



Original article

Evaluation of Patient Satisfaction in Oral And Dental Health Centers

Huseyin Topcuoglu¹, Aygul Yanik^{2*}

¹Dentist, Kirklareli Mouth and Dental Health Center, Kirklareli, Turkey,

²Associate Professor, Department of Health Management, Faculty of Health Sciences, Istanbul Medeniyet University, Istanbul, Turkey.

ABSTRACT

Introduction: The study was conducted in order to determine patient satisfaction in Oral and Dental Health Centers (ODHC) and to investigate the effects of sociodemographic variables on patient satisfaction. **Materials and Methods:** This descriptive and cross-sectional study was conducted with patients who administered to the ODHC's which were affiliated with the Turkish Ministry of Health and which were located in the Kirklareli. Using the random sampling method, 320 patients were selected and the patients were informed about the purpose of the study. The questionnaire was applied to patients who accepted to participate in the study. A total of 300 patients who answered the questionnaire were evaluated. Data analysis was performed using the SPSS for Windows 16.0 software package. **Results:** Patients were found to be highly satisfied with services; complaint about the service was low and dissatisfaction with the physical environment was at medium levels. Patient satisfaction factors showed significant differences according to gender, education, employment status, type of social security, cost of dental treatment, reasons for choosing the ODHC, re-administration, and recommending. It was determined that men were satisfied with more services compared to women. It was found that university graduates were more complained about services. It was showed that women and young patients were more scared of dental treatment compared to men and elderly patients. **Conclusion:** It was determined that patient satisfaction in ODHC's is affected by sociodemographic variables. The study will contribute to health managers' efforts to promote patient satisfaction and improve services in ODHC's.

KEYWORDS: Dental Centers; Dentists; Patient Satisfaction; Services

INTRODUCTION

Patient satisfaction is an important component of dental care. Patient satisfaction is an individual patient's appraisal of the extent to which the care provided has met his/her expectations and preferences [1]. It influences patients' compliance, their use of dental services, and their anxiety, and it is also associated with health outcomes and health status [2]. Patient satisfaction with health services is therefore a proxy measure of organizational performance, and its use has been recommended for evaluating the quality of care. Dental clinics with a high patient satisfaction score, for example, have been shown to have high credibility [1]. Patient satisfaction is a multidimensional concept.

Dimensions of dental care satisfaction that have been identified are [3]. Technical or aspects of care related to the process of diagnosis and treatment, interpersonal, accessibility/availability, financial access,

efficacy/outcomes, continuity of care, facilities, general attitudes about overall care. At first, patient satisfaction studies were carried out through these dimensions. Recently, part of the patient satisfaction studies analyzed the realization of expectations by comparing patients' views upon the ideal and actual behaviors of dentists. Ideal behavior equals desired service. The difference between dentists' ideal and actual behavior is mostly felt in the communication and information industries; e.g. dentists' frequent holding out on preventive procedures, not washing of hands and the procedures being too hard [4].

The majority of adults have stated that their first dental source of information was dentists and it is very important to have information in preventing caries [5]. Also, decent practices were presented by patients according to these criteria: explanation of procedures, sterilization/hygiene, dental skills (the highest) and by dentists; up-to-dateness of equipment, pleasant decoration, a decent practice image (the

lowest). For instance, the technical skill of the dentist was found to be the main determiner of dental satisfaction [4]. The provision of decent practice criteria is required for patient satisfaction.

Turkey is a country in which dental health problem count is high and dentist per capita count is low. Preventive dental services that the state is responsible for are poor. Lack of organizations is in question [2]. In Turkey, a total of 186 oral and dental health centers, 127 (3949 units) Ministry of Health and 59 (625 units) private, are present. There is a 10 575 population per unit. In Turkey, a total of 22 295 dentists, 35.9% Ministry of Health, 4.3% university, 59.8% private sector and 0.8% in other institutions, offer service. The number of dentists per 100 000 people is 29.1. The majority of dentists work privately.

