T.C.
YEDITEPE UNIVERSITY
INSTITUTE OF HEALTH SCIENCE
DEPARTMENT OF PEDIATRIC DENTISTRY

COMPARATIVE EVALUATION OF VERBAL AND VERBAL-WRITTEN ORAL HEALTH EDUCATION ON THE PARENTS OF EARLY CHILDHOOD CARIES PATIENTS UNDERGOING GENERAL ANESTHESIA

MASTER THESIS

NAZ YAZ ÇAKIR

ISTANBUL-2019

T.C.

YEDITEPE UNIVERSITY

INSTITUTE OF HEALTH SCIENCE

DEPARTMENT OF PEDIATRIC DENTISTRY

COMPARATIVE EVALUATION OF VERBAL AND VERBAL-WRITTEN ORAL HEALTH EDUCATION ON THE PARENTS OF EARLY CHILDHOOD CARIES PATIENTS UNDERGOING GENERAL ANESTHESIA

MASTER THESIS

NAZ YAZ ÇAKIR

SUPERVISOR

ASSOC. DR. ELİF SUNGURTEKİN EKÇİ

İSTANBUL-2019

THESIS APPROVAL PAGE

TEZ ONAYI FORMU

Kurum : Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü

Program : Pedodonti Yüksek Lisans

Tez Başlığı : GENEL ANESTEZİ ALTINDA DİŞ TEDAVİLERİ GERÇEKLEŞMİŞ OLAN ERKEN ÇOCUKLUK ÇAĞI ÇÜRÜĞÜ HASTALARININ AİLELERİNE YÖNELİK SÖZLÜ VE SÖZLÜ-YAZILI EĞİTİMİN KARŞILAŞTIRMALI OLARAK DEĞERLENDİRİLMESİ

Tez Sahibi : Naz YAZ ÇAKIR

Sınav Tarihi : 31.05.2019

Bu çalışma jurimiz tarafından kapsam ve kalite yönünden Yüksek Lisans Tezi olarak kabul edilmiştir.

	Unvanı, Adı-Soyadı (Kurumu)	İmza
Jüri Başkanı:	Doç. Dr. Senem SELVİ KUVVETLİ	
Tez danışmanı:	Doç. Dr. Elif SUNGURTEKİN EKÇİ	
Üye:	Doç. Dr. Didem ÖZDEMİR ÖZENEN	
Üye:	Doç. Dr. Mehmet Sertaç PEKER	
Üye:	Dr. Öğr. Üys. Kübra TONGUÇ ALTIN	

ONAY

Bu tez Yeditepe Üniversitesi Lisansüstü Eğitim-Öğretim ve Sınav Yönetmeliğinin ilgili maddeleri uyarınca yukarıdaki jüri tarafından uygun görülmüş ve Enstitü Yönetim Kurulu'nun 31./05./2019... tarih ve 2019/09-18..... sayılı kararı ile onaylanmıştır.

Prof. Dr. Bayram YILMAZ
Sağlık Bilimleri Enstitüsü Müdürü

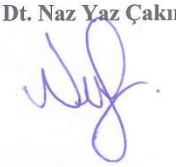
DECLARATION

DECLARATION

This thesis is my own work, I have no unethical behavior at any stage from planning to writing, I have obtained all the information in the thesis within academic and ethical rules, I have cited all the information and comments not obtained by the thesis work and I have included these sources in the list of sources, and that I do not infringe any copyright.

13/05/2019

Dt. Naz Yaz Çakır



ACKNOWLEDGEMENTS

Öğrenciliğimden tez hazırlamama kadar hiçbir zaman benden sevgisini ve desteğini esirgemeyen, her konuda bana yardımcı olan ve ablalığını her zaman hissettiğim, hayatımda ve kalbimde önemli bir yeri olan değerli hocam Sayın **Doç. Dr. Elif SUNGURTEKİN EKÇİ'**ye,

Engin bilgi ve tecrübelerini her zaman paylaşan, hem mesleki hem de hayattaki duruşunu örnek aldığım Sayın **Prof. Dr. Nüket SANDALLI**'ya,

