

## Educational Environment at University Medical and Dental College, FSD

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### Abstract

**Aims and Objectives:** To determine student's perception of learning environment at university Medical and Dental college, FSD.

**Study Type:** Observational, cross sectional.

**Place of Study:** University Medical and Dental College, FSD.

**Duration of Study:** 6 months from Jan 2010 to June 2010.

**Methods:** Dundee Ready Education Environment Measure (DREEM) was used to gather information about the teaching environment at University Medical and Dental College, FSD. It was administered to all five professional year medical students at UMDC, FSD. Data was collected and analyzed using SPSS version 15. Chi-square goodness of fit was used as test of statistical significance. P-value of < 0.05 was considered significant.

**Results:** The total mean score of DREEM at UMDC, FSD was 112/200 (56%). The total score of SPL domain was 30.02/48 (62.54%). The total score of SPT domain was 23.06/44 (52.40%), while that of SASP was 19.28/32 (68.85%). The total score of SPA domain was 27.54/48 (57.34%) and that of SSP was 12.46/28 (44.5%). For SPL, SPT, SASP, and SPA domains the score was  $\geq 50\%$ . However for SSSP domain the score was 44.5%.

**Conclusion:** Total DREEM score at UMDC, FSD was 112/200, more positive than negative. It also helped to identify certain issues which require further exploration such as support system for students who get stressed.

**Key words:** Educational environment.

### Introduction

The environment in the context of an educational setting is an important issue for debate,<sup>1</sup> as in adult learning theories, teaching is as much about environment for learning as it is about imparting knowledge or sharing expertise.<sup>2</sup>

Positive institutional profile, improved student performance, higher staff morale, increased motivation among students, and quality teaching are viewed as some indicators of healthy educational environment.<sup>3</sup> And according to Harden "measurement of educational environment act as a basis for the diagnosis of practices within an institution, and as the environment is changeable, the measurement may act as a platform

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for making necessary modifications for better educational practices in line with institution's own goals".<sup>4</sup> This prompted author to conduct the study to determine student's perception of their learning environment at her institution, University Medical and Dental College FSD.

### Aims and Objectives

To determine student's perception of their learning environment at UMDC, FSD.

### Methodology

After approval from ethical committee information sheet about the study (highlighting assurance that participation as well information will not affect their future teaching and learning opportunities, scores, and academic careers) was provided to all students.

### Inclusion Criteria

- Medical students of 1<sup>st</sup> to Final professional year.
- Medical students who consented for participation.

### Exclusion Criteria

- Dental students at UMDC, FSD.
- Medical students who did not consent for participation in the study.

Selected students (via inclusion / exclusion criteria) were asked to gather in auditorium in break (at 10.30 a.m, when all professional years medical students are free and have a break of 30 minutes). After briefing for instruction to complete DREEM<sup>5-7</sup> questionnaire, as elaborated in section of Scoring DREEM questionnaire, it was administered to students. They were asked to complete it confidentially within the same premises and collected immediately.

The DREEM questionnaire contains 50 statements relating to a range of topics directly relevant to educational environment. The subscales are as follows:

- Students' perceptions of Learning (SPL) – containing 12 items with a maximum score of 48.
- Students' perceptions of Teachers (SPT) – containing 11 items with a maximum score of 44.
- Students' Academic Self Perception (SASP) – containing 8 items with a maximum score of 32.
- Students' perceptions of Atmosphere (SPA) – containing 12 items with a maximum score of 48.

- Students' social self – perceptions (SSSP) – containing 7 items with a maximum score of 28.

### Scoring the DREEM Questionnaire

Scoring system of DREEM questionnaire was the one suggested by McAleer and Roff.<sup>8</sup> Each DREEM item was instructed to be scored from 0 to 4. Assignment for the scores was as: 0 (strongly disagree – SD), 1 (disagree – D), 2 (uncertain – U), 3 (agree – A), and

**Table 1:** Guide for overall score interpretation.

Score	Interpretation
0 – 50	Very poor
51 – 100	Plenty of problems
101 – 150	More positive than negative
151 – 200	Excellent

