

**Original article:**

**Preclinical medical students' perception about their educational environment based on DREEM at a Private University, Malaysia**

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**Abstract**

**Background:** Educational environment is one of the important elements to students' success. Student satisfaction is a significant indicator of learning quality and is related to several outcome  
**Objective:** The cross-sectional descriptive study was done to measure the preclinical medical students' perception of their educational environment at Faculty of Medicine (FOM), SEGi University. **Methods:** For measuring perception, the validated fifty Items English version of Dundee Ready Education Environment Measure (DREEM) questionnaire was administered among Year 1 and 2 students (N-170). Data was analyzed by SPSS software V 22. The Independent *t* test was used to check the significance at 95% CI. **Results:** The response rate of the study was good (90.6%). The mean DREEM score was 126.78/200(19.501) indicating an overall positive perception of educational environment among students. The mean scores for Year1 and 2 were 123.98/200(2.623) and 128.17/200(1.952) respectively which is not statistically significant ( $p > 0.05$ ). Students' perceptions of educational environment in all five Domains of DREEM is positive. The year wise perception scores are not statistically significant in four Domains ( $p > 0.05$ ) but the difference is significant ( $P < 0.05$ ) in Students' Social Self- Perception (SSSP). Item 2 (*Teachers are knowledgeable*) scored  $> 3.00$  indicates strong and nine Items scored  $< 2.00$  indicate the problem areas in the educational environment of FOM. Fourty Items scored 2-3 considered areas needed to be improved. **Conclusion:** Although the educational environment of FOM was found to be positive, it requires improvement as identified by the students. The faculty should address various important issues highlighted by the students to foster an excellent environment for promoting the effective learning.

**Keywords:** educational environment; perception; DREEM; preclinical; medical faculty.

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**Introduction**

The educational environment of an institution incorporates teaching learning methods, assessment, physical facilities, psychosocial, financial and many other elements that are experienced by students and different stake holders in a learning establishment. Students react diversely to these elements in their learning procedure. It has an extensive role in promoting student's motivation, satisfaction,

healthy competition, independence, self-confidence, learning, and critical thinking abilities<sup>1-6</sup>.

It is regularly comprehended that educational environment is an imperative component for productive learning. So, assessing educational environment has been recognized as a key element for the delivery of high quality education<sup>6</sup>.

It encompasses teaching and learning activities, student/teacher interactions, good physical resources

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and students' psychosocial and emotional aspects. By addressing all these, an institute might be said to have a good educational environment<sup>1-6</sup>. It has an impact on students learning experiences, their results and most vital elements deciding the achievement of an effective curriculum<sup>6,9</sup>. The core business of a medical programme is to produce competent graduates who can serve the community effectively and efficiently in giving care or treatment. A complete involvement of the learner during the teaching learning process is the most essential factor for a high quality medical programme<sup>4, 9-11</sup>. A good approach to and systematic design of the educational environment can lead to good outcomes for the graduates and helps teachers, students and administrators to answer the question 'what is medical education here really like'<sup>12, 13</sup>.

Being the main stake holder and the important role of the students in teaching-learning process, their perceptions about educational environment is considered as indicators of the effectiveness of the curriculum and programme. Each student has unique characteristics such as previous educational experiences and learning style and hence they perceive the educational environment differently<sup>14,15</sup>. Many institutions use a basic approach to determine the students' needs by measuring their perception as the main stake holder<sup>13,10</sup>. The improvement of evaluation inventories authorize students' view of their educational environment to be measured furthermore, looked at, either longitudinally inside single health professions institutions, then again between institutions<sup>16,17</sup>. Dundee Ready Education Environment Measure (DREEM) has been utilized in a several nations in medical schools, nursing schools and other institutions which preparing their students for professions related to medicine<sup>2,3,17</sup>. This instrument is intended to measure and diagnose the environment of educational institutions in the healthcare professions. The globally validated DREEM has been applied largely to evaluate the educational environment of medical institutions throughout the world<sup>2,3,5-10-14,17-19</sup>. It helps to find the areas of concern shared by a large number of students that might be neglected by educators unknowingly<sup>20-21</sup>. The inventory is useful for different purposes including: generating a profile of an institution's or course's strengths and weaknesses; making a comparative analysis within the institution or standardizing between themselves and another institution; applying it as a predictor of student performance; and obtain base line data for remedial action, make an international comparative analysis or as benchmarking between other medical

schools<sup>1,2,4,5,18,19,21</sup>. Moreover, data can be collected and analyzed according to variables such as year of study, ethnicity, gender, age and course<sup>4, 5</sup>. Roff et al, (2001) and Dunne et al, (2006) have reported, DREEM inventory as a reliable, globally validated inventory and a useful foundation for altering and improving the environment of educational institute. Educational environment is influenced by students' perceptions and the findings of the DREEM inventory can be used to transform and improve any institution for better learning results<sup>6,10</sup>.