The Social Security Institution covers the expenses only for services received from the public sphere. Accordingly, individuals pay out of their pockets for services they get from institutions other than the Ministry of Health. In other words, out of pocket expenditures are important exchequers. In Turkey, with the restructuring health system as a part of the Ministry of Health Transformation Program, the extensification and attainability of oral and dental services is aimed. Opening, managing, monitoring the activities of, evaluating and inspecting the ODHC (Oral and Dental Health Center) affiliated to the Ministry of Health Public Hospitals Institution of Turkey, and provision of all kinds of preventative, diagnostic, treatment and rehabilitative healthcare services was aimed [6]. With the implementation of such, progress in oral and dental health in Turkey may be made. In this context, while researching patient satisfaction in ODHC's and making arrangements on this subject may increase the service volume, it will also have a positive effect on the patients' compliance to treatment and care.

This study was carried out with the purpose of determining the patient satisfaction in outpatient ODHC's and researching the effects of sociodemographic variables on patient satisfaction.

MATERIALS AND METHODS

This cross-sectional and descriptive study was carried out with patients who have benefited from the services of the Oral and Dental Health Center affiliated to the Ministry of Health in the Kirklareli city of Turkey. In this center, where X-ray and sterilization units are also present, outpatient oral and dental health services are offered with 13 polyclinics. In the center, metal parts of all total-partial denture services, part of the expiratory phase and metal and porcelain procedures of crown-bridge procedures are provided via importation.

In the study, the questionnaire prepared by benefiting from the questionnaire in the research carried out collaboratively by the Marmara University Healthcare Policies Practice and Research Center and the Turkish Dentists Union. The

questionnaire consisted of socio-demographic variables, the general evaluation of patients regarding ODHC's and the patient satisfaction scale. Permission was obtained from the oral and dental health center management. A total of 310 patients who administered to the ODHC's were chosen by random sampling and the patients were informed about the purpose of the study. After obtaining the verbal consent from the patients who have accepted to participate in the study, the questionnaire was carried out face-to-face by the researchers between 03/06-05/07/2013. Finally, 300 patients who answered completely the questions were included in analysis.

In data analysis, MS-Excel 2010 and SPSS 16.0 software programs were used. Kaiser-Meyer-Olkin (KMO) value was found to be 0.845 and it was determined that the statements were suitable for factor analysis. In order to determine the sub factors in accordance with the original survey, Varimax confirmatory factor analysis was used. When the Cronbach's alpha coefficients of the factors was examined, it was found that satisfaction with the service ($\alpha=.91$) was highly reliable, complaint about the service ($\alpha=.77$) and dissatisfaction with the physical environment ($\alpha=.70$) were very reliable. It was determined that the factors did not demonstrate a normal distribution and out of the non-parametric tests, chi-square and Kruskal Wallis H tests were used in data analysis. The margin of error was chosen to be 0.05.

When the statements in the scale was evaluated, "1" was the highest perceived value (I strongly agree), "5" was the lowest perceived value (I strongly disagree). The test was interpreted while taking the scoring format into account. It was formed by positive variables in the satisfaction with the service factor, negative factors in the complaint about service and dissatisfaction with the physical environment variables. Therefore, the scores are expected to be low in the satisfaction with service factor, high in the complaint about service and dissatisfaction with the physical environment factors. In this case, it can be said that the patients have evaluated ODHC services positively.

The study cannot be generalized as its sample count is low and it only includes patients who have benefited from Kirklareli city ODHC services.

RESULTS

Sociodemographic Variables

The majority of patients were female, married, aged between 19-40 years, high school graduates or had an equivalent level of education, unemployed, had an income of 1000 liras or less, had preferred the ODHC because of health insurance. It was found that the patients were mostly going to apply to the ODHC again, were not afraid of dental treatment, and evaluated the costs of dental treatment as cheap and normal (Table 1).

