#### A Research on The Use of Preventive Oral and Dental Health Services

Koruyucu Ağız ve Diş Sağlığı Hizmetlerinin Kullanımı Üzerine Bir Araştırma

Dilek KOCABAŞ<sup>1</sup>, Sevil ASLAN<sup>2</sup>

#### ABSTRACT

The commonly used model about the use of health services is behavioral model developed by Andersen. According to this model, the use of an individual's health service is affected by predisposing factors (demographic characteristics, social structure, etc.), enabling factors (income level, health insurance, etc.) and need factors (health status assessment etc.) This study aims to investigate the use of preventive oral and dental health services for individuals who live in Isparta province and the factors affecting it. In the study, 242 people were reached using the convenience sampling method. As a data collection tool, the questionnaire was developed based on the studies in the literature which focused on the use of preventive dentistry and sociodemographic characteristics of participants. SPSS 22.0 package program was used for data analysis. The frequency analysis for descriptive statistics in data analysis and chi-square test determining the factors that affect preventive dentistry services are used. The results of the study indicate that majority of the participants (66%) did not use oral and dental health services for preventive purposes. Also, the use of preventive oral and dental health services is mainly associated with enabling and need factors.

Anahtar Kelimeler: Use of Health Services, Preventive Dentistry, Behavioral Model.

#### ÖΖ

Bireyin sağlık hizmeti kullanımı ile ilgili yaygın olarak kullanılan model Andersen'ın geliştirmiş olduğu davranışsal modeldir. Bu modele göre bireyin sağlık hizmeti kullanımı hazırlayıcı faktörler (demografik özellikler, sosyal yapı vb.), kolaylaştırıcı faktörler (gelir düzeyi, sağlık güvencesi vb.) ve ihtiyaç faktörlerinden (sağlık durumunu değerlendirme vb.) etkilenmektedir. Bu çalışma, Isparta'da ikamet eden bireylerin koruyucu amaçlı ağız ve diş sağlığı hizmetleri kullanımlarını ve bunu etkileyen faktörleri araştırmayı amaçlamaktadır. Çalışmada kolayda örnekleme yöntemi kullanılarak 242 kişiye ulaşılmıştır. Veri toplama aracı olarak literatürde yer alan çalışmalardan yararlanılarak oluşturulan anket, katılımcıların koruyucu diş hekimliği kullanımlarını ve sosyo-demografik özelliklerini içermektedir. Verilerin analizi icin SPSS 22.0 paket programı kullanılmıştır. Verilerin analizinde tanımlayıcı istatistikler için frekans analizi, koruyucu diş hekimliği hizmetlerini etkileyen faktörlerin belirlenmesinde ki-kare testi kullanılmıştır. Çalışma sonucunda, katılımcıların çoğunluğunun (%66) koruyucu amaçlı ağız ve diş sağlığı hizmetlerini kullanmadıkları ortaya çıkmıştır. Ayrıca, koruyucu amaçlı ağız ve diş sağlığı hizmeti kullanımının ağırlıklı olarak kolaylaştırıcı ve ihtiyaç faktörleri ile ilişkili olduğu tespit edilmiştir.

**Keywords:** Sağlık Hizmeti Kullanımı, Koruyucu Diş Hekimliği, Davranışsal Model.

\*Çalışmanın koruyucu hekimliğin kullanımını etkileyen sosyo-ekonomik faktörle ile ilgili bölümü 19-22 Mayıs 2017'de gerçekleşen '7th Annual International Conference on Humanities and Social Sciences', konferansında sözlü bildiri olarak sunulmuştur.

<sup>1</sup>Dr. Arş. Gör., Sağlık Yönetimi, Akdeniz Üniversitesi Sağlık Bilimleri Fakültesi Sağlık Yönetimi Bölümü, dilekkocabas@sdu.edu.tr, ORCID:0000-0002-7403-2924

<sup>2</sup>Dr. Öğr. Üyesi, Sağlık Yönetimi, Kafkas Üniversitesi Kağızman Uygulamalı Bilimler Yüksekokulu Sağlık Yönetimi Bölümü, sevilaslan716@gmail.com, ORCID:0000-0003-4128-310X

İletişim / Corresponding Author:	Dilek KOCABAŞ	Geliş Tarihi / Received:	30.11.2018
e-posta/e-mail:	dilekkocabas@sdu.edu.tr	Kabul Tarihi/Accepted:	31.07.2019