SEGi University is a self-financing institute, attracting both local and international students. Thus, students and parents often enquire about the teaching learning environment and the socio cultural environment of the university to better understand and determine the nature of the educational experiences. The medical faculty of the University provides a block based integrated curriculum to enhance the image of accomplishments of the students. It is crucial for any educational institution to assess its educational environment and modify it if it is vital to fulfill its desired goal. The study findings would provide useful information to the curriculum committee about the strengths and weaknesses of our educational environment there by help to improve our preclinical curriculum and the programme. The aim of our research was to measure the perception of preclinical medical students about their educational environment especially in the areas of learning experiences, teacher, academic self-perception, their atmosphere and social self-perception at Faculty of Medicine, SEGi University at Kota Damansara campus.

### **Methods**

A cross sectional descriptive study was conducted among preclinical medical students of Faculty of Medicine, SEGi university of Malaysia.

#### *Study population and sampling*

Year 1 and 2 medical students of Faculty of Medicine were the study population. All the preclinical medical students (Year 1 and 2) were selected as study sample (56n1+114n2= N 170). The inclusion criteria was the preclinical students of 2014/2019 and 2015/2020 intake and have under gone all of the teaching learning experiences. The student members of the research group and chronic absentee students were excluded from the study to minimize biasness. The study was conducted during the month of May to October, 2016

#### *Study tool*

Data on students' perception about educational

environment was obtained by the original English version of DREEM inventory<sup>2,4,6,20,21</sup>. Students' age, gender and academic year were included as the first section in the inventory for obtaining their profile. The 50-Item DREEM inventory has a maximum score of 200 indicating the ideal educational environment whereas the score of 0 is the minimum. The guidelines for interpreting the overall DREEM score are 0–50 very poor; 51–100 many problems; 101–150 more positive than negative; and 151–200 excellent. A Likert's scale 4 -Strongly Agree (SA), 3 - Agree (A), 2 - Uncertain (U), 1 - Disagree (D) and 0 -Strongly Disagree (SD). However, 9 of the 50 Items (Items 4, 8, 9, 17, 25, 35, 39, 48 and 50) are negative statements and was scored reversely. High scores for these statements indicates disagreement<sup>21</sup>. To indicate the different areas, the DREEM Items are grouped into five Domains: 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)<sup>6</sup>. For our study to pinpoint an area individual Item is categorized as problem areascore < 2, need to be improve score 2 -3 and strong area >3<sup>21</sup>

**Data Collection**

The questionnaire was distributed to the students on two different occasions for two batch of students. Before administering the questionnaire they were briefed about the purpose and process of data collection and stressing anonymity. The meaning of some educational terms and phrases, such as "factual learning", "ridicule", and "authoritarian", was explained before the respondents complete the questionnaire. The completed questionnaires were collected at the same session. The entire data collection process took approximately 15 – 20 minutes for each participant. The confidentiality of participants was ensured as data collected will only be available to the researchers.

**Data Analysis**

The Statistical Package for Social Sciences (SPSS) V 22 was used to analyze the data. All collected questionnaires were properly coded and cleaned. The data was entered according to Likert Scale. The scoring was in reverse from 4 to 0 for negative Items. The missing data was coded as 999. Descriptive analysis (frequencies, means and standard deviation) was performed for demographic variables, the

overall DREEM, each Domain and each Item mean score. The Independent *t* test was used to check the significance at 95% Confidence Interval (CI).

**Results**

Out of 170 students 154 students responded to the questionnaire giving a response rate of 90.6% for this study. The distribution of respondents by year was (51, 33.1%) from Year 1 and (103, 66.9%) from Year 2. Ninety seven (63%) of the respondents were female and fifty seven (37%) were male (Table 1).