Bana yol gösteren kıymetli bilgilerini paylaşarak mesleğimi en iyi şekilde icra etmeme yardımcı olan, değerli hocam Sayın **Doç Dr. Senem SELVİ KUVVETLİ'**ye ve Sayın **Doç. Dr. Didem ÖZDEMİR ÖZENEN'**e,

Doktora eğitimine başladığım ilk günden itibaren teorik ve pratik anlamda deneyim ve sevgilerini benden esirgemeyen **tüm değerli hocalarıma**,

Tez çalışmalarım sırasında bana her zaman moral ve destek vererek, yardımlarını esirgemeyen **tüm çalışma arkadaşlarıma,**

Yoğun çalışmalarım sırasında hep yanımda olan beni destekleyen ve sevgisini gösteren **Dt. Zeynep DERİNPINAR**, **Dt. Necmiye BULAM, Dt. Seda EKER**'e

Beni her durum ve şartta en iyi koşullarda büyütüp yetiştiren, bugünlere gelmemi sağlayan, varlığımı borçlu olduğum teşekkürlerin yetmeyeceği sevgili anneciğim **Filiz YAZ**, canım babam **Özcan YAZ**, canım biricik kardeşim **Efe Halil YAZ**'a, ve aldığım her kararda benden desteğini esirgemeyen sevgili eşim **Erge ÇAKIR**'a ,

En içten teşekkürlerimi sunarım.

TABLE OF CONTENTS

LIST OF TABLE

LIST OF FIGURES

LIST OF GRAPHICS

LIST OF PICTURES

LIST OF SYMBOLS AND ABBREVIATIONS

AAPD : American Association of Pediatric Dentists

USA : United States of America

ASA-2 : A person with a mild systemic disorder due to a cause requiring surgery or another disease (mild anemia, chronic bronchitis, hypertension, emphysema, obesity, diabetes).

BBSH : Primary Health Care

CPI : Community periodontal index

CPITN : The community periodontal index of treatment needs

DMFT : Number of Decayed, Missing due to Caries and Filled Teeth in the Permanent Dentition

DMFS : Number of Decayed, Missing due to Caries and Filled Surface in the Permanent Dentition

dmft : Number of Decayed, Missing due to Caries and Filled Teeth in the Primary Dentition

dmfs : Number of Decayed, Missing due to Caries and Filled Surface in the Primary Dentition

WHO : World Health Organisation

DVD : Digital Video Disc

EADPH : European Association of Dental Public Health

ECC : Early Childhood Caries

GI : Gingival Index

HAS-ECC : Hipoplasia- Early Childhood Caries

SSC : Stainless Steel Crown

PI : Plaque Index

TV : Television

ABSTRACT

Yaz Çakır, N. (2019). Comparative Evaluation of Verbal and Verbal-Written Oral Health Education on the Parents of Early Childhood Caries Patients Undergoing General Anesthesia. Yeditepe University, Institute of Health Science, Department of Pediatric Dentistry, MSc Thesis, İstanbul.

Improvement of oral health at the social level can only be possible with the implementation of preventive programs for society from childhood. In literature, it is stated that oral health is one of the most important components of health program. Oral and dental health education programs for parents are of great importance in improving the oral and dental health of children.The aim of this study was to compare the effectiveness of verbal and verbal-written education programs on parent's oral healthcare knowledge level and oral health behavior change. The study was designed as an experimental research with two groups.
90 children and parents were randomly divided into two groups as control and experimental groups. Parents in control group received only verbal education while parents in experimental group received both verbal and written. The study data were collected before and after education by recording the Plaque Index (PI) and Gingival Index (GI) values of the children and by applying a questionnaire to parents and analyzed by SPSS 24.0 package program. According to the study results, both verbal and verbal-written methods were effective in increasing the oral health knowledge levels of the parents, however, verbal-written education program was more effective. In addition, although there is no difference between them, both verbal and verbal-written methods were effective in changing the child's oral health behavior.

Key Words: Oral Health Education, Early Childhood Caries, General Anesthesia, Verbal and Verbal-Written Eduction, Parental Education

ABSTRACT (Turkish)

Yaz Çakır, N. (2019). Genel Anestezi Altında Diş Tedavileri Gerçekleşmiş Olan Erken Çocukluk Çağı Çürüğü Hastalarının Ailelerine Yönelik Sözlü ve Sözlü-Yazılı Eğitimin Karşılaştırmalı Olarak Değerlendirilmesi. Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü, Çocuk Diş Hekimliği A.D., Yüksek Lisans Tezi. İstanbul.