Table 1: Sociodemographic Variables Among The Study Population

Variables	Groups	n: 300	Percentage
Gender	Male	130	43.3
	Female	170	56.7
Age	18 years and younger	24	8.0
	19-30	80	26.7
	31-40	88	29.3
	41-50	51	17.0
	51-65	42	14.0
	Older than 65	15	5.0
Marital status	Married	178	59.3
	Single	122	40.7
Education	Primary	57	19.0
	Secondary	28	9.3
	High school or equivalent	129	43.0
	Bachelor's degree (university)	86	28.7
Employment status	Employed	187	62.3
	Unemployed	113	37.7
Income (TRY)	500 and below	79	26.3
	501-1000	90	30.1
	1001-3000	103	34.3
	3001 and above	28	9.3
Social security	Present	276	92.0
	Not present	24	8.0
Social security type	State retirement fund	88	31.9
	Social insurance institution	149	54.0
	Insuranced self-employed institution	29	10.5
	Other (private insurance and out of pocket)	10	3.6
Provision of health expenses	By their own means	22	7.3
	By SSI/ insurance	234	78.0
	Through the family	44	14.7
The reason for ODHC preference	Health insurance	183	61.0
	Urgency	15	5.0
	Being an acquaintance	23	7.7
	Being close	18	6.0
	Decent care	45	15.0
	Being cheap	16	5.3
Generally with the service	Satisfied	228	76.0
	Dissatisfied	30	10.0

The General Evaluation of Patients Regarding ODHC's

It was found that the majority of patients were satisfied with the service and their reason for being satisfied were; adequate and decent service being provided (33.4%), the interest of the dentist and other healthcare personnel (21.1%), the doctors being nice (50%), state guarantee (5.7%), the personnel being good humored (3.5%), being clean (2.6%), being acquainted with the personnel (2.2%), being a reliable place (1.8%), one's turn coming on time (1.8%), and being a decent and clean place (0.4%), respectively. The reasons for patients being complained about the service were: the appointments being long for the treatments (33.4%), the doctors not explaining (33.4%), not finding a solution for the dental problem (13.3%), dissatisfaction with filling (13.3%), the physical conditions of the building being poor (3.3%) and crowdedness (3.3%), respectively.

The reasons for the majority of the patients recommending ODHC's to others were; being satisfied (56.3%), the costs being compensated by the state and cheap (11.8%), getting a decent healthcare service (6.5%), the personnel treating warmly (5.7%), the dentists doing their job decently and with success (5.3%), the absence of another place (3.7%), compulsorily (3.7%), being a reliable place (3.3%), the interests of the dentist (1.2%) and other healthcare personnel (2.5%), being clean (2.5%), the right to choose the dentist and other reasons (1.2%), respectively. The reasons for patients not recommending the ODHC were determined as: not being satisfied (44%), other reasons (44%) and appointment dates being given too late (12.6%), respectively.

The things that bothered the patients the most were found to be: none (60.3%), only one procedure being carried out in one appointment waiting too long (6.7%), fear (6.7%), dentists treating indifferently (6%), the noises that the

equipment make (5%), injection (4.3%), various tools being put into mouth (2.3%), physical conditions being poor (2.3%), the problem not being solved (2%), the tooth being carved during the filling procedure (1.7%), anesthesia (1%), tooth extraction (0.7%), the dentist practicing without gloves and the concern of infection (0.7%), more modern procedures being not being practiced (0.7%), smell (0.3%) and various procedures being practiced at a single appointment (0.3%), respectively.

The reasons for patients, who were afraid of dental treatment, being afraid were determined as: hurting (31.1%), psychological (26.1%), injection (18.3%), the noises of the tools (13.1%), an unpleasant experience that previously befell me (4.3%), various tools being put into mouth (2.6%), tooth extraction (1.7%), fear of catching an infection (1.7%) and the dentists treating indifferently (0.9%), respectively.

There were no significant differences in general satisfaction with services according to gender ($p=0.426$), age ($p=0.209$), marital status ($p=0.230$) and education ($p=0.213$), while general satisfaction with services showed significant differences according to the level of income ($p=0.036$). It

was determined that patients with a monthly income of 501-1000 Turkish Liras were the most satisfied and patients with an income of 3001 Turkish Liras and more were the least satisfied.

