

Evaluating The Learning Environment In Dental Colleges From Students' Perspective; Qualitative Exploratory Research

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Abstract

Objective: The learning environment has a great role in students learning, achievement, and success. It is also essential for the development of the curriculum. The aim of this study is to document the perception of dental students regarding their learning environment.

Material and methods: This qualitative research were conducted from Dec 2021 to May 2022, at four dental colleges of Rawalpindi. A total of 16 students from all these colleges who were regularly enrolled and voluntarily participating in the study were included. Focus group interview (n=4 in each group) comprised of students from both basic sciences year (1st and 2nd year BDS) and clinical years (3rd and final year BDS). Data were transcribed verbatim and thematic analysis was done.

Result: Students overall expressed a good level of satisfaction with the learning environment but pointed out some issue that was summed up under major themes identified such as issues in lectures, issues in clinical teaching, issues in the dental curriculum, and lack of academic motivation.

Conclusion: This study suggests that dental students generally hold a positive perception of their learning environment, but they pointed out the shortcomings in their lectures, clinical teaching, dental curriculum, and the dearth of motivation. Taking students' viewpoints regarding their learning environment will help the stakeholders and policymakers to provide a better learning environment with more facilities and support systems for the students to enhance their learning.

Keywords: Dental curriculum, dental students, learning environment

Introduction

The learning environment almost encompasses everything that happens in the classroom, department, college, or university. It also incorporates the culture of a college, the way students interact with each other, and also the methods faculty employs in an educational setting to facilitate better learning.¹ Curriculum development relies on understanding the learning environment. Therefore, exploring the learning environment helps in identifying the program's strengths and weaknesses by providing an outline for reorganizing and improving the areas demanding changes.²

The learning environment has a tremendous effect on students' achievement, motivation, success, and happiness and is one of the benchmarks of an educational program's effectiveness. Medical educators worldwide agree that academic and clinical environment has a remarkable influence on the attitude, knowledge, and skills of students.³ Students' opinions regarding their educational environment can serve as a basis for implementing modifications in the present curriculum and therefore improving the learning environment. A more recent trend in quality enhancement and shift towards student-centered teaching, researchers are becoming more interested in students' perception of their environment for guiding them to introspect, devise and incorporate the best teaching strategies for upgrading the educational environment.^{1,4}

Many instruments were developed for assessing the students' perception of the learning environments, such as the Dundee Ready Education Environment Measure (DREEM), Medical School Learning Environment Survey (MSLES), Anatomy Education Environment Measurement Inventory (AEEMI), Clinical Learning Environment Inventory (CLEI), DSLES (Dental Student Learning Environment Survey), and others.^{4,5}

The face of dentistry is changing globally, and Pakistan is no exception. There has been exponential growth in the number of dental colleges in the past few decades in Pakistan. Therefore, its high time to review, reorganize and remodify the present curriculum to be at par with global standards. Program evaluation and curriculum refinement be carried out at institutional and national levels. International working groups have highlighted the significance of students' perspectives in regards to

improving dental curricula.¹ Most of dental colleges have ignored this major responsibility in the past, moreover, students' being important stakeholder, their experiences and opinions about their learning environment is seldom taken into consideration. Thus, keeping in view this background, this qualitative study was designed to take students' perceptions of their learning environment in dental colleges.

Materials and Methods

This basic qualitative research was conducted from Dec 2021 to May 2022, at four dental colleges, one public and three private colleges at Rawalpindi. A total of 16 students from all these colleges who were regularly enrolled and voluntarily participating in the study were included. Ethical approval was taken from the college ethical review board. A purposive sampling technique was used with a maximum variation technique. Informed consent was obtained from all participants and was ensured the confidentiality of responses.

A comprehensive interview guide was developed taking into consideration the systematic approach using AMEE Guide No. 87 to take students' perspectives on their learning environment. The interview guide was validated by three medical educationists and piloted to check for adequate item variance, validity, and reliability. Focus group interview (n=4 in each group) comprised of students from both basic sciences year (1st and 2nd year BDS) and clinical years (3rd and final year BDS). All focused group interviews were audio taped and the transcripts were reviewed and coded. Text analysis was done (word repetitions, key-indigenous terms, and key-words-in contexts) using an open coding technique. Data collection and analysis were done at the same time.

Results

The mean age of the participants was 22 years, having no statistical difference among institutions. The interview on average lasted for 55 minutes. Females exceeded the male in each group 3:1. The following themes were extrapolated while exploring the strengths and deficiencies in the learning environment.

Issues in the lectures:

Students expressed some concerns but at the same time were well aware of the significance they have. The following are a few quotes from students regarding lectures:

"Consecutive classes are too exhausting as there is much to absorb, a 10 mins break after each lecture be given and duration should be not more than 45 mins for each class".

"There are few teachers whose lectures are very interactive, their PowerPoint presentations and additional content in the form of videos explaining clinical scenarios are tremendous whereas many come up with the copy-pasted text of books to bore students to death".

Issues in the curriculum:

The students however used the course and curriculum synonymously but expressed the following concerns:

"I think our dental curriculum is very extensive, and to grasp numerous subjects in 4 years is very difficult, the stakeholders should do something about it".

"There are many redundant topics, for example, we have studied Dental materials in 2nd year BDS, but its practical application is in the final year, can authorities do something to either include it in the final year or merge various subjects to make our lives easy".

Concerns regarding clinical rotations:

The quotes of students expressing concerns about clinical rotations are as follows:

"I am very concerned about completing my clinical quotas, the university should give some consideration to students at private dental colleges as the patient turnover is not the same as public hospitals."