Toplumsal düzeyde ağız diş sağlığının iyileştirilmesi ancak çocukluk döneminden itibaren topluma yönelik koruyucu programların uygulanması ile mümkün olabilir. Yapılan araştırmalarda ağız-diş sağlığının sağlık programının en önemli bileşenlerinden birisi olduğu belirtilmektedir. Ebeveynlere uygulanan ağız ve diş sağlığı eğitim programları çocukların ağız ve diş sağlığını iyileştirmede büyük bir öneme sahiptir. Bu tez çalışmasının amacı, erken çocukluk çağı çürüğü tanısı konulan ve genel anestezi altında diş tedavileri gerçekleşmiş olan 4-6 yaş arasındaki çocukların ebeveynlerine uygulanacak sözlü ve sözlü-yazılı eğitim yöntemlerinin çocukların ağız diş sağlığı durumu ve ebeveynlerin bu konu hakkındaki bilgi düzeyleri üzerine etkisinin karşılaştırmalı olarak değerlendirilmesidir.
Çalışma kapsamında 90 çocuk ve ebeveyni rastgele şekilde kontrol ve deney grubu olarak ikiye ayrılmıştır. Kontrol grubundaki ebeveynlere sadece sözlü eğitim verilirken, deney grubundaki ebeveynlere hem sözlü hem de yazılı eğitim verilmiştir. Çalışma verileri eğitim öncesi ve sonrasında çocukların plak ve gingival indeks değerleri kaydedilerek ve ebeveynlere anket uygulanarak toplanmış ve SPSS 24.0 paket programı ile analiz edilmiştir. Çalışma sonucunda; ebeveynlere uygulanan sözel ve sözel-yazılı eğitim yöntemlerinin her ikisinin de ailelerin ağız sağlığı bilgi düzeylerinin artırılmasında etkili olduğu, bununla birlikte sözel-yazılı eğitim uygulamasının daha etkin olduğu belirlenmiştir. Ayrıca aralarında istatistiksel olarak anlamlı bir fark olmamakla birlikte her iki eğitim yönteminin de çocukların ağız diş sağlığı davranışlarını değiştirmesinde etkili olduğu görülmüştür.

Anahtar Kelimeler: Ağız Sağlığı Eğitimi, Erken Çocukluk Çağı Çürüğü, Genel Anestezi Sözlü ve Sözlü-Yazılı Eğitim, Ebeveyn Eğitimi.

1. INTRODUCTION AND PURPOSE

The health level of people living in a country is measured by the majority of healthy individuals in that country's society. According to the changing health understanding of today; In addition to gaining behaviors that will protect, maintain and improve the individual's well-being, health-enhancing practices that enable them to make the right decisions about their own health are defined as studies that protect, maintain and improve the health of the society (1). The World Health Organization (WHO) publishes a report on a public health issue which it considers to be a priority every year. In 2003, WHO identified the oral and dental health problem as the subject of the report (2).

In a large-scale study conducted in 2007 in our country, it was stated that individual oral hygiene habits were inadequate, dentists were not regularly visited, but when there was a complaint, frequent meals were consumed, and sugary food / beverage consumption took the first place (3).

Oral and dental diseases are among the most important public health problems in terms of their high prevalence, high cost of treatment and their effects on the quality of life of individuals. However, prevention of oral and dental diseases, which is basically a socio-political character of public health, is cheap and easy if necessary attention is given. Therefore, control of oral and dental diseases can only be effectively achieved through planned and persuasive social policies (4).

Anatomical and physiological characteristics of children vary according to age. After the end of infancy (between 0-18 or 24 months), the developmental period begins until the age of 5-6 years. This period consists of preschool children and is defined as the first childhood stage (2). Neuromotor and mood development continues in children in this stage, they gain habits related to oral health as well as sleeping, feeding and toilet habits. In this period, when the development of oral dental health of children is examined, it is seen that jaw growth continues in children and all dairy teeth complete their dental arch around 3-3.5 years. Dental caries is one of the most intense health problems encountered in children in this age group.

