

# Perceptions of Final Year students about Educational Environment at Khawaja Muhammad Safdar Medical College Sialkot

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## ABSTRACT

**Background:** Educational environment of medical institutes has been measured by an instrument called Dundee Ready Educational Environment Measurement (DREEM). This study assessed the perceptions of final year students about teaching and learning, using DREEM questionnaire.

**Aim:** The study aim was about the perceptions of final year M.B.B.S students about the teaching and learning environment based at Khawaja Muhammad Safdar Medical College Sialkot, using DREEM questionnaire.

**Study design:** Descriptive cross sectional study.

**Study period:** December 2016 to July 2017.

**Place of study:** Khawaja Muhammad Safdar Medical College Sialkot

**Methods:** All students from the final year MBBS class of the medical college (n=100) were included in the study. Mann Whitney U Test was used to determine the significance of differences for individual items.

**Results:** The total no of final year students of medical college were 100 with 100% respondents 31.86% males and 68.13% females. DREEM score of KMSMCS was 112.2 indicating a positive perception.

**Conclusion:** DREEM is a valid instrument for the measurement of students' perceptions about teaching and learning worldwide.

**Keywords:** Academic Environment perception, Medical educational environment, DREEM (Dundee Ready Educational Environment Measure)

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## INTRODUCTION

The multi-professional interaction of medical students enables them to experience different aspects of learning environment. The overcrowded curriculum makes them overstretched and overload with academic assignments. The competitive nature of medical college environment with sometime humiliating and abusive attitude of the staff make the overall educational environment a bit tense. Although the new innovative changes in the new curriculum with more student centred and problem based learning make the learning environment more positive, but still there are lots of curricular areas which need special attention.

Dundee Ready Educational Environment Measure (DREEM) for undergraduates have been used to measure educational environment<sup>1,2,3,4</sup>. DREEM is a 50 item questionnaire developed by panel of experts. Many undergraduate courses worldwide apply this tool<sup>5,6,7,8</sup>. This tool was validated by over 1,000 students world-wide and is now being used widely in order to measure and 'diagnose' undergraduate educational environment in the health professions<sup>9,10</sup>. The original version has been translated into several languages and has been applied in different countries<sup>11,12,13</sup>.

The present study was conducted to measure the teaching and learning environment at KMSMCS), using DREEM questionnaire.

## MATERIAL AND METHODS

**Instrument:** The collection of data was done by using Dundee Ready Educational Environment Measure (DREEM). It contain 50 statements covering almost all the aspects of learning environment. There are nine items with negative statements. Items are

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scored on Likert scale 0-4 while negative items are scored in reverse order

There are five subscales:

- Perceptions about Learning (12 items/ maximum score 48).
- Perceptions about Teachers (11 items/ maximum score 44).
- Students' perceptions about academics (8 items/ maximum score 32).
- Perceptions of Academic Atmosphere (12 items/ maximum score 48).
- Social Self-perceptions (7 items/ maximum score 28).

The total number of questions to be asked from the students are 50 with a maximum score of 200. This instrument has been used in health care professional institutions with high reliability.

**Study Design:** It was a Quantitative, Cross-sectional survey based on DREEM questionnaire done at KMSMCS. The interpretation of overall score:

0-50	Very Poor
51-100	Plenty of Problems
101-150	More Positive than Negative
151-200	Excellent

The sample size was 100 and sampling technique was non probability purposive sampling. The purpose of considering final year was their maturity level and better understanding of a newly developed medical college. The questionnaire was distributed to all the students on the lecture theatre. The objectives of the study were explained and the difficult terms were elaborated for better understanding. The absent students were approached through class representatives to complete the sample size. Statistical analysis was carried out through SPSS version 19. Mann Whitney U Test was used to determine the significance of differences (proportion of frequencies).

## RESULTS

The total number of students were 100 and the respondents were 100(100%) out of them (31.86%) were males and (68.13%) were females.

