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Analysis of Factors affecting the Patient's Service Satisfaction in Kimhae Dental Hospital

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김해 치과 의료기관의 치과진료 만족도 요인분석

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Abstract   In order to meet the medical demand according to the changing medical environment and to provide patients with quality dental treatment and improve treating environment by establishing reasonable management plan, with 149 patients for whom continuous dental health program has been applied, the degree of satisfaction with the dental treatment, and the influence factors on the satisfaction were investigated. Using the SPSS Ver. 13.0, mean value analysis were performed on the satisfactions with dental care service and the quality of dental care service according to general characteristics, and regression analysis were performed on the influence of general characteristics and the degree of satisfaction with dental care service on the satisfaction of dental treatment. The result of the multiple regression analysis revealed the human (staff), environment, and the procedure of treatment as the influence factors of the satisfaction with dental treatment. Systematic management and training should be implemented to improve the quality of dental care service and enhance the satisfaction.

Key words   Factors, Patient's service satisfaction

Introduction

Recently, the increased awareness of the general public towards health, and due to the diverse information provided by the mass media, change in the awareness of the medical service' satisfaction level took place. Compared to the past when the patients could not afford to select medical institutions, the medical market grew externally to the point that the patients can now enjoy a wide selection of medical institutions to choose from. As the general medical insurance is implemented, as the citizens' income and education increased and as the citizens' awareness that they are entitled to medical service to safeguard their health increased due to the improved social welfare, which in turn drastically increased the demand for quality medical service, medical service is now considered a product and the patients are now con-

sidered customers[1]. Therefore, individual dental institutions are trying to provide quality medical service as a strategy for securing competitive advantage, and the patients' satisfaction level is becoming an important medium that significantly affect the results of providing medical service.

Patients' satisfaction level is the representative index for evaluating the quality of medical service. It provides information on the overall satisfaction level, mutual relationship, medical technology and dentistry results[2-3] while contributing to the health results at the same time[4-5]. Use of the medical service and patients' satisfaction are considered as the relationship and process of interaction[6]. Moreover, as the awareness that the patients' satisfaction is an important factor that determines quality medical service expands, the American Public Health Association defines quality diagnosis as the patients' satisfaction and satisfaction of the suppliers[7-8]. Therefore, activities from the patients' viewpoint are emphasized when it comes to the series of activities that

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guarantees quality of medical service that evaluates and improves the quality of medical service. The awareness is such that increasing patients' satisfaction level is considered important for ensuring repeat visit by the patients and for motivating them to refer the services to their acquaintances. Kim[9] Suggested kindness of the medical care is the foremost factor that affects patients' satisfaction level. Lee[10] reported that the patients' satisfaction level is higher when the satisfaction level towards the results of treatment is higher.

While Hong et al.[11] reported that the awareness on the quality of medical service provided by the dentists and dental sanitation specialists when it comes to the overall quality of medical service tended to be more positive compared to the awareness on the external factors or on the medical examination and treatment procedure. The authors said that the role of dental sanitation specialists is important to improve the quality of dental service, and to increase patients' satisfaction level, willingness to use the service once again, and to refer the service to others. Chung et al.[12] suggested factors that directly affect willingness to re-use a hospital are expectation level towards a hospital, reliability of the medical cadre, accessibility to the diagnosis, expenses for diagnosis and patients' satisfaction level whereas the direct factors that influence willingness to refer are expectation level towards a hospital and reliability of the medical cadre, accessibility to the diagnosis, and patients' satisfaction level. Kasteler[13] and Dimatteo[14] said that the quality medical service significantly affect increase in patients' satisfaction level. Meanwhile, Zifko-Balig and Krampf[15] said that no matter how accurate a doctor's diagnosis and treatment may be, if a patient does not feel the affect or feel some kind of discomfort, then it cannot be said that quality medical service was provided. Moreover, they reported that the quality of medical service is most affected by the standard that the patients evaluate on their own.

