



Original Article

Patient's perception of the treatment performed by dental students: A cross-sectional satisfaction survey

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ABSTRACT

Objectives: The purpose of this study was to evaluate the satisfaction of patients regarding the facilities, services, and quality of treatment received at dental clinics of the College of Dentistry at Qassim University.

Material and Methods: A cross-sectional study was conducted in the educational dental clinics of the College of Dentistry at Qassim University. The study used a modified questionnaire that was based on Othman to estimate the patients' satisfaction factors affecting it. The questionnaire consisted of four sections: Appointment, clinic and facilities, patient-dentist interaction, and efficiency of treatment.

Results: About 79.5% of the distributed questionnaires were collected from patients who received treatment at the dental clinic at Qassim University College of Dentistry. Most of the patients were satisfied with appointments (93.18%). About 9.4% of patients mentioned that the dentists are talking to each other during providing treatment but most (92.79%) of patients were satisfied with dentist interaction. About the efficiency of treatment, most of the patients (89.36%) were satisfied with dental care and most of them (99.1%) mentioned that privacy during treatment has been maintained. Overall satisfaction from all items patients was satisfied 90.29% with dental services provided at which denoting an elevated high level of satisfaction.

Conclusion: Overall most of the patients who received treatment at the dental clinic in Qassim University were satisfied 90.29% with the appointments, clinic and facilities, patient-dentist interaction, and efficiency of treatment they received.

Keywords: Dental care, Dental students, Patient's satisfaction, Student-run clinic

INTRODUCTION

Satisfaction with dental care is an important topic of dental research as it is believed to be the primary factor for patients when they seek treatment. Patients who are satisfied with any clinical procedure are usually the patient who will come back for treatment, which directly affects the continuity of care for the patient and increase the trust between the patient and their dental care provider.^[1]

The patient has become aware that dental treatment is not only about improving oral hygiene or curing the disease but also it is becoming a medical and life necessity to respond to their needs and further improve the quality of life through improving their satisfaction.^[2] Since the most important person in the dental clinic is the patient, so, the comfort and satisfaction of the patient is needed to improve dental healthcare. On the other hand, a low level of satisfaction could cause

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instability in patients' quality of life or further introduce dental anxiety and stress among both the provider and the patient.^[3,4]

Patient dental care shifted from the dental focus approach to the patient focus approach to treat the patient, not only focusing on the dental condition but also the way of welcoming the patient, addressing any systemic condition, length of treatment.^[5] All these have become a factor of the quality of care and the level of satisfaction received as a result to the patient. Therefore, a good effort to provide excellent quality dental care to highly satisfy the patient is vital to the dental care provider.^[6] Educational institutions including students' dental clinics must continually aspire to meet the requirements of the patients and the students while focusing on patient satisfaction in all aspects of dental treatment.^[7]

Four precise explanations for examining patient satisfaction have been determined.^[8] The first one is that satisfaction is a goal of dental care; second, satisfaction is a product of previously received dental treatment; third, satisfaction can add to the effects of dental treatment and the acceptance of dental advice; and finally, satisfaction is the reason where patients evaluate and judge dental treatment that has been received.^[8]

Some studies investigated the reason why patient goes for treatment in a dental education setting and how that affects their treatment.^[9] The most reported reason was that students worked without the influence of money and they follow the ideal treatment, another reason reported was the low treatment cost; however, patient, car parking, and length of appointment were some of the reasons that discourage the patient from coming to dental school for treatment.^[8,9]

Due to the importance of measuring satisfaction of dental care provided by students; the present study aimed to evaluate patients' satisfaction regarding the experience of treatment received at students' dental clinic at Qassim University.

MATERIAL AND METHODS

This cross-sectional study was approved by the ethical committee of the College of Dentistry at Qassim University and conducted at the dental student clinic. Patient satisfaction is evaluated through four factors: Appointments, Clinics and facilities, Patient–dentist interaction, and Efficiency of treatment.

