

# ORIGINAL ARTICLE

## Educational Environment at KMS Medical College SKT

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### ABSTRACT

**Background:** The instructive climate in any organization is an important concern to debate, as it assumes powerful part in overseeing understudies scholastic accomplishment.

**Aim:** The target of my examination was to determine students' perception of the educational environment at Khawaja Mohammad Safdar Medical College, Sialkot.

**Methods:** A descriptive, cross-sectional, poll-based study was led in which undergraduate students of all five years were analyzed. 50-item DREEM Questionnaire was used, and scoring was based on 5 points Likert scale. Data were analyzed by using SPSS v 25. The obtained score was expressed as the mean  $\pm$ SD.

**Results:** A total mean score is 114/200 (57%), that is more affirmative than negative. The mean score for Students' perception of Learning is 28/48, Students' perception of Teachers 25/32, Students' academic self perception 20/28, Perceptions of atmosphere 27/48, and Students' social self-perception is 16/28. There were four problem areas; item no.1 (I am encouraged to participate in teaching sessions) (1.78), item no.8(course organizers ridicule their students)(1.42), item no.35(I find experience disappointing)(1.76), and item no.3(there is a sound support system for students who get tense)(1.25) all with means  $\leq$ 2.

**Conclusion:** The over-all educational climate was more valuable than negative; however, few problem areas need to be further explored, and measures are taken to make the environment more favorable for learning.

**Keywords:** DREEM (Dundee Ready Education Environment Education), student's perception, instructive climate.

**Introduction:** The instructive climate is characterized as "all that occurs inside the department, office, personnel, or college is significant in deciding the achievement of undergrad clinical training". Supportive environments give room to motivated learners to develop and exhibit improved levels of self-efficacy. (Patil & Chaudhari, 2016).

An understanding of the educational environment helps in the effective management of learning by employing the right interventions. The "Dundee Ready Education Environment Measure" (DREEM) is specific to the unique environment experienced by students in medical and healthcare-related courses. This questionnaire (DREEM) has been developed as a result of an international Delphi (comprising of an expert panel) and has been put to the test in several settings worldwide (Phadke et al., 2020).

Khawaja Mohammad Safdar Medical College is the only public institution here in Sialkot, established in 2010. Since then, the institution is dealing with progression and advancement as far as clinical schooling is concerned. The College is scheming a modular system with horizontal and vertical integration and is determined to bring in all avenues. Understanding the existing

educational environment and becoming aware of the students' perception.

The World Federation for Medical Education (WFME) reflects the tutorial environment together of the areas that ought to be focused on and discussed while evaluating or developing medical education schemes in any institute (Jawaid et al., 2013). Ever since the establishment of KMSMC, there is no documentation of students' performance and satisfaction.

Nowadays, the trends are continuously changing in terms of changing the curriculum from traditional to integrated. Therefore it is a must requirement for any institution to know where they truly stand (Brauer & Ferguson, 2015).

All the reasons mentioned above prompted me to lead the examination and to decide the understudy's view of the learning climate at Khawaja Mohammad Safdar Medical College Sialkot.

**Research objective:** To determine the medical students' "perceptions of the educational environment" at Khawaja Mohammad Safdar Medical College.

**Methods:** Research design & subjects: This was a descriptive study in which undergraduate students from all five years of the MBBS program were surveyed over a period of time.

**Sample size and technique:** The sample consisted of 400 participants of all five years of MBBS using a random sampling technique.

**Data collection & scoring:** The information was gathered

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utilizing the DREEM survey, which was set up more than ten years back by a Delphi board of employees of clinical schools and other faculty members. It was planned especially to quantify the instructive climate. (Roff et al., 1997).

Total number of participants was 400, that is, 80 students from each class. The paper-based questionnaire was administered to them in class during their lecture time, and almost 15 to 20 minutes were given to fill it and then return. Participation was entirely voluntary, and the confidentiality of all the participants was maintained. Informed consent was a part of the questionnaire and was taken before the survey. Ethical approval was also attained from the Ethical Review Board Khawaja Mohammad Safdar Medical College.

A pre-validated questionnaire, "DREEM INVENTORY," was used.

It comprised 50 questions which are divided into five domains:

- SPL (Students' view of Learning)-containing 12 things with a most extreme score of 48.

