

## Patient Satisfaction From Dental Care Services Performed By Senior Dental Students

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### ABSTRACT

**Aim:**To determine the levels of satisfaction regarding the quality of dental health care provided by the senior dental students in Riyadh Elm University. **Methods :** In this cross-sectional survey, self-administered modified questionnaires were used in the assessment of the patients. The questionnaires given were filled in two circumstances, during the waiting time and after receiving treatment. Data was analyzed using SPSS version 19. **Results:**The majority (80%) of the patients gave the consent that the students familiarized them with the procedures before conducting the treatment. The average overall proportion of consent was 76.8%, which denoted a high level of satisfaction. The relationship between the interviewees' nationality and the characteristics of the association in the four disciplines yielded significant differences between the Saudis and the Non-Saudis. **Conclusion:**The patients treated by the dental students at college of dentistry were highly satisfied with their treatment.

### **Introduction**

Patient satisfaction is a multidimensional concept addressing many aspects of care<sup>1</sup>. Oral health of the patient has an important effect on patient satisfaction<sup>2</sup>. Patient satisfaction is one of the important objectives that medics purpose to achieve. Accessibility, convenience, and satisfaction are some of the relevant factors that a patient considers before selecting a dentist. Proper training of dental students is paramount. Furthermore, examining the quality of services that are provided by these dental students is equally important. In the teaching institutions, there should be an effort to find a balance between meeting both the needs of the patient as well as the student<sup>3</sup>. Feedback on the level of satisfaction and quality of service experienced by the patients in the dental care is vital for continued improvement of the service delivery and its outcomes<sup>4</sup>. The satisfaction of the

patient is vital since it influences their pattern for service utilization<sup>5</sup>. Several studies have described patient satisfaction for dental treatment<sup>6-7</sup>. However, there are limited studies regarding patient satisfaction from dental care delivered by dental students<sup>8-9</sup>. The success of an oral health service can be assessed by the degree of satisfaction of its patients using structured questionnaires<sup>10-11</sup>.

The opinions of the patients are crucial in providing a holistic view of what helps them define a satisfactory care giving and the factors associated with the same. These factors of consideration include technical competency, patient-doctor interaction, clinic setup and administrative efficiency<sup>12</sup>. Communication skill is one of the important factor determining the level of patient satisfaction<sup>13</sup>. This study is aimed at determining the levels of satisfaction regarding the quality of dental health care and to investigate the key

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factors that determine the patient's satisfaction with the quality of service provided by the dental senior students in Riyadh Elm University.

### Materials and methods

In this study, a convenience sampling method was used over a period of one month (March 2017). Patients were surveyed on site and patients who had received dental treatment by the senior students were given questionnaires. The people accompanying patients and those patients who were unable to respond by themselves were excluded from the collection of data. Patients who declined to take part were also excluded. The surveys were conducted during the regular clinic hours. Self-administered modified questionnaires were used in the assessment of the patients.

The questionnaires given were filled in two circumstances, during the waiting time and after receiving treatment. They consisted of four sections: system/administrative efficiency (4 items) patient-personnel interaction (8 items); clinic setup/environment (2 items); and technical competency (3 items). The questionnaire was in both English and Arabic language. The original format involved a 3-point of Likert scale (1-Disagree), 2-Uncertain, and 3-Agree). Before the data collection, the questionnaire was tested and validated. Patients graded the items listed in the questionnaire based on their level of satisfaction and experience in the facility. The scores ranged from 1-3.

The percentages of agreement on the four disciplines were calculated and presented in a tabular form. Also, the percentage mean of satisfaction was also calculated to estimate the ranking of the individual comfort factors. The data recorded was entered into Statistical

Package for the Social Sciences, Version 19 for Windows. A descriptive study which was followed by inferential statistics was conducted. Mean, standard deviations, and percentages were calculated for both quantitative and qualitative sets of data. The Fisher's exact test was used alongside the Chi-square test. An allowance of 0.05 was put in consideration. The data was presented in tables generated in Microsoft Excel and Word applications.

### Results

Of the 130 patients who were eligible only 100 volunteered and accepted to participate, and the response rate was quite satisfactory (77.5%). The mean ( $\pm$ SD) age of the respondents was 28.42 ( $\pm$ 8.68) years. The majority of the respondents were men. It was appealing that most of the interviewees were satisfied with the patient-dentist discipline. The majority (89%) of the patients agreed on the domain about the service providers, which stated that the dental students concentrated during the service provision, and portrayed a friendly attitude. However, 14% of the respondents were obligated to receive the dental care from a student.

