

**Patient Perception about the Quality of Oral Healthcare Provided By Dental Students: A Mixed Method Research**

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**Citation of this Article:** Dr. Sakshi Shukla, Dr. Manu Batra, Dr. Simarpreet Singh, Dr. Deeksha Gijwani, Dr. Thounaojam Leimaton, Dr. Parul Mangal, “Patient Perception about the Quality of Oral Healthcare Provided By Dental Students: A Mixed Method Research”, IJDSIR- July - 2020, Vol. – 3, Issue -4, P. No. 54 – 61

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**Type of Publication:** Original Research Article

**Conflicts of Interest:** Nil

**Abstract**

**Introduction:** Patient perception has emerged as significant factor in the evaluation of healthcare quality. The aim of present study was to assess the patient perception about the quality of oral healthcare provided by dental students.

**Material And Methods:** present mixed research based design (QUAL + QUAN) study was conducted in a dental teaching hospital in Sriganganagar, Rajasthan. Sampling was purposive. A total of 15 participant were included and

the range of their ages was 18 to 86 years old. Participant in the study were ask to allow tape recording of the interviews. Five themes emerged during the Interview which included: Availability and convenience, cost, Pain management Quality, Attitude, General Satisfaction.

**Results:** Results showed both positive and negative Perception of the patient on getting treated by Dental students but it was seen that majority of the patients (93%) were satisfied by the treatment received.

**Conclusion:** It was concluded that with the increase of awareness among patients it is crucial for dental students to understand about the aspect of the care provided by them so as to fully satisfy the patient as it leads to enhancing the quality of health care.

**Keywords:** dental students, oral healthcare; Patient perception.

## Introduction

Amongst the basics to achieve quality of care are two rules stating that “customization based on patients’ needs and values” and that “the patient is the source of control” of interactions with the health care delivery system.<sup>1</sup> It becomes critical to define and measure patient perceptions of health care quality and to understand more efficiently what drives those perceptions, as appeals are made for a more patient-centered health care system.<sup>2</sup>

As medical education curricula develops, one consistent movement is the drive to provide earlier patient encounters for medical learners.<sup>3</sup> Similarly, in regard to dental education, it has been suggested that “the clinic is the learning environment to which all our students aspire,”<sup>4</sup> requiring the “transfer of knowledge from the basic sciences to the clinic by tuning and restructuring of knowledge.”<sup>5</sup>

According to Goerl et al, “Real patient experiences have been shown to be more authentic and instructive, whereas simulated patients prepare learners for real life encounters, practice sensitive exams, and obtain feedback in a safe environment. Patient exposure during preclinical years, has been shown to enhance empathy, improve knowledge retention, and bring elation to the partaking learners”.<sup>3</sup> The observation of the behavior of teachers during appointments and the direct contact with patients provides students essential opportunities for their scientific and humanistic development.<sup>6</sup>

Although student’s lack of experience may affect patient’s perception, as students may not be exposed to enough common clinical encounters and procedures to improve their clinical skills.<sup>7</sup> This may be mitigated by individual student’s characteristics as there is evidence that students’ communication skills and engagement with patients may play a role in patients’ willingness to approve their participation.<sup>8</sup>

Understanding patient perceptions of having students involved in their clinical care is imperative as we strive to develop optimal models of care that integrate teaching with the best possible experience for the patient.<sup>9</sup> However, there might be a difference of perception between the service given by the staff alone and that with the participation of students.

Since, Studies on this theme are not frequent in the literature. So, the present study sought to assess the perception of patients on the presence of dental students during their clinical examination and treatment in a dental teaching institute through a semi structured qualitative and quantitative approach.

## Methodology

The present mixed research based design (QUAL + QUAN) study was conducted in a dental teaching hospital in Sriganganagar, Rajasthan during the time period of March 2020. The participants were the patients reported to the hospital and were selected according to inclusion criteria. Inclusion criteria included patients aged 18–80 years, informed by a doctor about their diagnosis, required curative treatment, and those who were assessed by the dental staff to be mentally and physically able to participate in the research project. Sampling was purposive, the gender balance was not deliberate.