- SPT (Students' perception of Teachers)-containing 11 things with a greatest score of 44.
- SASP (Students' Academic Self Perception)-containing 8 things with a most extreme score of 32.
- SPA (Students' view of Atmosphere)-containing 12 things with a greatest score of 48.
- SSSP (Students' Social Self Perception)-containing 7 things with a most extreme score of 28.

The all out score is 200. The scoring depends on the Likert scale (0-1-2-3-4) where 0=strongly disagree, 1=disagree, 2=unsure, 3=agree, and 4=strongly agree. Notwithstanding, 9 of the 50 items are negative proclamations (4, 8,9,17, 25, 35, 39, 48, and 50) and were approached to score in backward order, where 0=strongly agree,1=agree,2=unsure,3=disagree,4=strongly disagree.

The questionnaire also included a demographic section that included age, gender, and professional year. All the incomplete questionnaires were discarded.

**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 many issues 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>

Data analysis: Data were inspected utilizing the Statistical Package for the Social Sciences (SPSS form 25). Descriptive and inferential statistics were determined. Mean scores plus standard deviations were determined. P-value of under <0.05 was viewed as critical.

**Results:** An aggregate of 400 students were involved within the study. The response rate was 90.75% as 363 students responded to the questionnaire. There were 131 males (36.1%) and 232 females (63.9%).

The overall score of DREEM at KMSMC, SKT was 114/200. Scores in the scope of 101-150 are viewed as more certain than negative and 151-200 as excellent. Scores in the scope of 51-100 coordinated a lot of issues, and 0-50 is exceptionally poor, as demonstrated in the table (Roff, 2005).

The total score of all the five professional years is listed in table 3.

The score of each domain has additionally been recorded in table 3, where the all-out score of SPL is 28/48(58.3%), demonstrating a

more certain methodology. SPT 25/32(76%) moving in the right heading, SASP 20/28(69%) which means feeling more on the good side, SPA 27/48(56%), an additionally good atmosphere, and SSSP 16/28 (56%) not all that awful.

The highest score was achieved by 1<sup>st</sup> year for (SPA) 30.75/48, which means students' depict a more positive environment, whereas the lowest score was obtained by 3<sup>rd</sup> year (SSSP) 14.9/28.

**Table 3: Total Score of five subdomains 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	5 <sup>th</sup> Year
Students' perception of learning (SPL)	30.47	28.41	27.02	26.07	28.00
Students' perception of teachers (SPT)	25.41	24.79	23.03	25.63	23.99
Students' academic self-perception (SASP)	20.41	20.13	19.05	18.63	18.88
Students' perception of the atmosphere (SPA)	30.75	27.3	25.77	25.92	26.61
Students' social self-perceptions (SSSP)	17.30	16.19	14.90	14.12	16.15
<b>Total</b>	<b>124.34</b>	<b>116.82</b>	<b>109.77</b>	<b>110.37</b>	<b>113.63</b>

Individual scores of each item of each sub-class have been listed in table 4-8.

**Table 4: Students' perception of learning:**

No	Item	1 <sup>st</sup> Year Mean ±SD	2 <sup>nd</sup> Year Mean ±SD	3 <sup>rd</sup> Year Mean ±SD	4 <sup>th</sup> Year Mean ±SD	5 <sup>th</sup> Year Mean ±SD
01	I am encouraged to participate in teaching sessions	2.30 (1.28)	2.28 (1.90)	1.99 (1.22)	2.08 (1.37)	<b>1.70</b> <b>(1.23)</b>
07	The teaching is often stimulating	2.59 (1.06)	2.42 (1.10)	2.21 (1.02)	1.84 (1.08)	2.24 (1.19)
13	The teaching is student-centered	2.61 (0.98)	2.25 (1.13)	2.13 (1.04)	1.83 (1.22)	2.21 (1.11)
16	The teaching helps to develop my competence	2.76 (0.98)	2.44 (1.01)	2.33 (1.12)	2.19 (1.18)	2.29 (1.24)
20	The teaching is well focused	2.80 (0.87)	2.39 (1.01)	2.37 (0.99)	2.27 (1.29)	2.69 (1.01)
21	The teaching helps to develop my confidence	2.59 (1.06)	2.48 (1.03)	2.46 (1.04)	2.11 (1.15)	2.49 (1.18)
24	The teaching time is put to good use	2.75 (1.03)	2.55 (0.92)	2.23 (0.95)	2.24 (1.21)	2.27 (1.17)
25	The teaching over emphasizes factual learning	2.20 (1.10)	2.12 (0.89)	2.10 (0.95)	1.94 (1.21)	2.24 (1.18)
38	I am clear about the learning objectives of the course	2.67 (0.93)	2.35 (1.06)	2.31 (1.02)	2.62 (0.83)	2.44 (1.04)
44	The teaching encourages me to be an active learner	2.84 (0.90)	2.50 (1.00)	2.26 (1.01)	2.21 (1.12)	2.74 (0.94)
47	Long term learning is emphasized over short term learning.	2.61 (1.11)	2.59 (1.15)	2.43 (0.92)	2.37 (1.03)	2.66 (0.94)
48	The teaching is too teacher-centered	1.75 (1.20)	2.04 (1.23)	2.20 (1.12)	2.37 (1.24)	2.03 (1.07)

