

Original Research Article

Perception of educational ambience among undergraduate medical students at Geetanjali Medical College, Udaipur, Rajasthan, India

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ABSTRACT

Background: The quality of education provided by any institution depends on many factors and perception of all the stakeholders involved in it. The students are the most important stake holders and their perception means a lot in shaping and refining the standards of medical education. There are many tools to find out the students perception about the educational ambience and DREEM's questionnaire is one such tool, which is valid and reliable. It has been used by many institutes in India and abroad to find the students perception but its use in this region was not reported.

Methods: The students of first and second MBBS were divided into groups FY and SY, using the validated DREEM questionnaire. The data obtained from the two groups was analysed using Levene's test of variance in SPSS version 16. A p-value less than 0.05 were considered significant.

Results: The students from both the batches participated in study with n=130 and 64 in group FY and SY respectively. Group FY feels significantly ($p=0.08$) more positive about educational environment as compared to group SY with total score 118.39 and 112.46 out of 200 respectively, for group FY and SY. Both groups are highly positive about their perception of learning and academic self-perception whereas they are not satisfied with their social self-perception.

Conclusions: The study concludes that the first MBBS students have better perception of educational environment as compared to second MBBS and the unsatisfactory social self-perception could hint towards much needed curricular reform for holistic development of our young professional.

Keywords: DREEM questionnaire, Students' perception of learning, Students' perception of teachers, Students' academic self-perception, Students' perception of atmosphere, Students' social self perception

INTRODUCTION

The educational environment of any institution is primarily responsible for imparting quality medical education which prepares the students in all spheres of learning and development. The satisfaction of the students in terms of their learning outcome, teaching, living conditions and social lifestyle determines the overall educational environment of the institution. Though, teaching and learning are the main pillars of any institution but grooming a student into a complete

medical professional is also the duty of an institution. In medical education, it has been greatly acknowledged; that a positive educational environment contributes to the better quality of education and has stimulated the development of several instruments to measure educational environment of the institutions. Out of which, Dundee Ready Education Environment Measure (DREEM), developed by Roff et al in 1997, is a widely used and a valid tool for measuring the perception of students regarding the educational environment of a medical institution. The inventory was developed using

input from 80 international medical educators who visited Dundee university from 1995-1997. The questionnaire is a culturally nonspecific and allows quality assurance comparisons between courses as well as within components of a course.¹ Hence, it's a reliable and validated instrument that identifies specific problem areas within an institution for different component of educational environment.²

Many studies have been done in which various medical institutes and the universities have assessed their educational environment using DREEMs questionnaire, but it needs further exploration in Indian scenario. So the present study was carried out with an aim to identify the perception of the students regarding the educational environment of our institution and to find out the difference between the perceptions of students studying in first and second MBBS i.e., the preclinical and para clinical phase using a validated DREEM questionnaire.

METHODS

The present study was observational questionnaire based study carried on first and second year MBBS students of Geetanjali Medical College and Hospital, Udaipur. The participants were allocated the group FY (for first year students) and SY (for second year students) and were included in the study after their consent. All the participants were given the DREEM questionnaire for assessment of educational environment of our institution.

The DREEM questionnaire comprise of 50 items based on a five point Likert scale where 0 stands for strongly disagree and 4 stands for strongly agree. These 50 items are divided in to five subscales viz. SPL, SPT, SASP, SPA and SSSP (Table 1). Out of these 50 items, 9 items are negative; where 0 stands for strongly agree and 4 stands for strongly disagree.¹

Table 1: Five subscales of DREEM questionnaire with number of items and maximum score in each domain.

Subscale	Items	Maximum DREEM score
Students' Perception of Learning (SPL)	12	48
Students' Perception of Teachers (SPT)	11	44
Students' Academic Self-Perceptions (SASP)	8	32
Students' Perception of Atmosphere (SPA)	12	48
Students' Social Self-Perceptions (SSSP)	7	28
Total	50	200

The data obtained from 2 groups was analysed using Levene's test for equality of variance in SPSS version 16, and a p value of less than 0.05 was considered as significant.