It is seen that refined sugar, cigarette and alcohol, which are widely used in the world and in our country, play an important role and cause differentiation in the prevalence of diseases in societies due to their effects on changing lifestyles. These negative effects are more pronounced in teeth and gum diseases. As a result, dental and gum diseases have become one of the important health problems in our country and in the world. These important problems that can arise can be prevented by taking care of oral-dental health and performing oral care in a good way, by protecting practices and by proper nutrition practices. On the other hand, there is a relationship between oral dental health and chronic diseases and poor living conditions. The distribution of oral diseases varies between countries around the world and, moreover, different regions of the same country. This shows that socio-economic level, socio-cultural structure and environmental factors also play a role in dental and gum diseases (5).

Tooth decay is the destruction of the acid in the hard tissues of the tooth as a result of the fermentation of the sugary foods consumed by some carious microorganisms in the mouth. Very common pediatric dental caries has become an increasingly important public health problem all over the world. The type of caries, which is quite common among preschool children, is known as “Early Childhood Caries (MIA) beraber. AÇÇ is expressed as a chronic infectious disease with a multifactorial etiology, seen among children in the 0-6 age group (6).

As in every period, nutrition is very important for preschool children, which makes it necessary for them to take all the nutrients they need in appropriate amount and balance in terms of growth and development. Oral health is an integral part of a child's overall health and is of great importance for the child to be able to grow and develop physically, mentally and socially. It is possible that children with pains caused by tooth decay will have difficulty in eating and will not eat because of the pain. In addition, it will be inevitable that deficiencies and insufficiencies occur in chewing which is one of the most basic functions performed by the teeth of the extracted teeth. This will negatively affect the growth of children. Therefore, the importance of oral and dental health and primary health protection activities such as education are among the basic concepts that should be gained to preschool children and their parents (7).

Improvement of oral and dental health at the social level can only be possible with the implementation of protective programs towards the society since childhood. It is stated that oral and dental health is one of the most important components of the health program. It is emphasized that preventive programs such as oral-dental health education should be started immediately after the teeth and at the youngest age possible, and it is important for individuals and governments to reduce oral dental health expenditures (2).

Kay and Locker (8) reported that oral-dental health protection and improvement programs provide an effective reduction in expenditures by providing a significant reduction in oral-dental diseases. The aim of oral dental health education programs is to educate individuals at an early age in order to gain healthy habits and to inform them about dental treatments. In order to achieve the goal of providing oral and dental health all over the world, education and correct habits of children who are considered as priority groups should be gained.

In the oral dental education program, the information should be easily understood, supported by simple images, should be appropriate to the educational level and socioeconomic status of the target audience, the information should be supported with visual elements and should attract the attention of the target audience and be catchy (9).

The aim of this study was to determine the oral-dental health status of children aged 4-6 years who were diagnosed with early childhood caries and underwent dental treatment under general anesthesia. is to determine the effect on oral health of children.

For the purpose of the research, the following questions were sought:

1. Is there a significant difference between the pre-test and first examination scores / values of the control group where verbal education is given and the experimental group where verbal-written education is given together?

2. Is there a significant difference between the pre-test / 1st examination, 2nd examination and post-test / 3rd examination scores / values of the control group where verbal education is given?

3. Is there a significant difference between the pre-test / 1st examination, 2nd examination and post-test / 3rd examination scores / values of the experimental group where verbal-written education is given together?

4. Is there a significant difference between the 2nd examination and post-test / 3rd examination scores / values of the control group where verbal education is given and the experimental group where verbal-written education is given together?

2. LITERATURE REVIEW

2.1. Early Childhood Caries

In 1978, the American Academy of Pediatric Dentistry (AAPD) described the term “Nursing Bottle Caries” and explained that this decay is related to bottle use. Following this, studies conducted over a period of 20 years have suggested that long-term intake of breast milk may also be the cause of tooth decay and that there is an infectious disease with a multifactorial etiology behind this decay picture, which is called tanımlama early childhood caries ”(ECC). The use of the definition of childhood caries (ECC) has been recommended (10).