Based on the previous studies, 24-items are divided into four disciplines designed to measure patient satisfaction. Othman's study questionnaire was used and modified to the current version used in this study.^[10] The questionnaire contained demographic information, the survey tool was composed of four different parts: Appointment (four items); clinics and facilities (five items); patient-dentist interaction

(seven items); and efficiency of treatment (eight items). It was randomly distributed over 1 month for the attendance of students' dental clinic. The selection criteria of this study were healthy patients above 18 years old. Questionnaires were collected through self-answered participants after obtaining informed consent. Any questionnaire with 2 or more items not answered was excluded from samples and patient who were not able to complete the treatment were excluded from the study. Table 1 showed the modified questionnaire used in the study.

The questionnaire was originally designed in English language and then translated into Arabic with a 5-point Likert response scale ranging from strongly agree to strongly disagree and the item that was not answered was coded by zero as a missing answer. Identification of patients was protected using a unique number for every participant.

Statistical analysis

The data were first coded and then transferred to for final analysis using social science software version 19 (Statistical Package for the Social Sciences Inc., Chicago, IL). Bivariate associations were examined using analysis of variance and chi-squared tests. Patients with missing responses for a given more than two questions were opted out from the study.

RESULTS

A total of 200 self-administered questionnaires were distributed, 159 questionnaires (response rate 79.5%) were collected from patients who received and completed treatment at the student dental clinic at Qassim University. 68 (57.15%) of patients were male and 51 (42.85 %) were female, age ranging from 18 to 79 years old.

The mean overall satisfaction score was 90.29%, [Table 2] indicated that the overall satisfaction level of the participants regarding the four main disciplines in the questionnaire. No statistically significant difference in the mean overall patient satisfaction between males and females' participant was there ($P > 0.05$).

When we looked at the appointment satisfaction, most of the patients' male and female were highly satisfied with appointments (93.18%). Table 3 showed a detailed description of appointment satisfaction.

The majority of participants felt comfortable with the clinic site and facilities including car parking (62.7%) and waiting for the area (74.1%). Table 4 showed more information about the clinic and facilities.

Regarding patient-dentist interaction, only 9.4% of patients mentioned that the dentists were talking to each other during providing treatment but mostly (92.79%) of patients were satisfied with dentist interaction, whereas the majority of

Table 1: A modified questionnaire used in the study.

S. No	Appointments	Strongly agree	Agree	Neutral	Not agree	Strongly not agree
1	It was easy to get the first appointment					
2	The reminder of the appointment was in an appropriate manner (call - text message)					
3	The time and date of appointments were suitable for me					
4	The screening was at the same appointment time and there was no delay					
	Clinics					
5	Comfortable clinics site with sufficient car parking					
6	Clinics were clean and tidy					
7	Conditioning was comfortable inside clinics					
8	The lighting was adequate inside clinics					
9	The comfortable and safe waiting area					
	Dentist					
10	Dentists did not talk to each other during providing treatment					
11	The dentist was focused on providing treatment					
12	The dentist was friendly with me					
13	The dentist explained to me the procedure before starting treatment					
14	The dentist gave me advice after treatment					
15	The dentist facial's expression was cheerful with a smile					
16	The dentist did not ask a personal question during treatment					
	The efficiency of treatment					
17	The treatment plan was explained clearly					
18	All my questions were answered					
19	My teeth were screened comprehensively					
20	Dental treatment was completed efficiently and promptly					
21	I am pleased with the quality of treatment provided to me					
22	Dental treatment was not painful					
23	It has been maintaining privacy during treatment					
24	Treatment of my teeth was completed					

Table 2: Overall satisfaction for the four main disciplines.