**Table 1: Demographic profile of the respondents (N- 154)**

Variables	Groups	Frequency (%)	Total (N %)
Year	Year 1	51(33.1)	154(100%)
	Year 2	103 (66.9)	
Gender	Male	57(37%)	154(100%)
	Female	97(63%)	
Age group	18–20 years	33(21.4)	154(100%)
	21-23 years	93(60.4)	
	23+ years	28(18.2)	

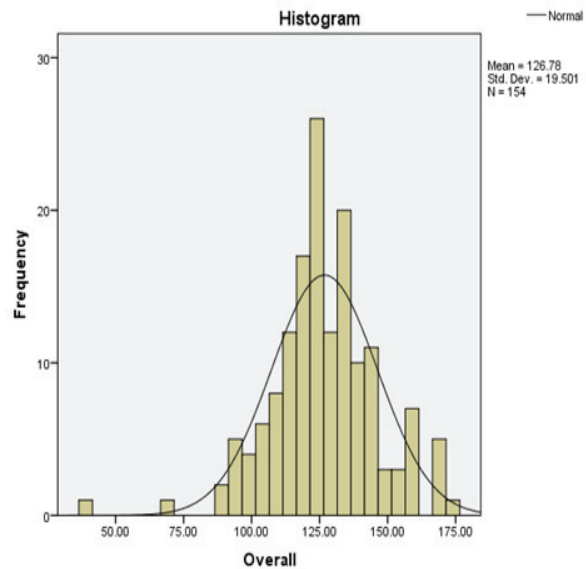


Figure 1: Distribution of data

Our data shows a normal distribution based on cross sectional summary process (Figure 1)

The observed global mean score of DREEM for Faculty of Medicine (FOM) is 126.78/200(SD 19.501). The score indicated that the preclinical students have more positive perception towards their educational environment than negative as per DREEM scoring scheme<sup>21</sup>.

The overall mean score for Year 1 is 123.98 (SD 18.732) whereas for Year 2 is 128.17(SD 19.813).

The overall perception of Year 2 students is more positive compared to Year 1 students However the perception difference is not statistically significant ( $p > 0.05$ ) (Table2).

in Domains SPoL, SPoT, SASP and SPoA( $P > 0.05$ ). In Domain, SSSP the perception difference is statistically significant ( $P < 0.05$ ), which means Year 1 students are not perceiving their social life as

**Table 2: The overall and year wise perceptionscore of DREEM (Independent t Test)**

Variable	Mean (SD)			t statistic (df)	p value
	Overall	Year 1	Year 2		
Overall perception about educational environment of preclinical medical students	126.78 (19.501)	123.98 (18.732)	128.16 (19.813)	-1.256 (152)	0.211

good as Year 2 students(Table 4).

The relationship between gender and perceptions level of the student in each of the Domains is shown

The preclinical students have a positive perception in all five Domains of DREEM but there is plenty of room forimprovement in all the Domains (Table 3)

in Table 5. There is no significant difference of perception between male and female students about the educational environment in all the five Domains ( $p > 0.05$ ).

**Table 3: Students’ perceptions as per Domains’ mean score of DREEM.**

Domains	Max. score	Mean (%)	SD
1 : Students’ Perceptions of Educational ( SPoL)	48	30.67 (64)	5.031
2: Students’ Perceptions of Teachers (SPoT)	44	27.19 (62)	3.557
3: Students’ Academic Self-Perceptions (SASP)	32	21.05 (66)	4.403
4: Students’ Perceptions of Atmosphere ( SPoA)	48	30.19 (63)	6.428
5: Students’ Social Self-Perceptions (SSSP)	28	17.69 (63)	4.012

Out of the 50 Items only one Item scored  $> 3$  (Item 2– *teachers are knowledgeable*)of Domain SPoT). Nine Items scored  $< 2$  out of which SPoL has two, SPoT four, SPoA two and SASP one. These are the most problematic areas of the educational environment of FOM. Domain SPoT has one high scored and four low scored problematic areas indicates that the students are very concerned about their teachers. Forty items scored between 2 to 3 suggesting these areas need to be improved to enhance the educational environment. No single Item scored  $\geq 3.5$  means there is no excellent aspects of FOM’s educational environment. (Table 6)