RESULTS

The present study was conducted on 194 students who volunteered to participate in study. These students were divided into two groups. Group FY with 130 students

from first MBBS and Group SY with 64 students from second MBBS. The mean scores of these groups in various subscales are shown in Table 2. Group FY has given highest rating to their perception of learning (SPL) with a percentage score of 63.75% and has given least rating to their social self-perception (SSSP) 51.5% whereas group SY has highest rated their Academic self-perception (SASP) with a percentage score of 63.25% and has given least rating to their social self-perception (SSSP) 49.42%.

Table 2: Mean score of five subscales in both the groups, FY and SY.

Subscale	Maximum DREEM score	Group FY (n=130)	Group SY (n=64)
Students' perception of learning (SPL)	48	30.60 (63.75%)	26.60 (55.41%)
Students' perception of teachers (SPT)	44	27.14 (61.68%)	25.42 (57.77%)
Students' academic self-perceptions (SASP)	32	20.36 (63.62%)	20.24 (63.25%)
Students' perception of atmosphere (SPA)	48	28.57 (59.52%)	26.92 (56.08%)
Students' social self-perceptions (SSSP)	28	14.42 (51.5%)	13.84 (49.42%)
Total	200	118.39* (59.19%)	112.46 (56.23%)

*significant with p=0.008.

It was also observed that First year students scored less than 2 (disagreed) for these three items listed as 14, 46,

49 whereas second year students scored less than 2 (disagreed) for 5 items listed as 3, 14, 28, and 46 Both the

groups had not scored more than 3 (agreed/ strongly agreed) for any item.

DISCUSSION

The present study has helped us to understand the perception of first and second MBBS students regarding the educational environment of present institution using DREEM questionnaire.

As observed, the students of first MBBS had perceived the significantly ($p= 0.008$) more positive educational environment as compared to the second MBBS students, where both the groups had rated the overall educational environment as positive with a mean score of 118.39 and 112.46 out of 200 in Groups FY and SY respectively.

The overall educational environment of our institute (115.42/ 200) is comparable to Maleka Manipal Medical College, Manipal (117/200).³ It was better than the KMC Manipal (107.44/ 200); UCMS Delhi (101/200); Medical Colleges in Bangladesh (110.44/200) and Kuwait university (108.7/ 200).^{2,4-6} Some medical colleges had even reported a higher score depicting a more positive educational environment of their institutions like Army Medical College, Delhi (126.3/ 200) and Terna Medical College, Navi Mumbai (123/ 200).^{7,8}

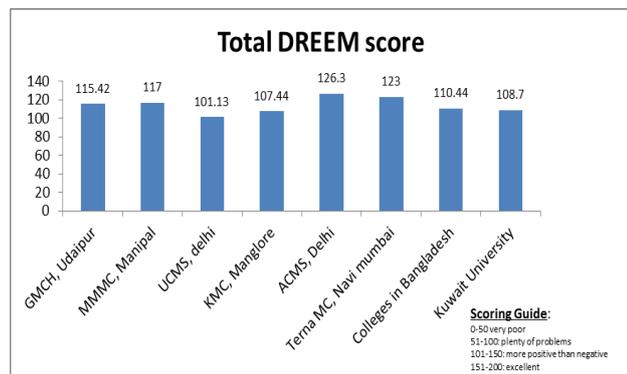


Figure 1: Comparison of total DREEM score (with scoring guide) of present institute with other medical institutes of India and abroad.

The analysis of various subscales, as seen in Table 2, shows that the students of group FY has more positive perception of their self-learning (63.75%) whereas Group SY has more positive academic self-perception (63.25%) as compared to other subscales in their respective groups.