Satisfaction	Male (%)	Female (%)	Total (%)
Appointment			
Agree	63 (94.73)	46 (91.13)	109 (93.18)
Neutral	3 (3.75)	3 (5.45)	5 (4.48)
Disagree	1 (1.50)	2 (3.45)	3 (2.35)
Clinics and facilities			
Agree	57 (84.96)	44 (86.96)	101 (85.84)
Neutral	6 (9.32)	2 (4.76)	9 (7.34)
Disagree	4 (5.70)	4 (8.28)	8 (6.80)
Patient-dentist interaction			
Agree	61 (92.63)	47 (92.94)	108 (92.79)
Neutral	3 (4.77)	2 (4.20)	5 (4.51)
Disagree	2 (2.60)	1 (2.87)	3 (2.67)
Treatment efficiency			
Agree	60 (90.98)	44 (87.26)	104 (89.36)
Neutral	4 (6.33)	5 (10.39)	9 (8.09)
Disagree	2 (2.71)	1 (2.36)	3 (2.54)

participants 98% reported their treating dentist to be very friendly with them. More information is shown in Table 5.

In terms of the efficiency of treatment, most of the patients (89.36%) were satisfied with dental care and most of them (99.1%) mentioned that privacy during treatment has been maintained. Only 4.2% were complained of pain during providing dental treatment. Table 6 showed more details about the efficiency of treatment.

DISCUSSION

The most important person in the clinic is the patient; therefore, patient' satisfaction towards the dental care provided at the dental clinic is paramount to improve the quality of treatment provided to the patient, and a good method to measure that is to distribute a self-administrative questionnaire about the dental care provided at the dental clinics to each patient.

Table 3: Appointment satisfaction.

Appointment	Male (%)	Female (%)	Total (%)	P-value
It was easy to get the first appointment				
Agree	62 (93.9)	44 (86.3)	106 (90.6)	0.36
Neutral	2 (3.0)	4 (7.8)	6 (5.1)	
Disagree	2 (3.0)	3 (5.9)	5 (4.3)	
The reminder of the appointment was in an appropriate manner (call-text message)				
Agree	64 (95.5)	50 (98.0)	114 (96.6)	0.45
Neutral	3 (4.5)	1 (2.0)	4 (3.4)	
Disagree	0 (0.0)	0 (0.0)	0 (0.0)	
Time and date of appointments were suitable for me				
Agree	64 (97.0)	44 (88.0)	108 (93.1)	0.145
Neutral	2 (3.0)	5 (10.0)	7 (6.0)	
Disagree	0 (0.0)	1 (2.0)	1 (0.9)	
The screening was at the same appointment time and there was not delay				
Agree	62 (92.5)	47 (92.2)	109 (92.4)	0.573
Neutral	3 (4.5)	1 (2.0)	4 (3.4)	
Disagree	2 (3.0)	3 (5.9)	5 (4.2)	

Our primary concern and most important point are the appointment satisfaction, which should be suitable and easy to get an appointment for the patient. When comparing study participants, males were more satisfied (93.9%) in getting an appointment than females (86.3%). Moreover, females were less satisfied (88.0%) with the time and date of the appointment than males (97.0%). In this study, patients were more satisfied (92.4%) to get treatment on the same appointment time without delay than the study conducted in the College of dentistry at Taibah University (81.5%).^[9] Overall, patients were satisfied 93.18% with the appointment system.

Clinics and facilities must offer comfortable services for the patient to increase their satisfaction; Table 4 show patients' satisfaction toward clinics and facilities. The least satisfaction reported was the location of the clinic and car parking 62.7% similar to what was found by Lafont and other studies.^[11] Patients when arrived at clinic they have to sit in the waiting room so the clinic should have a comfortable and safe waiting room. In this study, 25.8% of patients were not satisfied with it; which is high when compared to other studies.^[12]

Table 4: Clinic and facilities satisfaction.

