Evaluation of Patient Satisfaction with Dental Services at Kermanshah Dental Faculty in Iran

Shima Sadat Miri[1], Mohammad Moghadam Nejad[2], Parisa Soltani[3]

[1]Assistant Professor, Department of Endodontics, School of Dentistry, Kermanshah University of Medical Sciences, Kermanshah, Iran
[2]Dentist, Dental Students Research Center, School of Dentistry, Kermanshah University of Medical Sciences, Kermanshah, Iran
[3]Dental Student, Dental Students Research Center, School of Dentistry, Isfahan University of Medical Sciences, Isfahan, Iran

ABSTRACT

BACKGROUND: The current study was conducted to determine the satisfaction of patients visiting the Faculty of Dentistry, Kermanshah University of Medical Sciences, Iran.

METHODS: This study enrolled patients that were referred to the Dental School, Kermanshah University of Medical Sciences during the winter of 2014. We selected 300 patients through convenient sampling. The participants were asked to complete the patient satisfaction questionnaire, focusing on demographic and patient satisfaction variables. The collected data were analyzed with independent t-test and one-way ANOVA. A p-value of <0.05 was considered statistically significant.

RESULTS: Of the 300 patients, 71%, 27% and 2% patients showed high, average and low satisfaction with services provided by the Dental Faculty, respectively. The results of one-way ANOVA indicated a significant correlation between the patients' career and their satisfaction (p<0.001). Moreover, the findings of t-test revealed that satisfaction score in the healthcare domain (p=0.006) and admission and registration process (p=0.007) were significantly higher in females than in males; however, a higher satisfaction was reported for males in terms of the personnel and students' behavior (p=0.01). In addition, there was no significant gender difference in score for cleanliness or total satisfaction.

CONCLUSION: We found that the patients referred to Kermanshah Dental Faculty enjoyed higher satisfaction with the healthcare services.

Keywords: Dental treatments; Patient satisfaction; Kermanshah Dental Faculty

INTRODUCTION

Patient satisfaction is a patient-focused indicator of healthcare services [1]. Evaluation of patient satisfaction is an appropriate criterion for analysis of the quality and relationship between patients and physicians [2-4].
To improve the quality of dental services, regular evaluation and feedback is essential [5, 6]. The quality of healthcare may be defined as a composite of patient satisfaction and treatment outcomes [7-9].
Patient dissatisfaction is a major factor for changing the dentist or for complaints against a dentist. Despite the importance of patient satisfaction with dental services, only scant data is available on this topic. Thus, the present research was designed to determine satisfaction among the patients visiting Kermanshah Dentistry School in Iran.

METHODS

This study was approved by the ethical board of Kermanshah University of Medical Sciences (Code: A/P/7/428/165). In this cross-sectional study, 300 patients referred to Kermanshah Dentistry School during the winter of 2014 were enrolled using convenient sampling. The patient satisfaction questionnaire consisted of demographic and patient satisfaction variables. In a pilot study, 30 patients were given the

questionnaire with the Cronbach's α value coefficient of 0.78. The questionnaires were analyzed and encoded, and only the researchers had access to the identity of the participants.

The questionnaire contained 16 items addressing 4 domains: healthcare service, admission and registration process, hygiene of the department, personnel and students' behavior. The items of the questionnaire were scored from 0 (completely dissatisfied) to 4 (completely satisfied). The total scores were divided by the total number of items, thereby obtaining the score for each domain from 0 to 4. Then, the score of each domain was multiplied by 25 to calculate the score out of 100. The patient satisfaction was classified into three groups; low (0-33), average (34-66) and high (67-100).

The data were analyzed with one-way ANOVA and independent sample t-test using SPSS (version of 18, IL, USA) software. A $P<0.05$ was considered significant.

RESULTS

Of the 300 patients, 172 (57.3%) were male and 128 (42.7%) were female. Age of the participants ranged between 18 to 64 years. Mean, median and standard deviation of age were 29.1, 35.5 and 1.2, respectively. There were 41.3% married participants, 30.3% had elementary education, 38.3% had 12 years of education, and 31.4% had university education for at least 2 years. The majority of the participants were from the Kermanshah city (85%) and 15% lived in the neighboring cities. The professions of the participants were employed (31.3%), university student (20.3%), homemaker (19.3%), self-employed (13.3%), high school students (9%) and retired (3%). All patients were first referred to the department of oral medicine for initial examinations and then referred to other departments. Among the participants, 49 (16.3%) patients were referred to Department of Oral and Maxillofacial Radiology, 33 (11%) to Department of Prosthodontics, 27 (9%) to Department of Oral and Maxillofacial Surgery, 32 (10.7%) to Department of Pediatric Dentistry, 23 (7.7%) to Department of Orthodontics, 50 (16.7%) to Department of Restorative Dentistry, 61 (20.3%) to Department of Endodontics and 25 (8.3%) to Department of Periodontics.