It is possible to know that besides the results of dental treatment, satisfaction level on the quality of medical service perceived by the patients is also an important element for evaluating the quality of medical service. To this, increasing patients' satisfaction level when it comes to the dental service is an issue that requires significant attention for the medical policy and hospital management. Moreover, it is very important in the sense that it is one of the approaches for understanding the quality of medical service.

To improve the quality of medical service, it is necessary to address rapid growth and changes in the value system that are taking place these days at the economic and cultural levels. Furthermore, it is necessary to take an interest in the demands made by the patients and how they perceive hospital services to seek out the root causes of their complaints, in order to review, analyze and to make necessary corrections [16].

In other words, research on the dental service that is provided by the dental institutions is urgently called for as a measure for increasing the quality of medical service and the profit of the dental institutions at the dental institutions' rational management measure level when it comes to the changes taking place in the logic of the sanitary and medical environment in order to meet the patients' demands and to address the waves of libe-ralization[17].

The purpose of this study was to analyze of factors associated with the patient's satisfaction in Kimhae dental hospital and to provide the basic data that may bring about quality medical service and improved diagnosis environment appropriate for the dental institutions' management environment.

Subjects and methods

1. Subjects

This study surveyed based on the individual self-administered questionnaire survey method when it comes to the questionnaires that were distributed to the patients who came for help at the Hospital N located in Kimhae from July 15 to August 14, 2007. The study targets are the 160 patient's of the Hospital N who were registered as the patient's subject to continual oral cavity management who visited the hospital during the above mentioned period. Total of 149 subjects except for the 11 who did not answer at least one question were included in this study.

2. Method

To identify satisfaction level towards dental service, past research literature was examined to study general characteristics, patient's service satisfaction, satisfaction level on the quality of dental service, willingness to recommend the dental service to others afterwards and so forth. Patient's service satisfaction is comprised of three questions on the employee factor, four questions on the internal environment factors, two questions on the external environment factors and three questions on the diag-

nosis procedure. Quality of patient's service satisfactions comprised of five questions on kindness, five questions on the quality of dental service, and one question on the reliability. Each survey question used the Likert 5 scale measure to organize the findings into; "not very" (1 point), "not" (2 points), "average" (3 points), "yes" (4 points) and "yes very" (5points). And the research studies the willingness to refer the service to others, which is considered one of the outcomes of the patient's satisfaction.

3. Data analysis method

SPSS Ver 13.0 was used for data analysis, and frequency analysis was conducted for the study targets' general characteristics. Visiting frequency of dental hospital to general characteristics, type of dental service, and the willingness to refer the service to others were subjected to the Chi-square test. Factors affecting patient's service satisfaction to general characteristics, and quality of patient's service satisfaction were analyzed using t-test, and one-way ANOVA was used for the average analysis, and multiple regression analysis was conducted to examine the effect of the general characteristics and patient's service satisfaction.

Results

1. General characteristics of subject

46.3% and 53.7% of the study targets were male and female, respectively with greater number of female targets. As for the age groups, less than 30 years old took up 7.4% while 31-40 years old comprised 23.5%, 41-50

Table 1. Subject general characteristics

Variable		No	%
Gender	Male	69	46.3
	Female	80	53.7
Age	Less than 30 years old	11	7.4
	31-40 years old	35	23.5
	41-50 years old	55	36.9
	More than 51 years old	48	32.2
Education	Junior high graduate	14	9.4
	High school graduate	73	49.0
	University graduate	62	41.6
Job	Employed	104	69.8
	Unemployed	45	30.2
Income	Less than 2,000,000	45	30.2
	2,000,000-2,990,000	57	38.3
	More than 3,000,000	47	31.5
Total		149	100.0

years old comprised 36.9%, and more than 51 years old comprised 32.2%. As for the education, those who are junior high school graduates comprise 9.4%, while high school graduates comprise 49.0% and university graduates comprise 41.6%. Employed targets comprise 69.8%, while unemployed people comprise 30.2%. As for the income, less than 2,000,000 comprise 30.2%, 2,000,000-2,990,000 comprise 38.3% and more than 3,000,000 comprise 31.5% (Table 1).