Subscales of DREEM Questionnaire

Students' perception of learning (SPL)

The various subscale of the questionnaire are studied in detail and it has been seen that the mean scores of SPL in groups FY and SY are 30.60/ 48 and 26.60/48 respectively. This indicates that the students of first MBBS rate their self-learning more positively as

compared to the second MBBS students. As per the DREEM questionnaire guide to interpreting the subscales the score between 25-36, indicates 'A more positive perception'.¹

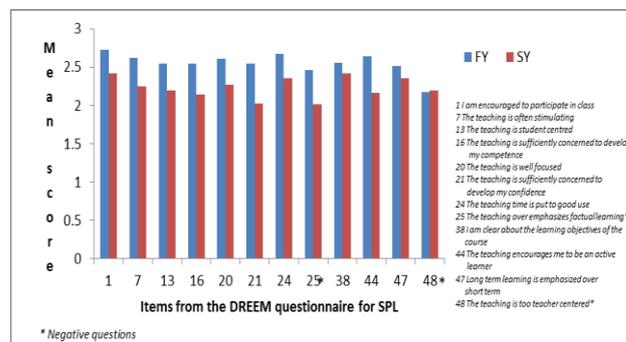


Figure 2: Comparison of mean scores of both groups in students' perception of learning (SPL) along with respective items of questionnaire.

The students of Group FY are more positive about items enlisted as 1,7,13,16,20,21,24,38,44 and 47 as compared to Group SY whereas Group SY thinks that the teaching is more teacher centered as compared to the other group. The studies from other institutions have shown the SPL score from our institution is better than Maleka Manipal Medical College, Manipal (29/48 and 27/48 for first & second MBBS students); KMC Manipal, Mangalore (25/48); UCMS Delhi (22.68/48); Medical Colleges in Bangladesh (27.86/48) and Kuwait university (25.2/48) and Terna Medical College, Navi Mumbai (28.99/48) whereas the SPL score of Army Medical College, Delhi (32.65/ 48) is better than our institution.²⁻⁸

Students' perception of teachers (SPT)

The mean scores of SPT in groups FY and SY are 27.14/ 44 and 25.42/44 respectively. This indicates that the students of first MBBS rate their self-learning more positively as compared to the second MBBS students. As per the DREEM questionnaire guide to interpreting the subscales the score between 23-33, indicates that we are moving in the right direction.¹

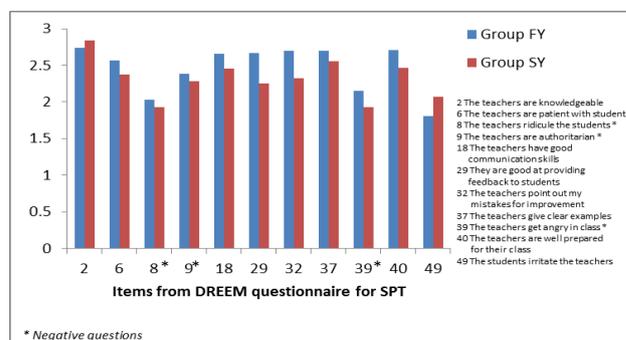


Figure 3: Comparison of mean scores of both groups in students' perception of teachers (SPT) along with respective items of questionnaire.

The students of Group FY are more positive about items enlisted as 6,18,29,32,37 and 40 as compared to Group SY whereas Group SY thinks that the teachers are authoritarian and they get angry in class as compared to the other group.

The studies from other institutions have shown the SPT score from our institution is better than KMC Manipal, Manglore (24.57/44); UCMS Delhi (23/44); Medical Colleges in Bangladesh (24.36/44) and Kuwait university (24.6/44) and Terna Medical College, Navi Mumbai (26.71/44) whereas the SPT score of Maleka Manipal Medical College, Manipal (30/44 and 26/44 for first and second MBBS students); Army Medical College, Delhi (28/ 44) is better than our institution.²⁻⁷ MMC and AMC scores better because, according to their students, their teachers are more knowledgeable (3.22), (3.32) and well prepared for their class (3.06), (3.13) respectively.