There were no significant differences in patients being afraid of dental treatment according to marital status ($p=0.334$), education ($p=0.091$) and income ($p=0.645$), patients being afraid of dental treatment showed significant differences according to gender ($p=0.012$) and age ($p=0.037$). It was found that women were more afraid of dental treatment than men, patients aged 18 and below were more afraid than others, and patients aged 66 years and above were the least afraid.

Patient Satisfaction Factors in the ODHC and Their Means

Variables that form the patient satisfaction factors in the ODHC, factor loadings and their means have been shown in Table 2. With regard to patient satisfaction factors; satisfaction with the service (2.05 ± 1.15), complaint about the service (3.46 ± 1.34) and dissatisfaction with the physical environment (3.08 ± 1.42) was determined.

Table 2: Patient Satisfaction Factor Loadings And Service Averages

Variables	1. Satisfaction with the service	2. Complaint about the service	3. Dissatisfaction with the physical environment	Average and standard deviation
There is nothing to be afraid of in dental treatment.	0.395			2.18±1.35
I can easily have my dental treatments.	0.561			2.06±1.18
Generally I am satisfied with the ODHC comfort.	0.545			1.95±1.10
Generally the cleanliness was decent.	0.390			1.88±1.04
The examination room was orderly.	0.402			1.71±0.95
The dentist allocated enough time.	0.722			2.09±1.27
The dentist listened to me with interest.	0.784			2.07±1.25
In my opinion, the dentist was well-informed.	0.722			1.79±0.97
I could receive the healthcare service I desired for.	0.692			2.07±1.19
The dentist understood my feelings about my illness.	0.722			1.99±1.09
The explanations of the dentists about the diagnosis were adequate.	0.748			2.03±1.11
The explanations of the dentists about the treatment were adequate.	0.725			2.03±1.12
The dentist answered my questions.	0.715			1.90±1.06
The explanations of the dentists were easy to understand.	0.657			1.95±1.04
I felt like I received psychological support during the treatment.	0.559			2.38±1.29
The personnel who work at the ODHC treat people well.	0.623			1.81±1.02
Generally I was satisfied with the services I had gotten.	0.612			2.09±2.09
Problems with my teeth have a priority for me.		0.446		3.93±1.17
The dentist was not nice to me.		0.509		3.19±1.46
The explanations of the dentist about the results of the procedures were inadequate.		0.649		3.47±1.30

I refrained from asking the dentist questions.		0.614		3.39±1.37
There are services I could not get even though I need them.		0.541		3.14±1.42
Generally I do not find the quality of the ODHC services well.		0.403		2.99±1.43
I do not recommend this institution to a person close to me in case he or she is ill.		0.496		3.76±1.31
Privacy was not cared in the examination room.		0.680		3.65±1.30
I got the feeling that the dentist did not take my problem seriously.		0.636		3.62±1.28
The ODHC interior was unventilated.			0.585	3.20±1.43
It was too noisy inside, I was disturbed.			0.710	3.35±1.35
The characteristics of the building makes the provided services difficult.			0.740	2.96±1.42
I have waited for a long time before the treatment.			0.445	2.81±1.50

The Effect of Socio - Demographic Factors on Patient Satisfaction in the ODHC

It was determined that there was no significant differences in patient satisfaction factors according to age, marital status, income, social security and the absorption state of health expenditures of patients ($p > .05$), (Table 3).

With regard to patient satisfaction factors in the ODHC (Table 3); While a significant difference between the patients' gender and satisfaction with the service ($p = 0.369$) could not be found ($p > .05$), a significant difference between complaint about the service ($p = 0.024$) and dissatisfaction with the physical environment was found ($p < .05$). It was determined that women were more dissatisfied with the physical environment than men. Also the women were more complained about the services. While a significant difference between the education of patients and satisfaction with service ($p = 0.071$) and dissatisfaction with the physical environment ($p = 0.288$) could not be found ($p > .05$), a significant difference was found between complaint about the service ($p < .05$).