Clinic and facilities	Male (%)	Female (%)	Total (%)	P-value
Comfortable clinics site with sufficient car parking				
Agree	43 (64.2)	31 (60.8)	74 (62.7)	0.134
Neutral	13 (19.4)	5 (9.8)	18 (15.3)	
Disagree	11 (16.4)	15 (29.4)	26 (22.0)	
Clinics were clean and tidy				
Agree	66 (98.5)	49 (98.0)	115 (98.3)	0.834
Neutral	1 (1.5)	1 (2.0)	2 (1.7)	
Disagree	0 (0.0)	0 (0.0)	0 (0.0)	
Conditioning was comfortable inside clinics				
Agree	61 (92.4)	50 (98.0)	111 (94.9)	0.332
Neutral	3 (4.5)	1 (2.0)	4 (3.4)	
Disagree	2 (3.0)	0 (0.0)	2 (1.7)	
The lighting was adequate inside clinics				
Agree	66 (98.5)	51 (100.0)	117 (99.2)	0.381
Neutral	1 (1.5)	0 (0.0)	1 (0.8)	
Disagree	0 (0.0)	0 (0.0)	0 (0.0)	
Comfortable and safe waiting area				
Agree	47 (71.2)	39 (78.0)	86 (74.1)	0.344
Neutral	13 (19.7)	5 (10.0)	18 (15.5)	
Disagree	6 (9.1)	6 (12.0)	12 (10.3)	

Dentists should be able to communicate the aim of continuous dental care with the patients in an acceptable manner; Table 5 shows patient satisfaction toward dentist interaction. In this study, 9.4% of patients were unsatisfied when dental students talked to each other during providing treatment, which is relatively high when compared with Mohamed Saad's study.^[13] Explaining the procedures before starting treatment is very important to maintain the satisfaction of patients which represents 96.6% of satisfaction among patients, which is contrary to what was found by Othman and Abdel Razak (46%),^[14] and this could be due to the implementation this study in an educational setting clinic that put high priorities on educating the students about the ideal way of communication and patient-dentist interaction. Rankin and Haris reported that patients dislike having a dentist who begins treatment without explanation.^[15] About 94.9% of participants in this study were satisfied with the care provider, who was cheerful and smiling during dealing with patients. Regarding dentists not asking personal questions not related to dental, the females (98.0%) were more satisfied than males (86.2%), but overall, 91.4% of study samples were

Table 5: Patient-dentist interaction.

Patient-dentist interaction	Male (%)	Female (%)	Total (%)	P-value
Dentists did not talk to each other during providing treatment				
Agree	49 (74.2)	39 (76.5)	88 (75.2)	0.879
Neutral	10 (15.2)	8 (15.7)	18 (15.4)	
Disagree	7 (10.6)	4 (7.8)	11 (9.4)	
Dentist was focused during providing treatment				
Agree	63 (94.0)	51 (100.0)	114 (96.6)	0.207
Neutral	3 (4.5)	0 (0.0)	3 (2.5)	
Disagree	1 (1.5)	0 (0.0)	1 (0.8)	
Dentist was friendly with me				
Agree	64 (98.5)	49 (98.0)	113 (98.3)	0.355
Neutral	0 (0.0)	1 (2.0)	1 (0.9)	
Disagree	1 (1.5)	0 (0.0)	1 (0.9)	
Dentist explained to me the procedure before starting treatment				
Agree	66 (98.5)	48 (94.1)	114 (96.6)	0.360
Neutral	1 (1.5)	2 (3.9)	3 (2.5)	
Disagree	0 (0.0)	1 (2.0)	1 (0.8)	
Dentist gave me advice after treatment				
Agree	66 (98.5)	45 (93.8)	111 (96.5)	0.083
Neutral	1 (1.5)	0 (0.0)	1 (0.9)	
Disagree	0 (0.0)	3 (6.3)	3 (2.6)	
Dentist facial's expression was cheerful with a smile				
Agree	66 (98.5)	46 (90.2)	112 (94.9)	0.118
Neutral	1 (1.5)	4 (7.8)	5 (4.2)	
Disagree	0 (0.0)	1 (2.0)	1 (0.8)	
Dentist did not ask a personal question during treatment.				
Agree	56 (86.2)	50 (98.0)	106 (91.4)	0.057
Neutral	6 (9.2)	0 (0.0)	6 (5.2)	
Disagree	3 (4.6)	1 (2.0)	4 (3.4)	

Table 6: Efficiency of treatment satisfaction.

