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Original Article

Education Section

Medical Students' Perception of Their Educational Environment

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ABSTRACT

Background: Students' perception of the environment within which they study has shown to have a significant impact on their behavior, academic progress and sense of well-being. This study was undertaken to evaluate the students' perception of their learning environment in an Indian medical school following traditional curricula and to study differences, if any, between the students according to the stages of medical education, i.e., the pre-clinical and clinical stages.

Methodology: In the present study, the Dundee Ready Education Environment Measure (DREEM) inventory was administered to undergraduate medical students of first (n = 227), third (n = 175), fifth (n = 171) and seventh (n = 123) semesters. Scores obtained were expressed as mean ± Standard Deviation (SD) and analyzed using one-way ANOVA and Dunnett's test. P-value < 0.05 was considered as significant.

Results: The mean DREEM score for our medical school was 123/200.The first-year students were found to be more satisfied with learning environment (indicated by their higher DREEM score) compared to other semester students. Progressive decline in scores with each successive semester was observed. Evaluating the sub-domains of perception, the registrars in all semesters had a more positive perception of learning (Average mean score: 29.44), their perception of course organizers moved in the right direction (Average mean score: 26.86), their academic self-perception was more on the positive side (Average mean score: 20.14), they had a more positive perception of atmosphere (Average mean score: 29.07) and their social self-perception could be graded as not too bad (Average mean score: 17.02).

Conclusion: The present study revealed that all the groups of students perceived their learning environment positively. However, a few problematic areas of learning environment were perceived such as: students were stressed more often; they felt that the course organizers were authoritarian and emphasized factual learning. Implementing more problem-based learning, student counseling and workshops on teaching-learning for educators might enable us to remedy and enrich our learning environment.

Keywords: Learning environment, Dundee Ready Educational Environment Measure (DREEM) questionnaire, Dunnett's test

INTRODUCTION

Learning environment of an institution is the environment experienced or perceived by students and teachers. The educational climate/environment plays a very important role in effective student learning. Among the various factors which effect learning, engagement of the learner tends to be very crucial.The learners' engagement is further affected by their motivation and perception of relevance. These, in turn, can be affected by learners' previous experiences and preferred learning styles and by the context and environment in which the learning is taking place. In adult learning theories, teaching is as much about setting the context or climate for learning as it is about imparting knowledge or sharing expertise [1]. The educational environment makes an impact on students' learning experiences and outcomes [2]. Students' perception of the environment within which they study has shown to have a significant impact on their behavior, academic progress and sense of well-being [3-5].

Educational environment influences how, why and what students learn which is crucial in the success of the curriculum. The curriculum and students' perception towards it may affect the quality of learning. The student's feedback in such system is pivotal for the success of the educational climate. Although, there may be cultural and other determinants of how individuals view different qualitative aspects of a given educational environment, perceived ratings precisely report their perceptions [6].

Educational environment as the spirit of teaching and learning activities is a major determinant of developing motivation in students [3]. It would play an important role in academic achievement, satisfaction and success. However, learning is a relatively permanent change, in behavior of students in three domains: knowledge, attitude and psychomotor aspects [7]. Teaching and learning in clinical setting is a matter of interest in medical schools and clinical attachments have strong influence in shaping the new doctors' competencies. Recent studies have shown that although teachers and students are educational partners they have different ideas about the clinical setting in terms of quality [8]. Qualitative studies have shown discrepancies between perceptions of students, especially when they attach to clinical wards and hospital environment. It seems unhelpful for their learning, mostly because of the teachers' behavior [9]. Institutions in higher education are concerned with their quality which is perceived as the quality of learning environment.

Various methodologies have been designed to investigative the educational environments, such as qualitative approaches [10] or the use of questionnaires [5,10,11]. Surveys by using qualitative and quantitative tools were done. Henzi and colleagues investigated dental school learning environment by dental version of medical student learning environment survey and provided information for dental teacher [12]. Dundee Ready Educational Environment Measure (DREEM) questionnaire [10] is the most specific tool for investigation of the unique environment experienced by students on medical and healthcare-related courses. This instrument was developed by an international Delphi panel, and has been applied to a number of undergraduate courses for health professionals worldwide [13].

