# Parents' satisfaction with pediatric dental care provided by dental college, Riyadh

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### Abstract

**Aims and Objectives:** To evaluate the level of parents' satisfaction with pediatric dental care provided by dental students at the College of Dentistry and explore the factors associated with various parents' demographics. **Materials and Methods:** A cross-sectional study was conducted among parents (n = 150) whose children received dental care in dental colleges in King Saud University (KSU) in Riyadh. The parents were asked to fill a self-administered dental satisfaction questionnaire between Februry and April 2016. Data were recorded and analyses using the Statistical Package for the Social Sciences Version 20 (SPSS Inc., Chicago, IL, USA). **Results:** Results indicated that only 10.7% of the parents strongly agreed that before being seen they had to wait for a long time in the waiting area, and 36% strongly agreed that one of the causes for which they went to the KSU dental college is that there were inadequate pedodontics in their region. More than half of parents (60%) strongly agreed that the KSU dental clinic is up to date and very modern. **Conclusions:** The results indicate that the pediatric department has been successful in achieving parents' satisfaction with dental students, their treatment, as well as operational aspects related to access. There was a strong degree of satisfaction from parents regarding the KSU dental college being modern and up to date.

Key words: Child, dental care, humans, parents, personal satisfaction

## **INTRODUCTION**

Satisfaction is one of the components of psychological science. Patient satisfaction with care is a useful measure that evaluates care, including the quality of care and provider-patient relationships.<sup>[1,2]</sup> Further, being considerate in dental care is a vital feature of the value of care and affects the future utilization of the facility.<sup>[3]</sup> Therefore, it is necessary to access patients' view regarding health care programs because patients are the primary source of data collection regarding the quality and effectiveness of care services, and because

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paying attention to their viewpoint during care planning is their right and should be considered.<sup>[1]</sup> All of these are important for all features of dental practice, especially for caregiver and patient cooperation.<sup>[4,5]</sup>

Because clinical outcomes are dependent on patient cooperation and the latter relies on their satisfaction, patient satisfaction with health care is essential. Hence, it can be said that, without satisfied patients, health care not qualified.<sup>[6]</sup> If a patient is satisfactorily served, they continue the process of care. Therefore, the outcome for dental treatment impacts patients' attendance for

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dental treatment, where a poor outcome may delay future visits to the dental practitioner.<sup>[7]</sup>

Hence, evaluation of patient satisfaction is a vital feature of assessing the quality of care and must be assessed in a regular center.<sup>[8]</sup> In this regard, multiples studies around the world have described patient satisfaction for dental treatment in dental training centers.<sup>[2,9-12]</sup> Still, studies regarding patient satisfaction from dental care delivered by dental students are limited. In 2014, the patients recorded high satisfaction with treatment by dental students at the College of Dentistry.<sup>[9]</sup> Furthermore, a similar setting in a study by Balkaran et al., the authors reported a high level of overall satisfaction with dental care at The University of the West Indies dental school. Self-rated oral health status may be important in patients' satisfaction. Policies and strategies promoting preventive dental advice are likely to improve patients' satisfaction with dental care and may lead to increased satisfaction with dental services.<sup>[13]</sup>

Unfortunately, most studies concerning dental patients' satisfaction have focused on dental visits in general, and given the fact that the continuity of health care for children, which relies on their satisfaction, is especially important, the aim of this study was to evaluate the level of parents' satisfaction with pediatric dental care provided by the dental students at the College of Dentistry, King Saud University (KSU), Riyadh, Saudi Arabia and explore the factors associated with various parents' demographics.

## MATERIALS AND METHODS

Before starting the study, approval was obtained from the ethical committee of the College of Dentistry Research Centre (CDRC), KSU, Riyadh, Saudi Arabia, and patients' parents provided written consents for the study. Participation in the study was purely voluntary and those who were unable to fill the questionnaire were eliminated from the study.

The questionnaire used in a previous study by Davies and Ware, was used in the present study with some changes to obtain parents acceptability score for satisfaction.<sup>[14]</sup> During pilot study, 15 parents were asked to complete the questionnaire and to provide any comments on overall satisfaction derived from the outpatient clinic.

