4] Decline in overall and individual subscale scores for senior batch students (116.7 from 130.9) can be attributed to psychological pressure of facing continuous academics related stressful situations, no seniors students to guide them and difficulty in coping with medical curriculum with advancing years [18]. Senior students are reportedly dissatisfied on many aspects and areas of concern observed are similar to other studies in form of teaching being teacher centered, over emphasis on factual learning, teachers being authoritarian and students being ridiculed [4-5].

In present study knowledgeable teachers, good communication skills of teachers with patients, being well prepared for the classes and reported confidence of passing by students signifies the things moving in right direction in a new institute [19-20] except for few teachers who act authoritarian and follow conventional teacher's practices and thus lead to dissatisfaction among students [14]. The current study helps us to understand that in spite of positive educational environment, faculty orientation regarding student perception is missing. This is essential to carry out as it will help faculty members to understand student's expectations and enable them in planning their teaching activities. Based on our literature search, none of the existing studies have investigated perception of faculty members or curriculum planners regarding role of student inputs in formulating medical curriculum. Poor faculty participation in orientation sessions reflected in our study need to be researched

further and possibly highlights the neglect of medical educators in integrating student's feedback while designing the curriculum and their teaching learning activities. One of the limitations of study is lack of information on student's family and the local guardian support available for students in and around city. This might have important implication as students belonging to same or nearby place may experience better emotional and psycho-social support as compared to students hailing from distant areas.

Conclusion

DREEM inventory supplemented with small group discussions where students freely express and discuss their concerns with their peers is an effective strategy to assess areas of concern among students regarding educational environment. Innovations in promoting long term and practical based learning are well appreciated by students but continuous efforts need to be made towards collecting student's feedback and orienting faculty members regarding it to strike balance between expectations of course planners, teacher and students. Demanding medical curriculum need definite inclusion of activities promoting better faculty- student dialogue and measures of relaxation and entertainment as essential part of educational environment.

References

1. Dent JA, Harden RM. A practical guide for medical teachers (3rd ed.). *Elsevier Churchill Livingstone.* 2009.
2. Newble D, Cannon RA & Kapelis ZA. A handbook for medical teachers. *Kluwer Academic Publishers,* 2001.
3. Hutchinson L. Educational environment. *British Medical Journal.* 2003; 326(7393):810-812.
4. Pai PG, Menezes V, Srikanth, Subramanian AM, Shenoy JP. Medical Students' Perception of Their Educational Environment. *Journal of Clinical and Diagnostic Research.* 2014; 8(1):103-107.
5. Ministry of Health & Family Welfare, Government of India. New All India Institutes of Medical Sciences [Internet]. New Delhi: MOHFW, GoI; 2016 Apr [cited 2016 Apr 1]. Available from: *http://pmssy-mohfw.nic.in/newAIIMSstatus.aspx*
6. Roff S. The Dundee Ready Educational Environment Measure (DREEM)-a generic instrument for measuring students' perceptions of undergraduate health professions curricula. *Medical Teacher.* 2005; 27(4):322-325.
7. Al-Hazimi A, Zaini R, Al-Hyiani A, Hassan N, Gunaid A, Ponnamperuma G, Karunathilake I, Roff S, McAleer S, Davis M. Educational environment in traditional and innovative medical schools: a study in four undergraduate medical schools. *Education for Health-Abingdon-Carfax Publishing Limited.* 2004; 17(2):192-203.
8. Arzuman, H., Yusoff, M. S. B., & Chit, S. P. Big Sib Students' Perceptions of the Educational Environment at the School of Medical Sciences, Universiti Sains Malaysia, using Dundee Ready Educational Environment Measure (DREEM) Inventory. *The Malaysian Journal of Medical Sciences, MJMS.* 2010; *17*(3):40–47.
9. Thomas BS, Abraham RR, Alexander M, Ramnarayan K. Students' perceptions regarding educational environment in an Indian dental school. *Medical teacher.* 2009; 31(5):e185-188.
10. Varma R, Tiyagi E, Gupta JK. Determining the quality of educational climate across multiple undergraduate teaching sites using the DREEM inventory. *BMC Med Educ.* 2005; 5(1):8-10.
11. Hammond SM, O'Rourke M, Kelly M, Bennett D, O'Flynn S. A psychometric appraisal of the DREEM. *BMC Med Educ* 2012; 12(1):2.
12. 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(4):295-299.
13. Dunne F, McAleer S, Roff S. Assessment of the undergraduate medical education environment in a large UK medical school. *Health Educ J.* 2006; 65:149.
14. Shankar PR, Bharti R, Ramireddy R, Balasubramanium R, Nuguri V. Students' perception of the learning environment at Xavier University School of Medicine, Aruba: a follow-up study. *J Educ Eval Health Prof.*2015; 11:9.
15. Karim J, Becher Al-Halabi YM, Sadeq H, Dawas A, Al-Abdulrazzaq D. The educational environment of the undergraduate medical curriculum at Kuwait University. *Advances in medical education and practice,* 2015; 6:297.
16. Ahmad MS, Bhayat A, Fadel HT, Mahrous MS. Comparing dental students' perceptions of their educational environment in Northwestern Saudi Arabia. *Saudi Medical Journal.* 2015; 36(4):477.
17. Sunkad MA, Javali S, Shivapur Y, Wantamutte A. Health sciences students' perception of the educational environment of KLE University, India as measured with the Dundee Ready Educational Environment Measure (DREEM). *J Educ Eval Health Prof.* 2015; 12: 37.
18. Genn JM. AMEE Medical Education Guide No. 23 (Part 1): Curriculum, environment, climate, quality and change in medical education – a unifying perspective. *Medical teacher.* 2001; 23(4):337-44.
19. Jiffry MT, McAleer S, Fernando S, Marasinghe RB. Using the DREEM questionnaire to gather information on an evolving medical school in Srilanka. *Med Teach.* 2005; 27:348-352.
20. Unnikrishnan B, Rekha T, Mithra PP, Kumar N, Reshmi B. Perceptions of Medical Students about their Educational Environment in Community Medicine in a Medical College of Coastal Karnataka. *Indian Journal of Community Medicine*: Official Publication of Indian Association of Preventive & Social Medicine. 2012; 37(2):130-132.

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