Patients were asked to give written consent to participate in the study and to allow tape recording of the interviews. The researcher assured participants that the

interviews will be deleted after transcription. The first author conducted all interviews while the informants will be inpatients. Five themes related to the importance of students, knowledge and treatments skills emerged. The opening question was “Was your chief complain addressed by the dental student while examining?”

We sought to understand the patient feedback from a dialectical constructivist perspective. Dialectical constructivism is based on the belief that knowledge is acquired from the interaction between the person and the environment. The interviewer encouraged patients to talk about the theme as freely as possible and tried to hold dialogues rather than simply asking questions. Patients’ statements to the interviewer about their experiences and feelings led to new follow up questions and will be important in shaping how the interviews proceeded. Open-ended questions such as “Do you want to tell me more about it?” and “Can you tell me why?” were used when needed to gain a deeper understanding of the research question and to meet the aim of the study.

## Results

A total of 21 patients were contacted and invited to participate in the present study out of which only 15 responded appropriately which included 6 females and 9 males and the range of their ages was 18 to 86 years old. Eight patients had been receiving multiple treatments in dental hospital and 7 of them only received a single treatment. The treatments received by the participants included endodontic treatment, periodontal treatment, dental implant, prosthesis, tooth extraction and oral maxillofacial surgery.

Table 1 shows the Characteristics of the participants

The majority of the patients that were involved in the study were totally satisfied by the quality of the services provided by the students whereas some of them reported dissatisfaction regarding different aspects of the treatment

including: Availability and convenience, cost, Pain management Quality, Attitude, General Satisfaction.

## Availability and convenience

When asked about the availability and the convenience three of the participants were not satisfied. The statement provided by them were:

“Dental students usually keep me waiting for a long time as compared to staff, when I reported to the dental.”

(26 year old female patient)

I was asked to come for more appointments as compared to staff and faculty and it’s even harder to get an appointment for dental care right away”

(43 year old male patient)

“Treatment schedule provided to me was of too long duration as sometimes I had to wait for one month and sometimes I waited upto 2 months (before I can see the dentist again).”

(67 year old male patient)

## Cost

Of all the patients interviewed only one of them reported dissatisfaction regarding the cost of the treatment provided. The 56 year old, male patient undergoing endodontic treatment stated that-

“The fees charged for dental care are way too higher as compared to quality of services provided.”

## Pain management

According to majority of participants pain was considered key factor to a successful treatment. Out of 15 patients 6 of them undergoing treatment stated discomfort during the treatment. The statement given by two of them were:

“During my root canal treatment, even though three shots of local anesthetics were injected, I still felt painful and even the cold water irritated my teeth and made me feel really painful.”

“because it is so painful I usually avoid going to Dentist”

Whereas majority of them had no complaints regarding the pain during the treatment. One such statement provided by a 52 years old female patients was:

“I think they did well in pain management and they never let me feel very painful. I could raise my hand and he would inject more anesthetic before carrying on, thus I felt no pain.”

#### Attitude

The answers received on this question were divided into two statements. They were:

“Dental students are very careful to check everything while examining them and always treat me with respect”

(32 year old male patient)

“Students aren’t as thorough as they should be regarding the problem reported and showed lack of confidence during the examination”

(53 year old male patient)

#### General satisfaction

The last segment of the questionnaire was their general satisfaction and suggestion if they want to provide any. Here are three of the statements given by the participants.

“Dentists are able to relieve or cure dental problems that I have”

“Dentists explain what they are going to do and how much it will cost before they begin treatment”

“somethings could have been better about the dental care I received”

Table 2 shows key replies of the participant according to the respective themes during the interview based on their experience with the dental student.

Table 3 shows the statistics of the responses given by the participation which shows most of the patient were fully satisfied by the cost difference between the treatment provided by staff and the student and patient were least satisfied by the attitude of the student.

#### Discussion

Delivery of dental care to the patients in a Dental teaching hospital is primarily by the students under guidance of experienced faculty whose major concern is to provide good quality dental treatment to the patients<sup>10</sup> but to keep in mind, patient satisfaction as a concept is complex and it is related to the health care provider as well as patient’s personality, past experience and future expectations.<sup>11</sup>

Thus, the current study aimed at exploring patients’ perception of the quality of dental care services provided by dental students. The open ended questionnaire included in the study was divided into five domains that is attitude, accessibility, cost, pain management and General Satisfaction.