2. Visiting Frequency of dental hospital to general characteristics

As for the experience of visiting dentistry by gender, 43.5% of the male targets visited more than 16 times, while 45.0% of the female targets visited 11~15 times.

Table 2. Visiting Frequency of dental hospital to general characteristics

Variables		Visiting Frequency of dental hospital				
		1-5 times	6-10 times	11-15 times	More than 16 times	Total
Gender	Male	3(4.3)	19(27.5)	17(24.6)	30(43.5)	69(100.0)
	Female	8(10.0)	15(18.8)	36(45.0)	21(26.3)	80(100.0)
Age	Less than 30 years old	3(27.3)	7(63.6)	1(9.1)		11(100.0)
	31-40 years old	6(17.1)	19(54.3)	8(22.9)	2(5.7)	35(100.0)
	41-50 years old		6(10.9)	35(63.6)	14(25.5)	55(100.0)
	More than 51 years old	2(4.2)	2(4.2)	9(18.8)	35(72.9)	48(100.0)
Education	Junior high graduate	2(14.3)	1(7.1)	7(50.0)	4(28.6)	14(100.0)
	High school graduate	1(1.4)	14(19.2)	32(43.8)	26(35.6)	73(100.0)
	University graduate	8(12.9)	19(30.6)	14(22.6)	21(33.9)	62(100.0)
Job	Employed	6(5.8)	25(24.0)	33(31.7)	40(38.5)	104(100.0)
	Unemployed	5(11.1)	9(20.0)	20(44.4)	11(24.4)	45(100.0)
Income	Less than 2,000,000	8(17.8)	13(28.9)	15(33.3)	9(20.0)	45(100.0)
	2,000,000-2,990,000	3(5.3)	18(31.6)	27(47.4)	9(15.8)	57(100.0)
	More than 3,000,000		3(6.4)	11(23.4)	33(70.2)	47(100.0)
	Total	11(7.4)	34(22.8)	53(35.6)	51(34.2)	149(100.0)

As for the age groups, less than 30 years old visited 6-10 times, 31-40 years old visited 6-10 times, 41-50 years old visited 11-15 times, and more than 51 years old visited more than 16 times. Likewise, visit to dentist increased with age. As for the education, junior high graduate visited 11-15 times, high school graduates visited 11-15 times and university graduates visited more than 16 times. Likewise, visit to dentist increased with education. People who are employed visited more than 16 times while unemployed people visited 11-15 times. As for the income, less than 2,000,000 visited 11-15 times, 2,000,000-2,990,000 visited 11-15 times, and more than 3,000,000 visited more than 16 times. Likewise, visit to dentist increased with income (Table 2).

3. Type of dental service to general characteristics

When the type of dental service depending on gender is examined, male targets sought after surgery implant (36.2%), dental prosthesis (24.6%), and periodontal diagnosis (10.1%) while female targets sought after dental prosthesis (27.5%), periodontal diagnosis (26.3%) and surgery implant (20.0%). As for the age, less than 30 years old sought mostly after the preservation diagnosis with 36.4% while 30-40 years old pursued after dental

prosthesis, 41-50 years old pursued after dental prosthesis, and more than 51 years old pursued after surgery implant with 47.9%. As for the education, junior high graduates pursued after periodontal diagnosis with 42.9%, high school graduates pursued after surgery implant with 35.6% and university graduates pursued after dental prosthesis with 22.6%. Employed targets pursued after surgery implant with 30.8% while unemployed targets pursued mostly after dental prosthesis with 28.9%. As for the income, less than 2,000,000 pursued mostly after surgery implant with 24.4%, 2,000,000-2,990,000 pursued mostly after dental prosthesis with 36.8% and more than 3,000,000 pursued mostly after surgery implant with42.6% (Table 3).

