

Dental student's and their Perception towards Learning Environment: A comparison of preclinical and clinical dental student's in Bengaluru

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ABSTRACT

Background: Dental education is at a critical juncture; Changes in demographics, advances in biological sciences, fundamental changes in health care delivery systems and modern economy is forcing the dental educators to question the appropriateness of retaining the current dental curriculum in the 21st century. **Aim:** To determine dental students and their perception towards learning environment and comparison of preclinical and clinical dental student's in Bengaluru. **Settings and design:** It was a comparative questionnaire study conducted among 264 preclinical and clinical dental students of four colleges in Bengaluru city. **Methods and material:** The participants' 2nd and 4th-year student's from 3 colleges were given the questionnaire. Dental Students Learning Environment Survey Scale (DSLES) the questionnaire was used. **Statistical analysis:** Descriptive statistics were done, and the mean values were compared using Student's t-test, Chi-square test, and Analysis of variance. **Results:** Among 264 students, 143 belong to preclinical and 121 belong to clinical groups. The highest mean value DSLES for subscales - flexibility, student to student interaction, and the organization was found among preclinical dental student's and for other subscales – the breadth of interest, emotional climate, supportiveness and meaningful experience highest mean values found among clinical dental students. Whereas, highest mean values of subscales were found in Government Dental College when compared to the deemed university and private colleges. **Conclusions:** To conclude clinical students have better perception towards learning environment than the pre-clinical dental students.

KEYWORDS: Dental Education, Learning Environment, Stress, Dental Students

INTRODUCTION

Dental education is at a critical juncture; changes in demographics, advances in biological sciences, fundamental changes in health care delivery systems and modern economy are forcing the dental educators to question the appropriateness of retaining the current dental curriculum in the 21st century. Thus, it is necessary to take dental students views into consideration to bring about appropriate changes in the dental curriculum.¹

In the delivery of undergraduate curricula, dental educators place a lot of stress on curriculum content, scheduling of courses, setting of examinations, and analyzing student performance on examinations. In the past, the very little stress was placed on obtaining feedback from students on their learning experience.² The invitation for students to join in this communication will demonstrate the administrations' sincere interest in developing strategies that will help to increase students' positive impressions of their dental school experience.³

In the 1970s, a number of survey-based instruments were developed to assess students' perceptions of their learning

experiences and the overall environment within a school. The present study includes Dental Student Learning Environment Survey (DSLES) subscales same as Medical Student Learning Environment Survey (MSLES) like flexibility, emotion climate, student to student interaction, supportiveness, meaningful experience, organization and breadth of interest.¹

Hence, the study was conducted to determine the perception of preclinical and clinical dental student's in the learning environment.

MATERIALS AND METHODS

This was a comparative questionnaire study. The study population included pre-clinical and clinical students of two private, one Government and a deemed university dental college. The study was conducted from August 2016 – October 2016. It was purposive sampling, and sample size estimation was done using previous literature. Therefore, the sample size was 264 in which 132 were pre-clinical, and 132 were clinical dental students. The inclusion criteria were students of 2nd and 4th year only was included in the study and students who gave written consent. The exclusion criteria were students

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of the odd batch(repeaters). Dental Student Learning Environment Survey (DSLES) scale questionnaire was used for the study. The DSLES included 7 subscales: Flexibility, Student to student interaction, Emotional climate, Supportiveness, Meaningful experience, Organization, and Breadth of interest. A 55-item self-administered questionnaire was used. Each subscale had the following number of questions Flexibility - 6, Emotion climate - 6, Student to student interaction - 8, Supportiveness - 9, Meaningful experience - 10, Organization - 9, Breadth of interest - 7. The response to the questionnaire was on a 4 point Likert scale ranging from 1- seldom to 4- very often.

Ethics: The ethical clearance was obtained from the Oxford Dental College review board. Permission letters were taken from the head of the institutions. The participants' 2nd and 4th year student's from 3 colleges were given the questionnaire. The time taken to fill the questionnaire was approximately 45mins.

Statistical method: Descriptive statistics were done and the mean values were compared using Student's t-test, Chi-square test and Analysis of variance (ANOVA). All statistics were carried out in SPSS version 22. The P value was taken as $P < 0.05$.

RESULTS

In comparison of pre-clinical and clinical dental student's mean values based on DSLES scale - pre-clinical dental students the highest mean value was in student to student interaction (2.87 ± 1.23) followed by the organization, (2.85 ± 1.09) then by meaningful experience (2.77 ± 1.11), breadth of interest (2.71 ± 1.23), emotional climate (2.66 ± 1.18), flexibility (2.55 ± 1.18) and followed by lowest mean in supportiveness (2.50 ± 1.13).

Whereas, among clinical dental students the highest mean value was in the organization (2.92 ± 1.02) then by the student to student interaction (2.81 ± 1.03) followed by the breadth of interest (2.75 ± 1.13), meaningful experience (2.70 ± 1.03), emotional climate (2.58 ± 1.12), supportiveness (2.51 ± 1.11) and least in flexibility (2.37 ± 1.09) (Table 1-7).