AAPD defined the presence of caries (cavities / cavities) on one or more deciduous teeth, the presence of a filled tooth surface due to tooth decay, or the loss of the tooth due to tooth decay. Severe ECC (s-ECC) is defined as the presence of more than 4 caries at the age of 3, more than 5 caries at the age of 4, or more than 6 caries, incomplete or filled tooth surface at the age of 5 (6).

In the case of ECC and s-ECC, areas affected by caries are usually seen in the upper anterior teeth. However, caries can also be seen in the lower and upper first molars. Canine teeth are usually less likely to be affected by caries, as they are driven later. It is also typically described that lower incisors benefit more from the cleansing effect of the tongue and often remain unaffected because the salivary glands are at the opening site (11,12). The upper milk anterior incisors are first-lasting teeth. Therefore, they primarily experience acid attacks and therefore accumulate plaque. The buccal and occlusal surfaces of the molars and the vestibule surface of the milk canine teeth are affected. Depending on the localization of the microbial dental plaque, white, yellow, brown or black discolorations and caries cavities can be seen in many parts of the teeth from gingival edges to buccal, palatinal and incisal edges (13-15). While early white demineralized bands can be seen on the laughing line in early periods, molar teeth are also affected due to the rapid progression of ECC and initial caries are rapidly turning into cavitation (16). In the late stages, caries can be seen in the lower anterior milk incisors in an area which is not expected to occur (14).

2.1.1. Etiology of Early Childhood Caries

ECC is a very serious public health problem that is very effective on preschool children (16). In a study conducted in the United States, ECC has been reported to be a chronic disease that is effective in 28% of children aged 2-5 years and is very common in childhood, but is an even greater problem, especially for younger children. (6,17). There are many etiologic factors that cause ECC. Carbohydrate-rich diet, susceptible host, microbial dental plaque, carcinogenic microorganisms and time factor are among the main factors that cause caries development. Apart from these, mothers 'educational level, parents' attitude, oral hygiene habits of the child and the family, especially the mother, socio-demographic characteristics, socio-economic status, nutritional habits of children, use of baby bottles or pacifier use with honey or jam, the child's breathing status It has been reported that children may have chronic diseases and special care needs, psychosocial factors, some drugs used in children and their ethnic origins may be related to ECC (18–21). Important risk factors for ECC; that the enamel layer is not ripe during the new period of the teeth, that the teeth and the surrounding tissues are not taken care of, the development of enamel defects in milk teeth (hypoplasia on the enamel or hypomineralization on the enamel) and plaque accumulation in the posterior teeth is suitable for plaque accumulation (22,23).). If there is an initial caries in the teeth in the presence of hypoplasia, rapid cavitation can be observed (24). Consumption of sugar-rich nutrients, low socio-economic income, high levels of carcinogenic bacteria such as S. mutans in cases of enamel hypoplasia estimated to be caused by perinatal stress, and / or early childhood caries associated with s HAS-ECC is defined and classified as a sub-variant of s-ECC.

Caufield et al. (25) reported that preterm children also carry a risk for HAS-ECC development. In addition, preterm birth and low birth weight are considered as one of the factors associated with ECC due to its association with high S. mutans colonization and also reported as one of the factors associated with enamel hypoplasia and / or hypomineralization (24,26). For the purpose, it is reported that the use of a bottle containing carbohydrates and vitamin C, milk or fruit / s / juices, which can usually be fermented at night time, increases the risk for ECC formation (16,27-29). When the parent gives the child food and / or milk in a bottle before sleep, these nutrients accumulate around the teeth. At the same time, as the saliva flow decreases

during sleep, the nutrients cannot be washed away from the oral cavity and the environment may become conducive to the proliferation of acid-producing microorganisms. For the same reason, there is little or no time for acid buffering and remineralization.

Generally, positive effects of breast milk are mentioned and breastfeeding is recommended until the age of two (30). In particular, long-term intake of breast milk was also associated with ECC (24,27,29,31). Yonezu et al. (32) found that infants receiving breast milk for 18 months and more had a 3-fold higher probability of having an ECC when they reached the age of two compared to infants receiving less; Li et al. (33) reported that those who received breast milk for nine months and more were 5 times more likely to have a ECC at age 3 than those who received less.