4. Reliability of factors affecting patient's satisfaction

Table 4 demonstrates the results of analyzing reliability level by factors affecting patient's satisfaction When each survey component is examined, reliability level was highest for the quality of dental service with 0.890 while reliability level for the external environment factors was the lowest with 0.572. As for the patient's service satisfaction, reliability was the highest with 4.11, followed by the quality of dental service with 4.08 and internal

Table 3. Type of dental service to general characteristics

Variables		Type of dental service							
		Dental prosthesis	Preservation diagnosis	Infant diagnosis	Periodontal diagnosis	Preventive diagnosis	Surgery implant	Continual care	Total
Gender	Male	17(24.6)	6(8.7)	4(5.8)	7(10.1)	6(8.7)	25(36.2)	4(5.8)	69(100.0)
	Female	22(27.5)	9(11.3)	6(7.5)	21(26.3)	1(1.3)	16(20.0)	5(6.3)	80(100.0)
Age	Less than 30 years old	2(18.2)	4(36.4)	2(18.2)		2(18.2)	1(9.1)		11(100.0)
	31-40 years old	11(31.4)	7(20.0)	7(20.0)	2(5.7)	3(8.6)	3(8.6)	2(5.7)	35(100.0)
	41-50 years old	22(40.0)	2(3.6)		14(25.5)	1(1.8)	14(25.5)	2(3.6)	55(100.0)
	More than 51 years old	4(8.3)	2(4.2)	1(2.1)	12(25.0)	1(2.1)	23(47.9)	5(10.4)	48(100.0)
Education	Junior high graduate	2(14.3)	1(7.1)		6(42.9)		2(14.3)	3(21.4)	14(100.0)
	high school graduate	23(31.5)	6(8.2)	2(2.7)	11(15.1)	2(2.7)	26(35.6)	3(4.1)	73(100.0)
	University graduate	14(22.6)	8(12.9)	8(12.9)	11(17.7)	5(8.1)	13(21.0)	3(4.8)	62(100.0)
Job	Employed	26(25.0)	10(9.6)	6(5.8)	18(17.3)	6(5.8)	32(30.8)	6(5.8)	104(100.0)
	Unemployed	13(28.9)	5(11.1)	4(8.9)	10(22.2)	1(2.2)	9(20.0)	3(6.7)	45(100.0)
Income	Less than 2,000,000	8(17.8)	7(15.6)	4(8.9)	9(20.0)	3(6.7)	11(24.4)	3(6.7)	45(100.0)
	2,000,000-2,990,000	21(36.8)	7(12.3)	6(10.5)	10(17.5)		10(17.5)	3(5.3)	57(100.0)
	More than 3,000,000	10(21.3)	1(2.1)		9(19.1)	4(8.5)	20(42.6)	3(6.4)	47(100.0)
	Total	39(26.2)	15(10.1)	10(6.7)	28(18.8)	7(4.7)	41(27.5)	9(6.0)	149(100.0)

Table 4. Reliability of factors affecting patient's satisfaction

Components	Cronbach' α	Average±standard deviation
Employee factor	0.810	3.98±0.61
Internal environment factors	0.837	4.06±0.57
External environment factors	0.572	3.92±0.67
Medical examination and treatment procedure	0.695	3.77±0.60
Kindness	0.819	4.00±0.57
Quality of dental service	0.890	4.08±0.59
Reliability		4.11±0.66

environment factors with 4.06. Satisfaction level on the medical examination and treatment procedure was the lowest with 3.77.

5. Factors affecting patient's service satisfaction to general characteristics

Gender patient's service satisfaction was manifested the highest among the male targets when it comes to the employee factor, internal environment factors, external environment factors and medical examination and treatment procedure. As for the satisfaction level towards employee factor, it was 4.13 in male targets, which is significantly higher than that of the female with 3.86

($p < 0.05$). Satisfaction level towards medical examination and treatment procedure was 3.88 when it comes to male targets, which is also statistically significant increase compared to the female targets with 3.68 ($p < 0.05$). As for the patient's service satisfaction by age, satisfaction level for the employee factor, internal environment factors, external environment factors, and medical examination and treatment procedure was high for the 31-40 year olds. As for the education, satisfaction level for the employee factor, internal environment factors, and medical examination and treatment procedure except for the external environment factors when it comes to the low education (junior high graduate) was high. Compared to the unemployed targets, the employed targets manifested higher satisfaction level for the employee factor, internal environment factors, external environment factors, and medical examination and treatment procedure. As for the employee factor, people who are employed manifested statistically significant difference compared to the unemployed targets (3.83) with 4.05 ($p < 0.05$). As for the patient's service satisfaction by income, less than 2,000,000 manifested high satisfaction level when it comes to the internal environment factors, external environment factors, and medical examination and treatment procedure except for the employee factor (Table 5).