Most patients had high satisfaction with healthcare services, with a mean total satisfaction of 69.8% (Table 1). Among the total sample, 71% had high satisfaction, 27% had average satisfaction and 2% had low satisfaction with the

services provided at Kermanshah dental faculty. The maximum level of satisfaction was reported by the employed (76.2%), followed by the unemployed and retired participants (75.5%), high school students (72.8%), homemakers (72.1%), university students (71%) and self-employed participants (58.6%), respectively.

It was shown that the patients' education level and patient satisfaction had a negative correlation with the personnel and students' behaviour ($p<0.01$, r=-0.31) and had no significant correlation with other variables (Table 1). Further, no significant correlation was reported between participants' age and their satisfaction scores. There was a positive relationship, however, between the number of referrals and the patients' satisfaction with the admission process (p=0.01, r=0.14), but no significant correlation was found between the number of referrals and satisfaction scores. The findings of one-way ANOVA indicated a significant correlation between the patients' career and their total satisfaction ($p<0.001$) (Table 1).

The mean score of patient satisfaction with the personnel and students' behavior was significantly higher in single individuals rather than married patients ($p<0.002$), but no significant difference was observed between the single and married participants in other domains (Table 1). Moreover, no significant difference was reported between the Kermanshah city residents and neighboring cities in terms of the patient satisfaction with admission process ($p>0.01$). However, in other domains, the satisfaction of the patients living in Kermanshah was significantly higher than that of the patients living in the cities around Kermanshah. In addition, the females' satisfaction with healthcare services (p=0.006) and admission process (p=0.007) was significantly higher than that of the males, but the males' satisfaction with the personnel and students' behavior was significantly higher than the females (p=0.01). However, there was not any significant difference between males and females with regard to the hygiene of the departments as well as the patients' total satisfaction (Table 1). The patient satisfaction with students' skill, healthcare costs and facilities of the faculty was reported to be favorable, and only a small percentage of the patients reported dissatisfaction.

DISCUSSION

Based on the results of this study, most patients

had high satisfaction with healthcare services. Patient satisfaction was significantly related to number of referrals and career of the patients. We found a high level of patient satisfaction with healthcare services. Improving patients' satisfaction can be achieved by identification of the weaknesses and strengths [15, 16]. The findings of the current study also indicated that patients with higher education were more sensitive to the personnel and students' behavior which may be the reason behind the observed relationship. Similar to our results, one study [13] found a significant relationship between the patients' education and their satisfaction. Another study [20] showed that patients with lower education had higher satisfaction than those with higher education. It is possible that greater degree of knowledge of their rights among educated patients may be the reason for the observed results.

The findings of the present research indicated that the patient's age did not affect their satisfaction with the studied domains, which is in line with the findings of Razmi et al [14]. Moreover, the results showed that patient's marital status did not influence patient satisfaction, which is in agreement with the findings of the study performed by Masoodirad et al [21]. We found that females had higher satisfaction with the admission process and lower satisfaction with the personnel and students' behavior than males. It seems that females have more patience and higher satisfaction with the admission process than males. However, females have higher expectation and are more sensitive to the personnel and students' behavior.

In addition, the results of this study demonstrated a significant correlation between the patients' career and their satisfaction. The employed and business owner patients showed the highest and lowest levels of satisfaction, respectively. In contrast, Noorossana et al [20] found that business-owner and student patients were reported to have the maximum and minimum levels of satisfaction, respectively. This difference can be attributed to the differing nature of the two studies; the study by Noorossana et al [20] enrolled patients in private dental offices. Certainly, the expectation of the patients visiting private offices is different than that of the patients referred to public clinics, which consequently affects their satisfaction.

CONCLUSION

Patient satisfaction was favorable in all domains. The maximum level of satisfaction was reported for the personnel's behavior, students' quick attendance on the patient and students' behavior. The maximum level of dissatisfaction, however, was reported for guiding the patient to the related department for treatment. Thus, appropriate measures are needed to rectify this problem and to enhance patient satisfaction.

Table 1: The mean values of satisfaction according to the educational status, occupation, sex, and marital status