Efficiency of treatment	Male (%)	Female (%)	Total (%)	P-value
Treatment plan was explained clearly				
Agree	65 (97.0)	47 (94.0)	112 (95.7)	0.680
Neutral	1 (1.5)	2 (4.0)	3 (2.6)	
Disagree	1 (1.5)	1 (2.0)	2 (1.7)	
All my questions were answered				
Agree	64 (95.5)	47 (92.2)	111 (94.1)	0.724
Neutral	2 (3.0)	3 (5.9)	5 (4.2)	
Disagree	1 (1.5)	1 (2.0)	2 (1.7)	
My teeth were screened comprehensively				
Agree	64 (97.0)	47 (94.0)	111 (95.7)	0.295
Neutral	1 (1.5)	3 (6.0)	4 (3.4)	
Disagree	1 (1.5)	0 (0.0)	1 (0.9)	
Dental treatment was completed efficiently and in a timely manner				
Agree	56 (88.9)	38 (76.0)	94 (83.2)	0.100
Neutral	5 (7.9)	11 (22.0)	16 (14.2)	
Disagree	2 (3.2)	1 (2.0)	3 (2.7)	
I am pleased with the quality of treatment provided to me				
Agree	64 (95.5)	51 (100.0)	115 (97.5)	0.310
Neutral	2 (3.0)	0 (0.0)	2 (1.7)	
Disagree	1 (1.5)	0 (0.0)	1 (0.8)	

(Contd...)

Table 6: (Continued)

Efficiency of treatment	Male (%)	Female (%)	Total (%)	P-value
Dental treatment was not painful				
Agree	49 (73.1)	38 (74.5)	87 (73.7)	0.550
Neutral	14 (20.9)	12 (23.5)	26 (22.0)	
Disagree	4 (6.0)	1 (2.0)	5 (4.2)	
It has been maintaining privacy during treatment				
Agree	66 (98.5)	50 (100.0)	116 (99.1)	0.386
Neutral	1 (1.5)	0 (0.0)	1 (0.9)	
Disagree	0 (0.0)	0 (0.0)	0 (0.0)	
Treatment of my teeth were completed				
Agree	51 (82.3)	31 (67.4)	82 (75.9)	0.200
Neutral	7 (11.3)	10 (21.7)	17 (15.7)	
Disagree	4 (6.5)	5 (10.9)	9 (8.3)	

satisfied, which is relatively the same as what was found by Othman study.^[14] All in all, patients were satisfied with patient-dentist interaction by 92.79% which is relatively high.

The fourth and last discipline of our questionnaire items was measuring patient satisfaction about the efficiency of treatment provided at educational clinics [Table 5]. About 97.5% of patients were satisfied with the quality of dental treatment they received contrary to what Othman and Mahrous found in their studies.^[13,14] Regarding maintaining privacy during the treatment, most of the participants were satisfied (99.1%) which is higher than other studies,^[13,14] and the reason behind that might goes to the separation policy that was seen in the clinics which provide the patient with some space and privacy during treatment and talking with the dentist. The least satisfaction in this discipline 73.7% was toward painful dental treatment. The satisfaction of subjects about the efficiency of treatment was 89.36% which is acceptable. No significant difference in satisfaction between males and females in any discipline. The overall satisfaction from all items is 90.29%, which denotes a high level of satisfaction that is higher than other studies.

In light of the study's findings, it has a few limitations that need to be considered when interpreting the study. First, the study might have a reporting bias as the questionnaire is self-reported, and the patient might answer any questionnaire items without further validation. Second, the questionnaire was given by the student to his patient, which might affect the privacy and confidentiality of answering the questionnaire; this species could be related to the high satisfaction rate in the study, where the patient answered in front of his treating dentist.

CONCLUSION

Overall, patients were satisfied (90.29%) with the dental services provided by dental students at the college of dentistry Qassim University which provided an excellent

level of satisfaction in regards to a dental appointment, clinic area and facilities, patient-dentist interactions, and efficiency of treatment. Some patients were unsatisfied, where clinic location, insufficient car parking, and uncomfortable waiting area (10.3%) were the most commonly reported reasons.

Ethical approval

The Research Ethics Committee of the College of Dentistry, Qassim University, approved this study (EA/56/2014).

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Nil.

Conflicts of interest

There is no conflict of interest.

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