Table 5. Factors affecting patient's service satisfaction to general characteristics

Variables		Patient's service satisfaction (n=149)			
		Employee factor	Internal environment factors	External environment factors	Medical examination and treatment procedure
Gender	Male	4.13±0.60	4.15±0.58	3.97±0.71	3.88±0.62
	Female	3.86±3.86	3.99±0.56	3.89±0.64	3.68±0.57
		p=0.007	p=0.093	p=0.486	p=0.036
Age	Less than 30 years old	3.91±0.47	3.93±0.59	3.82±0.68	3.79±0.48
	31-40 years	4.09±0.48	4.16±0.43	4.11±0.67	3.86±0.47
	41-50 years	3.84±0.65	3.99±0.57	3.90±0.65	3.68±0.64
	More than 51 years old	4.08±0.64	4.11±0.66	3.85±0.70	3.82±0.66
		p=0.140	p=0.411	p=0.304	p=0.505
Education	Junior high graduate	4.19±0.45	4.13±0.44	3.71±0.51	3.83±0.55
	High school graduate	3.92±0.65	4.04±0.59	3.96±0.72	3.79±0.66
	University graduate	4.01±0.58	4.08±0.58	3.94±0.65	3.74±0.54
		p=0.271	p=0.835	p=0.453	p=0.793
Job	Employed	4.05±0.65	4.12±0.62	4.00±0.66	3.82±0.64
	Unemployed	3.83±0.45	3.94±0.43	3.78±0.69	3.67±0.49
		p=0.043	p=0.094	p=0.070	p=0.149
Income	Less than 2,000,000	4.01±0.79	4.15±0.49	3.99±0.66	3.84±0.55
	2,000,000-2,990,000	3.87±0.59	3.94±0.54	3.88±0.70	3.73±0.60
	More than 3,000,000	4.09±0.70	4.13±0.67	3.94±0.66	3.76±0.64
		p=0.149	p=0.126	p=0.708	p=0.624

p- value by t-test or ANOVA

6. Quality of patient's service satisfaction by general characteristics

As for the gender satisfaction level on the quality of dental service, kindness, quality of dental service and reliability were high in the male targets. Quality of dental service for the male targets was 4.20, which is significantly higher than that of the female with 3.98 ($p < 0.05$). As for the age, satisfaction level for the kindness, quality of dental service and reliability was high among 31-40 year olds. As for the education, satisfaction level towards kindness, quality of dental service and reliability was highest among junior high graduates compared to those from other age groups. Compared with the unemployed, satisfaction level of the people who are employed was relatively higher. As for the quality of dental service, there was statistically significant difference among the people who are employed (4.16) and people who are unemployed (3.89) ($p < 0.05$). As for the income, satisfaction level towards kindness, quality of dental service and reliability was high among the people with less than 2,000,000 (Table 6).

7. Recommendation thought to general characteristics

As for the percentage of the targets who replied that they willing to refer the service to others after the dental care, 46.9% and 53.1% of the male and female tar-

gets, respectively, said yes. As for the age group, 41~50 year olds were the highest with 37.4% while less than 30 year olds took up the lowest with 7.5%. As for the education, high school graduates comprised 49.0%, university graduates comprised 42.2% and junior high graduates comprised 8.8%. People who are employed comprised 70.1%, which is higher than that of the unemployed targets with 29.9%. As for the income, 38.8%, 32.0% and 29.3% of the 2,000,000~2,990,000, more than 3,000,000 and less than 2,000,000 said yes, respectively (Table 7).