		Healthcare service	Admission process	Hygiene of the department	Personnel and students' behavior	Total satisfaction
Educational status	Elementary	71.1±9.8	69.5±11.4	65.2±14	86.2±12.6	73.4±9.1
	Diploma	66.4±15.1	68.04±11.4	66.3±25.5	78.5±18.3	69.8±14.6
	Academic	72.6±10.6	72.6±12.2	64.8±16	76.1±10.4	72.07±9.6
	P value	0.001×	0.02 ×	0.8	<0.001×	0.09
Occupation	Self-employed	53.3±17	68.7±19.1	47.1±31.6	63.4±18.9	58.5±18.5
	Homemaker	72.3±11.1	76.2±10.8	63.9±13	73.8±9.6	72.1±9.6
	Employee	73.8±8.1	68.8±8.3	69.8±14.5	91±12.8	76.2±7.5
	University student	70.9±9.5	67.7±10.5	65.5±11.5	78.3±9	70.9±7.9
	Unemployed	75.7±13.1	65±7.9	90±21	85±9.8	78.1±11.8
	Retired	63.5±6.2	66.9±4.7	86.9±23.4	82.1±9.1	73.4±7.8
	High school student	71.8±8.5	68.9±11.2	66.9±12.5	82.4±7.1	72.8±8.1
	P value	<0.001×	0.001×	<0.001×	<0.001×	<0.001×
Sex	Female	71.5±9.7	71.5±11.8	64.5±13.5	78.3±10.7	71.9±8.8
	Male	67.5±15.5	67.8±11.6	66.9±25.8	82.7±19.3	71.3±14.9
	P value	0.006×	0.007×	0.28	0.01	0.66
Marital status	Unmarried	70.02±13.5	69.1±11.9	66.2±21.4	82.4±17.1	72.2±13
	Married	69.4±11.3	70.9±11.7	64.5±17.2	76.9±11	70.8±9.7
	P value	0.7	0.1	0.4	0.002×	0.3

REFERENCES

1. Noor AM, Dinon M, Kalthom A. Development and validation of patient satisfaction instrument. *Leadersh Health Serv*. 2012; 25(1):27-38.
2. Alhashem AM, Alquraini H, Chowdhury RI. Factors influencing patient satisfaction in primary healthcare clinics in Kuwait. *Int J Health Care Qual Assur*. 2011; 24(3):249-62.
3. Mascarenhas AK. Patient satisfaction with the comprehensive care model of dental care delivery. *J Dent Educ*. 2001; 65:1266-1271.
4. Butters JM, Willis DO. A comparison of patient satisfaction among current and former dental school patients. *J Dent Educ*. 2000; 64:409-415.
5. Ball R. Practical marketing for dentistry. 1. What is marketing? *Br Dent J*. 1996; 180(10):385-8.
6. Ball R. Practical marketing for dentistry. 3. Relationship marketing and patient/customer satisfaction. *Br Dent J.* 1996; 180(12):467-72.
7. Burke L, Croucher R. Criteria of good dental practice generated by general dental practitioners and patients. *Int Dent J.* 1996; 46(1):3-9.
8. Newsome PR, Wright GH. A review of patient satisfaction: 1. Concepts of satisfaction. *Br Dent J.* 1999; 186(4):161-5.
9. Ntabaye MK, Scheutz F, Poulsen S. Patient satisfaction with emergency oral health care in rural Tanzania. *Community Dent Oral Epidemiol.* 1998; 26(5):289-95.
10. Eklund SA, Burt BA. Risk factors for total tooth loss in the United States; longitudinal analysis of national data. *J Public Health Dent*. 1994; 54(1):5-14.
11. Golletz D, Milgrom P, Mancl L. Dental care satisfaction: the reliability and validity of the DSQ in a low-income population. *J Public Health Dent.* 1995; 55(4):210-7.
12. Levin R. The correlation between dental practice management and clinical excellence. *J Am Dent Assoc*. 2004; 135(3):345-6.
13. 13. Lee KT, Chenb CM, Huang ST, Wub YM, Lee HE, Hsua KJ. Patient satisfaction with the quality of dental treatment provided by interns. *J Dent Sci*. 2013; 8(1):177-83.
14. Razmi H, Jafari Talari M. Evaluation of patients' satisfaction referred to Dentistry Faculty, Tehran University of Medical Sciences in 2003. *J Islamic Dent Assoc.* 2005; 17(2):82-89.
15. Bleich SN, Ozaltin E, Murray CK. How does satisfaction with the health-care system relate to patient experience? *Bull World Health Organ*. 2009; 87(4): 271-8.
16. Kessler DP, Mylod D. Does patient satisfaction affect patient loyalty? *Int J Health Care Qual Assur*. 2011; 24(4):266-73.
17. Chu CH, Yeung CYYJ, Lo ECM. Monitoring patient satisfaction with university dental services under two fee-paying systems. *Community Dent Oral Epidemiol*. 2001;29(5):390-8.
18. Hashim R. Patient satisfaction with dental services at Ajman University, United Arab Emirates. *East Mediterr Health J*. 2005; 11(5-6):913-21.
19. Crossley M, Blinkhorn A, Cox M. External relations:'What do our patients really want from us?': Ivestigating patients perceptions of the validity of the Chartermark criteria. *Br Dent J*. 2001; 190(11):602-6.
20. Noorossana R, Rezaeian S, Saghaei A. Assessment of satisfaction of patients referring dental offices and identification of opportunities for improvements in Fasa, Iran in 2012. *J Isfahan Dent Sch.* 2014; 10(3):251-61.
21. Masoodirad H, Tabari R, Arefian M. An assessment of patient's satisfaction toward endodontics department, Guilan dental school (2003-2004). *J Islamic Dent Assoc*. 2005; 17(5):81-8.