It was determined that the ones with a bachelor's degree were the most complained about the service. While a significant difference with the employment of the patients and satisfaction with service ($p = 0.414$) and complaint about the service ($p = 0.864$) was not found ($p = 0.864$), a significant difference was found between dissatisfaction with the physical environment ($p = 0.001$) ($p < .05$). It was determined that the unemployed were more dissatisfied with the physical environment than the employed.

While a significant difference between complaint about the service ($p = 0.129$) and dissatisfaction with the physical environment ($p = 0.989$) was not found with regard to the patients' social security type ($p > .05$), a significant difference was found between satisfaction with the service ($p = 0.012$) ($p < .05$). It was determined that the ones with social insurance institution and insured self-employed

institution were more satisfied with the service than the ones with state retirement fund and others. While a significant difference between the reasons for patients to choose the ODHC and complaint about the service ($p = 0.198$) and dissatisfaction with the physical environment ($p = 0.209$) was not found ($p > .05$), a significant difference was found between satisfaction with the service ($p = 0.011$) ($p < .05$).

It was determined that satisfaction with the service was the most due to decent care, the least due to emergency. With regard to the reapplication states of the patient, while a significant difference was not found between dissatisfaction with the physical environment ($p = 0.416$) ($p > .05$), a significant difference was found between satisfaction with the service and complaint about the service ($p = 0.001$) ($p < .05$). It was determined that the ones who had reapplied to the ODHC were more satisfied with the service than the ones who did not reapply and were indecisive. The more the patients are satisfied with the ODHC services, the more they are inclined to prefer again. While a significant difference between the patients state of recommending the ODHC and dissatisfaction with the physical environment ($p = 0.206$) was not found ($p > .05$), a significant difference between satisfaction with the service ($p = 0.000$) and complaint about the service ($p = 0.002$) was found ($p < .05$).

It was determined that the ones who were going to recommend the ODHC were more satisfied with the service than the ones who were not going to recommend and were indecisive. While a significant difference between the views of patients regarding the dental treatment charges and satisfaction with the service ($p = 0.213$) was not found ($p > .05$), a statistically significant difference was found between complaint about the service ($p = 0.003$) and dissatisfaction with the physical environment ($p = 0.022$) ($p < .05$). It was determined that the ones who had found the dental treatment charges cheap were more complained about the service, as for the ones who had found the dental treatment charges expensive, they were more dissatisfied with the physical environment.

Table 3: The Effects of Socio-Demographic Variables on Patient Satisfaction in The ODHC.