Availability and convenience was the first question asked which refers to whether the necessary providers and services exist in the area, and to the convenience of location and working hours regarding treatment provided by dental students<sup>12</sup> to which most patients had positive perceptions about the time management and punctuality of the dental students except for the three patients who complained of long duration sittings and waiting time. In spite of the difficulty in scheduling appointments and extended clinical sittings, dental schools cater to a large section of the population due to the lower costs of treatment and a perceived sense of high quality care. Thus it is imperative to inculcate high standards of professional conduct among dental students.<sup>10</sup>

Of all the patients interviewed almost all of them reported satisfaction regarding the cost of the treatment and service provided which is similar to the study conducted by Luo et al<sup>13</sup> and Saffan AA et al<sup>14</sup> which concluded that the dental care services provided by this hospital was much lower in cost compared with private clinics.

Extend of details of the interpretation to the patients on the disease itself, the treatment process and complications; the

attention and concern given to the patients in the process of treatment were the key considerations of good dental services.<sup>13</sup> When asked about the attitude of the patient most of the patient that they were treated respectfully, similar to the study conducted by Mahrous and Hifnawy, found that (77.7%) of the patients were satisfied with the dentists' interaction.<sup>15</sup> Which is in contrast with the study conducted by from Othman and Abdel Razzak who found a much lower level of satisfaction among patients of only 54.3%.<sup>16</sup>

Addressing the question about pain management during and after the treatment which is interpreted as how well the dentist handles the pain associated with dental treatment and how its management affects attitudes toward seeking dental care.<sup>14</sup> In the present study 40% of patients undergoing treatment stated discomfort which can be explained as often patients arrive with serious treatment needs and a greater chance of experiencing pain, which increases the chances of the patient becoming more anxious.

The last segment of the interview was their general satisfaction and suggestion if they want to provide any. Most of the patients were fully satisfied with the treatment whereas few of them said that treatment could be made better if some issues as their responses are addressed. Similar with study conducted at Riyadh Elm University and a study conducted by Bedi R et al on the adult population in UK, about (90%) of people were satisfied with the quality of care they received.<sup>17</sup>

Patient Perception regarding the dental treatment provided by the dental students is a multidimensional concept and is critical for oral health service development and practice. Nowadays patients are becoming gradually concerned about the type of dental treatment received and the prognosis and outcome of the treatment itself. Hence , evaluation of patient perception is important as it i will

also influence students amenability towards dental treatment indirectly and in turn the treatment outcome.

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## Legends Tables

Table 1: Characteristics of the participants

Gender		N(%)
Male		9 (60%)
Female		6 (40%)
Age		
18–30		5(33.33%)
31–50		2(13.33%)
51–60		4(26.66%)
61–70		2(13.33%)
> 70		2(13.33%)
Treatment		
Periodontal Treatment		3(20%)
Endodontic Treatment		2(13.33%)
Tooth Extraction		2(13.33%)
Oral Maxillofacial Surgery		3(20%)
Multiple Treatment		5(33.33%)

Table 2: Categories and related responses by the participants

Category	Item number	Responses	Statement
Accessibility	3	+	“Appointment timings for the dental care are good for most people”
		-	“kept waiting a long time” “asked to come for more appointments as compared to staff” “Treatment schedule of long duration”
Cost	2	+	“Fully satisfied”
		-	“fees charged are too higher as compared to quality”
Attitude	1	+	“Treated with respect”
		-	“Students aren’t as thorough as they should be and showed lack of confidence”
Pain management	3	+	did well in pain management “because it is so painful I usually avoid going to Dentist”
		-	
General satisfaction	1	+	“able to relieve or cure dental problems”
		-	“all the procedure and cost explained” “somethings could have been better”

Table 3. Descriptive statistics for dental satisfaction measures (N = 15)

Category	Mean	Std. Deviation
Access	.80	.414
Cost	.93	.258
Attitude	.53	.516
General satisfaction	.80	.414
Pain management	.60	.507