#### INTRODUCTION

Preventive dentistry is a health practice that aims to prevent the formation of oral and regular dental diseases by medical examinations with oral hygiene and balanced nutrition.<sup>1</sup> For this purpose, preventive dentistry is used to make an effort to prevent the onset of the disease or to reverse the progression of the disease.<sup>2</sup> Strategies and agents are used to stop the disease process without the need for treatment in preventive services.<sup>3,4</sup> Tooth and mouth cleaning (brushing, mouthwash, dental floss, etc.) and regulation of eating habit (not eating sugar, healthy eating, etc.) can be given as examples.<sup>5,6</sup> However, the necessity of regular protection required makes it strenuous and thus difficult to disseminate. On the other hand, in countries where preventive practices are not yet widespread, the cost of treatment is quite high, and oral and dental health expenses are also high.<sup>7,8</sup> Therefore, it is necessary to pay attention to the services that protect oral and dental health which have a significant effect on the reduction of costs and to increase the use of preventive services in the society.<sup>3-</sup> <sup>10</sup> This study is aimed at determining the factors affecting the use of preventive dentistry services of individuals and to provide suggestions for the development of practices that will increase the use of individuals by these services.

Studies conducted in this field, observed that the use of preventive health services is affected by many factors such as personal characteristics of individuals, social environment and health of systems countries.<sup>11,12</sup> The most accepted classification of these factors is credited to Andersen as indicated in Figure 1.<sup>13</sup> Andersen's Behavioral Model (1960) is used to identify the factors affecting the use of health services by individuals, to define and measure fair access to health services and to develop policies to facilitate fair access.<sup>14, 15</sup> This model examines the factors affecting the use of health services under three main headings. As indicated in Figure 1, the model focuses on predisposing, enabling and need factors. In this model, the tendencies of people

to use health services are interpreted into these three factors and it is argued that these factors are very important. The first of these factors are individual factors including; demographic characteristics. social environment and individual's health beliefs. Gender, age and marital status of the individual are considered as the main variables affecting the use of health services. Generally, women tend to get more health care than men, elderly people tend to get more health care than young people and married people tend to get more health care than single people. In addition, it is accepted that the individual's social environment affects the habits of using health care and people behave in a way similar to their social environment.

As the second factor, 'need' can be expressed as considering health services as necessary for an individual to feel good. Many factors such as the individual's view of himself/herself as a patient, the belief in the healing power of medical treatments rather than alternative means, the benefit of the treatments he/she has received before, and the fact that the drugs are good for him/her will affect the decision of the individual about the necessity of health care. Additionally, it is known that the individual's believe in the health sector, health workers and therapies affects the use of health services. In fact, an individual who does not believe that the treatment is healing is less likely to receive health care. The third factor that constitutes the model includes factors that enable or make it difficult for individuals to use health services. Enabling factors make health resources more accessible to individuals. People's household income, the presence and scope of health insurance, having a regular and sufficient source of income and access to these resources are enabling factors at a household level. The existence and scope of health insurance directly affects the demand for health services as it protects against the financial risks of health problems. Similarly, the level of income and the continuity of this source of income (having a permanent job etc.) also play an important role in the use of health services.





Many studies in different countries on preventive dentistry have shown that the implementation of preventive measures and the improvement of the social environment have significantly reduced the rates of tooth decay.<sup>16,17</sup> Studies in the literature show that the use of preventive health services is affected by many factors. These studies found that low-income families did not show enough interest in dentistry and preventive physician examinations, compared to families with high socioeconomic status who shown more interest. In addition, individuals with higher socio-economic status were considered to have better oral health.<sup>18</sup>

# MATERIAL AND METHOD

## Aim of the Study

The aim of the study is to investigate the use of preventive oral and dental care services for participants in the study using Andersen's Model.<sup>19</sup> Behavioral Factors affecting individual health care utilization were considered based on the 3 categories (predisposing, enabling and need) by Andersen's Behavioral Model. In this study, gender, education and marital status are the predisposing factors; health insurance, working status, income status, host status and evaluating the individual's income situation are enabling factors; and the assessment of the individual's oral and dental health is considered as a need factor. Additionally, the research aims at investigating the relation demographical variables between and predisposing, enabling and need factors affecting the health service utilization of the individual in the study.

## **Population and Sample**

The population of the study comprises of all individuals residing in Isparta city center. The sample of the study consists of 242 participants in Isparta. 242 participants were reached using convenience sampling method.