**Table 4: Students’ year wise perception in different Domains(Independent t Test)**

Variable	Mean (SD)		t statistic (df)	P value
	Year 1	Year 2		
SPoL	30.06 (5.049)	30.97 (5.019)	-1.059 (152)	0.291
SPoT	26.94 (3.518)	27.31 (3.587)	-0.605 (152)	0.546
SASP	20.98 (3.972)	21.08 (4.620)	-0.129 (152)	0.898
SPoA	29.55 (5.914)	30.50 (6.673)	-0.868 (152)	0.387
SSSP	16.45 (3.802)	18.30 (3.990)	-2.750 (152)	0.007

**Discussion**

Our research is the first to report the findings of educational environment from the preclinical students of Faculty of Medicine, SEGi University. The DREEM questionnaire has provided an impression of Year 1 and 2 medical students’ perception about their

The overall perception in different Domains has a consistent trend for a particular year. Year 2 students have a marginally higher score in all five Domains compared to Year 1. There is no significant difference in perception level among Year 1 and Year 2 students

educational environment in FOM, SEGi University. The study response rate was 90.6% considered as very good in comparison with the reported study response rate.<sup>7,16,22</sup>. The good response rate shows that the students were interested to be a part of our

**Table 5: Students' gender wise perception in different Domains (Independent t Test)**

Variable	Mean (SD)		t statistic (df)	p value
	Male	Female		
SPoL	29.63 (5.728)	31.28 (4.492)	-1.860 (96.452)	0.066
SPoT	26.86 (3.393)	27.38 (3.653)	-0.878 (152)	0.381
SASP	20.70 (4.284)	21.25 (4.482)	-0.741 (152)	0.460
SPoA	29.04 (6.411)	30.87 (6.373)	-1.718 (152)	0.088
SSSP	16.88 (3.333)	18.16 (4.308)	-1.940 (152)	0.054

**Table 6: Itemized score for five Domains of DREEM.**

No	Items	Mean	SD
<b>Domain 1: Students' Perception of Learning (SPoL Maximum score is 48)</b>			
1	I am encouraged to participate during teaching sessions	2.90#	0.831
7	The teaching is often stimulating	2.60#	0.932
13	The teaching is student centred	2.64#	0.847
16	The teaching helps to develop my competence	2.95#	0.819
20	The teaching is well focused	2.95#	0.748
22	The teaching helps to develop my confidence	2.73#	0.827
24	The teaching time is put to good use	2.67#	0.879
25	<i>The teaching over emphasizes factual learning(*) (Agree)</i>	1.23!	0.906
38	I am clear about the educational objectives of the course	2.97#	0.762
44	The teaching encourages me to be an active learner	2.72#	0.844
47	Long term educational is emphasized over short term learning	2.70#	0.923
48	<i>The teaching is too teacher centred (*) (agree)</i>	1.60!	1.019
Total Mean Score		31/48 <sup>^</sup>	10.337
<b>Domain 2: Students' Perception of Teachers ( SPoT- Maximum score is 44)</b>			
2	The teachers are knowledgeable	3.21*	0.683
6	The teachers adopt a patient centred approach to consulting	2.60#	0.859
8	<i>The teachers ridicule the students(*) (agree)</i>	1.85#!	0.955
9	<i>The teachers are authoritarian(*) (agree)</i>	1.64#!	0.823
18	The teachers have good communication skills	2.92#	0.682
29	The teachers are good at providing feedback to students	2.64#	0.861
32	The teachers provide constructive criticism here	2.70#	0.715
37	The teachers give clear examples	2.97#	0.753
39	<i>The teachers get angry in teaching(*) (agree)</i>	1.99!	1.106
40	The teachers are well-prepared for their teaching sessions	2.93#	0.879
50	<i>The students irritate the teachers(*) (agree)</i>	1.73!	0.950
Total Mean Score		27/44 <sup>^</sup>	9.266

research.