**Table 2:** Guide for DOMAIN Score Interpretation.

Domain	Score
SPL	<ul style="list-style-type: none"> <li>• 0 – 12 Very poor</li> <li>• 13 – 24 Teaching is viewed negatively</li> <li>• 25 – 36 A more positive approach</li> <li>• 37 – 48 Teaching highly thought of</li> </ul>
SPT	<ul style="list-style-type: none"> <li>• 0 – 11 Abysmal</li> <li>• 12 – 22 In need of some retraining</li> <li>• 23 – 33 Moving in the right direction</li> <li>• 34 – 44 Model teachers</li> </ul>
SASP	<ul style="list-style-type: none"> <li>• 0 – 8 Feeling of total failure</li> <li>• 9 – 16 Many negative aspects</li> <li>• 17 – 24 Feeling more on the positive side</li> <li>• 25 – 32 Confident</li> </ul>
SPA	<ul style="list-style-type: none"> <li>• 0 – 12 A terrible environment</li> <li>• 13 – 24 There are many issues that need changing</li> <li>• 25 – 36 A more positive atmosphere</li> <li>• 37 – 48 A good feeling overall</li> </ul>
SSP	<ul style="list-style-type: none"> <li>• 0 – 7 Miserable</li> <li>• 8 – 14 Not a nice place</li> <li>• 15 – 21 Not too bad</li> <li>• 22 – 28 Very good socially</li> </ul>

4 (strongly agree – SA). However, 9 of the 50 items (numbers 4, 8, 9, 17, 25, 35, 39, 48 and 50) were negative statements and asked to be scored in the reverse manner (0 for SA, 1 for A, 2 for U, 3 for D and 4 for SD) table 1 and 2. The maximum score is 200.

Data was collected and shifted to computer for analysis. Statistical package of Social Sciences (SPSS) version 15 was used for statistical analysis. Chi-square goodness of fit was the test of statistical significance. p-value of < 0.05 was considered significant.

## Results

A total of 250 students were included in this study. All the students were female as UMDC is an institution for females only. However E Gudrun et al stated male to female ratio of 41.1% to 59.8%<sup>9</sup> in his study.

The total mean score of DREEM at UMDC, FSD was 112/200 (56%). Scores in the range of 101 – 150 are viewed as more positive than negative and 151 – 200 as excellent. However scores in the range of 51 –

**Table 3:** Total score of five subclasses of DREEM for all five professional years.

Domain	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	Final Year
Students perception of learning (SPL)	30.20	29.90	29.80	29.80	30.00
Students perception of teachers (SPT)	24.00	23.80	22.50	21.90	23.10
Students academic self perception (SASP)	19.00	18.50	19.90	20.00	19.00
Students perception of atmosphere (SPA)	28.00	26.50	27.00	28.00	28.00
Students social self perceptions (SSSP)	12.00	13.50	12.80	12.00	12.00
Total	113.20	113.20	112.0	111.70	112.1

**Table 4:** Individual score of SPL domain.

No.	Item	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	Final Year
1	I am encouraged to participate in teaching sessions.	3.5	3.8	3.7	3.6	3.8
7	The teaching is often stimulating.	2.3	2.5	2.6	2.6	2.7
13	The teaching is student centered.	2.0	2.5	2.3	2.8	2.6
16	The teaching helps to develop my competence.	3.2	2.5	3.0	2.8	3.1
20	The teaching is well focused.	3.1	2.4	1.8	3.0	2.5
21	The teaching helps to develop my confidence.	3.5	1.8	3.2	3.1	2.8
24	The teaching time is put to good use.	2.4	1.9	1.8	2.1	2.5
25	The teaching over emphasizes factual learning.	1.5	1.7	1.8	1.5	1.5
38	I am clear about the learning objectives of the course.	2.1	2.0	2.5	2.8	3.0
44	The teaching encourages me to be an active learner	2.8	3.0	3.2	3.1	3.2
47	Long term learning is emphasized over short term learning.	2.0	2.6	2.7	1.4	1.1
48	The teaching is too teacher centred.	1.8	3.2	1.2	1.0	1.2