Several studies have evaluated the perceptions of their students in their native countries utilizing the DREEM questionnaire to study the educational environment [14]. Before entering a new learning institution, students and their parents enquire about the teaching and learning environment in addition to social climate of the institution,

as these are important in determining the nature of the learning experience. The institution also has an obligation to offer a 'fit-for-purpose' curriculum in an educational environment that will enhance the prospects of success of its students. Hence, we decided to evaluate the students' perceptions of their learning environment in an Indian medical school following traditional curricula. We also aimed to study differences, if any, between the perceptions of students according to the stages of medical education, i.e., the pre-clinical and clinical stages, so that remedial measures could be taken to enhance students' learning experiences.

MATERIALS AND METHODS

The study was a cross sectional study.

Instrument for Data Collection

The Dundee Ready Educational Environment Measure (DREEM) questionnaire, a generic, highly reliable and diagnostic inventory, was used for collection of data as a measure of students' perceptions about the educational environment. DREEM is a valid tool in referring the deficient areas in learning process and it was developed by an international Delphi panel. This inventory was developed using input from 80 international medical educators who visited Dundee from 1995-1997. It was developed for undergraduate health professionals. It was intended to be universal and cultural free inventory [14]. DREEM was tested in Europe, Africa, Asia, Australia and America [3]. It has been shown to be independent of culture, and its translated version to various languages has been used in many countries [2].

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

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

DREEM contains 50 statements relating to a range of topics directly relevant to education climate. Items were scored as follows: 4 for Strongly Agree (SA), 3 for Agree (A), 2 for Uncertain (U) and 1 for Disagree (D) and 0 for Strongly Disagree (SD). However, 9 of the 50 items (number 4, 8, 9, 17, 25, 35, 39, 48 and 50) are negatively phrased statements and scored 0 for SA, 1 for A, 2 for U, 3 for D and 4 for SD. The 50-item DREEM has a maximum score of 200, indicating the ideal educational environment.

The DREEM questionnaires were given to first, third, fifth and seventh semester students. The questionnaire was distributed to the students following a brief explanation of the objectives and data processing procedures, including anonymity and the importance of voluntary-based participation. Meanings of some of the terms such as 'course organizers' and 'registrars' were explained to the students prior to the administration of DREEM. It was also explained that the data would be used for quality assurance, as well as, for research purpose with a request for their co-operation. The resulting scores for domains were interpreted using the guide proposed by McAleer and Roff [2].

Statistical Analysis

For statistical analysis of the data, for the whole 50 item inventory, scores for categorized domains and each item were both expressed as Mean ± Standard Deviation (SD). Data were analyzed using the statistical package SPSS. One-Way ANOVA and Dunnett's test were used to identify the significance between sub-groups. A p-value < 0.05 was considered as significant.

RESULTS

The mean DREEM score for our medical school was 123/200. [Table/Fig-1] shows the DREEM domain scores for the first semester, third, fifth and seventh semester students. The first-year students were found to be more satisfied with the learning environment (indicated by their higher DREEM score) compared to the other semester students. Progressive decline in scores with each successive semester was observed. Evaluating the sub-domains of perception, the registrars in all semesters had a more positive perception of learning (Average mean score: 29.44), their perception of course organizers moved in the right direction (Average mean score: 26.86), their academic self-perception was more on the positive side (Average mean score: 20.14), they had a more positive perception of atmosphere (Average mean score: 29.07) and their social self-perception could be graded as not too bad (Average mean score: 17.02).

Domain	First semester	Third semester	Fifth semester	Seventh semester
Students' perception of learning	30.8(4.67)	30.0 (5.61)	28.9 (5.81)	28.1 (6.36)
Students' perception of Teachers	27.8 (4.25)	27.5 (4.36)	26.2 (5.09)	25.9 (4.31)
Students' academic self-perception	20.6 (4.27)	20.2 (4.61)	19.8 (5.16)	20.0 (5.09)
Students' perception of Atmosphere	30.3 (5.70)	29.2 (6.05)	28.9 (6.15)	28.0 (5.92)
Students' social self-perception	18.0 (3.29)	16.7 (3.45)	16.8 (4.37)	16.6 (4.45)
Total DREEM score for the group	127.5/200	123.6/200	120.6/200	118.6/200

[Table/Fig-1]: Mean (SD) DREEM domain scores for the first year, third year and fifth year students

[Table/Fig-2] shows the mean DREEM item scores for the individual semesters. It was observed that the first semester students scored less than 2 for three items (9, 25 and 48) and above 3 for two items (2 and 15). The third semester students scored less than 2 for eight items (4, 9, 10, 14, 25, 27, 42 and 48) and above 3 for three items (2, 10 and 15). The fifth semester students scored less than 2 for eight items (4, 9, 14, 25, 27,39, 48 and 50) and above 3 for two items (2 and 15). The seventh semester students scored less than 2 for nine items (4, 8, 9, 17, 25, 35, 39, 48 and 50) and above 3 for two items (2 and 10).