The majority (80%) of the patients gave the consent that the student familiarized them with the procedures before conducting the treatment process. There was, however, a decline of 3% when considering those who admitted having received advice after treatment. Just over three quarter (77%) of them gave consent, 7% disagreed while the 16% were undecided on the issue. Another aspect that was essential in determining the quality of service was how the seniors presented themselves. This prompted the inclusion of the domain

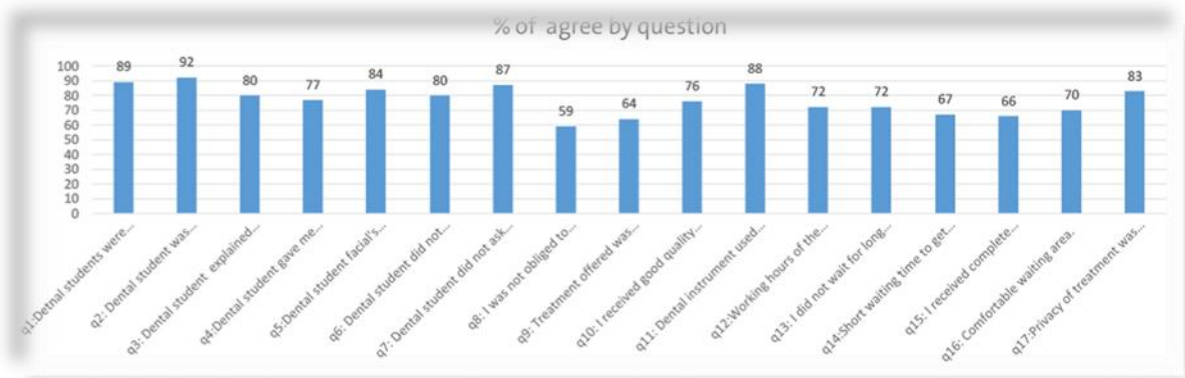


Figure 1. Distribution of items by agree

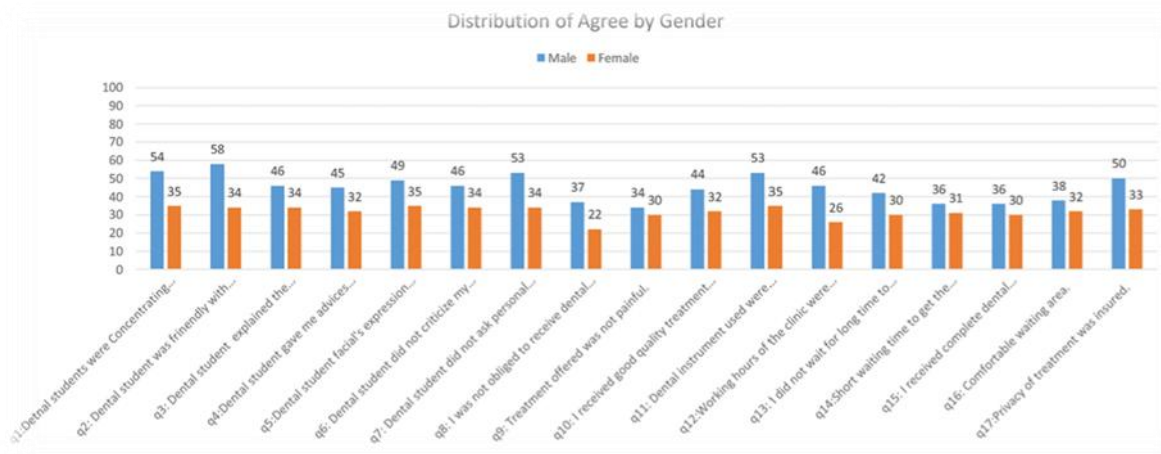


Figure 2. Distribution of agree by gender

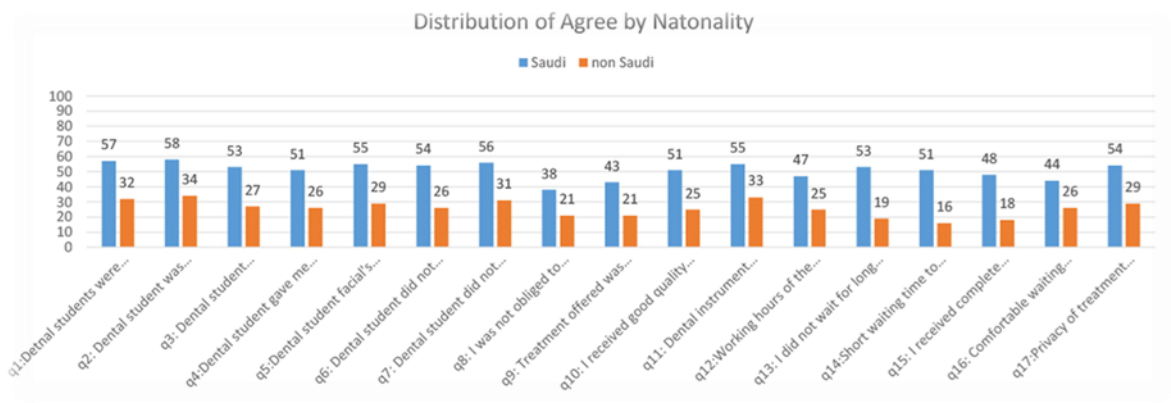


Figure 3. Distribution of agree by nationality

to determine the trainee’s facial expression while serving the patient. The recorded results indicated that

84% agreed that the seniors had a cheerful facial expression (Figure 1 and Table 1).