## **Data Collection Tool**

The data of the study was gathered from the participants through a questionnaire developed from existing surveys in literature. The questionnaire was applied to participants through a survey method.

## Ethical Aspect of the Study

This study was found to be ethically appropriate with the protocol number 252/255 of Süleyman Demirel University Ethics Committee of Health Sciences dated 05.10.2018 and decision 26/1. Before starting to gather data, participants were informed about the research and verbal approvals of the participants were obtained. In addition, participants were told that they could withdraw from the research at any time and that their individual information would be protected and the identity of the respondents would be kept confidential.

#### Analysis

Data analysis was conducted using SPSS 22.0 package program. For the purpose of this study, the distribution of oral and dental health

service use according to the predisposing, enabling and need factors was shown using frequency and percentage and it was used in the study using Chi-square test analysis. Additionally, the participants were asked questions to measure their attitudes towards preventive dentistry. The frequencies of participants' responses to these questions are shown in Figure 1, 2, 3, 4.

## **RESULTS AND DISCUSSION**

Demographic findings of the participants are shown in Table 1. As indicated in Table 1, 51.9 % of the participants in the study are female and 48.1% are male. Marital status of the participants indicates that 49.6% of the participants are married and 50.4% participants are single. The educational status of the participants are; illiterate for 3.4%, literate for 7.6%, primary school for 12.7%, secondary school 6.4%, high school 24.2%, associate degree for 10.6%, bachelor's degree for 30.9% and postgraduate for 4.2%. Income status of the participants are; 0-2000 TL for 36.5%, 2001-3600 TL for 24.6% and more than 3601 TL for 38.9%.

Gender	F	%	Home Ownership	F	%
Male	114	48.1	Yes	161	68.5
Female	123	51.9	No	74	31.5
Total	237	100	Total	235	100
Marital Status			Level of Income (TL)		
Single	119	50.4	< 2000	74	36.5
Married	117	49.6	2001-3600	50	24.6
Total	236	100	3601<	79	38.9
Educational Level			Total	203	100
Illiterate	8	3.4	Health Insurance		
Literate	18	7.6	None available	13	5.5
Primary School	30	12.7	Social Insurance Institution	122	51.5
Secondary School	15	6.4	Retirement Fund	58	24.5
High School	57	24.2	Self-employed Institution	24	10.1
Associate Degree	25	10.6	Green Card	5	2.1
Bachelor's Degree	73	3.9	Private	13	5.5
Postgraduate	10	4.2	Ghazi Insurance	2	0.8
Total	236	100	Total	237	100
Assessment of Income	Level				
Very good	9	3.9	Working Status		
Good	84	36.4	Unemployed	89	38.9
Medium	113	48.9	Employed	117	51.1
Bad	18	7.8	Retired Unemployed	16	7.0
Very Bad	7	2.9	Retired Employed	7	3.1
Total	231	100	Total	229	100

**Table 1:** Demographical Attributes of the Research Participants

The assessed individual's income situations of participants are; medium for 48.9%, good for 36.4%, bad for 7.8%, very good for 3.9%, and very bad for 2.9%. 68.5% of respondents participating in the study state they have a home and 31.5% state they do not

have a home. Health insurance status of participants are; 51.5 % for social insurance institution, 24.5% for retirement fund and 10.1% for self-employed institution. Finally, 51.1% of the participants state that they are

employed and 38.9% state that they are unemployed.

The questions that aim to measure the attitudes of the participants towards oral and dental health services are given below. The responses of the participants to the questions are shown in column figures.



**Figure 1.** Status of Participants in Routine Control to Preserve Oral and Dental Health

In Figure 1, it was observed that more than half (66.1%) of the participants responded with "no" when asked "Do you have routine checks to preserve your oral and dental health, even if you do not have any health problems at all?". Furthermore, when asked "Why are you not regularly consulting with your dentist?" 18.4% of the respondents said "I am afraid of going to the dentist", 13.1% of them said "I do not think I need to check my teeth", 11.9% stated that "My teeth do not need any treatment" and the remaining participants stated "Other causes". Findings from the studies by Gilbert et al. (1998) and Jahangir et al. (2012) are consistent with the findings obtained from this study.<sup>20, 21</sup> In both studies, it was determined that individuals tend to use less health services because they perceive their oral health to be good.



Figure 2. Frequency of Participants' Consultation with the Dentist

In Figure 2, when participants were asked "How often do you consult with your dentist?"