**Table 5: Students' Perception of Teaching:**

No	Item	1 <sup>st</sup> Year Mean ±sd	2 <sup>nd</sup> Year Mean ±sd	3 <sup>rd</sup> Year Mean ±sd	4 <sup>th</sup> Year Mean ±sd	5 <sup>th</sup> Year Mean ±sd
02	The course organizers are knowledgeable	2.71 (1.05)	2.49 (1.06)	2.14 (1.31)	2.33 (1.28)	2.36 (1.06)
06	The course organizers adopt a patient-centered consulting approach	2.57 (1.26)	2.18 (1.01)	1.91 (1.12)	2.17 (1.08)	1.90 (1.14)
08	The course organizers ridicule their students	<b>1.42</b> (1.15)	1.89 (1.32)	1.89 (1.13)	2.29 (1.00)	2.13 (1.23)
09	The course organizers are authoritarian	2.25 (1.14)	2.29 (1.03)	2.34 (0.97)	2.78 (1.06)	2.14 (0.93)
18	The course organizers have effective patient communication skills	2.40 (1.22)	2.32 (1.06)	2.30 (1.10)	2.46 (1.01)	2.10 (1.18)
29	The teachers are good at providing feedback to students	2.70 (1.15)	2.30 (1.19)	2.24 (1.01)	2.25 (0.96)	1.93 (1.14)
32	The teachers provide constructive criticism here	2.21 (1.17)	2.06 (1.17)	1.89 (1.12)	2.08 (1.23)	2.31 (1.13)
37	The teachers give clear examples	2.71 (1.08)	2.55 (0.91)	2.30 (1.01)	2.24 (1.05)	2.51 (0.97)
39	The teachers get angry in teaching sessions	1.83 (1.32)	2.30 (1.22)	2.14 (1.31)	2.51 (1.26)	2.56 (1.28)
40	The teachers are well prepared for their teaching sessions	2.81 (1.18)	2.46 (1.16)	2.07 (1.23)	2.08 (1.26)	2.09 (1.16)
49	The students irritate the teachers	1.80 (1.39)	1.95 (1.35)	1.81 (1.30)	2.44 (1.26)	1.96 (1.45)

**Table 6: Student Academic Self Perception:**

No.	Item	1 <sup>st</sup> Year Mean ±SD	2 <sup>nd</sup> Year Mean ±SD	3 <sup>rd</sup> Year Mean ±SD	4 <sup>th</sup> Year Mean ±SD	5 <sup>th</sup> Year Mean ±SD
05	Old learning strategies continue to work for me now	2.14 (1.14)	2.03 (1.22)	2.091 (1.22)	2.48 (1.20)	<b>1.89</b> (1.21)
10	I am confident about passing this year	2.84 (1.06)	3.13 (0.97)	2.84 (1.07)	2.63 (1.05)	2.63 (1.03)
22	I feel I am being well prepared for my profession	2.55 (1.21)	2.60 (1.00)	2.36 (1.22)	2.14 (1.24)	2.23 (1.15)
26	Last year's work has been good preparation for this year's work	2.54 (1.16)	2.62 (0.97)	2.53 (1.01)	2.30 (1.18)	2.63 (0.90)
27	I can memorize all I need	2.32 (1.10)	2.29 (1.10)	2.26 (1.17)	2.38 (1.09)	2.26 (1.05)
31	I have learned a lot about empathy in my profession	2.57 (1.05)	2.61 (1.07)	2.41 (1.14)	2.29 (1.28)	2.44 (1.08)
41	My problem-solving skills are being well developed here	2.66 (1.10)	2.30 (1.06)	2.20 (0.98)	1.98 (1.35)	2.33 (0.98)
45	Much of what I have to learn is relevant to a career in healthcare	2.79 (1.04)	2.55 (0.90)	2.36 (1.14)	2.43 (1.08)	2.47 (1.00)