Students' academic self-perceptions (SASP)

The mean scores of SASP in groups FY and SY are 20.36/32 and 20.24/32 respectively. This indicates that the students of first MBBS rate their Academic perception more positively as compared to the second MBBS students. As per the DREEM questionnaire guide to interpreting the subscales the score between 17-24, indicates that we are 'Feeling more on the positive side'¹

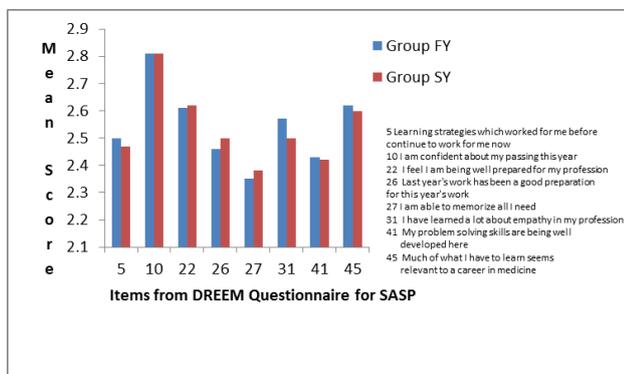


Figure 4: Comparison of mean scores of both groups in students' academic self-perception (SASP) along with respective items of questionnaire.

The students of Group FY are more positive about items enlisted as 5,10,26,31,41 and 45 as compared to Group SY whereas Group SY thinks that they are well prepared for their profession as compared to the other group and both of them are more confident about passing this year.

The studies from other institutions have shown the SASP score from our institution is better than KMC Manipal, Manglore (17.98/32); UCMS Delhi (16.68/32); Medical Colleges in Bangladesh (19.51/32) and Kuwait university (18.4/32) and Maleka Manipal Medical College, Manipal (19/32 and 20/32 for first and second MBBS students); whereas the SASP score of Terna Medical College, Navi

Mumbai (21.24/32) Army Medical College, Delhi (21.76/32) is better than our institution.^{2,4,6-8}

TMC and AMC scores better because, according to their students, that they are more confident about passing this year (3.35) and they learned seems relevant to a career in health care (3.19) respectively.

Students' perception of atmosphere

The mean scores of SPA in groups FY and SY are 28.57/48 & 26.92/48 respectively. This indicates that the students of first MBBS rate their Academic perception more positively as compared to the second MBBS students. As per the DREEM questionnaire guide to interpreting the subscales the score between 25-36, indicates that we are a more positive attitude.¹

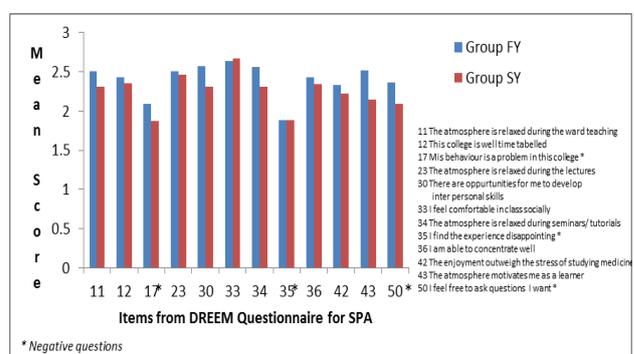


Figure 5: Comparison of mean scores of both groups in students' perception of atmosphere (SPA) along with respective items of questionnaire.

The students of Group FY are more positive about items enlisted as 11,12,23,30,34,36,42 and 43 as compared to Group SY whereas Group SY thinks that they feel more comfortable in class socially compared to the other group.

The studies from other institutions have shown the SPA score from their institution is better than KMC Manipal, Manglore (25.54/48); UCMS Delhi (24.58/48); Medical Colleges in Bangladesh (24.34/48) and Kuwait university (26.2/48) whereas the SPA score of Terna Medical College, Navi Mumbai (29.21/48); Army Medical College, Delhi (28.99/48) and Maleka Manipal Medical College, Manipal (28/48 and 30/48 for first and second MBBS students); is better than our institution.²⁻⁸ TMC and AMC scores better because, according to their students, that the atmosphere is relaxed during the ward teaching (2.55), (3.00) respectively.