**Student perception of learning:** The total mean score of subscale (students' perceptions of learning) was 26.09 while the mean score of males was 25.25 and females was 30.50 (table 2-3) so the interpretation of this subscale was that the teaching was viewed positively by the students. The items with mean scores >3.5 (real positive) were 6. Items with mean score >2 – 3 needs enhancement were 15. Items with mean score ≤ 2 (problem area) were 3. Table 1

**Student's perception of teachers:** The total mean score of subscale (student's perception of teachers)

was 21 while the total mean score of male was 20.65 and females 21.40 so the interpretation of this subscale was that the students thought that there is need of some retraining. The items with mean scores >3.5 (real positive) were 0. Items with mean score >2 – 3 needs enhancement were 10. Items with mean score = < 2 (problem area) were 12). Table 1

**Student academic self-perception:** The total mean score of subscale (students' academic self-perception) was 19.43 with total mean score of males 19.11 and females was 19.75 so the interpretation of this subscale was feeling more on positive side. The items with mean scores >3.5 (real positive) were 2. Items with mean score >2 – 3 needs enhancement were 6. Items with mean score = < 2 (problem area) were 8). Table 1

**Student perception of atmosphere:** The total mean score of subscale (student's perception of atmosphere) was 27.64 while total mean score of male was 28.41 and females 26.87 (table 1- 4) so the interpretation of this subscale was a more positive attitude. The items with mean scores >3.5 (real positive) were 2. Items with mean score >2 – 3 needs enhancement were 10. Items with mean score = < 2 (problem area) were 12). Table 1

**Student social self-perception:** Finally, the total mean score of the subscale (student's social self-perception) was 18.26 while the total mean score of the males was 18.11 and females 18.41 so the students perceived that it not too bad place. The items with mean scores >3.5 (real positive) were 1. Items with mean score >2 – 3 needs enhancement were 6. Items with mean score = < 2 (problem area) were 7).

The total item score of all subscales was 114.2 (more positive than negative) table. The items with mean scores >3.5 were 11 (real positive). Items with mean score >2 – 3 were 47 (needs enhancement). Items with mean score = < 2 were 42 (problem area) Table 1.

**Gender Difference:** The total scores of all subscales between males and females was 111.53 and 113.3 respectively which was statistically insignificant (p value >0.05). The following items were perceived more negatively by the students

- The teaching time is put to good use
- The teaching is too teaching centered
- The course teachers have good communication skills
- The course teachers are good at providing feedback
- I have learnt a lot about empathy in my profession
- My problem solving skills are being well developed here

- The atmosphere is relaxed during lectures
- The teaching encourages me to be an active learner
- There is a good support system for the students who got stressed.
- My accommodation is pleasant

**Comparison of students perception based on DREEM between male and female:** The total number of score of all items between Male and female was 111.53 and 113.3 respectively which was statistically insignificant (table). The total score and the score of each subscale by the study population is shown in Table 3

Table 1:

Subscale	Total no of item score ≤2(M/F)	Total no of item score 2-3(M/F) (Problem area)	Total no of item score >3(M/F) (Needs enhancement)	Real +ve
SPL	3	15	6	
SPT	12	10	0	
SAS	8	6	2	
SPA	12	10	2	
SSS	7	6	1	
Total	42	47	11	

Table 2: Total Score and Score of each subscale by the study population with Interpretation KMSMCS

DREEM and its subscales	Maximum score	Sample Mean Score KMSMCS	Interpretation
All items	200	112	A more positive than negative
Students Perception of Learning	48	26.09	A more positive perception
Students Perception of teachers	44	21	In need of some retraining
Students' Academic Self-Perception	32	19.43	Feeling more on positive side
Students' Perceptions of Atmosphere	48	27.64	A more positive attitude
Students' Social Self Perceptions	28	18.26	Not too bad

Table 3 Total Score and score obtained for each subscales by the study population male/female

DREEM and its subscales	Maximum score	Sample Mean Score MALE	Remarks	Sample Mean Score FEMALE	Remarks
All items	200	111.53(%)	More positive than negative	113.3(%)	More positive than negative
Students Perception of Learning	48	25.25	A more positive perception	30.50	A more positive perception
Students Perception of teachers	44	20.65	In need of some retraining	21.40	In need of some retraining
Students' Academic Self-Perception	32	19.11	Feeling more on positive side	19.75	Feeling more on positive side
Students' Perceptions of Atmosphere	48	28.41	A more positive attitude	26.87	A more positive attitude
Students' Social Self Perceptions	28	18.11	Not too bad	18.41	Not too bad

## DISCUSSION

DREEM questionnaire is used to assess the environment experienced by the students in medical institutions. The multiprofessional interaction of medical students enable them to experience different aspects of learning environment. The competitive nature of medical college environment with sometime humiliating attitude of staff make the overall educational environment a bit tense. Moreover, the overcrowded curriculum also makes them overstretched with academic work<sup>14</sup>.