Item	Disagree	Neutral	Agree
Item Participants' satisfaction on patient-student interaction.			
q1: Dental students were Concentrating on their work.	3 (3%)	8 (8%)	89 (89%)
q2: Dental student was friendly with me .	1 (1%)	7 (7%)	92 (82%)
q3: Dental student explained the procedures before start of treatment.	9 (9%)	11 (11%)	80 (80%)
q4: Dental student gave me advices after treatment .	7 (7%)	16 (16%)	77 (77%)
q5: Dental student facial's expression was cheerful with a smile.	7 (7%)	15 (15%)	84 (84%)
q6: Dental student did not criticize my oral condition or compared it with others .	7 (7%)	13 (13%)	80 (80%)
q7: Dental student did not ask personal question during offering care.	6 (6%)	7 (7%)	87 (87%)
q8: I was not obliged to receive dental care by a student.	14 (14%)	27 (27%)	59 (59%)
Item Participants' satisfaction with technical competency.			
q9: Treatment offered was not painful.	14 (14%)	22 (22%)	64 (64%)
q10: I received good quality treatment ; e.g. filling did not get dislodged or broken .	5 (5%)	19 (19%)	76 (76%)
q11: Dental instrument used were sterilized.	1 (1%)	11 (11%)	88 (88%)
Item Participants' satisfaction with administrative efficiency.			
q12: Working hours of the clinic were suitable for me.	14 (14%)	14 (14%)	72 (72%)
q13: I did not wait for long time to have an appointment.	12 (12%)	16 (16%)	72 (72%)
q14: Short waiting time to get the treatment.	16 (16%)	17 (17%)	67 (67%)
q15: I received complete dental treatment.	13 (13%)	21 (21%)	66 (66%)
Item Participants' satisfaction with clinic setup environment.			
q16: Comfortable waiting area.	13 (13%)	17 (17%)	70 (70%)
q17: Privacy of treatment was insured.	3 (3%)	14 (14%)	83 (83%)

**Table 1. Assessment of patient satisfaction for the four disciplines**

Item	Gender		Total N=100	p-value
	Male n=60(60%)	Female n=40 (40%)		
q1: Dental students were Concentrating on their work.	54 (90)	35 (87.5)	89 (89)	0.629
q2: Dental student was friendly with me .	58 (96.7)	34 (85)	92 (92)	0.094
q3: Dental student explained the procedures before start of treatment.	46 (76.7)	34 (85)	80 (80)	0.176
q4: Dental student gave me advices after treatment .	45 (75)	32 (80)	77 (77)	0.350
q5: Dental student facial's expression was cheerful with a smile.	49 (81.7)	35 (87.5)	84 (84)	0.594
q6: Dental student did not criticize my oral condition or compared it with others .	46 (76.7)	34 (85)	80 (80)	0.341
q7: Dental student did not ask personal question during offering care.	53 (88.3)	34 (85)	87 (87)	0.859
q8: I was not obliged to receive dental care by a student.	37 (61.7)	22 (55)	59 (59)	0.596
q9: Treatment offered was not painful.	34 (56.7)	30 (75)	64 (64)	0.073
q10: I received good quality treatment ; e.g. filling did not get dislodged or broken .	44 (73.3)	32 (80)	76 (76)	0.704
q11: Dental instrument used were sterilized.	53 (88.3)	35 (87.5)	88 (88)	0.669
q12: Working hours of the clinic were suitable.	46 (76.7)	26 (65)	72 (72)	0.445
q13: I did not wait for long time to have an appointment.	42 (70)	30 (75)	72 (72)	0.176
q14: Short waiting time to get the treatment.	36 (60)	31 (77.5)	67 (67)	0.119
q15: I received complete dental treatment.	36 (60)	30 (75)	66 (66)	0.127
q16: Comfortable waiting area.	38 (63.3)	32 (80)	70 (70)	0.189
q17: Privacy of treatment was insured.	50 (83.3)	33 (82.5)	83 (83)	0.275

