

Views of Teachers Regarding Effective Clinical Teaching and Learning in Dental Education

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Abstract

This was a qualitative study conducted in one government and one private dental college selected purposively. Study population was final year clinical teachers of selected Dental Colleges. A total of 35 teachers (twenty from private dental college and fifteen from govt. dental college) participated in this study. An open ended questionnaire was developed for in-depth interview of the teachers.

Analysis of the teachers' responses revealed that their views were related to only three issues: (1) Organization of teaching experiences: Make objectives realistic and practical, feedback, (2) Clinical experiences related factors: Student's active involvement, working with patient and their family/ attendant and (3) Supervisory factors: Knowledgeable faculty, positive attitude of teachers.

Dental faculty involved in teaching activities should be encouraged to take formal training. Study recommended increasing time and patient availability in clinical setting for effective clinical learning and skill competency.

Key Words: Views of teachers, effective clinical teaching, effective clinical learning, dental education

Introduction

A significant part of dental student training consists of clinical practice on patients, under

the supervision of qualified dentists. Although many health care professions use a clinical environment in teaching of students, the teaching of dentistry has a number of unique aspects.

Clinical teaching—that is, teaching and learning focused on, and usually directly involving patients and their problems—lies in the heart of dental education. Clinical teaching is the core of their professional development. How can a clinical teacher optimize the teaching and learning opportunities that arise in daily practice? (John Spencer, 2003).

Clinical skill teaching is provided both in ambulatory and inpatient settings. This combination of teaching settings is likely to provide the most effective approach to dental students.

The clinical learning is affected by many factors, including the varieties of clinical cases encountered, the quality of supervision and feedback, good organization, experiences and characteristics of learners and teachers. However, the impact of some of these factors on students' clinical learning, when tested, is not always confirmed.

The lists of strategies that can be implemented are many and varied and the choice of which to use is very much related to the preferences of the facilitator and the learning situation. Strategies to consider are:

Case conferences/studies; Discussions; Ward reports; Critical incident analysis; Demonstration; Clinical rounds; Experiential activities; Role play; Group work; Brainstorming; Simulations etc.

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Materials and Methods

This was a qualitative study (cross sectional). It was conducted in one government and one private dental college. Study period was July 2010 to June 2011. Study population was the clinical teacher's of selected dental colleges.

One government and one non-government dental college were selected purposively from the list of dental colleges of Dhaka. A total of 35 teachers (twenty from private dental college and fifteen from govt. dental college) participated in this study.

As the research was aimed at clinical learning, only the teachers' of the department responsible for clinical teaching were interviewed. The respondents were chosen according to the convenience of the researcher as per the following criteria:

- One/ two Assistant professor(s)/ Associate professor(s) / Professor(s) from each department of dental colleges.
- Two/ three Assistant register(s) / Dental surgeon(s) from each department.

An open ended questionnaire was developed and another open ended questionnaire was developed for in-depth interview of the teachers. The instrument developed was finalized after pre-testing out side of the study area. This research was conducted after getting permission from respective authority and verbal consent of all respondents. Confidentiality of the response of the respondents was maintained.

Results

Teacher in-depth interview

The teachers' extensive comments were analyzed. Analysis was conducted until no new themes emerged and data saturation was complete.

Analysis of the teachers' responses revealed that their views related to only three issues: (1) Organization of teaching experiences, (2) Clinical experiences related factors and (3) Supervisory factors (Table 2).

Organization of the teaching experiences

Make objectives realistic and practical

Teachers perceived that to be effective, teaching sessions should be carefully organized, with clear objectives.

"The objectives have to be clear, practical, more realistic, and easier for students and teachers to implement."

"If the objectives of my clinical session match with the future practice and I can give the students a clear conception what they will do after the session, they will be more interested and their learning will be better."

Active participation in patient care

Teachers mentioned that student's active participation in patient care has a great impact on their learning process.

"Learners should be given an increasing role in patient care by allowing them to interview and examine patients independently."