8. Relation between factors affecting patient's satisfaction and general characteristics

Multiple regression was conducted to identify the effect of each general characteristics and factors affecting patient's satisfaction and general characteristics. Patient's satisfaction was set as a dependant variable while employee factor, internal environment factors, external environment factors and medical examination and treatment procedure were set as independent variables. The independent variables explained 50.6% of the patient's satisfaction. When the satisfaction level for the employee factor is higher, when the satisfaction level for the internal environment factors is higher, when the satisfaction level on the external environment factors is higher, and when the satisfaction level for the medical

Table 6. Quality of patient's service satisfaction to general characteristics

Variables		Quality of patient's service satisfaction (n=149)		
		Kindness	Qualityof dental service	Reliability
Gender	Male	4.09±0.57	4.20±0.56	4.20±0.68
	Female	3.93±0.56	3.98±0.60	4.04±0.65
		p=0.075	p=0.027	p=0.129
Age	Less than 30 years old	3.95±0.57	3.93±0.58	4.18±0.75
	31-40 years	4.11±0.45	4.14±0.48	4.20±0.58
	41-50 years	3.92±0.57	4.04±0.57	4.00±0.64
	More than 51 years old	4.04±0.63	4.12±0.69	4.07±0.72
		p=0.404	p=0.688	p=0.455
Education	Junior high graduate	4.19±0.42	4.17±0.44	4.29±0.47
	High school graduate	3.96±0.60	4.04±0.62	4.05±0.71
	University graduate	4.01±0.55	4.11±0.60	4.15±0.65
		p=0.407	p=0.672	p=0.439
Job	Employed	4.05±0.61	4.16±0.64	4.16±0.73
	Unemployed	3.89±0.43	3.89±0.42	4.00±0.48
		p=0.116	p=0.010	p=0.168
Income	Less than 2,000,000	4.10±0.53	4.16±0.52	4.22±0.60
	2,000,000-2,990,000	3.96±0.51	3.99±0.54	4.00±0.66
	More than 3,000,000	3.97±0.66	4.12±0.70	4.15±0.72
		p=0.380	p=0.316	p=0.223

p- value by t-test or ANOVA

Table 7. Recommendation thought to general characteristics

Variables		Recommendation thought		
		Yes	No	Total
Gender	Male	69(46.9)		69(46.3)
	Female	78(53.1)	2(100.0)	80(53.7)
		p=0.186		
Age	Less than 30 years old	11(7.5)		11(7.4)
	31-40 years	34(23.1)	1(50.0)	35(23.5)
	41-50 years	55(37.4)		55(36.9)
	More than 51 years old	47(32.0)	1(50.0)	48(32.2)
		p=0.636		
Education	Junior high graduate	13(8.8)	1(50.0)	14(9.4)
	High school graduate	72(49.0)	1(50.0)	73(49.0)
	University graduate	62(42.2)		62(41.6)
		p=0.111		
Job	Employed	103(70.1)	1(50.0)	104(69.8)
	Unemployed	44(29.9)	1(50.0)	45(30.2)
		p=0.539		
Income	Less than 2,000,000	43(29.3)	2(100.0)	45(30.2)
Level	2,000,000-2,990,000	57(38.8)		57(38.3)
	More than 3,000,000	47(32.0)		47(31.5)
		p=0.096		
	Total	147(100.0)	2(100.0)	149(100.0)

p- value by t-test or ANOVA

Table 8. Relation between factors affecting patient's satisfaction and general characteristics

Variables	Relation between factors affecting patient's satisfaction and general characteristics					
	Coefficient of regression	t	p	Coefficient of regression	t	p
Employee	0.257	2.177	0.031	0.261	2.144	0.034
Internal environment	0.049	0.373	0.710	0.048	0.362	0.718
External environment	0.172	2.358	0.020	0.187	2.496	0.014
Medical examination and treatment procedure	0.410	3.819	0.000	0.393	3.578	0.000
Gender				-0.115	-1.161	0.248
Age				0.013	0.244	0.807
Education				0.018	0.230	0.818
Job				0.144	1.318	0.190
Income				-0.040	-0.673	0.502
R^2=0.506 F=36.866				R^2=0.514 F=16.323		

examination and treatment procedure is higher, satisfaction level towards dental service was higher. Employee factor, external environment factors, and medical examination and treatment procedure were the variables that significantly affected patient's satisfaction $(p < 0.05)$. When the general characteristics were added on as independent variables, the model's ability to explain was 51.4%. When the satisfaction level for the employee factor, internal environment factors, external environment factors, and medical examination and treatment procedure was higher, patient's satisfaction was higher in male, employedand lower income. As for the employee

factor, external environment factors, and medical examination and treatment procedure, they were variables that affected patient's satisfaction $(p < 0.05)$(Table 8).