24.7% of the participants consulted with their dentist once a year and 22.2% stated that four times a year. In addition, when the participants were asked "Which is the first health institution you consult for control without a health problem?" 32.5% stated the "Oral and Dental Health Center", 24.7% the 19.5% "University Hospital", "Private Practice", 14.5% "Private Dental Hospital", 6.2 % the "County State Hospital" and 2.6% stated "Others". Findings by Lo and Schwarz (1998) are consistent with the findings of this study.<sup>22</sup>



**Figure 3.** Reasons for Participants' First Dentist Consultation

In Figure 3, participants were asked, "What is the first reason for consulting with a dentist?", and it was observed that about half of the participants were referred to the dentist because of "decayed tooth treatment". 31.8% of the participants consulted with the dentist because of "tooth extraction". It can be interpreted that majority of the participants' first dentist consultation was because of decayed tooth treatment and tooth extraction, therefore this may be an indication that the participants did not preserve and care for the mouth and use other preventive dental services.

When asked "How old were you when you first visited the dentist?", 59.4% of the respondents stated that they were 0-15 years, 32.7% were 16-30 years and 7.8% were 30 years and above. When asked "Do you have a habit of brushing your teeth?" 82.8% responded with a "Yes" and 17.2% responded with "No". When participants were asked if they use dental floss and mouthwash, majority

(75.6%) of the participants stated that they did not use floss and mouthwash.



Figure 4, shows that when asked "When do you need to visit a dentist?" majority of the participants responded with "when I had a problem with my teeth". This finding could also be interpreted as the vast majority of participants involved in the study did not use oral and dental care for preventive purposes.

 Table 2. Participants' Use of Preventive Dentistry Services According to Predisposing Factors Distribution

Predisposing Factors	Use of Preventive Dentistry Services (Yes)		Use of Preventive Dentistry Services (No)		Total		Total		Value	df	Р
Gender	F	%	F	%	F	%					
Female	45	57.7	78	49.1	123	51.9					
Male	33	42.3	81	50.9	114	48.1	1.563	1	0.21		
Educational Level											
Illiterate	3	3.8	5	3.2	8	3.4					
Literate	4	5.1	14	8.9	18	7.6					
Primary School	8	10.1	22	14.0	30	12.7					
Secondary School	3	3.8	12	7.6	15	6.4	10.038	7	0.18		
High School	19	0.0	38	24.2	57	24.2	10.050	,	0.10		
Associate Degree	7	8.9	18	11.5	25	10.6					
Bachelor's Degree	28	35.4	45	28.7	73	30.9					
Postgraduate	7	8.9	3	1.9	10	4.2					
Marital Status											
Single	46	56.8	73	47.1	119	50.4	• • • •		o 1 -		
Married	35	43.2	82	52.9	117	49.6	2.000	1	0.15		

In Andersen's Behavioral Model, predisposing factors are defined as all factors that prepare the individual to use the services and the tendency of the individual to use health services. Predisposing factors include; demographic characteristics such as age and gender, social characteristics such as education and ethnicity, and health beliefs affecting the health of the individual.<sup>23</sup> In Table 2, the relationship between the individual's use of preventive dentistry and predisposing factors (gender, educational status and marital status) was examined.

Findings indicate that there is no statistically significant relationship between the use of preventive dentistry and the predisposing factors (p>0.05). Contrary to the current findings, Güngör et al. (1999) found that as long as the level of education of the individuals increased, the level of the use of preventive dentistry also increased. In a study conducted by Brzoska et al. (2017), there was

statistically significant relationship between the use of preventive dentistry and the predisposing factors.<sup>24, 25</sup> These findings may different due to the individual differences of the respondents.

	Table 3.	Participa	nts' Use of	Preventive	Services	According	to Enabling	Factors
--	----------	-----------	-------------	------------	----------	-----------	-------------	---------