One hundred and fifty questionnaires were given to the parents of children who were treated by fourth and fifth year dental students during February to April 2016. Sample size 150 participate because At  $\alpha$  probability type (A1 error) or level significant 0.05=5% and estimate percentage of satisfaction 73% from previous study with power 0.095, sample size should be at least 145.<sup>[15]</sup>

In order to collect information, a questionnaire containing 26 questions were used. The questionnaire was designed in three parts; the first part included 7 questions to gather demographic information. The second part of the questionnaire included 2 questions; first, a question regarding causes for child's visit (diagnostic, preventive, surgical, or restorative), and the second question if they missed/canceled dental appointments during treatment at the dental college. The third part consisted of 17 items assessing satisfaction by asking parents to assess their satisfaction towards dental treatment based on the items recorded in the questionnaire by using a five-point Likert scale ranging from 1 to 5 (strongly disagree, disagree, neither, agree, and strongly agree). The 17-item questionnaire contained items related to six aspect of care, namely, access (3 items), availability (2 items), pain (3 items), quality (6 items), continuity (1 item), and general satisfaction (2 items).

Descriptive statistics (percentage, frequencies, mean, and standard deviation) were used to describe variables. Records from satisfaction questionnaire were tabulated. All the collected data was analyzed using the Statistical Package for the Social Sciences software for Windows version 20 (IBM Corp, Armonk, NY, USA). Statistical differences between dental satisfaction items and parents' sociodemographic characteristics (employed status, education level, and gender) were explored using chi-square test. A *P*-value of  $\leq 0.05$  was considered statistically significant.

## **RESULTS**

In this study, 150 parents whose children received dental care in dental college responded and consented to participate. Participants' distribution of sociodemographic characteristics, causes for visit, and their compliance with the child's appointment are summarized in Table 1. The children age ranged between 2 and 12 years (mean:  $9.95 \pm 1.143$ ), and there was a greater percentage of girls (56.7%) than boys (43.3%). The majority of the causes for children visiting the clinic were operative purpose (60%) followed by diagnostic (34%), preventive (5%), and surgical (1%). Approximately (16.7%) of the children whose parents filled the questionnaire had at least one missed dental appointment during the period of their child's

Table 1: Participants' sociodemographic characteristics, cause for dental appointment, and compliance				
Child	n (%)			
Gender				
Boy	65 (43.3%)			
Girl	85 (56.7%)			
Cause for visit				
Diagnostic	51 (34%)			
Operative	90 (60%)			
Preventive	8 (5%)			
Surgical	1 (0.7%)			
At least one broken appointments				
Yes	25 (16.7%)			
No	125 (83.3%)			
Parents	· · ·			
Gender				
Male	19 (12.7%)			
Female	131 (87.3%)			
Nationality				
Saudi	132 (88%)			
Non-Saudi	18 (12%)			
Education level of parents				
Uneducated	3(2%)			
Primary school	22 (14.7%)			
Intermediate school	12 (8%)			
Secondary school	44 (29.3%)			
High school	11 (7.3%)			
University	58 (38.7%)			
Employment status	. ,			
Employed	52 (34.7%)			
Unemployed	96 (64%)			
Retired	2 (1.3%)			

treatment at the dental college. The parents' age ranged from 19 to 50 years (mean:  $33.3 \pm 4.964$ ), and the majority were females (87.3%), Saudi (88%), and non-Saudi (12%). Nearly half of the parents reported being unemployed (64%), whereas (38.7%) had attended university, (29.3%) were secondary school and (7.3%) had high school graduation.

Table 2 presents the distribution of the parent's response to the satisfaction questionnaire. In more detail, regarding access, 10.7% of the parents strongly agreed that before being seen they had to wait for a long period in the waiting area, 18% strongly agreed that it was not easy to get an appointment with dental students, and 41.3% strongly agreed that the available dental appointment times were convenient. Regarding availability, 36% strongly agreed that one of the causes they visit the KSU dental clinic is because of inadequate pedodontics services in their region, and 38% strongly agreed that KSU dental clinic was very conveniently

located. Almost half of the parents (50.7%) strongly agreed that they were not afraid from pain at the dental clinic and 45.3% strongly agreed that dental students adopted methods to reduce dental problems. Finally, only 10.7% of the parents described that they avoided bringing their child to the dental students because of their own fear of pain.