**Table 5:** Individual score of SPT domain.

No.	Item	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	Final Year
2	The course organizers are knowledgeable.	2.2	2.0	2.0	2.5	2.5
6	The course organizers espouse a patient centered approach to consulting.	1.2	1.5	1.0	0.5	1.8
8	The course organizers ridicule their students.	2.5	2.3	1.0	0.6	0.8
9	The course organizers are authoritarian.	3.5	3.6	1.5	1.2	2.5
18	The course organizers appear to have effective communication skills with patients.	1.5	1.8	2.5	2.8	3.0
29	The teachers are good at providing feedback to students.	2.0	2.5	3.0	3.2	2.8
32	The teachers provide constructive criticism here.	2.6	2.0	1.0	1.2	1.5
37	The teachers give clear examples.	3.5	1.8	3.8	3.2	3.5
39	The teachers get angry in teaching sessions.	2.0	2.5	1.5	2.0	0.5
40	The teachers are well prepared for their teaching sessions.	2.0	2.8	3.5	3.6	3.2
49	The students irritate the teachers.	1.0	1.0	1.7	1.1	1.0

**Table 6:** Individual score of SASP domain.

No.	Item	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	Final Year
5	Learning strategies which worked for me before continue to work for me now.	2.5	2.6	2.5	2.0	1.5
10	I am confident about passing this year.	2.5	2.5	2.8	3.0	2.5
22	I feel I am being well prepared for my profession.	3.5	3.6	3.5	3.5	2.5
26	Last year's work has been a good preparation for this year's work.	0.5	1.9	1.9	2.0	2.0
27	I am able to memorize all I need	2.5	2.1	2.5	2.0	2.0
31	I have learned a lot about empathy in my profession.	2.5	2.1	2.5	3.0	3.0
41	My problem solving skills are being well developed here.	3.0	1.2	1.6	2.2	3.5
45	Much of what I have to learn seems relevant to a career in healthcare.	2.0	2.5	2.6	2.3	2.0

100 indicate plenty of problems, while 0-50 indicates very poor score.<sup>8</sup> The total score from all five professional years is listed in table 3.

The total score of each five subscales of DREEM questionnaire is also listed in table 3. The total score of SPL domain was 30.02/48 (62.54%). The total score of

SPT domain was 23.06/44 (52.40%), while that of SASP was 19.28/32 (68.85%). The total score of SPA domain was 27.54/48 (57.34%) and that of SSP was 12.46/28 (44.5%). For SPL, SPT, SASP, and SPA domains the score was  $\geq 50\%$ . However for SSP domain the score was 44.5%. The highest value was

**Table 7:** Individual score of SPA domain.

No.	Item	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	Final Year
11	The atmosphere is relaxed during consultation teaching	3.0	2.5	2.5	2.5	2.5
12	The course is well timetabled	2.5	2.0	2.5	2.5	2.0
17	Cheating is a problem in this course	2.0	1.5	1.5	1.5	1.0
23	The atmosphere is relaxed during lectures.	3.5	2.5	2.8	3.0	3.5
30	There are opportunities for me to develop interpersonal skills.	3.5	3.0	3.2	3.5	3.5
33	I feel comfortable in teaching sessions socially.	3.0	2.0	1.5	2.0	1.0
34	The atmosphere is relaxed during tutorials	3.0	3.0	3.2	3.0	3.0
35	I find experience disappointing	2.5	3.0	3.0	2.0	2.5
36	I am able to concentrate well	3.0	2.5	2.0	2.0	2.5
42	The enjoyment outweighs the stress of studying medicine	1.0	0.5	2.0	2.0	1.5
43	The atmosphere motivates me as a learner	2.0	2.0	1.3	2.0	2.5
50	I feel able to ask the questions I want	1.0	2.0	1.5	2.0	2.5

**Table 8:** Individual score of SSSP domain.

No.	Item	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	Final Year
3	There is a good support system for students who get stressed.	1.0	1.2	0.8	0.8	1.0
4	I am too tired to enjoy this course.	1.5	1.8	1.2	1.0	1.5
14	I am rarely bored on this course.	2.0	2.2	2.8	2.5	2.5
15	I have good friends in this course.	2.5	2.0	3.0	2.5	2.0
19	My social life is good.	2.0	2.5	3.0	2.5	2.0
28	I seldom feel lonely.	1.5	1.8	1.0	1.5	2.0
46	My accommodation is pleasant.	1.5	1.0	1.0	1.2	1.0

obtained by 4<sup>th</sup> professional year students for SASP, and was 20.00/28. The lowest value was obtained for SSP by 1<sup>st</sup> and final professional year students and was 12/28.