"Many students have yet to have a one-on-one experience with a patient after a year and a half of dental schooling. Simple clinical procedures, such as administering local anesthesia, will help the student dentist become more comfortable with actual clinical procedure. Because there is so much anxiety associated with this, it would help students better understand how their patient may feel."

"In student's clinical learning active participation in patient's care, history taking, diagnosis, Rx etc. all are very much important. Without these whole sound procedures no medical student can become a good doctor in his professional career."

Table 2: Themes and sub-themes

	Theme	Sub-themes
Theme 1	Organization of the teaching experiences	Make objectives realistic and practical Active participation in patient care Varieties of cases Proper curriculum designing and planning of contents Feedback Teaching environment Assessment
Theme 2	Supervisor factors	Knowledgeable Faculty Positive attitude of teachers
Theme 3	Factors related to clinical experiences	Student's active involvement Working with patient and their family/ attendant. Using simulations Giving assignments

Varieties of cases

Many teachers agreed with the concept that medical students should be exposed to a large number of clinical cases in order to practice their diagnostic and management skills.

"Exposing medical students to multiple cases improves their performance when combined with feedback."

"More opportunity students have to see patients, the richer their database of illness."

"Cases with different clinical pathologies and presentations are most effective in clinical learning."

Proper curriculum designing and planning of contents

Teachers value organization in the curriculum. In their minds, organization comprises the attributes of clarity, efficiency, communication, and effectiveness. Responses indicate that they think students will learn better in almost any subject matter or course topic as long as it is presented in a well-organized, coherent, and efficient manner.

“An integrated curriculum helps students to construct their knowledge.”

“By proper alignment of the various curricular components, and proper implementation, I think the students will have clear conception and they will be motivated and learning will be effective.”

Teachers reported that the opportunity for more clinic time early in the curriculum would be the most beneficial enhancement to student's education.

“It is truly a shame that students are not brought into the clinics at an early time (i.e., second year) and that more time isn't focused or directed to clinics in the upper years. Because I think early involvement and more time in clinical work will have a good impact on students learning.”

“I don't think the time students spent in clinical rotation is enough. For effective learning their clinical rotation time should be increased.”

Feedback

Teachers reported that a crucial aspect of learning from application and experience was the availability of high-quality feedback. The feedback is an important component of a positive academic environment.

“If something's wrong, it's not just 'it is wrong' but why it is wrong, why it happened, if the clinical teacher explain this things to the students immediately it will retain in their mind and will do better next time.” Teachers suggested that feedback from the students is also an important aspect of learning.

“If I do not know what the students learned from me or which part they did not understand I can not make things clear to them.” “After a clinical session I ask the students what they have learned. This was very helpful for my teaching experience. By this way I knew how much they have learned, where their gaps of understanding were and I could clear those aspects. So I think taking feedback is very important for their learning.”

Teaching environment

Teaching environment includes various factors such as clinical setting, resource, patient teacher, staff etc. teachers agreed with the fact that a positive teaching environment will help both the teacher to teach and the students to learn in an effective manner.

“I strongly agree with the fact that students will learn better if I can teach them in an adequate clinical setting and with proper resource.”

“Once I went to the X department outdoor to demonstrate the application of local anesthesia to the students. I waited for several minutes for the assistant to attain me and when I asked him for the syringe he said that there was only one and a trainee was using it. I felt ashamed about the fact and the students were depressed as because they were eagerly waiting to learn the procedure. I think the students will learn more effectively if we could provide them a well equipped clinical setting.”

Assessment

Issues of assessment also represent an important perspective for viewing the design of learning environments. Students may receive grades on tests and essays, but these are summative assessments that occur at the end of projects. What are needed are formative assessments, which provide students with opportunities to revise and improve the quality of their thinking and understanding.

“Assessment is crucial in the learning process of students. Assessment is used to measure student learning.”

“I think formative assessment is very important for students learning. By taking assessment throughout the clinical year we can assess their level of competence and give them feedback accordingly.”

Supervisor factors

Knowledgeable Faculty

Teacher's commentaries reflect the fact that clinical teacher's knowledge plays a vital role in student's effective learning.

“Effective clinical teachers must have wide-ranging clinical knowledge, and must know their patients and the environments in which they practice.”