Discussion

The Korean medical institutions entered into the age of unlimited competition due to the large companies' entry into the hospital business, allowance of hospitals'pursuit of profit, introduction of private medical insurance, and the WHO's pressure on the liberalization of the medical industry[18]. In the past, medical service

was centered on the suppliers. Today, however, the service is centered on the consumers' viewpoint as the consumer demands became increasingly diverse and high end as the competition among the medical institutions increased. Moreover, as the quality of the medical service perceived by the patients became the center of attention, there is a need to determine how the quality of medical service affects the satisfaction level and repeat use from the strategic point of view.

This study targeted 149 patients who continue to use a dentist located in Kimhae. The proven survey questions were re-configured to suit this study.

When the visiting Frequency of dental hospital to general characteristics is examined, visiting Frequency of dental hospital increased with higher age, education and income. As for the type of the dental service, male targets pursued mostly after surgery implant diagnosis while female targets pursued mostly after dental prosthesis diagnosis. As for the age group, surgery implant was highest among the targets that are more than 51 years old. Employed targets and those with higher education tended to purse after surgery implant and dental prosthesis diagnosis. As for the income, more than 3,000,000 pursued the surgery implant diagnosis the most. As for the reliability level for each factors affecting patient's satisfaction and general characteristics, more than 0.5 results, which indicates that the reliability level is high. As for the quality of the dental service, Cronbach' a coefficient was the highest with 0.890, followed by internal environment factor and kindness, in this order, and the external environment factor was the lowest with 0.572. As for the satisfaction level for the dental service, satisfaction level for the employee factor manifested significant difference in the male targets who are employed (p < 0.05)and the satisfaction level of the male targets was higher than that of the female targets when it comes to the medical examination and treatment procedure (p < 0.05). This is similar to the factors showed in a study[19] that studied the factors that affect patients'satisfaction level, which showed dentist factor, medical examination and treatment procedure and standby time factor and internal environment factorsin this order, which is somewhat different from the Kim's study[20] that showed the factors as the internal environment factor, medical examination and treatment procedure, standby time and dentist factor. In this study, maletargets manifested significant difference (p < 0.05) in the order of the employee factor, quality of medical ser-

vice, and medical examination and treatment procedure, which shows that they are more sensitive to the employee attitude, quality of medical service, and medical examination and treatment procedure. Moreover, the fact that the satisfaction level among the people who are employed is high in the order of the quality of medical service and employee factor shows that the people who paid higher price for diagnosis want better service. When the satisfaction level and the willingness to refer to others are examined, there is a relationship between satisfaction level and revisting and recommendation thought when the age, education and income are higher both for the male and female, and they are employed.

Because of the concept that involves the relationship and value pertaining to the quality of medical service and satisfaction level, and repeat use was mostly focused on the relationship among service quality and satisfaction level (service quality-satisfaction level), service quality and repeat use (service quality-repeat use), quality of medical service and satisfaction level, and repeat use (service quality-satisfaction level-repeat use), there are reported made that the expenses paid out to acquire service need to factored in as well[21].

Lee[22] reported that the dental patients' satisfaction level affects referral by the willingness to use the service again, and reported that the level of specialty and the kindness directly influence satisfaction level. Choi et al.[23] suggested that the quality of medical service influences satisfaction level, service value, and the willingness to use the service again, and the quality of the medical service perceived by patients directly affects willingness to use the service again. Sohn et al.[24] suggested that the satisfaction level is high when the quality of medical service, accessibility, pain control, and trust on the cost are high. Kim[20] reported that the internal environment factor is the index that is useful for forecasting patients' satisfaction leveland value of service. As for the most useful indices for forecasting service value are the medical examination and treatment procedure and standby time, according to him. This study too concluded that the quality of medical service directly affects the willingness to use the service again, and the willingness to refer the service to others.