Individual score of each item in each domain is listed in table 4 to 8.

## Discussion

The Dundee Ready Education Environment Measure (DREEM) instrument has been developed and valida-

ted for use regardless of culture and country.<sup>6</sup> It has been used in many settings and for several purposes, i.e to find out how students perceive the ideal educational environment,<sup>10</sup> to look at expectations of climate,<sup>11</sup> to compare academic achievers and under-achievers,<sup>12</sup> to compare educational environment across schools and programs,<sup>13,14</sup> to compare educational environment at different sites within a school,<sup>15</sup> to identify problem areas in an education program, to get a baseline before curriculum reform,<sup>16</sup> to determine students' reactions to ongoing curricular reform, and

as a tool for improvement.<sup>17</sup>

The study was conducted to determine student's perception of their learning environment at University Medical and Dental College, FSD. DREEM questionnaire was chosen to collect this information. DREEM being an instrument to find out how students perceive their learning environment was accepted eagerly, and a good response rate reflected access to the views of the majority of students at UMDC, FSD.

The total mean score of DREEM at UMDC, FSD, was 112/200. When it was compared with other studies conducted in India,<sup>18</sup> Saudi Arabia,<sup>19</sup> Canada,<sup>20</sup> and West Indies,<sup>21</sup> it was better. But it showed a lesser score when compared to studies conducted in Sweden<sup>22</sup> and Australia.<sup>23</sup>

Analysis of individual items in SPL domain, identified item No. 47 (Long term learning is emphasized over short term learning) scored lowest (1.1) by final year, in SPT domain item No. 6 (The course organisers espouse a patient centred approach to consulting) was scored lowest(0.5) by 4<sup>th</sup> year, in SASP domain item No. 26 (Last year's work has been a good preparation for this year's work) was scored lowest (0.5) by 1<sup>st</sup> year, in SPA domain item No. 42 (The enjoyment outweighs the stress of studying medicine) was scored lowest (0.5) by 2<sup>nd</sup> year, and in SSP domain item No. 3 (There is a good support system for students who get stressed) was scored lowest (0.8) by 3<sup>rd</sup> and 4<sup>th</sup> year.

In SASP domain, item No 26 scored lowest by 1<sup>st</sup> year is probably not an area of major concern because medical studies may or may not be helped by previous academics. In fact it is learning style of student that may be helpful not previous work.

Similarly in SPT domain item No. 6, scored lowest by 2<sup>nd</sup> year does not seem to pose any major problem, because 2<sup>nd</sup> year students at UMDC do not attend clinical site, and it may be simply their assumption, or personal experience out of educational environment context.

In SPA domain item No. 42, scored lowest by 2<sup>nd</sup> year indicates that there are less opportunities for enjoyment of students. However this issue has only been raised by one professional (2<sup>nd</sup> year), and may be due to their time table / content constrain. Whatever may be the cause this issue needs further exploration.

In SSP domain item No 3, scored lowest by 3<sup>rd</sup> and 4<sup>th</sup> year is an area of concern. However, in all published results of the DREEM inventory, this item score is low so it seems to be a common problem in medical education. A study reported that medical students are

more stressed than other students.<sup>24</sup> It seems reasonable to assume that this could be due to various reasons. For example limited leisure time was identified as a contributing factor in Jordan<sup>25</sup> and Canada.<sup>26</sup> However studies done in Australia<sup>27</sup> and Europe attributed stress to exam anxiety whereas finance was identified a major contributing factor in Canada and Europe.

Conclusively it seems reasonable to assume that stress may be due to a number of factors; and this issue must be addressed with concern and sensitivity as stress may be inversely associated with learning. Although literature describes different support systems available in medical education, further studies are required to address this issue.

## Conclusion

Total DREEM score at UMDC, FSD was 112/200, more positive than negative. It helped to identify certain issues which require further exploration such as support system for students who get stressed.

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