[Table/Fig-3] shows the mean of items which showed statistically significant differences between the various semester students. Out of the seventeen items, six items (20, 21, 24, 44, 47 and 48) were from Students' perception of learning, three items (2, 8 and 39) were from Students' perceptions of teachers, one item (27) was from students' academic self-perception, three items (35, 42 and 50) were from Students' perceptions of atmosphere and four items (3, 14, 15 and 46) were from Students' social self-perception.

DISCUSSION

The curriculum's most significant manifestation and conceptualization is the environment, educational and organizational, which embraces everything that is happening in the medical school. There is a proven connection between the environment and the valuable outcomes of students'achievement, satisfaction and success [15]. Every University should aim to offer the best possible environment and learning experience to encourage students to perform to their full potential. Students play a critical part in the evaluation, development and enhancement of the quality of this learning experience. Student involvement requires that students act as collaborators in, rather than merely passive receivers, of teaching and learning. The DREEM inventory allows areas of concern in the educational environment to be highlighted.

In the present study,the educational environment in this institution

DDomain	Item number/ Item	First semester N=226 Mean ± SD	Third semester N= 174 Mean ± SD	Fifth Semester N= 170 Mean ± SD	Seventh semester N=122 Mean ± SD
SSPL	1. I am encouraged to participate in class.	2.74 ± 0.74	2.73 ± 0.85	2.49 ± 1.02	2.67 ± 0.86
	7. The teaching is often stimulating.	2.66 ± 0.81	2.47 ± 0.86	2.57 ± 0.93	2.39 ± 1.00
	13. The teaching is student-centred.	2.46 ± 0.81	2.39 ± 0.87	2.43 ± 0.99	2.33 ± 0.97
	16. The teaching is sufficiently concerned to develop my competence.	2.69 ± 0.88	2.71 ±0.93	2.65 ± 0.96	2.58 ± 0.92
	20. The teaching is well focused.	2.9 ± 0.69	2.85 ± 0.76	2.77 ± 0.82	2.61 ± 0.94
	21. I feel I am being well prepared for my profession.	2.84 ± 0.86	2.72 ± 0.88	2.57 ± 0.99	2.52 ± 0.89
	24. The teaching time is put to good use.	2.8 ± 0.82	2.75 ± 0.96	2.65 ± 1.01	2.48 ± 0.90
	25. The teaching over-emphasizes factual learning.	1.52 ± 0.95	1.45 ± 0.88	1.46 ± 0.96	1.41 ± 0.89
	38. I am clear about the learning objectives of the course.	2.8 ± 0.8	2.78 ± 0.84	2.7 ± 0.92	2.67 ± 0.97
	44. The teaching encourages me to be an active learner.	2.77 ± 0.9	2.51 ± 1.01	2.45 ± 0.96	2.52 ± 1.08
	47. Long term learning emphasizes over short term.	2.5 ± 0.97	2.7 ± 0.91	2.43 ± 0.97	2.4 ± 1.03
	48. The teaching is too teacher-centered.	1.98 ± 1.01	1.86 ± 0.87	1.7 ± 0.96	1.54 ± 0.99
SPT	2. The teachers are knowledgeable.	3.17 ± 0.56	3.25 ± 0.53	3.11 ± 0.69	3.01 ± 0.80
	6. The teachers are patient with patients.	2.41 ± 0.76	2.5 ± 0.77	2.49 ± 0.83	2.45 ± 0.79
	8. The teachers ridicule the students.	2.31 ± 0.92	2.19 ± 0.94	2.08 ± 0.98	1.79 ± 0.89
	9. The teachers are authoritarian.	1.65 ± 0.84	1.68 ± 0.82	1.6 ± 0.99	1.49 ± 0.89
	18. The teachers have good communications skills with patients.	2.75 ± 0.8	2.94 ± 0.71	2.79 ± 0.97	2.89 ± 0.9
	29. The teachers are good at providing feedback to students.	2.55 ± 0.78	2.35 ± 0.74	2.37 ± 0.89	2.3 ± 0.94
	32. The teachers provide constructive criticism here.	2.59 ± 0.86	2.46 ± 0.91	2.46 ± 0.93	2.45 ± 0.98
	37. The teachers give clear examples.	2.85 ± 0.8	2.86 ± 0.77	2.74 ± 0.83	2.75 ± 0.86
	39. The teachers get angry in class.	2.24 ± 1.04	2.01 ± 1.10	1.92 ± 1.18	1.68 ± 1.03
	40. The teachers are well prepared for their classes.	2.93 ± 0.75	2.89 ± 0.76	2.83 ± 0.88	2.76 ± 0.82
	49. I feel able to ask the questions I want.	2.35 ± 1.03	2.35 ±1.05	2.12 ± 1.06	2.36 ± 1.2