#### **Overall perception of the educational environment**

The results of our study revealed an overall mean

score of DREEM (126/200 SD 19.501) which indicates a 'more positive than negative perception' of the students about FOM's educational environment

<b>Domain 3: Students' Academic Self-Perception (SASP- Maximum score is 32)</b>			
5	Educational strategies which worked for me before continue to work for me now	2.56#	0.935
10	I am confident about my passing this year	2.81#	0.861
21	I feel I am being well prepared for my profession	2.51#	0.945
26	Last year work has been a good preparation for this year work	2.59#	0.961
27	I am able to memorize all I need ( not agree)	1.97!	1.093
	I have learnt a lot about empathy in my profession	2.88#	0.753
31		2.79#	0.773
41	My problem solving skills are being well developed here		
45	Much of what I have to learn seems relevant to a career in healthcare	2.94#	0.806
Total Mean Score		21/32 <sup>^</sup>	7.127
<b>Domain 4: Students' Perception of Atmosphere (SPoA- Maximum score is 48)</b>			
11	The atmosphere is relaxed during ward teaching	2.88#	0.795
12	This school is well timetabled	2.60#	1.013
17	<i>Cheating is a problem in this school (* (agree)</i>	1.36!	1.272
23	The atmosphere is relaxed during lectures	2.75#	0.845
30	There are opportunities for me to develop my interpersonal skills	2.73#	0.858
33	I feel comfortable in teaching sessions socially	2.73#	0.786
34	The atmosphere is relaxed during tutorials	2.68#	0.885
35	<i>I find the experience disappointing(* (Disagree)</i>	2.21#	1.089
36	<i>I am able to concentrate well</i>	2.56#	0.935
42	The enjoyment outweighs the stress of the course	2.18#	1.140
43	The atmosphere motivates me as a learner	2.79#	2.634
49	I feel able to ask the questions I want	2.73#	0.957
Total Mean Score		30/48 <sup>^</sup>	13.209
<b>Domain 5 : Students' Social Self-Perception (SSSP- Maximum score is 28)</b>			
3	There is a good support system for students who get stressed	2.55#	0.879
4	<i>I am too tired to enjoy the course(* (agree)</i>	1.77!	1.131
14	I am rarely bored in this course	2.26#	1.159
15	I have good friends on this course	2.94#	1.005
19	My spiritual and social life is good	2.94#	0.822
28	I seldom feel lonely	2.46#	1.967
46	My accommodation is pleasant	2.77#	1.000
Total Mean Score		18/28 <sup>^</sup>	8.023

**Note:**

(\* ) *Italic are negative Items*

#! *Negative Items scored reversely (indicates disagreement about the statement)*

\* *Positive Items (strong areas > 3)*

# *Aspects of the environment that could be enhanced*

! *Should examine more closely as they indicate problem areas*

<sup>^</sup> *Domain mean score is more positive than negative.*

according to Mc Aleer and Roff (2001). The overall mean score of our studied faculty was almost similar with the previous reported studies.<sup>2, 6, 7, 11-13, 15, 20, 22-28</sup>. Our overall score is higher than reported score of Melaka Manipal Medical College, India, Faculty of Medical Sciences in Trinidad, Universiti Sains Malaysia and Faculty of Medical Sciences of University of Sri Jayewardenepura, Sri Lanka<sup>7, 8, 13, and 22</sup>. However, our score is lower than the overall reported mean score<sup>11, 23, 24</sup>. These renowned universities practiced a reformed curriculum and are more creative in providing a student centred approach in their educational environment that could be possible explanation for the high scores. Year 2 students had a more positive perception (128.16, SD 19.813) compared to Year 1 (123.98, SD 18.732) students, though the difference is not significant ( $p > 0.05$ ). It is difficult to say conclusively whether this overall score of our faculty is due to students' first time encounter with such a study which might put them in a confusion, however since scores were not unanimously high it can be sensibly assumed this was not the case. Females have more positive<sup>31, 28</sup> perception compared to male students (29.63) but statistically not significant ( $P > 0.05$ ). Previous studies reported the similar findings<sup>7, 8, 10, 15 and 20</sup>. We believe that Year 1 students are more stressed due to difficulties in adapting to the challenging environment of medical school with different teaching

learning experiences as they are mainly exposed with very traditional teaching learning experiences in their pre-med education. As the students' progress to Year 2, they become more positive, less judgemental, more adaptive, independent and comfortable with their educational environment.