When the multiple regression was conducted to identify relation between factors affecting patient's satisfaction and general characteristics, patient's satisfaction was high when the satisfaction level towards the employee factor, external environment factors and medical exami-

nation and treatment procedure was high (p < 0.05). Hong[11] showed dental service, medical examination and treatment procedure and internal environment as the factors that significantly affected the willingness to use the service again, while Song[25] citied dentists, dental sanitation specialists, medical examination and treatment procedure and diagnosis cost as the factors that affect satisfaction level after receiving dental service. This is in line with a finding of this study that the employee factor, and medical examination and treatment procedure significantly affect patient's satisfaction.

This study may be limited compared to other previous studies conducted that studied various regions, and various medical institutions when it comes to the survey on the overall satisfaction level of the people who use dental service, their willingness to use the service again and their willingness to refer the service to others. Meanwhile, this study limits the study at one particular hospital, which prevents application of the findings to other medical institutions. Because survey was conducted on the patients who are receiving dental care, evaluation may be higher than other general public. Despite these limitations, however, this study is significant in the sense that it analyzed the factors that are related to the patient's satisfaction level for the medical service improvement and change in the revisting and recommendation thought to provide basic data that would enable evaluate the patient's satisfaction of the oral cavity management targets continuously. Therefore, other researches that evaluate dental diagnosis satisfaction level and service quality are needed.

Summary

The purpose of this study is to provide basic data for the provision of quality dental service that suits the hospital management environment and for the improvement of the diagnosis environment by studying the factors that affect diagnosis satisfaction level after receiving dental service when it comes to the patients who are continuing to receive oral cavity management and by studying the willingness to refer the service to others. Therefore, the study was conducted for the 149 patients of a dental hospital in Kimhae who are receiving oral cavity management from July 15 to August 14, 2007.

1. In the patient's service satisfaction, employee factor, internal environment factors, external environment factors, and medical examination and treatment procedure were manifested higher in male than female, and the employee factor and medical examination and treatment procedure manifested increasingly significant difference in male than female (p < 0.05), and significant increase was manifested in the employed compared to the unemployed (p < 0.05).

2. As for the satisfaction level on the quality of dental service, satisfaction level was higher in male than female, and in the employed than unemployed (p < 0.05).

3. As result of conducting multiple regression analysis with the diagnosis satisfaction level as the dependant variable, satisfaction level towards dental service was higher when the satisfaction level for the employee factor is higher, when the satisfaction level for the external environment is higher, and when the satisfaction level for the medical examination and treatment procedure is higher (p < 0.05).

In conclusion, structured employee management and training are required to improve quality of medical service, patients' satisfaction level and their willingness to refer the service to others, and there is a need to pursue after the direction that can provide greater conveniences to the patient diagnosis, and to minimize inconveniences.

요　약

보건의료환경 변화에 따른 환자들의 의료수요에 부응하고 합리적인 경영대책을 마련하여 환자들에게 양질의 치과의료서비스를 제공하고 진료환경을 개선시킬 목적으로 계속구강건강관리 환자 149명을 대상으로 치과의료서비스를 제공 받은 후의 진료 만족도와 진료만족도에 영향을 미치는 요인을 파악하였다. SPSS Ver 13.0을 이용하여 일반적 특성에 따른 치과의료서비스 만족도, 치과의료서비스의 질에 대한 만족도는 평균분석을 하였고, 일반적 특성 및 치과의료서비스 만족도가 치과진료 만족도에 미치는 영향은 회귀분석을 하였다. 다중회귀분석에서 치과진료 만족도에 영향을 미치는 요인은 직원요인, 외부환경요인, 진료절차였다. 치과의료 서비스의 질을 향상시키고 환자의 만족도를 높이기 위해서는 직원들의 체계적인 관리 및 교육이 이루어져야 할 것이다.

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