DDomain	Item number/ Item	First semester N=226 Mean ± SD	Third semester N= 174 Mean ± SD	Fifth Semester N= 170 Mean ± SD	Seventh semester N=122 Mean ± SD
SASP	5. Learning strategies which worked for me before continue to work for me now.	2.21 ± 1.01	2.19 ± 0.99	2.35 ± 1.06	2.3 ± 1.03
	10. I am confident about my passing this year.	2.94 ± 0.91	3.1 ± 0.94	2.95 ± 1.05	3.01 ± 0.9
	22. The teaching is sufficiently concerned to develop my confidence.	2.7 ± 0.91	2.65 ± 0.97	2.56 ± 1.04	2.52 ± 1.04
	26. Last year's work has been a good preparation for this year's work.	2.47 ± 0.88	2.51 ± 0.99	2.38 ± 1.04	2.46 ± 1.01
	27. I am able to memorize all I need.	2.08 ± 0.99	1.9 ± 1.05	1.77 ± 1.08	2.02 ± 1.14
	31. I have learned a lot about empathy in my profession.	2.72 ± 0.81	2.71 ± 0.88	2.69 ± 0.91	2.5 ± 0.95
	41. My problem solving skills are being well developed here.	2.59 ± 0.84	2.39 ± 0.92	2.36 ± 0.88	2.48 ± 1.01
	45. Much of what I have to learn seems relevant to a career in healthcare.	2.91 ± 0.81	2.84 ± 0.84	2.83 ± 0.87	2.66 ± 1.03
SPA	11. The atmosphere is relaxed during the ward teaching.	2.69 ± 0.85	2.67 ± 0.94	2.49 ± 1.06	2.63 ± 0.83
	12. This school is well time-tabled.	2.73 ± 0.96	2.56 ± 1.16	2.67 ± 1,18	2.44 ± 1.12
	17. Cheating is a problem in this school	2.02 ± 1.09	1.95 ± 1.14	2.02 ± 1.34	1.75 ± 1.01
	23. The atmosphere is relaxed during lectures.	2.8 ± 0.87	2.8 ± 0.86	2.61 ± 1.02	2.63 ± 0.96
	30. There are opportunities for me to develop interpersonal skills.	2.72 ± 0.86	2.8 ±0.97	2.65 ± 0.91	2.66 ± 0.91
	33. I feel comfortable in class socially.	2.79 ± 0.88	2.67 ± 0.91	2.65 ± 0.86	2.58 ± 0.99
	34. The atmosphere is relaxed during seminars/ tutorials.	2.62 ± 0.97	2.66 ± 0.89	2.61 ± 0.88	2.58 ± 1.01
	35. I find the experience disappointing.	2.38 ± 1.06	2.4 ± 1.06	2.32 ± 0.99	1.82 ± 1.14
	36. I am able to concentrate well.	2.54 ± 0.97	2.3 ± 1.08	2.28 ± 0.97	2.34 ± 1.07
	42. The enjoyment outweighs the stress of the course.	2.44 ± 1.07	1.98 ± 1.15	2.17 ± 1.12	2.36 ± 1.14
	43. The atmosphere motivates me as a learner.	2.62 ± 0.94	2.48 ± 0.9	2.42 ± 0.97	2.52 ± 0.93
	50. The students irritate the teachers.	2.06 ± 1.02	2.06 ± 1.02	1.93 ± 0.94	1.62 ± 1.01