Enabling Factors	Use of P Dentistry (Y	reventive y Services Zes)	Use of Pr Dentistry (N	reventive Services o)	Total		Value	df	Р
Health Insurance	F	%	F	%	F	%			
None available	3	3.8	10	6.3	13	5.5			
Social Insurance Institution	35	44.3	87	55.1	122	51.5			
Retirement Fund	19	24.1	39	24.7	58	24.5			
Self-employed Institution	12	15.2	12	7.6	24	10.1	7.620	6	0.26
Green Card	3	3.8	2	1.3	5	2.1			
Private	6	7.6	7	4.4	13	5.5			
Ghazi Insurance	1	1.3	1	0.6	2	0.8			
Working Status									
Unemployed	31	39.7	58	38.4	89	38.9			
Employee	39	50.0	78	51.7	117	51.1	2 200	2	0.51
Retired Unemployed	4	5.1	12	7.9	16	7.0	2.290	3	0.51
Retired Employee	4	5.1	3	2.0	7	3.1			
Level of Income (TL)									
< 2000	28	43.1	46	33.3	74	36.5			
2001-3600	9	13.8	41	29.7	50	24.6	6.091	2	0.04*
3601<	28	43.1	51	37	79	38.9			
Assessment of Income Level									
Very good	2	2.6	7	4.5	9	3.9			
Good	29	38.2	55	35.5	84	36.4			
Medium	38	50	75	48.4	113	48.9	1.836	4	0.76
Bad	4	5.3	14	9.0	18	7.8			
Very Bad	3	3.9	4	2.6	7	3.0			
Home Ownership									
Yes	53	67.9	108	68.8	161	68.5	0.017	1	0.89
No	25	32.1	49	31.2	74	31.5	0.017	1	0.09

Based on the enabling factors by Andersen's Behavioral Model, other than predisposing factors, it is necessary for individuals to have some tools, such as income, social security status, working status, etc., to use health services.<sup>13</sup> In the literature, these tools are defined as enabling factors. As indicated in Table 3, there was no statistically significant relationship between participants' use of preventive dentistry and health insurance, working status, home ownership and self-assessment of income level (p>0.05). However, there was a statistically significant relationship between the use of preventive dentistry and income (p<0.05). **Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi** Gümüşhane University Journal of Health Sciences

Assessment of Oral and	Use of Dentist	Preventive ry Services Yes)	Use of P Dentistr (1	Preventive y Services No)	Total		Value	df	Р
Dental health	F	%	F	%	F	%			
Excellent	7	8.5	14	9.0	21	8.8			
Very Good	9	11.0	15	9.6	24	10.1			
Good	51	62.2	60	38.5	111	46.6	17.046	4	0.001*
Reasonable	13	15.9	48	30.8	61	25.6			
Bad	2	2.4	19	12.2	21	8.8			

Table 4. Participants' Use of Preventive Services According to Need Factors

According to Table 4, statistically significant relationship was found between participants' use of preventive dentistry and assessment of own oral and dental health (p < 0.05).

In Table 5, it is seen that 33.3% of the participants visited the Oral and Dental Health Center, 27.3% Private Dental Hospital and

18.2% visited the County State Hospital in the last 15 days. When examining the dental health institutions most recently visited by participants who have not visited a physician within the last 15 days; 25.2% of the participants visited the Oral and Dental Health Center, 25.2% Private Practice and 19.3% visited the Private Dental Hospital.

 Table 5. Distribution of Participants According to Their Last Visit to the Dentist

Variables		
Applicant institution (Applied in last 15 days)	F	%
Oral and Dental Health Center	11	33.3
Private Dental Hospital	9	27.3
Private Practice	4	12.1
County State Hospital	6	18.2
State Hospital	3	9.1
Applicant institution (Not applied in last 15 days)		
Oral and Dental Health Center	30	25.2
Private Dental Hospital	23	19.3
Private Practice	30	25.2
County State Hospital	20	16.8
State Hospital	16	13.5
The reason for applying		
Toothache	58	40.3
Tooth extraction	29	20.1
Cleansing teeth	57	39.6
Transportation status		
Car	101	4.9
Commercial taxi	10	4.3
Bus	74	32.2
On foot	43	18.7
Other	2	0.9
Time to health institution		
20 minutes and less	147	74.5
21 minutes and over	53	25.5
Additional payment status		
Yes	88	37.9
No	144	62.1

Continuation of the Table 5		
Financial burden of paying money		
Very little	39	20.6
Little	55	29.1
Middle	61	32.3
Much	23	12.2
Too much	11	5.8
Communication problem		
Yes	31	14.0
No	191	86.0
Waiting status for examination		
Yes	31	14
No	191	86

When asked how they reached the dental health institution, 43.9% of the participants indicated that they used a car, 32.2% by bus and 18.7% by foot. When asked how long it took to reach the dental health institution, majority (74.5%) of the participants stated that they spent 20 minutes or less. The vast majority (62.1%) of the participants stated that they did not pay any additional money for

dental health services except for social security and that the money they paid for the services did not form any financial burden.