### **Perception of educational environment by Domain.**

The students have a positive perception in all five Domains of DREEM with plenty of scopes for improvement. The findings are consistent and comparable with other reported studies.<sup>5-8, 10-13, 21, 22, 25-28.</sup>

The mean score of SPoL is 30.64/48 means students' positive perception as per DREEM guidelines<sup>5-9,18</sup> (Table 3). Year 2 students have slightly higher positive perception compared to Year 1 (Table 4). The perception also differs based on the gender as it is more positive in female compared to male students (Table 5). But the differences are not statistically significant ( $P > 0.05$ ). Majority of the Items scored within 2-3 and two Items scored  $< 2$ . The score of Item 1 (*I am encouraged to participate during teaching sessions*), Item 16 (*The teaching helps to develop my competence*), Item 20 (*The teaching is well focused*) and Item 38 (*I am clear about the educational objectives of the course*) are found to be  $\geq 2.90$  (Table 6). These areas need little improvisation for excellent educational environment of FOM. The students were pleased with their learning and they identified the teaching as interesting, well-focused and help them to build their confidence level. Item 25 (*The teaching over emphasizes factual learning*) and 48 (*The teaching is too teacher centred*) which are both negative Items scored  $< 2$  mean the students agreed with both the statements. Their perception of over-emphasis on factual learning and teachers' centred teaching need to be discussed in the context of the assessment methods and curriculum and these are similar to previously reported findings<sup>7, 10, 21, 22 and 25</sup>

The SPoT has an overall positive perception score 27/44<sup>6,8, 18</sup> but the students' perception differs based on year of study (Table 4) and gender (Table 5) which is more positive among students of Year 2 and female students which is not statistically significant in both the variables ( $P > 0.05$ ). One Item scored  $> 3$ , four Items scored  $< 2$  and the rest scored in between 2-3. Item 2 (*The teachers are knowledgeable - 3.21*) indicates students' believe that their teachers are knowledgeable. Their perception is positive about their teachers in different aspects as indicated by

the high score in Item 18 (*The teachers have good communication skills - 2.92*), Item 40 (*The teachers are well prepared for their teaching session - 2.93*). They also perceived that their teachers managed to give clear examples in relation to their studies. (Item 37 - 2.97). These findings suggest that the teaching is stimulating, well focused and helping the students in developing their confidence and competence. The Items scored  $< 2$  were Item 8 (*The teachers ridicule the students - 1.85*), Item 9 (*The teachers are authoritarian - 1.64*) which was also reported in a previous study (20), Item 39 (*The teachers get angry in teaching - 1.99*) and Item 50 (*The students irritate the teachers - 1.73*) are suggestive that teachers are still wearing their traditional hats of teaching philosophy and they are strict during in their teaching sessions. These low scored areas need to be exploring further to pinpoint the actual situation. The students' views should be taken into consideration and we strongly feel that the teachers should attend refresher training course for updating themselves with newer development in teaching and medical education. It will enhance the teacher-student relationship for a positive educational environment of the faculty and the findings are consistent with reported findings<sup>7,13</sup>. Overall SASP is positively perceived (21/32) and Year 2 students are more positive (21.08) compared to Year 1 (20.98) students like other domains. This might be associated with the fact that Year 1 students have lesser experience; hence they face difficulties in different facets of medical life. Female students were more positive<sup>21,25</sup> compared to male students (20.70) but the difference is not statistically significant for both the variables ( $P > 0.05$ ). Item 27 (*I am able to memorise all I need*) scored  $< 2$ . This might be an indication of content overload in curriculum which was also reported in a study<sup>8, 10, 18, 23-25</sup>. Medical students had to go through a significant level of stress due to the multifaceted nature of the medical course that might be another explanation for students' poor memorisation. Overall we can conclude that the preclinical students of the medical faculty were satisfied with their overall academic performance. For an example Item 45 (*Much of what I have to learn seems relevant to a career in healthcare - 2.94*) indicates that the students are very clear about their educational outcomes from their teaching learning experiences and are comparable with reported findings<sup>8-10, 14-16</sup>

A positive perception is reported for SPoA (30/48). like other Domains. Year 2 students had a more positive perception (30.50) compared to Year 1

students (29.55), female perceived more positively (30.87) compared to male students (29.04).but the difference is not significant ( $P > 0.05$ ). All the Items scored within 2-3 except Item 17 (*Cheating is a problem on this course*) which scored  $< 2$ . This is a self-reflection of the students where students approved academic dishonesty. We are not very sure what type of dishonesty they are referring to? The students might be dishonest during class tutorials, assignments writing, copying in continuous assessment or it could be in summative assessment. Thus the faculty needs to be very meticulous in organising or conducting any form of assessment or evaluation of the student. The preclinical students portrayed a great deal of honesty while answering the questionnaire. This finding is also a kind of authenticity of our research findings. This finding is consistent with other study<sup>16, 19, 24 and 26</sup>.