Factors		Satisfaction with the service		Complaint about the service		Dissatisfaction with the physical environment	
Socio-demographic variables							
Variables	Groups	Mean rank	p	Mean rank	p	Mean rank	p
Gender	Male	145.35	0.369	137.56	0.024*	137.57	0.024*
	Female	154.44		160.40		160.39	
Age	18 years and younger	153.60	0.247	144.9	0.183	169.31	0.331
	19-30	135.38		160.69		147.63	
	31-40	163.7		157.68		140.45	
	41-50	157.37		126.65		147.14	
	51-65	152.32		158.2		156.3	
	Older than 65	120.27		122.53		189.87	
Marital status	Married	156.08	0.178	146.11	0.289	155.57	0.222
	Single	142.35		156.91		143.11	
Education	Primary	161.54	0.071	137.35	0.019*	168.77	0.288
	Secondary	141.14		143.79		154.43	
	High school or equivalent	137.26		141.24		148.03	
	Bachelor's degree (university)	166.09		175.3		140.81	
Employment status	Employed	153.68	0.414	149.83	0.864	137.16	0.001*
	Unemployed	145.23		151.61		172.57	
Income (TRY)	500 and below	148.69	0.779	146.65	0.971	168.37	0.081
	501-1000	144.26		152.2		151.48	
	1001-3000	154.71		151.04		143.15	
	3001 and above	160.18		153.89		123.96	
Social security	Present	150.97	0.753	151.73	0.406	149.35	0.436
	Not present	145.15		136.40		163.73	
Social security type	State retirement fund	160.24	0.012*	143.16	0.129	138.55	0.989
	Social insurance institution	126.87		141.02		137.45	
	Insuranced self-employed institution	126.14		130.76		141.86	
	Other (private insurance and out of pocket)	156.40		82.40		144.00	
Provision of health expenses	By their own means	127.07	0.268	147.25	0.979	150.11	0.561
	By SSI/ insurance	150.21		150.55		148.10	
	Through the family	163.75		151.84		163.43	
The reason for ODHC preference	Health insurance	159.74	0.011*	147.7	0.198	150.11	0.209
	Urgency	193.13		148.67		193	
	Being an acquaintance	141.09		181.22		158.83	
	Being close	121.89		113.72		121.94	
	Decent care	116.73		163.11		153.96	
	Being cheap	145.56		145.94		125.56	
Generally with the service	Satisfied	135.51	0.000*	159.22	0.001*	151.74	0.416
	Dissatisfied	243.2		102.63		161.2	
	Has no idea	202.87		115.43		132.07	
To the ODHC	Would reapply	136.76	0.000*	158.64	0.002*	153.01	0.206
	Would not reapply	259.03		98.84		165.34	
	Has no idea	192.28		120.54		128.62	
The ODHC	Would recommend	161.52	0.083	154.24	0.556	144.34	0.332
	Would not recommend	143.65		148.18		154.33	
	Has no idea	113.56	0.213	142.11	0.003*	99.78	0.022*
Form the dental treatment	Afraid	146.86	0.213	166.76	0.003*	155.73	0.022*
	Not afraid	149.78		131.13		163.25	
Dental treatment charges	Cheap	113.56	0.213	142.11	0.003*	99.78	0.022*
	Normal	146.86		166.76		155.73	
	Expensive	149.78		131.13		163.25	
	Has no idea	169.75		124.5		125.27	

DISCUSSION

In the evaluation of the services provided at ODHC's, the effect of dissatisfaction with the patient satisfaction increases and are accepted as indicators of the success of these centers. In Turkey, ODHC's are effective, public

centers in which oral and dental information is provided and care and treatment are practiced. In the present study, the patients' satisfaction with the service was found to be high, complaint about the service was low and dissatisfaction with the physical environment was at a medium level. It can be

said that the patients evaluate ODHC services as positive, but the physical environment as negative. Also, in the study, a significant difference between gender, education, employment, type of social security, dental treatment charge, reason for preferring the ODHC, reapplication and recommending and patient satisfaction factors, was found. In fact, some study findings showed that socio-demographic factors were not important indicators in dental patient satisfaction [2,7].

Similar to the study, it was determined that age was not an indicator in patient satisfaction [2,8], as for some, it was an indicator contrary to the study; satisfaction with dental services increased with age [9], older patients were more satisfied than younger patients [4,5]. Also, women being more dissatisfied with the services and physical environment in the study can be explained with women's level of expectations being higher and their sensitive approach. Also, men could have encountered the services more. Some study findings have shown contrarily to the study that women were more satisfied with the services than men [1,4,5,8]. Some others have presented that gender does not have an effect on satisfaction [9], gender is not important in the choice of the dentist [10]. Although there are different study results, gender is an important indicator in dental patient satisfaction.

The ones with a bachelor's degree being the most dissatisfied shows that expectations increase with higher education. Contrary to the present study, in one study, it was found that as the level of education increased, so did satisfaction [5]. Also, the ones with social insurance institution and insured self-employed institution being more satisfied with the service than the ones who are state retirement fund and private insurance members presents that the expectations of the ones with social insurance institution and insured self-employed institution are low. Similar to the study, study findings show that there is a significant difference between patient satisfaction with dental services and the social security type, but contrary to the study, patients who are dependent on state retirement fund are more satisfied than others [2].

It can be mentioned that the type of social security has an effect on patient satisfaction. The ones who are unemployed being more dissatisfied with the physical environment can be explained with the ones being unemployed not being familiar to the working environment. Contrary to the study, in studies, it was found that most of the patients were satisfied with the physical environment, the attitude of and the explanation of the diagnosis and the treatment by the dentist [2], the services and the clinical environment [11]. Although the physical environment and clinical facilities are not thought to be as important as the other factors in determining patient satisfaction, for instance, cleanliness, comfort, music etc. have been conferred to have an effect on patients [4]. Also, in studies, it was determined that patients were satisfied with oral care on a medium level [1]. and dentist services on a low level [12,13].