Additionally, the vast majority of participants stated that they did not have a communication problem when they access the services and that they did not expect much to be in order to be examined.

**Table 6.** The Relationship Between Participants Consulting with the Dentist in the Last 15 Days and Predisposing Factors

Predisposing Factors	Dentist Consultation Status in the Last 15 Days (Yes)		Dentist Consultation Status in the Last 15 Days (No)		Total		Value	df	Р
	F	%	F	%	F	%			
Gender									
Female	22	68.8	101	49.3	123	51.9	4 208	1	0.04*
Male	10	31.3	104	50.7	114	48.1	4.200	1	0.04
Educational Level									
Illiterate	1	3.0	7	3.4	8	3.4			
Literate	2	6.1	16	7.9	18	7.6			
Primary School	7	21.2	23	11.3	30	12.7			
Secondary School	0	0.0	15	7.4	15	6.4			
High School	6	18.2	51	25.1	57	24.2	7.610	7	0.36
Associate Degree	3	9.1	22	10.8	25	10.6			
Bachelor's Degree	11	33.3	62	30.5	73	30.9			
Postgraduate	3	9.1	7	3.4	10	4.2			
Marital Status									
Single	19	55.9	100	49.5	119	50.4	0 473	1	0 49
Married	15	44.1	102	50.5	117	49.6	0.175	-	0.17

In Table 6, when examining the relationship between consultation with the dentist in the last 15 days and the gender of the participants, statistically significant relationship was found between gender and

consulting with the dentist (p<0.05). Women are more likely to have dental consultations than men in the last 15 days. However, there was no statistically significant difference between visits to the dentists in the last 15 days and education and marital status (p>0.05). The findings from a study by Altun et al. (2005) are similar to the findings of this study. The study by Altun et al. (2005) posits that there is evidence that gender affects

dental health.<sup>6</sup> According to this study, oral and dental health of men was found to be worse than those of women. This explains the finding that most of the women applied to the dentist in our study

**Table 7.** The Relationship Between Participants' Consultation with the Dentist in the Last 15 Days and Enabling Factors

Enabling Factors	De Const Statu Last 1 (Y	entist ultation s in the 15 Days Yes)	Der Const Status Last 1 (N	ntist Iltation s in the 5 Days No)	Total		Value	df	Р
Health Insurance	F	%	F	%	F	%			
None available	2	6.1	11	5.4	13	5.5			
Social Insurance Institution	18	54.5	104	51.0	122	51.5			
Retirement Fund	8	24.2	50	24.5	58	24.5			
Self-employed Institution	1	3.0	23	11.3	24	10.1	3.387	6	0.76
Green Card	1	3.0	4	2.0	5	2.1			
Specific	3	9.1	10	4.9	13	5.5			
Ghazi Insurance	0	0.0	2	1.0	2	0.8			
Working Status									
Unemployed	11	34.4	78	39.60	89	38.90			
Employee	18	56.3	99	50.30	117	51.10	1 827	3	0.61
Retired Unemployed	3	9.4	13	6.60	16	7.00	1.027	3	0.01
Retired Employee	0	0.0	7	3.60	7	3.10			
Level of Income (TL)									
< 2000	11	37.9	63	36.2	74	36.5			
2001-3600	7	24.1	43	24.7	50	24.6	0.032	2	0.98
3601<	11	37.9	68	39.1	79	38.9			
Assessment of Income Level									
Very good	2	6.3	7	3.50	9	3.90			
Good	13	40.6	71	35.70	84	36.40			
Medium	14	43.8	99	49.70	113	48.90	1.031	4	0.91
Bad	2	6.3	16	8.00	18	7.80			
Very Bad	1	3.1	6	3.00	7	3.00			
Home Ownership									
Yes	24	72.7	137	67.8	161	68.5	0 316	1	0.57
No	9	27.3	65	32.2	74	31.5	0.510	1	0.57

The results presented in Table 7 indicate that there were no statistically significant differences between the visits of the participants to the dentist in the last 15 days and the enabling factors (health insurance, working status, income status, home ownership and assessment of own income situation) (p>0.05).