SSSP is also perceived positively (18/28) and the perception of Year 2 students (18.30) and female students (18.1s) is more positive than Year 1 (16.45) and male students (16.88) as reported by previous. Studies<sup>19,20</sup>. Year wise perception is significantly different between Year 1 and 2 ( $p < 0.05$ ) but gender wise the difference is not significant ( $p > 0.05$ ). This may be due to the fact that the Year 1 students feel more stressed and unable to maintain a balance between their studies and their social life. The students' feeling is not too bad as indicated by relatively high score in Item 15 (*I have good friends on this course* 2.94), Item 19 (*My spiritual and social life is good-* 2.94) and Item 46 (*my accommodation is pleasant* 2.77). This proves that the students have a healthy relationship with their peers and are able to maintain a spiritual life. This could be due to the word of encouragement from the teachers and the support system provided by the faculty, though the service needs to be improved as indicated by score

in Item 3 (*There is good support system for students who got stressed* – 2.55). Item 4 (*I am too tired to enjoy the course* -1.77) might be due to the fact the students were incapable to cope with the factually loaded curriculum and exhausted or burnout to enjoy the teaching learning process which is consistent with reported findings<sup>8,16, 22,23-25</sup>

### **Conclusion**

The study revealed that preclinical medical students positively perceived (126.78 /200) the educational environment of FOM. The all five Domains of DREEM were also perceived positively by the students with plenty of scopes for improvement. The issues raised by them were teachers being strict during the teaching learning session, academic dishonesty by the students, too tiring course, factual knowledge and over emphasizes of factual learning. A positive educational environment of the medical faculty is an excellent evidence for the SEGi University in terms of its branding and credibility. The lack of many outstanding aspects only means a scope for growth and improvisation on the faculty's educational environment. Information obtained by this research would be valuable feedback in solidifying the teaching learning experiences and curriculum review process. The study was conducted in a medical faculty of a private University among a selected group of studento, so the findings cannot be generalised to other private medical programme of Malaysia.

### **Ethical Consideration**

Permission from the co- author of DREEM instrument was obtained. The study was cleared by the research panel of Faculty of Medicine, SEGi University. The respondents were assured about the confidentiality and anonymity.