Another factor in dental patients' satisfaction is dental fear. In a study, when the ones who were afraid were compared to the ones who were not afraid, it was determined that the ones who were afraid were more dissatisfied with dental care [4]. However, in the study, a significant difference between dental fear and patient satisfaction was not found.

Results that are similar to the study were obtained by Sur et al. [2]. It has been conferred that different results regarding dental fear are obtained from studies and its importance has been emphasized.

Similar to the study, it is determined that the majority of patients prefer public institutions due to health insurance [2]. It has been determined that, the ones who prefer ODHC due to provision of good service are the most, however, the ones who prefer due to emergency are the least. In Turkey health insurance is not required in state of emergency at ODHCs. Ones who have toothache usually contact emergency service. A survey also indicated that ones who have toothache and receive emergency dental services are less satisfied [9]. It can be seen that the issue at the moment of contact to ER and the reason to prefer ODHC determine dental satisfaction.

It is discovered that lowest-income patients are most pleased with ODHC, while highest-income patients are pleased least. However, it is clarified that ones who think dental treatment charges are cheap are dissatisfied with more services. Similarly to this survey, another survey outcome stated that high-income people are less satisfied than low-income ones in terms of oral and dental care [4]. It is stated that costs have a negative effect on patient satisfaction [1]. Income is significant in terms of patient satisfaction. Those different outcomes may be a result of different survey methods, different working environments or alternative environmental effects.

Oral and dental health and satisfaction of patients are significant for constant development of services because this will affect the use of services. Satisfied patients will use service again and advice to others. What is more, such patients will be more optimistic during dental treatment, will be more loyal to clinical advices and planned visitation and complain less [11]. Surveys of Wilson et al. pointed out that dental treatment raises patient satisfaction and vast majority of patients contact to clinics again [14]. A correlation and interaction exist between patient satisfaction and loyalty [7]. Similar to the survey, it is found out that majority of patients are keen to advice an implementation which satisfy them to others [15]. However, it is stated that patients usually are not able to remember dentists' briefings and advices in long term [16].

Within this context regular consultation and repeated briefings and advices are important for patient loyalty. The more patients are satisfied with ODHC the more they tend to prefer it once more. It may be difficult to access to current services unless awareness and society's expectations are increased [17]. Within this framework psycho-social factors that prevent the access to dental and oral health services and appear for both patient and dentist have to be evaluated. Occupational stress of dentist and dental fear of patient reduce the access to regular services. They both live in concern and strive to get through [18]. Therefore the factors which prevent access to services have to be identified and resolved. Moreover, patients' satisfaction decreases when their expectations are not fulfilled. Patients certainly expect to get better by getting rid of symptoms and reasons of their problems. In that sense the patient-dentist relationship is also significant [19].

Information in care and treatment process ensures that patients follow the dentist's and other personnel's advices.

Speaking the language the patients understand the best increases satisfaction [5]. Not just with regard to the desired service, knowing the patients expectations with regard to the minimum acceptable and adequate service is required [4]. Patient satisfaction studies will also reveal patient expectations and with the meeting these expectations by health institutions, patient satisfaction will be ensured.

CONCLUSION

It was determined that socio-demographic factors have an effect on patient satisfaction in the ODHC. In line with the study results; architectural adjustments should be made primarily in ODHC waiting rooms, ventilation system should be activated, comfort of the physical environment should be ensured and the appointment system should be reorganized. Also, in order to improve patient and employee communication, in service training on subjects such as communication, listening, body language, cultural skills and patient management should be provided and high professional behavior standards should be developed. Additionally, changes in practice policies should be made for the effectiveness and efficiency of the services in the ODHC, preventative dentistry should be activated urgently in the country. Thus, by practicing oral and dental health with the regular controls, dental health problems, primarily caries, will be prevented.