“Clinical teacher should carry on life long learning. The more they know about their subject the more they will be able to teach their students new techniques and their learning will be more effective.”

Positive attitude of teachers

Attitude of the teachers has a great deal of impact over students learning. Positive attitude of a teacher will higher the interest of the students to learn and the teaching and learning environment will be more communicative and friendly.

“Positive attitude results positive learning.”

“Teachers attitude to the teaching activities should be cordial & friendly so that students can get interest for learning, can ask the teacher about their lacking.”

Factors related to clinical experiences

Issues related to how clinical teaching is delivered were thought to be important to students' learning. These include having students be actively involved, allowing them to work with patients and families, and allowing students to work as a "real doctor".

Teachers thought about student's active involvement

“Offering clinical sites in other than hospitals could be very beneficial for students. If students are sent to community settings, they will have a lot of clinical opportunities. More common clinical problems will be encountered, they will be dealing with patients and their families, and competition for cases will be much less. They will learn better.”

Teacher's opinion regarding students working with patient and their family/ attendant

“I think when a student comes in contact with a real patient his/her interest in learning increases and he/she becomes more motivated.”

“Working with a patient and his/her attendant will help the student to develop hi/hers level of confidence and his learning will be effective.”

Teachers thought about using simulations

“Using simulated patient can be very helpful for learning. In a simulated patient a student can practice the same procedure for several times until he acquires the proper skill.”

Giving assignments

“After demonstrating a procedure in a clinical session, I give the students assignments to perform the procedure independently in a limited period of time. I think by this way the students have the opportunity to practice and learn better.”

Discussion

This study aimed to explore dental clinical teachers' views of the types of experiences and activities that contributed to students' clinical competence. Teachers in this study perceived that various organizational issues affected students' learning, including issues relating to the curriculum and the teaching environment. Teachers also noted the importance to learning of how teaching activities are organized, the quality of supervision, and authenticity of the clinical experiences. Supervision appears to be the key to the success of clerkships. Kilminster and Jolly (2000) defined supervision as “the provision of monitoring, guidance and feedback on matters of personal, professional and educational development in the context of the doctor's care of patients”. Helpful supervisory behaviors include direct guidance on clinical work, linking theory and practice, and offering feedback and role modeling.

Teachers identified the importance of assessment in student's clinical learning. Much remains to be done in this area, including both standardizing core goals and objectives and developing a complementary performance evaluation system that assesses students' proficiency in a way that tracks changes in their knowledge and understanding over time.

Faculty need to be informed of their students' performance on assessments in order to plan learning experiences and instruction as needed, to adjust their teaching if students do not meet established criteria, and to note students' achievements and failures in areas for which they (individual faculty members) have teaching responsibility. It has also been shown that teachers value good feedback in clinical teaching and learning (Lawrence 1999) and that good feedback directly influences students' performance (Kell 2002). Feedback is best given regularly during and after interactions between students and patients and at the midpoint of clinical clerkships.

The majority of faculty members want to be effective teachers and to graduate highly knowledgeable and capable professionals, but multiple and complex factors— curricular, cultural and environmental—impede their efforts.

There is a wide known belief that dental students in general are not satisfied with their experience in dental colleges. Thus, their teachers perspective might help improve the curriculum. Clinical teachers are able to provide information concerning the effectiveness of the dental curriculum in preparing students for their dental career.

Conclusion

This study has identified the factors that teachers of our dental colleges believe affect clinical learning. These factors can be considered when planning and developing dental curricula, to promote effective clinical rotations and students' learning. It should be noted that this study queried perceptions, and relying on only subjective assessments and personal views and experiences cannot confirm or quantify the impact of each factor identified. Further studies using other, complementary study approaches should assess the impact of the factors identified by the teachers of this study.

Recommendations

Based on the views of the teachers the following recommendations have been made with a view to making the students clinical teaching and learning more effective.

- 1) Clinical time should be increased for the students to practice more.
- 2) Steps should be taken to increase flow of patient in clinical setting.
- 3) Opportunity should be provided for the students to be actively involved in patient care.

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