Even though nearly all parents strongly agreed (54.7%) and agreed (38.3%) that dentists conducted thorough examination of their child, 12.7% reported that the dental students were not as thorough as they expected. However, a significant number of parents reported that the dental studentd treated their child with respect (64.7%). And strongly agree (30%) reported by parents who seeing the same dental student during their visit to the dental college. In general, most parents (60%) strongly agreed that the KSU dental college is very modern and up to date.

In a detailed evaluation, some statistical differences in the items related to pain were explored by sociodemographic characteristics and agreement with scheduled dental appointments using chi-square tests [Table 3]. Parents who stated that they not afraid of pain at the dental college had at least primary and high school education. Moreover, no significant differences was recorded in parents who avoided bringing their child to the dental college sometimes due to their fear of pain.

Finally, the majority of parents who had reported of a least one canceled dental appointment for their child strongly disagreed that they avoided bringing the child to the dental college because to their own dental fear and fear about pain [Table 4]. They also agreed greatly (64%) that the dentist adopted methods to reduce pain. While the parents who reported their satisfaction about the KSU dental college is very conveniently located, 12.8% still had at least one missed dental appointment.

#### DISCUSSION

The present study was conducted to evaluate the level of parents' satisfaction with pediatric dental care provided by dental students at the College of Dentistry, KSU, Riyadh, Saudi Arabia, as well as to explore factors associated with various parents' demographics. Because the pediatric patients were not capable of understanding and filling the questionnaires, 150 questionnaires were given to their parents.

In general, the results of this study that the high level of parents' satisfaction, which did not differ

Table 2: Rate of parents' satisfaction with each item					
Dental Satisfaction	Rate of agreement				
	Strongly agree	Agree	Neither	Disagree	Strongly disagree
Access					
Before my child seen from dental student I have to wait a long time in the waiting area	16 (10.7%)	26 (17.3%)	31 (20.7%)	39 (26%)	38 (25.3%)
It's not easy to catch appointment to my child at KSU dental college for dental care	27 (18%)	23 (15.3%)	23 (15.3%)	41 (27.3%)	36 (24%)
Office hours at the KSU dental college are good for the most patients	62 (41.3%)	58 (38.7%)	22 (14.7%)	6 (4%)	2 (1.3%)
Availability					
I come to the KSU dental college is due to inadequate pedodontics in my region	54 (36%)	45 (30%)	16 (10.7%)	23 (15.3%)	11 (7.3%)
KSU dental clinic is very conveniently located Pain	57 (38%)	48 (32%)	27 (18%)	13 (8.7%)	5 (3.3%)
Sometimes I avoid bring my child to the KSU dental students due to my fear of pain	16 (10.7%)	18 (12%)	30 (20%)	43 (28.7%)	43 (28.7%)
KSU dental students must do more to reduce pain	33(22%)	42 (28%)	30 (20%)	32 (20.7%)	14 (9.3%)
I'm not afraid for pain when I bring my child for treated at the KSU dental college	76 (50.7%)	58 (38.7)	10 (6.7%)	5 (3.3%)	1 (0.7%)
Quality					
KSU dental students are very alert to check all when treated my child	82 (54.7%)	57 (38%)	8 (5.3%)	1 (0.7%)	1(0.7%)
KSU dental students always treat my child with respect	97 (64.7%)	43 (28.7%)	7(4.7%)	1(0.7%)	2(1.3%)
KSU dental students are not as thorough as they should be	19 (12.7%)	16 (10.7%)	17 (11.3%)	54 (36%)	44 (29.3%)
KSU dental students are able to treated most dental problems that effect child	68 (45.3%)	64 (42.7%)	13 (8.7%)	2 (1.3%)	3 (2%)
Before start treatment KSU dental students usually explain what will do for my child	81 (54%)	56 (37.3%)	7 (4.7%)	4(2.7%)	2 (1.3%)
KSU dental students must do more to save my child from having dental problems	39 (26%)	59 (39.3%)	25 (16.7%)	18 (12%)	9 (6%)
Continuity					
I see same KSU dental students just about every time I come to the college	54 (30%)	44(29.3)	31 (20.7%)	15 (10%)	15 (10%)
General Satisfaction					
The KSU dental college is very modern and up to date	90 (60%)	54 (36%)	5 (3.3%)	0 (0.0%)	1(0.7%)
Dental care at KSU dental college need to be improve	50 (33.3%)	70 (46.7%)	21 (14%)	6 (4%)	3 (2%)