Colleges	Pre-Clinical	Clinical	P-Value
Private Colleges	2.55 ± 1.183	2.37 ± 1.094	0.20
Government College	2.79 ± 1.130	2.66 ± 0.862	0.66
Deemed College	2.63 ± 1.037	2.07 ± 1.035	0.07

Table no:1 – comparison of pre-clinical and clinical dental student's for the dsles subscale - flexibility. $p < 0.05$

Colleges	Pre-Clinical	Clinical	P-Value
Private Colleges	2.87 ± 1.232	2.81 ± 1.037	0.67
Government College	2.99 ± 1.312	3.22 ± 1.083	0.51
Deemed College	2.92 ± 1.041	2.84 ± 0.793	0.76

Table no:2 – comparison of pre-clinical and clinical dental student's for the dsles subscale - student to student interaction. $p < 0.05$

Colleges	Pre-Clinical	Clinical	P-Value
Private Colleges	2.66 ± 1.186	2.58 ± 1.236	0.53
Government College	2.88 ± 1.087	2.91 ± 0.997	0.10
Deemed College	2.84 ± 1.010	2.34 ± 1.070	0.11

Table no:3 – comparison of pre-clinical and clinical dental student's for the dsles subscale - emotional climate. $p < 0.05$

Colleges	Pre-clinical	Clinical	P-value
Private colleges	2.34 ± 1.151	2.40 ± 1.141	0.42
Government college	2.70 ± 1.105	2.97 ± 0.852	0.35
Deemed college	2.83 ± 1.019	2.57 ± 0.952	0.378

Table no:4 – comparison of pre-clinical and clinical dental student's for the dsles subscale - supportiveness. $p < 0.05$

Colleges	Pre-clinical	Clinical	P-value
Private colleges	2.64 ± 1.100	2.68 ± 1.088	0.86
Government college	2.99 ± 0.984	3.01 ± 0.900	0.94
Deemed college	2.90 ± 0.928	2.56 ± 0.967	0.23

Table no:5 – comparison of pre-clinical and clinical dental student's for the dsles subscale - meaningful experience. $p < 0.05$

Colleges	Pre-clinical	Clinical	P-value
Private colleges	2.72 ± 1.077	2.87 ± 1.139	0.87
Government college	3.04 ± 0.942	3.03 ± 0.887	0.96
Deemed college	3.08 ± 0.898	2.97 ± 0.770	0.66

Table no:6 – comparison of pre-clinical and clinical dental student's for the dsles subscale - organization. $p < 0.05$

Colleges	Pre-clinical	Clinical	P-value
Private colleges	2.66 ± 1.167	2.83 ± 1.131	0.31
Government college	2.82 ± 1.064	3.02 ± 0.966	0.497
Deemed college	2.79 ± 1.089	2.67 ± 0.963	0.694

Table no:7 – comparison of pre-clinical and clinical dental student's for the dsles subscale - breadth of interest. $p < 0.05$

DISCUSSION

In the present study the clinical student's show organization as most favorable. The preclinical students have flexibility, student to student interaction, emotional climate and meaningful experience as the lowest scores. Among clinical student's - organization and breadth of interest as the highest. According to Jain L et al. the highest mean value was for the student to student interaction in both pre-clinical and clinical dental student's. Whereas, Henzi D et al. reported highest mean value in the DSLES subscale for the breadth of interest in pre-clinical dental students and meaningful experience as highest in clinical dental students.

For the DSLES subscale flexibility, clinical student's rated it as lowest. Jain L et al. and Henzi D et al. reported the same. It shows that they have the least freedom to adjust and change the environment. Among all colleges Government college had the highest value. Since, there are no previous studies in relation to comparison of the colleges the comparison for this cannot be done.

Clinical students showed lowest mean value for student to student interaction. According to Henzi D et al. clinical students showed the highest value but Jain L et al. reported lowest among clinical students. It shows that clinical student's don't mix socially the reason could be academics or work load. The highest mean value was seen in Government College. Since, there are no previous studies in relation to the comparison of the colleges the comparison for this cannot be done.

Emotional climate subscale was lowest among the clinical student's. Jain L et al. reported the same but Henzi D et al. stated the lowest among preclinical students. Emotional climate states the response of their

experience within the academics. Among colleges it was highest in Government college. Since, there are no previous studies in relation to comparison of the colleges the comparison for this cannot be done.

The lowest supportiveness subscale value was seen among preclinical students. Jain L and Henzi D et al. reported lowest in clinical students. It states the support given by the faculty and preclinical students don't have much support as clinical student's have. It was highest for Government college. Since, there are no previous studies in relation to comparison of the colleges the comparison for this cannot be done.

Meaningful experience was lowest in clinical students and similar results were, also observed by Jain L et al. and Henzi D et al. The meaningful experience structures the learning activities that are perceived to be relevant to the practice of dentistry. It was highest in Government College. Since, there are no previous studies in relation to comparison of the colleges the comparison for this cannot be done.

For the DSLES subscale organization, the lowest value was seen in preclinical students. According to Henzi D et al. it was same in both, and Jain L et al. reported lowest in clinical students. It was highest in deemed college. Since, there are no previous studies in relation to comparison of the colleges the comparison for this cannot be done.

In DSLES subscale breadth of interest, it was lowest in preclinical. Jain L et al. and Henzi D et al. reported lowest in clinical students. It shows that the students are encouraged to develop a variety of activities within and

outside the course. It was highest among Government College. Since, there are no previous studies in relation to comparison of the colleges the comparison for this cannot be done.

CONCLUSION

To conclude clinical students have better perception towards learning environment than the pre-clinical dental students.

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