It has been stated that night feeding is highly risky in terms of ECC (34) and frequent breast feeding or frequent breastfeeding may be a condition associated with ECC (27,35). Having breastmilk intake more than 2 times at night (35,36) and breastfeeding the child for more than fifteen minutes at night are among the factors associated with ECC (36). AAPD; recommends that breastfeeding and breastfeeding should be done frequently for the psychological and physical development of the baby. However, it is also recommended that the child falling asleep in the breast be separated from the breast by his mother and that the teeth should be brushed after the teeth come out (24). In an in-vitro study, it was reported that only breastmilk did not lower plaque pH, so it was not risky for IE, but tooth decay developed when breastmilk was consumed together with other carbohydrates. (37).

Other risky behaviors associated with ECC; It is reported that behaviors such as having the mother clean the pacifier by taking it in her own mouth or giving the pacifier to the child's mouth by being chewed in the mother's mouth before the pacifier is given to the child's mouth, and using common spoons or forks are directly related to the passage of microorganisms to children (38). In addition, active or untreated caries lesions of the mothers and the kissing of the children's lips were also associated with the presence of ECC (16,39). It is recommended to prevent activities by reducing saliva

sharing with mothers or first carers in order to prevent carcinogenic bacterial transmission (16).

The relationship between low socioeconomic level of family and caries prevalence has been reported in many studies (20,40,41). In addition, the low level of education of the mother and / or father leads to an increase in the prevalence of dental caries (42). In addition, Alaki et al. (43) reported that children receiving antibiotics frequently during the first year of life are at risk for the development of ECC because of the incomplete crown formation of the primary teeth and their root development. In addition, it was determined that exposure of children to environmental cigarette due to smoking of the parents, ie passive smoking, is associated with the development of caries. Moreover, it has been reported that the prevalence of ECC is higher when there is a cumulative effect (44). Hanioka et al. (45) stated that there was a relationship between the presence of ECC in children and the smoking of the mother and father, and the effect of the mother's smoking on the development of caries was higher in children compared to the father.

Milsom et al. (46) reported that children with caries lesions have a 5-6-fold higher chance of developing new caries lesions than children without caries.

2.1.2. Epidemiology of Early Childhood Caries

ECC is still one of the most common childhood diseases in the world (47). The results of the studies conducted in our country show similarities with the data of developing countries in terms of the prevalence of ECC (48). The incidence of IE in developed countries varies between 1 and 12%, while in developing countries it is seen that this value increases to 70% (49).

Gökalp et al. (3), Turkey's Oral Health Status of the study, 5-year-olds at 69.8% of caries prevalence in deciduous teeth, the average dft (decay per person, withdrawn and fill number of teeth made) value was reported to be 3.7. Namal et al. (50) found the prevalence of dental caries to be 74% in children aged 3-6 years.

For example, data from Australia have reported that caries prevalence in primary teeth of 6-year-old children is more than 50% (51). According to data from different regions of the world, the proportion of children with ECC reaches 89.2% in Qatar and 36% in Greece (52.53). In the USA, the same prevalence (40%) has been reported in children aged 2-11 years (54). In a recent study from Germany, it was reported that the rate of 10% in children aged 3 years (up to 26% of initial lesions) increased by 50% in children aged 6-7 (55).

In 2015, in the E Determination of oral-dental health status of 3-6 years old children in kindergartens affiliated to Altındağ District National Education Directorate E, the incidence of ECC was reported as 73.8% (61). In addition, the prevalence of caries was reported to be 63.1% in patients in the 3-6 age group and 20.4% of children examined in the province of Trabzon and severe ECC was reported (62).

2.1.3. Diagnosis of Early Childhood Caries

ECC is defined as lığı the presence of one or more cavities with or without cavities, tooth decay or filled tooth surface observed in primary teeth less than 71 months (before 6 years of age) 63 (63). In addition, if the dmft score is ≥4 at age 3, ≥5 at age 4, ≥6 at age 5, it is accepted as s-ECC in children aged 3-5 years (64).