DDomain	Item number/ Item	First semester N=226 Mean ± SD	Third semester N= 174 Mean ± SD	Fifth Semester N= 170 Mean ± SD	Seventh semester N=122 Mean ± SD
SSSP	3. There is a good support system for students who get stressed.	2.39 ± 0.74	2.31 ± 0.69	2.16 ± 0.96	2.14 ± 0.96
	4. I am too tired to enjoy the course.	2.04 ± 1.17	1.81 ± 1.23	1.75 ± 1.12	1.85 ± 1.11
	14. I am rarely bored on this course.	2.2 ± 1.12	1.9 ± 1.16	1.85 ± 1.17	2.11 ± 1.16
	15. I have good friends in this school.	3.2 ± 0.89	3.11 ± 0.9	3.09 ± 0.95	2.78 ± 1.13
	19. My social life is good.	2.87 ± 0.96	2.77 ± 1.05	2.8 ± 1.14	2.69 ± 1.05
	28. I seldom feel lonely.	2.22 ± 1.11	2.25 ± 1.09	2.3 ± 1.14	2.24 ± 1.15
	46. My accommodation is pleasant.	2.99 ± 0.83	2.49 ± 1.16	2.61 ± 1.18	2.57 ± 1.19

[Table/Fig-2]: Mean (SD) DREEM item scores for the first year, third year and fifth year students

was rated as more positive than negative.(Mean DREEM score: 123/200) The DREEM global scores reported for medical schools in Srilanka 108/200 [16] Nigeria 118/200 [3] and Trinidad 109.9 [17] were lower than our score. However, the scores for medical schools in Nepal (130/200) [3] and UK (139/200) [18] were higher than our scores. The mean DREEM score for medical schools in India was reported as 107.44/200 [19] and 117/200. [20] Perception of the environment may vary with the educational background of the students from different regions and hence comparisons with respect to other countries or medical schools which follow different types of curricula (traditional or integrated or problem-based learning) might be difficult to be made.

To define the weaknesses and strengths more clearly, the five essential domains and corresponding items of DREEM were comparatively interpreted. When the guide of McAleer and Roff was used to interpret the mean scores, all students had a more positive perception of learning (Average mean score: 29.44), their perception of course organizers moved in the right direction (Average mean score: 26.86), their academic self-perception was more on the positive side (Average mean score: 20.14), they had a more positive perception of atmosphere (Average mean score: 29.07) and their social self-perception could be graded as not too bad (Average mean score: 17.02) [4]. These results should be stimulating for the curriculum planners to transform students' perceptions about their educational environment to a higher level.

When comparing the students perceptions with respect to their academic levels, it was noted that the first-year students had a more positive perception of the educational environment than the third, fifth and seventh semester students. This data is in conflict with previously reported data, where the scores for first year were considerably lower than that of final year [21]. However, the findings were in line with those of Hla et al., [22], who noted a trend for reduced scores in the senior years. It was suggested that this trend could be due to the fact that students genuinely believed that the learning environment was deteriorating and thus were psychologically tired of being a student and looking forward to leaving student life. The students' perceptions in year one could have been high initially and dissatisfaction may have crept in as the novelty of joining a medical school wore off [22]. The data with respect to year 3 students were comparable with results of Jiffry et al., and Rofff et al., from Nepalese students [16,10]. Obvious differences were clearly seen between the various academic levels. It is possible that year-one students' scores were influenced by their expectations and knowledge that they were coming to a new medical school [23]. Their scores might have been higher due to the fact that they had only been at the college for a few months when they were asked to complete the questionnaire and they had therefore, not yet experienced many stressful aspects of the learning environment, such as relating theoretical knowledge to the clinical practice environment. Moreover, the apparent differences in how the different groups experienced the learning environment at the institution highlighted differences in their degree of experience in both the institution and the curriculum. For instance, it is possible to identify some stress points among final year students due to their more challenging teaching and learning activities [3].