Need Factors	Dentist Co Status in t Days	onsultation he Last 15 (Yes)	De Consulta in the La (1	ntist tion Status st 15 Days No)	Total		Value	df	Р
	F	%	F	%	F	%			
Excellent	3	9.1	18	8.8	21	8.8			
Very Good	8	24.2	16	7.8	24	10.1			
Good	16	48.5	95	46.3	111	46.6	10.707	4	0.03*
Reasonable	4	12.1	57	27.8	61	25.6			
Bad	2	6.1	19	9.3	21	8.8			

Table 8. The Relationship Between Participants' Consultation with the Dentist in The Last 15 Days and Need Factors

According to Table 8, there was a statistically significant relationship between the consultation of the participants with the

dentist within the last 15 days and their oral and dental health evaluation status (p < 0.05).

## CONCLUSION AND RECOMMENDATIONS

Andersen's behavioral model explains the use of the individual's health care services into three categories. These three categories are explained in a way that includes the socioeconomic status of the individual, their attitudes and beliefs, their accessibility to health service, and their level of perception of their health status.

The aim of this study was to investigate the use of preventive dentistry by Andersen's Behavioral Model. For this purpose, firstly, the findings about the use of oral and dental health services for preventive purposes were presented. Approximately 66% of the participants in the study stated that they did not use oral and dental health services without any health problems. 72% of the participants stated that they only consulted with the dentist if they needed help with their dental problems from a dentist. These results show that the majority of the participants do not feel the need to use preventive dentistry.

The reasons why participants did not use preventive dentistry services were; the fear of visiting the dentist, lack of dental control and considering their teeth to be healthy. I According to the results of the study, it is seen that the participants prefer dental treatment rather than the preventive purpose. According to this, it was seen that the first consultation of the patients with the dentist was due to decayed tooth treatment (42.5%) and tooth extraction (31.8%). Only 16.7% of the participants were found to be consulting the dentist for preventive purposes for the first time. It was determined that people with high numbers of tooth fillings increased the number of patients consulting with the dentists.

In the study, the relationship between the use of preventive dentistry services and the predisposing factors was not statistically significant (p>0.05). Furthermore, there was no statistically significant relationship between the use of preventive dentistry and health insurance, working status, home ownership status and assessment of income level (p>0.05). However, a statistically significant relationship was found between the use of preventive dentistry and income level (p < 0.05). Increasing the income levels of individuals facilitates access to preventive dentistry services, similarly it facilitates access to instruments used in preventive dentistry that require financial resources like dental floss, mouthwash, toothpaste, etc.

There was a statistically significant relationship between the use of preventive dentistry and the assessment of their own oral and dental health (p<0.05). More than half of the participants (46.6%) considering mouth and dental health as good benefit from preventive dental services. The ratio of benefiting from preventive dentistry services

is decreasing towards the participants who think that oral and dental health is good and the participants who think that oral and dental health is excellent. This may be due to the self-confidence of people who think that their dental health is excellent therefore they see no need to go to the dentists. Additionally, the rate of the utilization of preventive dentistry services is decreasing towards the participants who think that oral and dental health is good and the participants who think that oral and dental health is bad. This may be due to the fact that the participants who think that dental health is bad need more dental care services rather than preventive dentistry services and that there is nothing more they can do for their dental health.

This study also indicated that the use of preventive oral and dental health services is mainly related to the variables considered as enabling and need factors. The income status of the individual and the assessment of his/her own oral and dental health are associated with the use of oral and dental health services for preventive purposes. In conclusion, the results of this study can be used as a resource for planning of oral and dental services. It is recommended that, in the future studies, a study with a larger sample may be useful for generalizing the findings of the study.