**Table 7: Students 'Perception of the atmosphere:**

No.	Item	1 <sup>st</sup> Year Mean ±SD	2 <sup>nd</sup> Year Mean ±SD	3 <sup>rd</sup> Year Mean ±SD	4 <sup>th</sup> Year Mean ±SD	5 <sup>th</sup> Year Mean ±SD
11	The atmosphere is relaxed during consultation teaching	2.72 (1.13)	2.34 (0.99)	1.94 (1.19)	1.98 (1.27)	2.04 (1.26)
12	The course is well timetabled	2.82 (1.01)	2.12 (1.20)	2.17 (1.16)	2.22 (1.15)	2.61 (1.15)
17	Cheating is a problem in this course	1.98 (1.19)	1.93 (1.27)	2.07 (1.10)	2.56 (1.08)	2.17 (0.99)
23	The atmosphere is relaxed during lectures	2.85 (0.98)	2.56 (1.05)	2.41 (1.02)	2.03 (1.09)	2.41 (0.98)
30	There are opportunities for me to develop interpersonal skills	2.71 (0.98)	2.49 (1.10)	2.26 (1.11)	2.27 (1.12)	2.43 (0.97)
33	I feel comfortable in teaching sessions socially	2.65 (1.00)	2.36 (1.07)	2.16 (1.00)	2.05 (1.17)	2.20 (1.05)
34	The atmosphere is relaxed during tutorials	2.63 (1.08)	2.50 (1.11)	2.16 (1.18)	2.19 (1.10)	2.24 (1.10)
35	I find experience disappointing	2.05 (1.19)	<b>1.76</b> (1.24)	1.81 (1.18)	2.22 (0.94)	1.99 (1.17)
36	I can concentrate well	2.58 (0.95)	2.38 (1.10)	2.27 (1.08)	2.05 (1.03)	2.09 (1.08)

**Table 8: Students' social self-perception**

No.	Item	1 <sup>st</sup> Year Mean ±SD	2 <sup>nd</sup> Year Mean ±SD	3 <sup>rd</sup> Year Mean ±SD	4 <sup>th</sup> Year Mean ±SD	5 <sup>th</sup> Year Mean ±SD
03	There is a good support system for students who get stressed	2.18 (1.30)	1.55 (1.36)	1.53 (1.37)	<b>1.25</b> (1.30)	1.79 (1.44)
04	I am too tired to enjoy this course	2.03 (1.19)	2.05 (1.23)	2.01 (1.18)	2.49 (1.04)	2.10 (1.22)
14	I am rarely bored on this course	2.16 (1.21)	1.94 (1.14)	1.81 (1.18)	1.70 (1.21)	2.09 (1.20)
15	I have good friends in this course	2.66 (1.11)	2.71 (0.97)	2.47 (1.16)	2.41 (1.32)	2.63 (1.28)
19	My social life is good	2.85 (1.08)	2.72 (1.10)	2.40 (1.14)	2.30 (1.11)	2.51 (1.08)
28	I seldom feel lonely	2.59 (1.12)	2.47 (1.25)	2.21 (1.20)	2.01 (1.40)	2.47 (1.21)
46	My accommodation is pleasant.	2.83 (1.06)	2.75 (1.03)	2.47 (1.03)	1.97 (1.27)	2.56 (1.17)

Cronbach's Alpha was used to verify the reliability (Joseph A. Gliem & Rosemary R. Gliem, n.d.). The overall score is (0.886), which is good. SPT and SSP domains have scored low, that is

(0.648) and (0.65) respectively. The alpha for other subdomains is mentioned in table: 9.

**Table 9: Reliability:**

SCALE	ITEM	ALPHA
Overall DREEM	50	0.886
<b>Subscale</b>		
SPL	12	0.793
SPT	11	0.648
SASP	8	0.78
SPA	12	0.72
SSP	7	0.65

**Discussions:** The “Dundy Ready Educational Environment Measure (DREEM)” has been developed and proven to remain a useful tool (Miles et al., 2012).

The DREEM has been utilized for numerous reasons, including institutional qualities and shortcomings, curricular changes (Edgren et al., 2010), and students’ insights of the educational setting (Aghamolaei & Fazel, 2010), and comparisons for academic achievements. It has also been used for a variety of other purposes as well.