according to the age and gender of parents, are consistent with previous reports [Table 2].<sup>[15,16]</sup> Overall increased healthcare awareness among patients leads to improvement in standard of living of patients. As a result of high demand for quality medical/dental services, medical and dental training schools are not only involved in preparing future doctors or dentists to face health care challenges but also deliver public healthcare services. In line with medical schools, dental schools also train the dental students in providing dental care on patients. Most of the dental schools are continuously undertaking to improve with updated quality of training and subsequent dental treatment delivery by dental students.<sup>[3,9,17]</sup> For that, Lafont et al. investigated whether patients would continue to visit the school for treatment from other dental care.<sup>[18]</sup>

In the present study, no relationship between at least one missed appointments and parents' expressions of pain was found, which is inconsistent with previous reports [Table 3].<sup>[15,19]</sup> Furthermore, fear is still considered to be a major cause for noncompliance in dentistry,<sup>[20]</sup> and findings from this study are consistent with previous studies.<sup>[14,21,22]</sup> because parents, report of dental fear seemed to be correlated with pediatric appointment keeping. Strong relationships between dental anxiety and refusal of dental care have been previously reported.<sup>[21,22]</sup>

In this study, approximately one-third (38.7%) of the parents seeking dental care for their child had university education level; seeking care in these clinics is attributed to the perceptions of high quality service and concern

	Υ.	roid brin	o mv chi	Avoid bring my child to Dentist	ist	Denti	st shoul	d do more	Dentist should do more to reduce pain	s nain	Not af	raid abo	ut nain af	Not afraid about nain at the KSU dental	dental
			n n							I and			clinic		
	Strongly agree	Agree	Neither	Strongly Agree Neither Disagree Strongly agree disagree	Strongly disagree	Strongly agree	Agree	Neither	Disagree	Strongly disagree	Strongly Agree agree		Neither	Disagree	Strongly disagree
At least	þ				þ					þ	þ				0
one broken															
appointments															
yes	3(12%)	3(12%) $4(16%)$ $3(12%)$	3(12%)	8(32%)	7(28%)	4(16%)	6(24%)	7(28%)	$5\ (20\%)$	3(12%)	13(52%) 9(36%) 0(0.0%)	9(36%)	0(0.0%)	2(8%)	1(4%)
No	13	14	27	$35\ (28\%)$	$36\left(28.8\% ight)$	29	36	23(18.4%)	26(20.8%)	11(8.8%)	63	49	10(8%)	3(2.4%)	0(0.0%)
	(10.4%)	(10.4%) $(11.2%)$ $(21.6%)$	(21.6%)			(23.3%)	(28.8%)				(50.4%) $(39.2%)$	(39.2%)			
Education															
level of															
parents															
Uneducated	0(0.0%)		0(0.0%)	2 (66.7%)	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1 (33.3%)	1	$1\ (33.3\%)$	0(0.0%)	0(0.0%)	1 (33.3%)	2 ///	0(0.0%)	(0.0%)	0(0.0%)
		(0.0%)					(33.3%)					(66.7%)			
Primary	4(18.2%)	1	5	4(18.2%)	8(36.4%)	7(31.8%)	65	$5\ (22.7\%)$	5(22.7%)	2(9.1%)	17	$\mathcal{S}$	1(4.5%)	1(4.5%)	0(0.0%)
school		(4.5%)	(4.5%) $(22.7%)$				(13.6%)				(77.3%)	(13.6%)			
Intermediate $1 (8.3\%)  3 (25\%)$	1(8.3%)	$3\ (25\%)$	61	4(33.3%)	2~(16.7%)	7 (58.3%)	0	1(8.3%)	$2\ (16.7\%)$	0(0.0%)	7(58.3%)	3(25%)	1(8.3%)	(%0.0) 0	1(8.3%)
school			(16.7%)				(16.7%)								
Secondary	9	9	11(25%)	$12\ (27.3\%)$	11(25%) $12(27.3%)$ $8(18.2%)$	8(18.2%)	16	6(13.6%)	6(13.6%) 11 $(25%)$	3~(6.8%)	24	16	3~(6.8%)	1 (2.3%)	0(0.0%)
school		(13.6%)					(36.4%)				(54.5%)	(36.4%)			
High school	0(0.0%)	9		1 (9.1%)  1 (9.1%)	6(54.5%)	0(0.0%)	5	4 (36.4%)	1(9.1%)	1(9.1%)	7 (63.6%)	જ	1(9.1%)	(0.0%)	0(0.0%)
		(27.3%)					(45.5%)					(27.3%)			
University	4(6.9%)	5	11(19%)	11(19%) 20(34.5%) 18	18(31%)	10	15	13	12(20.7%) 8(13.8%)	8(13.8%)	20	31	4(6.9%)	3(5.2%)	0(0.0%)
		(8.6%)				(17.9%)	(%b b <i>b)</i>	(00 4%)			(34.5%)	(20 4%)			