As expected, the study will contribute to the efforts of health politicians and health managers to ensure patient satisfaction and improve the services constantly in the ODHC s. Carrying out of more specific and comprehensive studies is advised.

Conflict of Interest/ Competing interests

The authors declare that they have no competing interests.

ACKNOWLEDGMENT

The authors would like to thank all patients who took part in this study.

REFERENCES

1. Kikwilu AN, Kahabuka FK, Masalu JR, Senkoro A. Satisfaction with urgent oral care among adult Tanzanians. *J Oral Sci* 2009;51(1):47-54.
2. Sur H, Hayran O, Yildirim C, Mumcu G. Patient satisfaction in dental outpatient clinics in Turkey. *Croat Med J* 2004;45(5):651-4.
3. Mascarenhas AK, Vig K, Joo BH. Parents' satisfaction with their child's orthodontic care: A comparison of orthodontists and pediatric dentists. *Pediatr Dent* 2005;27(6):451-6.
4. Newsome PR, Wright GH. A review of patient satisfaction: 2. Dental patient satisfaction: An appraisal of recent literature. *Br Dent J* 1999;186(4):166-70.
5. Horowitz AM, Wang MQ, Kleinman DV. Opinions of Maryland adults regarding communication practices of dentists and staff. *J Health Commun* 2012;17(10):1204-14.
6. Turkey Republic Ministry of Health, General directorate of health research annals of health statistics. (Ed. BB Basara, C Guler, GK Yentur), mh publication no: 956, *Sentez Publishing*, Ankara, 2014. p.85-150.
7. Caruana A, Fenech N. The effect of perceived value and overall satisfaction on loyalty: A study among dental patients. *J Med Mark* 2005;5(3):245-55.
8. Gopalakrishna P, Munnalene V. Influencing satisfaction for dental services. *J Health Care Mark* 1993;13:16-22.
9. Mussard J, Ashley FA, Newton JT, Kendall N, Crayford TJ. What do you think of your dentist? A dental practice assessment questionnaire. *J Eval Clin Pract* 2008;14(2):181-4.
10. Furnham A, Swami V. Patient preferences for dentists. *Psychol Health Med* 2009;14(2):143-9.
11. Mahrous MS, Hifnawy T. Patient satisfaction from dental services provided by the College of Dentistry, Taibah University, Saudi Arabia. *Journal of Taibah University Medical Sciences* 2012; 7(2):104-9.
12. Ohrn K, Hakeberg M, Abrahamsson KH. Dental beliefs, patients' specific attitudes towards dentists and dental hygienists: A comparative study. *Int J Dent Hyg* 2008;6:205-13.
13. Sun N, Burnside G, Harris R. Patient satisfaction with care by dental therapists. *Br Dent J* 2010;208(5):212-3.
14. Wilson K, Bouchiba M, Vithlani G, Holmes R. Patient satisfaction with oral urgent treatment (OUT) in North West Tanzania. *Br Dent J* 2013;215(3):131-4.
15. Youk SY, Lee JH, Park JM, Heo SJ, Roh HK, Park EJ, Shin IH. A survey of the satisfaction of patients who have undergone implant surgery with and without employing a computer-guided implant surgical template. *J Adv Prosthodont* 2014;6(5):395-405.
16. Misra S, Daly B, Dunne S, Millar B, Packer M, Asimakopoulou K. Dentist-patient communication: What do patients and dentists remember following a consultation? Implications for patient compliance. *Patient Prefer Adherence* 2013;7:543-9.
17. Anderson R, Thomas DW, Phillips CJ. The effectiveness of out-of-hours dental services: II. patient satisfaction. *Br Dent J* 2005;198(3):151-6.
18. Freeman R. Barriers to accessing dental care: dental health professional factors. *Br Dent J* 1999;187(4):197-200.
19. Anderson R. Patient expectations of emergency dental services: A qualitative interview study. *Br Dent J* 2004;197(6):331-4.

*Corresponding author: Aygul Yanik
E-Mail: aaygul.moon@gmail.com