**Table 2. Association between patient satisfaction items and gender**

An overall ranking and comparison of the determining factors that were related to patient satisfaction were carried out. The process involved calculating the mean percentage of agreement on the different disciplines. The average overall proportion of consent was 76.8%, which denoted a high level of satisfaction. However, the relationship between the interviewees' nationality and the characteristics of the association in the four disciplines yielded significant differences between the Saudis and the Non-Saudis. The Saudis recorded a

Item	Nationality		Total N=100	p-value
	Saudi n=65(65%)	non Saudi n=35 (35%)		
q1: Dental students were Concentrating on their work.	57 (87.7)	32 (91.4)	89 (89)	0.822
q2: Dental student was friendly with me .	58 (89.2)	34 (97.1)	92 (92)	0.365
q3: Dental student explained the procedures before start of treatment.	53 (81.5)	27 (77.1)	80 (80)	0.068
q4: Dental student gave me advices after treatment .	51 (78.5)	26 (74.3)	77 (77)	0.089
q5: Dental student facial's expression was cheerful with a smile.	55 (84.6)	29 (82.9)	84 (84)	0.390
q6: Dental student did not criticize my oral condition or compared it with others .	54 (83.1)	26 (74.3)	80 (80)	0.571
q7: Dental student did not ask personal question during offering care.	56 (86.2)	31 (88.6)	87 (87)	0.928
q8: I was not obliged to receive dental care by a student.	38 (58.5)	21 (60)	59 (59)	0.464
q9: Treatment offered was not painful.	43 (66.2)	21 (60)	64 (64)	0.445
q10: I received good quality treatment ; e.g. filling did not get dislodged or broken .	51 (78.5)	25 (71.4)	76 (76)	0.732
q11: Dental instrument used were sterilized.	55 (84.6)	33 (94.3)	88 (88)	0.069
q12: Working hours of the clinic were suitable for me.	47 (72.3)	25 (71.4)	72 (72)	0.727
q13: I did not wait for long time to have an appointment.	53 (81.5)	19 (54.3)	72 (72)	0.010
q14: Short waiting time to get the treatment.	51 (78.5)	16 (45.7)	67 (67)	0.004
q15: I received complete dental treatment.	48 (73.8)	18 (51.4)	66 (66)	0.014
q16: Comfortable waiting area.	44 (67.7)	26 (74.3)	70 (70)	0.551
q17: Privacy of treatment was insured.	54 (83.1)	29 (82.9)	83 (83)	0.035

**Table 3. Association between patient satisfaction items and nationality**

significantly higher level of satisfaction in comparison to their Non-Saudi counterparts (Figure 2 and 3; and Table 2 and 3).

**Discussion**

The present study has provided information about the levels of satisfaction regarding the quality of dental health care and to investigate the key factors that determine the patient's satisfaction with the quality of service provided by the dental senior students in Riyadh Elm University. The response rate among patients who were contacted (130 patients) for the study was 77.5% (n=100). Patient satisfaction is complex concept related to the patient' personality, past experience, future expectations, and the health care provider<sup>14</sup>. The current study employed a self-administered questionnaire pertaining to the patients' satisfaction towards the dental care provided by the senior dental students.

The patient satisfaction has been under investigation in many colleges of dentistry across different nationalities. The self-administered questionnaire used

in this survey proved to be effective and efficient in the collection of data. Its simplicity was very useful in avoiding ambiguity and was suitable for patients from different educational backgrounds. The results obtained indicate that the quality of service given by the seniors was satisfactory. It is important to note that these findings were in line with a previous study among students in Saudi Arabia<sup>3,9</sup>.

This study reveals a more satisfactory outcome in comparison to a previous study<sup>15</sup> which yielded a 45.6% satisfaction rate. About 59% of the patients indicated that they were obliged to receive treatment from interns. The results above can be explained by considering that the institution was an educational facilities and therefore the interns worked their level best for approval by their instructors and also gain expertise in the field. The limitation of this study is that it was conducted in one dental college and the figures depicted may be considerably higher than those recorded in an ideal public clinic situation. Further research need to be conducted using a larger sample size and involving many dental training centers.

### **Conclusions**

The satisfaction levels were high and satisfactory. A significantly good number of the patients were satisfied with the quality of dental service provided by the seniors, based on the findings of the study. The factors that were considered in determining their satisfaction levels were administrative efficiency, technical competence, clinic setup and patient-dentist interaction at the dental clinics in which the study was conducted.

### **Recommendations**

Patient satisfaction is a clear indication of the quality of services offered in the dental clinics as well as in any other medical institution. Continuous evaluation tests for patient satisfaction should frequently be conducted to ensure patient satisfaction at all times. Consequently, evaluation of patient satisfaction should frequently be conducted and sources of dissatisfaction should be eliminated.

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