The environment from an educational setting perspective is an important concern for discussion (Cannon et al., 2008). The teaching environment is as important as imparting knowledge and skills, which has been proven according to adult learning theories (Aneela Umber, n.d.)

Progressive institutional profile, enhanced student performance, developed staff morale, higher motivation among students, and quality of teaching are viewed as indicators for a healthy educational environment (Vinette Cross, I Carolyn Hicks, 2006).

The investigation was directed to determine impression of the learning environment at Khawaja Mohammad Safdar Medical College, SKT. The overall score was 114/200, which is certain than negative and almost related study conducted in Riphah college in 2014 (Arshad Nawaz Malik, Rahila Yasmeen, 2014). It is far better than Saudi Arabia (Al-Hazimi et al., 2004), Canada, and West Indies. But has a lower score than studies conducted in Sweden and Australia (Aneela Umber, n.d.).

The worldwide scores for DREEM stock acquired by clinical establishments are generally not exactly our gotten score. Clinical foundations at Srilanka, UK, Nigeria, and the Nepal got a mean score of 108 (Jiffry et al., 2005), 130, 118 (Roff et al., 2001), and 139 (Varma et al., 2005) out of a sum of 200 separately. The mean DREEM score for a wellbeing training foundation in India was accounted for as 107.44/200. (Mayya and Roff, 2004) The outcomes got by specialists directing fairly comparable examination utilizing an equivalent to yielded scores of 125.77 from Aga Khan University at 125.77. (Rehman et al., 2016)

Analyses of SPL domain item no.01 “I am encouraged to contribute in teaching sessions” scored lowest (1.70) has shown us weakness in our teaching system as we are still following the traditional curriculum and a more teacher-centered approach.

SPT domain item no.08 (The course organizers ridicule their students) scored (1.42), which again has identified the weakness on teachers part, and faculty development programs should be conducted to lessen the gap between teachers and students. According to a study conducted in Australia (KEITH TRIGWELL1, 1999), the teacher adopts a different teaching strategy while the learners’ approach is different, which is also a significant barrier between teacher and students’ perceptions. Also, the hidden curriculum contributes to pressures felt by students (Lempp & Seale, 2004).

SPA domain item no.35 (I find experience disappointing) (1.76) scored by the 2<sup>nd</sup> year is an area of concern that should be further explored. Item no.3 “there is a good support system for students

who get stressed” scored (1.25), which is very low and depicts the picture of pressure felt by students and a teacher-centered approach that should be resolved by taking serious measures in term of establishing students counseling department.

The Cronbach Alpha is (0.886), which is good and acceptable, but two subscales scored low, which may be due to negative items in the questionnaire.

In general the individual scores of DREEM gives an energetic thought regarding the needs to change the current educational plan. This study can be used as a reference point for establishing and implementing an integrated curriculum.

**Conclusion:** The DREEM score at KSMSC, SKT is 114/200, which is more positive than negative. This study has helped in the identification of some problems that need further exploration and remedial actions. It is essential to attain regular assessment, feedback, and evaluation that can only be done through the information obtained. In this way, modifications can be made, and errors can be corrected.

**Impact of study:** In this modern era of advancement, change is a must and continuous in changing curriculum, teaching strategies, or assessment and evaluation criteria. The DREEM has end up being a helpful apparatus. It gives us a picture of where we actually stand and what further needs to be done.

As of late an investigation has reasoned that DREEM was likely to be the most appropriate instrument for evaluating the instructive climate at undergrad level in clinical organizations (Miles et al., 2012).

**Limitations:** The study provides useful information on the environment perceived by students. However, a few limitations could have been avoided. Firstly, the sample size could have been better, including all the 500 students, but due to time constraints and random sampling, 80 students per class were entertained. Secondly, gender differences in terms of opinion should also be taken into account. Finally, a comparative study of all three medical colleges in Sialkot would have given better insight as the other colleges are also following the traditional system.

**Way forward:** to improve, I would like to include other medical colleges to get a better vision of teaching and learning, plus male to female differences of opinion can also be taken into account.

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**(Questionnaire, Ethical review Certificate attached at the end)**

**Declaration of interest:**

The authors report no conflict of interest.

**Author’s contribution:**

Dr. Abeer Anjum: Origination and plan of the work; and the procurement, examination, and understanding of information for the work.

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