#### REFERENCES

- Akbaş, Y. and Hazar Bodrumlu, E. (2015). "Current Protective Approaches in Pedodontics". International Journal of Dental Sciences, 1, 1-8.
- Çubukçu, Ç. E. (2003). "Why Protective Dentistry?". http://www.thb.hacettepe.edu.tr/arsiv/2003/sayi\_1/baslik1.pdf (05.07.2018).
- Harris, N. O. and Garcia-Godoy, F. (2004). Primary Preventive Dentistry (6th Ed.), Pearson Prentice Hall: Florida.
- Contencin, P., Falcoff, H. and Doumenc, M. (2006). "Review of Performance Assessment and Improvement in Ambulatory Medical Care". Health Policy, 77, 64–75.
- Martı Akgün, Ö., Görgülü, S. and Altun, C. (2012). "Protective Orthodontic Approaches". Smyrna Medical Journal, 1, 44-49.
- Altun, C., Güven, G., Başak, F. and Akbulut, E. (2005). "Evaluation of Oral and Dental Health of Six-Eleven Years Old Children". Gulhane Medical Journal, 47, 114-118.
- Çelik, H. C. (2013). Center Information about the Mouth and Dental Health Knowledge of Patients (Denizli Oral and Dental Health Center Case). (Master Thesis). Beykent University Institute of Social Sciences Oral and Dental Health, İstanbul.
- Kılınç, G., Koca, H. and Ellidokuz, H. (2013). "Two-Year Follow-up of Oral Health Conditions for Children of 3-4 Years". Dokuz Eylül University Journal of Faculty of Medicine, 27 (1), 25-31.
- 9. Kambek, S. (2001). "The Approaches of Preventive Treatment Methods for Free Dentists in Sivas Province". Journal of Faculty of Dentistry, 4 (1), 1-4.
- Ulusoy, A. T. (2010). "Current Protective Approaches in Pedodontics". Atatürk University Faculty Journal of Dentistry, 3, 28-37.
- Çavuş, Z. S. and Aydoğan, Y. (2017). "An Investigation on Oral and Dental Health Variables in Preschool Children". Journal of Social Sciences, 4 (16), 234-247.
- Zhu, L., Petersen, P. E., Wang, H. Y., Bian, J. Y. and Zhang, B. X. (2005). "Oral Health Knowledge, Attitudes and Behaviour of Adults in China". International Dental Journal, 55, 231–241.
- Andersen, R. N. (1995). "Revisiting the Behavioral Model and Access to Medical Care: Does It Matter?". Journal of Health and Social Behavior, 36, 1-10.

- Silva, A. E. R., De Oliveira Langlois, C. and Feldens, C. A. (2013). "Use of Dental Services and Associated Factors among Elderly in Southern Brazil". Brazilian Journal of Epidemiology, 16 (4), 1005-1016.
- Andersen, R. M. (2008). "National Health Surveys and the Behavioral Model of Health Services Use". Medical Care, 46 (7), 647-653.
- Bravo, M., Montero, J., Bravo, J. J., Baca. P. and Llodra, J. C. (2005). "Sealants and Fluoride Varnish in Caries: A Randomized Trial". Journal Dental Research, 84(12), 1138–1143.
- Petersen, P. E, Lennon, M. A. (2004). "Effective Use of Fluorides for the Prevention of Dental Caries in the 21st Century: the WHO Approach". Community Dentistry and Oral Epidemiology, 32, 319–21.
- Saldūnaitė, K., Bendoraitienė, E. A., Slabšinskienė, E., Vasiliauskienė, I., Andruškevičienė, V. and Zūbienė, J. (2014).
   "The Role of Parental Education and Socioeconomic Status in Dental Caries Prevention among Lithuanian Children". Medicina, 50, 156–161.
- Andersen, R. (1968). A Behavioral Model of Families' Use of Health Services. (Research Series No. 25, Center for Health Administration Studies). Chicago: University of Chicago.
- Gilbert, G. H., Duncan, R. P. and Vogel, W. B. (1998). "Determinants of Dental Care Use in Dentate Adults: Six-Monthly Use during A 24-Month Period in the Florida Dental Care Study". Social Science Medical, 47 (6), 727-737.
- Jahangir, E., Irazola, V. and Rubinstein, A. (2012). "Need, Enabling, Predisposing, and Behavioral Determinants of Access to Preventative Care in Argentina: Analysis of the National Survey of Risk Factors". Plos One, 7 (9), 1-6.
- 22. Lo, E. C. M. and Schwarz, E. (1998). "Determinants for Dental Visit Behavior among Hong Kong Chinese in a Longitudinal Study." Journal of Public Health Dentistry, 58 (3), 220-227.
- 23.Andersen, R. and Aday, L. A. (1978). "Access to Medical Care in the U.S: Realized and Potential". Medical Care, 16 (7), 533-546.
- Güngör, K., Tüter, G. and Belgin, B. (1999). "Evaluation of the Relationship between Education Level and Oral Health". Gazi University Journal of Dentistry Faculty, 12 (1), 21-25.
- 25. Brzoska, P., Erdsiek, F. and Waury, D. (2017). "Enabling and Predisposing Factors for the Utilization of Preventive Dental Health Care in Migrants and Non-Migrants in Germany". Front Public Health, 14 (5), 1-7.