**Conflict of Interest** – None



## References

- Roff S. Education, environment: a bibliography, *Medical Teacher* 2005; 27 (4): 353–357.
- Roff S. The Dundee Ready Education Environment Measure (DREEM)-a generic instrument for measuring students' perceptions of undergraduate health professions curriculum. *Medical Teacher* 2005; 27: 322-325.
- Abraham R, Ramnarayan K, Vinod P and Torke S. Students' perceptions of educational environment in an Indian medical school, *BMC Medical Education* 2008; 8 (20).
- Dent J, Harden RM. *A Practical Guide for Medical Teachers*, 4<sup>th</sup> ed. Amsterdam: Elsevier Health Sciences 2009: ISBN: 9780702062599
- Brown T, Williams B and Lynch M. The Australian DREEM: Evaluating student perceptions of academic educational environments within eight health science courses. *International Journal of Medical Education* 2011; 2:94- 101 DOI: 10.5116/ijme.4e66.1b37
- Roff S, McAleer S, Ifere OS and Bhattacharya S.A. Global diagnostic tool for measuring learning environment: comparing Nigeria and Nepal. *Medical Teacher* 2001;23 (4): 378-382
- Yusoff MB. The Dundee Ready Educational Environment Measure: A Confirmatory Factor Analysis in a Sample of Malaysian Medical Students', *International Journal of Humanities and Social Science* 2012; 12(16)
- Clarke RM., Feletti GI and Engel CE. Student perceptions of the educational environment in a new medical school. *Medical Education* 2009; 18(5):321-325
- Arzuman H, Yusoff MB and Chit SP. 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. *Malaysian Journal of Medical Sciences* 2010;17(3):40-7
- Dunne F, McAleer S, Roff S. Assessment of the undergraduate medical environment in a large UK medical school. *Health Education Journal* 2006;65(2):149–158
- Al-Nagar R. A., Abdulghani M and Osman MT. The Malaysia DREEM: perceptions of medical students about the learning environment in a medical school in Malaysia. *Advances in Medical Education and Practice* 2014; 5: 177–184. DOI <https://doi.org/10.2147/AMEP.S61805>
- Nurumal MS, Jaafar R and Arzuman H. Study of Learning Environments in the Kulliyah (Faculty) of Nursing, International Islamic University Malaysia. *Malaysian Journal of Medical Sciences* 2009; 16(4)
- Khshialiabad H, Bakhshi M, and Hassanshahi G. Students' perceptions of the academic learning environment in seven medical sciences courses based on DREEM, *Advances in Medical Education and Practice* 2015; 6:195–203.
- Bassaw B, Roff S, McAleer S, Roopnarinesingh S, De Lisle J, Teelucksingh S and Gopaul S. Students' perspectives on the learning environment, Faculty of Medical Sciences, Trinidad. *Medical Teacher* 2003; 25 (5): 522-526.
- Lempp H and Seale C. The hidden curriculum in undergraduate medical education: qualitative study of medical students' perceptions of teaching. *British Medical Journal* 2004; 329(7469):770-773.
- Genn JM. AMEE Medical Education Guide No 23(Part1): Curriculum, environment, climate, quality and change in medical education – a unifying perspectives. *Medical Teacher* 2001; 23 (4): 337-344.
- Pimparyon P, Roff, McAleer S, Poonchai B, and Pemba S. Learning environment, student approaches to learning and academic achievement in a Thai nursing school. *Medical Teacher* 2000; 22(4): 359-365.
- Arzuman H, Al-Mahmood AK, Islam S, Afrin SF, Khan SA, & Schofield S J . Students' perception of learning environment: A base line study for identifying areas of concern at a private medical college, Bangladesh. *Bangladesh Journal of Medical Science* 2016;5(2):234-242 DOI: [10.3329/bjms.v15i2.28793](https://doi.org/10.3329/bjms.v15i2.28793).
- Youssef WT, Wazir YME, Ghaly MS and, Khadragy RAE. Evaluation of the Learning Environment at the Faculty of Medicine, Suez Canal University: Students' Perceptions. *Intellectual Properties Rights* 2013; 1(1). DOI 10.4172/2375-4516.1000102.
- Roff S, McAller S, Harden RM, Al-Qahtani M, Ahmed A, Deza H, Groenen Gand Pimparyon P. Development and validation of the Dundee Ready Education Environment Measure (DREEM). *Medical Teacher* 1997; 19 (4): 295-299.
- McAleer S and Roff S. A Practical Guide to using the Dundee Ready Education Environment Measure (DREEM) 2001; retrieved from [www.gppro.co.uk/swacpo/document/dreems2.doc](http://www.gppro.co.uk/swacpo/document/dreems2.doc) on 20th July 2016.
- Al-Ayed IH, Sheik SA. Assessment of the educational environment at the College of Medicine of King Saud University, Riyadh. *Eastern Mediterranean Health Journal* 2008; Vol 14:953–959.
- Jiffry MTM, McAleer S, Fernandoo S and Marasinghe RB. Using the DREEM questionnaire to gather baseline information on an evolving medical school in Sri Lanka. *Medical Teacher*; 2005; Vol.27: 348-352.
- Sajid A, Ahmad T, Khalid T. Stress in medical undergraduates; its association with academic performance. *Bangladesh Journal of Medical Science* 2015;14(2):135-141
- Henning M A, Boaz S, Hawken SJ and Pinnock R. Changing the learning environment: the medical student voice, *The Clinical Teacher* 2011; Vol 8 : 83–87.
- Till H. Identifying the perceived weakness of a new curriculum by means of the Dundee Ready Education Environment Measure (DREEM) Inventory. *Medical Teacher* 2004;26: 39-45.
- Denz-Penhey H and Murdoch C. A comparison between findings from the DREEM questionnaire and that from qualitative reviews. *Medical Teacher* 2009 ; 31:449-453
- Masoomah I, Afsaneh S, Shahrzad G and Hamid H. Evaluating the Educational Environment of a Nursing School by using the DREEM Inventory. *Global Journal of Health Science*, 2015; 7(4)