Students' social self-perceptions

The mean scores of SSSP in groups FY and SY are 14.42/28 and 13.84/28 respectively. This indicates that the students of first MBBS rate their Social Self-Perceptions more positively as compared to the second

MBBS students. As per the DREEM questionnaire guide to interpreting the subscales the score between 15-21, indicates that students are not satisfied with SSSP.¹

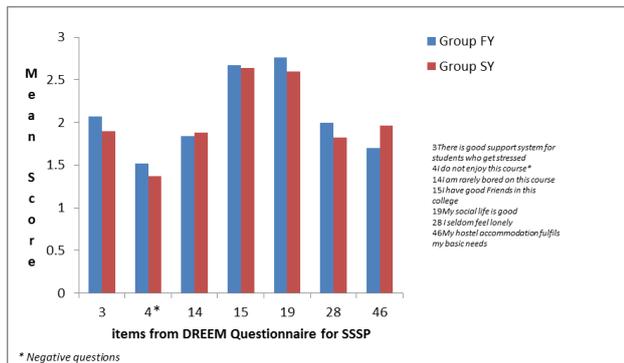


Figure 6: Comparison of mean scores of both groups in students' social self-perception (SSSP) along with respective items of questionnaire.

Both these groups, FY & SY, have perceived the social self-perception as least positive with scores of 51.5% and 49.42% respectively. The group FY has higher perception as compared to group SY, indicating better social perception in group FY.

The average score (Figure 6), had been rated as less than 2 (Disagree) for item 46 by group FY and for items 44, 46 & 49 for Group SY.

The above observation could be interpreted that

1. The senior students require a better support system to be functional for the stressed students; hence the mentorship program could be extended to the senior batches.
2. Both the batches require some innovative reforms in existing curriculum to make it more exciting and interesting rather than following the same age old trends.
3. The students of second MBBS often feel lonely as compared to the first year students; probably due to formation of nuclear groups and increasing inter batch rivalries, which are less in first year. The regular co-curricular activities and healthy academic competitions could be incorporated to take care of this problem. Also the near peer mentoring of the senior batches could also answer to their problems.
4. Both the batches are facing the problems in the hostel accommodation.

The mean SSSP score of our institute is 14.13/ 28 which is similar to many other medical institutes located in India and abroad (Figure 7) where the students have also rated SSSP as a least positive score at their respective institutions. It becomes obvious from this finding that the medical students rate their Social Self Perception as 'not satisfactory'.

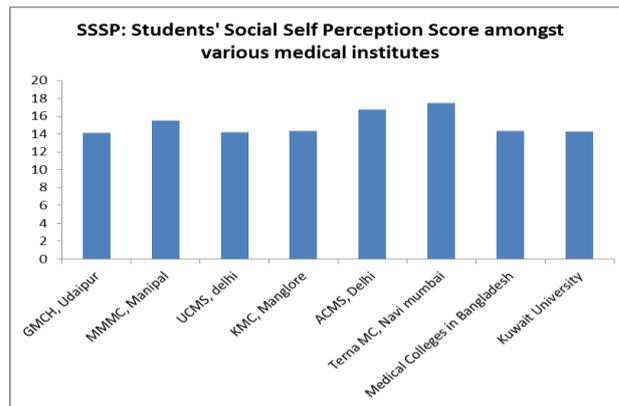


Figure 7: Comparison of SSSP score of our institute with other medical institutes of India and abroad.

CONCLUSION

The present study concludes that the students of first MBBS perceive a more positive educational environment as compared to the second MBBS Students in all the educational spheres. Both the groups are not satisfied with their Social Self-perception, which appears as a global phenomenon. This could probably hint towards a much required curricular reform where we could shift the traditional teaching pattern to a more worthwhile student centered curriculum. This would rejuvenate the students' interest in learning and self-grooming.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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