"I find clinical demonstrations challenging, we are in large numbers and when the teacher is showing some procedure I can't learn well, teacher to student ratio in clinical rotations should be 1:5".

Concern regarding the teaching role of clinicians:

"I am too shy and scared to ask questions from certain teachers in front of the patients due to the fear of humiliation, that hampers my clinical learning."

"There are some students that become their teachers favorite and are always in the limelight, faculty should treat all students equally, rather give more time to the ones lacking behind".

"If I fail to perform a task I am criticized and taunted by some teachers, I think this is not a good idea teacher should give a good feedback and point out my mistakes in a way that I can improve in future."

Academic motivation:

Students' quotes expressing lack of academic motivation and drive are as follows:

"There is constant put down and demotivation from some professors, encouragement from our teachers go a long way and effects our mental capacity to work forward. I believe

teachers' attitudes play an important role in our future personality and the type of doctor/dental surgeon we become".

"Our clinical side teachers are more warm, accepting, and open to our suggestions. We can approach them and feel acknowledged and understood. I can see my peers and even myself lose empathy, passion, and humanity for our patients and become money-oriented robots, but it shouldn't be this way. We need to change our behaviors towards each other to become better empathetic doctors."

Discussion

This study was done to explore dental students' perceptions regarding their learning environment. Evaluation of an educational environment is significant for assessing its effectiveness. Students' perceptions can initiate a change and improvement. Medical and dental education is expensive, and efforts must be made to minimize academic failure. Therefore, ensuring a conducive learning environment will facilitate better learning.^{1,6}

The perception of learning via lectures varied amongst students, but overall, the students expressed satisfaction and suggested some improvements. First-year students were happier with classroom teaching, whereas the senior years expressed dissatisfaction and suggested improvements. Dissatisfaction might have crept up in the following years, due to certain reasons, maybe dental students in clinical years found lectures boring as compared to chair-side teaching with live patients. This was in accordance with another study carried out in India.¹ This trend could also be due to students believing the learning environment deteriorates with the passing years which can be explored further by investigating each subject to clarify these differences.^{7,8} Overall, the students were of the opinion that their faculty are very well qualified and took a keen interest in their teaching. A study at Harvard School of Dentistry on the integrated aspect of the curriculum also pointed out that customized teaching plans with less faculty involvement and more self-directed learning stimulate students' quest for learning.⁹

The dental student pointed out some pertinent issues in their clinical teaching. Amongst them was an insufficient number of patients to complete their quota, inappropriately designed physical space for effective teaching, limited access to the concerned specialists, and scarcity of resources to purchase instructional material and technology. The dental college should invest in improving its skill lab,

simulation models, and faculty training. Some students pointed out the reluctance of patients in getting them treated by dental students, even if it was just giving local anesthesia, this was highlighted in a somewhat similar study which pointed out that patient participation and student variability complicate teaching and learning.⁴ A similar study also reported issues with patients, resisting students' involvement in their treatment. Moreover, a fear among some faculty for ensuing additional discomfort to the patients due to student involvement has also been reported.^{1,10} Batra and his coworkers also pointed out the lack of patients for teaching certain diseases and procedures, hindering students' learning in a clinical setup.⁴ Every student learns at his/her own pace, some need to see two or three patients before understanding the problem others require additional opportunities for practice, thus faculty should have this realization and should wholeheartedly accommodate differences in students learning abilities and learning pace.¹¹

The students expressed dissatisfaction regarding the dental curriculum. The dental curriculum is largely lecture-based having strictly divided department areas. The coursework is then further divided into syllabuses and catalogs of knowledge, with many redundant topics. This was seen in a similar international study criticizing contemporary dental practice without any effective integration between basic and clinical sciences.¹

The study pointed out the fact that students are happy with teachers who acknowledge them and are readily available and give constructive feedback. Students expressed a dearth of constructive feedback which is highly imperative for faculty and student. A somewhat similar finding was seen in a study conducted in other parts of the world.^{4,12,13}

Another important finding in the study was the role of an "empathetic teacher", the students expressed their reservations towards the authoritarian attitude of teachers and lack of motivation. This was also pointed out by a somewhat similar study where students expressed dissatisfaction with the academic and motivational drive they are expected to get from their teachers.¹⁴ It has been shown by research that the unempathetic attitude of doctors towards their patients and students travels down in their students. Students who face public humiliation and are not considered worthy enough ultimately don't empathize with their patients.³ Therefore, it is of utmost importance for any healthcare institute to provide support for physicians and dental surgeons who also

happen to be medical educators. Faculty training, understanding teaching and learning, research in medical education, and medical grants should be among the top priorities of the government.^{6,15}

Medical and dental education is no joke, it comes with a heavy price of increased stress and tiredness. The students expressed some concerns in regard to a good stress support system, they somehow felt they were not heard and understood. These problems were also pointed out by some other studies as well.

Conclusion

Dentistry is a very important component of the health sector; hence it is of utmost importance that we are able to produce highly qualified and empathetic dental surgeons. A conducive learning environment will help us achieve this goal. In this study, the dental students had a positive perception of their learning environment, but they pointed out the shortcomings in their lectures, clinical teaching, dental curriculum, and the dearth of motivation. Taking students' viewpoints regarding their learning environment will help the stakeholders and policymakers to provide a better learning environment with more facilities and support systems for the students to enhance their learning.

Limitations:

Students from four dental colleges participated in the study, hence the findings cannot be generalized. Such a study can be conducted across Pakistan to get a better and deeper understanding of the current learning environment of other dental colleges.

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