Although the new innovative changes in the new curriculum with student centered and problem based learning have a positive impact on the learning

environment but still there are lots of curricular areas which need special attention. In light of this overcrowded curriculum a conducive, non-threatening environment is the need of the day. In order to produce good health professionals a motivating environment is essential. It not only foster deep learning but also motivate the medical students positively The objective of this study was to determine the perception of medical students about learning environment and to identify certain aspects which may differ from that of big cities institutions. The overall mean score of KMSMC was 112/200 n 100 which indicate that the perception of the students was more positive. Different medical institutions in Nigeria, United Kingdom, Scotland, Nepal, Saudi

Arabia scored 118, 139, 123, 130 and 127 respectively.<sup>15,16,17,18</sup> Gender wise the overall DREEM score did not show much difference between male and female with p-value insignificant. Different studies showed much lower total score of DREEM inventory with female students as compare to male students<sup>19,20</sup>.

In the subscale of perception of learning the student perceive negative with low scoring in items like i.e., “the teaching time is put to good news”, “the teaching is teacher centered” and “the teaching encourages me as an active learner”. Their negative perception precisely in these items highlights our traditional approach of learning in institution. Teaching methodologies need to be revisited to put the teaching time more productive. Similarly, a more student center approach with problem solving skills as an educational strategy is also needed. The only subscale with low total mean score was student perception of teachers. The item scoring < 2 were 12 while no student scores any item > 3. The lowest score was observed in items like “the course teachers have good communication skills”, “the course teachers are at providing feedback”. The present medical educational era with lot of changes in health profession curricular system where academician is stressing on outcome based, competency based, and problem based curriculum, the role of teachers as facilitator is becoming extremely important. Teachers need to be a role model with an excellent communication skill. These soft skills can be improved by continual medical educational activities. The feedback to the students not only identifies their weak areas but also strengthen their future performance.

The third subscale of students’ academic self-perception was positive except the paucity of inculcating problem solving skills. The teaching methodology ought to be problem solving rather than traditional to address this situation. Similarly, perception of students about learning atmosphere was positive except about a slightly tense atmosphere of learning during lectures. The negative perception of students again reflects a teacher centered approach with didactic lecturing. Finally, the student social self-perception was not too bad except about accommodation and student support system.

The health department with an objective to improve health facilities established new medical colleges in four cities of Punjab. Provision of equitable health facilities across the board was a real challenge. In this context KMSMC was established in 2011. At that very time the college did not have its own constructed building but rather the office of Allama Iqbal Memorial Teaching hospital was used as college building Fig 1.

Fig.1:



The present final year inducted in 2013 have experienced the different phases of development of the institution both in logistics and human resource. This medical college in its initial time face lot of difficulties in inducting and sustaining the teaching faculties. Later on, with the construction of new college building, auditoriums, libraries, offices and separate hostels for males and females,



the medical college became self-sufficient in logistic and human resource. The final year students were adjusted in different private hostels and college building, so their perceptions about accommodation was justified. Hopefully with the completion of new hostels with all facilities the perception will be more positive in future.

Although the sample size included only final year which gave us a snapshot about educational environment the results of this study can be generalized. The study gives us clues about the strength and weakness of learning environment and need to follow up these components in the coming years. A follow up research will be useful in the future to see either the identified weak areas are rectified with better results.

Although KMSMCs have a similar student population characteristic in ethnic, social, cultural and educational background as in the other public and private medical institution, the results from this study can be generalized to all public sectors medical colleges located in the province of Punjab.

## CONCLUSION

This study showed the educational environment of a newly constructed medical college located in Sialkot.

Although the results were positive in majority of the subscales but the perception of the teachers highlighted the need of retraining of teachers with new teaching methodologies. Moreover, provision of better accommodation also enhances the positive perceptions. The study can open new avenues of research in terms of quality control and assurance in educational environment

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