#### Table 4: Statistical differences between compliance with dental appointment and parents' sociodemographic characteristics

At least o	one broken
appoi	ntment
Yes	No
1(5.3%)	18 (94.7%)
24 (18.3%)	107 (81.7%)
11 (21.2%)	41 (78.8%)
14 (14.6%)	82 (85.4%)
0 (0.0%)	2 (100%)
1 (33.3%)	2(66.7%)
4 (18.2%)	18 (81.8%)
4(33.3%)	8 (66.7%)
5 (11.4%)	39 (88.6%)
3(27.3%)	8 (72.7%)
8 (13.8%)	50 (86.2%)
	$\begin{tabular}{ c c c c c } \hline & appoin \\ \hline \hline & Yes \\ \hline & 1 (5.3\%) \\ 24 (18.3\%) \\ 11 (21.2\%) \\ 14 (14.6\%) \\ 0 (0.0\%) \\ 1 (4.14.6\%) \\ 0 (0.0\%) \\ \hline & 1 (33.3\%) \\ 4 (18.2\%) \\ 4 (33.3\%) \\ 5 (11.4\%) \\ 3 (27.3\%) \\ \hline \end{tabular}$

for the patients' well-being. Other studies found that the most important reason for attending these clinics is low cost of service.<sup>[23-26]</sup>

The general satisfaction from the KSU dental clinic is very modern and up-to-date was considered very high. This study found that most of the items under technical competency were acceptable, which similar to other studies.<sup>[13,27]</sup> This can also be explained by the fact that the facility offering the service at KSU dental college is of high quality and modern for providing dental care services to the community.

There were some limitations to this study that need to be acknowledged and addressed. First, the results of this study must be considered with attention because it was impossible to conduct complete analysis of the dental treatment rendered to the child. Another limitation of this study was that identify lack of statistical significance in the evaluation this may be end with study less power. Future studies should be carried out with larger sample size.

#### CONCLUSION

The results of this study indicate that the majority of the parents were strongly satisfied with the care their children were receiving from the dental students, and strongly agreed that the parents and their child were treated with respect. However, parent strongly agreed that there was no relation between fear of pain and seeking dental treatment for the child. Finally, pediatric department has been successful in achieving parents satisfaction regarding their treatment and other operational aspects related to access. Furthermore, there was a strong degree of satisfaction among parents regarding dental colleges in KSU being very modern and up to date.

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Nil.

#### **Conflicts of interest**

There are no conflicts of interest.

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