While taking the individual items into consideration it was noted that the first semester students scored less than 2 for three items (9, 25 and 48) and above 3 for two items (2 and 15). The students felt that the course over-emphasized factual learning, the course organizers were authoritarian and too teacher-centered, indicating that the teachers are still wearing their traditional hats. In the first year, students learnt anatomy, physiology and biochemistry and the number of independent learning sessions were less in first year

Items	First semester	Third semester	Fifth semester	Seventh semester	P value
2. The teachers are knowledgeable.	3.17 ± 0.56	3.25 ± 0.53	3.11 ± 0.69	3.01 ± 0.80	0.014
3. There is a good support system for students who get stressed.	2.39 ± 0.74	2.31 ± 0.69	2.16 ± 0.96	2.14 ± 0.96	0.009
8. The teachers ridicule the students.	2.31 ± 0.92	2.19 ± 0.94	2.08 ± 0.98	1.79 ± 0.89	0.000
14. I am rarely bored on this course.	2.2 ± 1.12	1.9 ± 1.16	1.85 ± 1.17	2.11 ± 1.16	0.007
15. I have good friends in this school.	3.2 ± 0.89	3.11 ± 0.9	3.09 ± 0.95	2.78 ± 1.13	0.001
20. The teaching is well focused.	2.9 ± 0.69	2.85 ± 0.76	2.77 ± 0.82	2.61 ± 0.94	0.008
21. I feel I am being well prepared for my profession.	2.84 ± 0.86	2.72 ± 0.88	2.57 ± 0.99	2.52 ± 0.89	0.004
24. The teaching time is put to good use.	2.8 ± 0.82	2.75 ± 0.96	2.65 ± 1.01	2.48 ± 0.90	0.012
27. I am able to memorize all I need.	2.08 ± 0.99	1.9 ± 1.05	1.77 ± 1.08	2.02 ± 1.14	0.001
35. I find the experience disappointing.	2.38 ± 1.06	2.4 ± 1.06	2.32 ± 0.99	1.82 ± 1.14	0.000
39. The teachers get angry in class.	2.24 ± 1.04	2.01 ± 1.10	1.92 ± 1.18	1.68 ± 1.03	0.000
42. The enjoyment outweighs the stress of the course.	2.44 ± 1.07	1.98 ± 1.15	2.17 ± 1.12	2.36 ± 1.14	0.000
44. The teaching encourages me to be an active learner.	2.77 ± 0.9	2.51 ± 1.01	2.45 ± 0.96	2.52 ± 1.08	0.005
46. My accommodation is pleasant.	2.99 ± 0.83	2.49 ± 1.16	2.61 ± 1.18	2.57 ± 1.19	0.000
47. Long term learning emphasizes over short term.	2.5 ± 0.97	2.7 ± 0.91	2.43 ± 0.97	2.4 ± 1.03	0.008
48. The teaching is too teacher-centered.	1.98 ± 1.01	1.86 ± 0.87	1.7 ± 0.96	1.54 ± 0.99	0.000
50. The students irritate the teachers.	2.06 ± 1.02	2.06 ± 1.02	1.93 ± 0.94	1.62 ± 1.01	0.000

[Table/Fig-3]: Mean ± SD DREEM inventory items where significant differences were observed between the years of study

compared to the clinical batch. As the students progressed to the second year and later to the clinical phase, they spent more time learning independently. The third semester students scored less than 2 for seven items (4, 9, 14, 25, 27, 42 and 48) and above 3 for three items (2, 10 and 15). The fifth semester students scored less than 2 for eight items (4, 9, 14, 25, 27, 39, 48 and 50) and above 3 for two items (2 and 15). The seventh semester students scored less than 2 for nine items (4, 8, 9, 17, 25, 35, 39, 48 and 50) and above 3 for two items (2 and 10). The students felt that they were too tired to enjoy the course and were seldom able to memorize all they needed and they admitted to being stressed for most of their time during the course. The rating was more by the clinical batch students as their schedule demanded more time.

However, on the positive side, clinical batch students felt that the teaching and learning strategies which worked for them during the pre-clinical phase continued to work for them and also the learning environment seemed to make them more confident with respect to their perception regarding passing the course. They acknowledged that the course organizers were knowledgeable, well-focused and prompt in providing feedback to the students. Most of the students admitted having good friends on the course.

The researchers would like to investigate students' insights relating to the items that were scored as unsatisfactory by conducting focus groups in the near future. The focal elements are those items with a mean score of less than two. This is because any items with a mean of less than two represent poor learning environments and by conducting focus groups, we may learn what the main problems are and how they might be addressed. Improvement in feedback to students,constructive criticism, training in learning strategies and problem-solving skills are some of the important aspects which need to be emphasized.

CONCLUSION

This small study has provided useful information on student perceptions of their learning environment by using the DREEM inventory. The recommendations arising from this DREEM study include the need for the creation of a supportive environment, in addition to designing and implementing interventions to remedy unsatisfactorily elements of the learning environment for more effective and successful teaching and learning.

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