The ECC begins as a white decalcification band along the gingival line or in accordance with plaque distribution on occlusal surfaces. During the course of demineralization, enamel surfaces are deteriorated and the cavity formed becomes yellow, brown or black. If the lesion progresses further, it spreads around the tooth and becomes black ring with wide loss of hard tissue. As a result, it causes the tooth to become more sensitive to crown fracture (41). The upper four incisors are the most affected, while the four lower incisors generally remain intact. It is known that milk teeth other than these may be involved in the decay process, but the caries lesions that occur in these teeth are not as common and severe as in the upper incisors (63).

2.1.4. Treatment of Early Childhood Caries

Treatment in children with ECC is related to the extent of lesions, age, behavioral capacity of the child and the degree of cooperation of their parents. If these factors are not taken into consideration, the chances of success of treatment are low. The first stage of treatment is to detect and stop the harmful habits of children (65). Besides the extent of the disease process, the child's comprehension ability and development level also affect the treatment approach to be applied by the physician. The compassionate attitude of the physician to the patient has priority over efficient and effective treatment (41).

During the treatment of general anesthesia, more radical methods should be chosen. This is because it is necessary to keep the procedure time as short as possible in order to minimize the possible risks of general anesthesia. In addition, procedures that are not proven to have good prognosis and which may not have a good prognosis after treatment should be avoided. Some of the treatment techniques that can be applied during general anesthesia are; tooth extraction process, glass ionomer, compomer and composite restoration, vital pulpotomy, strip crowns and stainless steel crowns (66).

In addition to these treatment options, various post treatments are tested especially after endodontic treatment of severely damaged anterior primary teeth. In addition to chemical and mechanical bonding properties, glass fiber glass posts were used in these teeth because of their good aesthetic results. The posts should be placed on the cervical 1/3 portion of the tooth to eliminate problems that may arise during root resorption of the primary tooth (67). In the study of Bayrak et al. (68) in their research, they have strengthened the extremely damaged upper anterior milk teeth with polyethylene fiber, using the composite resin in the form of short post restoration have achieved quite successful results. Grewal and Seth (69) in their study, pulled for any reason, milk cutters with excessive loss of material in the anterior milk teeth canal cavity and have been restored. After the endodontic treatment, the teeth were placed in the canal cavity and the teeth were restored. Both studies were compared with each other and after one year observation period, biological restoration could be preferred as an alternative method.

However, children who have undergone ECC have high risk of developing new lesions in milk and continuous dentition despite all these restorative treatments (70). Almeida et al. (71) reported that in most of the children with ECC treated under general anesthesia, restorative approaches such as placement of stainless steel crowns (SSC) were preferred. ECC reduces the possibility of new or second caries on the surface of the teeth. However, successfully applied restorative treatments do not change the level of S. mutans and additional effective treatment methods are needed in order to reduce carcinogenic bacteria (41). The infectious nature of ECC should be accepted and antibiotics should be used in the treatment of this disease in order to improve its clinical outcomes. Iodine has been known for many years as one of the potential antibacterials during anti-caries treatments. According to preliminary studies in this field, the regional use of iodine against the S. mutans population has been found to have prolonged suppressive effects in the mouth. Lopez et al. (72) showed that inhibition of white opaque lesions was achieved in infants at high risk for ECC with the application of 10% povidone iodine solution every two months. This showed that the administration of povidone iodine every 2 months or once a month could provide the desired control in the re-emergence of carcinogenic bacteria. Such exciting results show that more work is needed. Zhan et al. (73) stated that as a result of their studies using povidone iodine in patients under general anesthesia, fluoride gel application was insufficient to complete the surgical steps for prophylaxis and new lesions occurred in more than 60% of high-risk children. they have. Although povidone iodine has been administered once, S. mutans and Lactobacilli levels up to 3 months and new caries formation was observed to last for a year.

The traditional treatment of dental caries is to remove only the diseased tissues and to make restorations. In fact, the interventions are not intended to eradicate the causes of these diseases. Therefore, the presence of pathological factors in the oral environment cannot be prevented and new caries or secondary caries may occur. Not only the symptoms of the disease, but also the treatment itself. It is also important to control the effects of preventive and therapeutic measures in the long term (74).

2.2. Methods Used in Assessment of Oral and Dental Health Condition

There are oral and dental health criteria and criteria used in the evaluation of the success in the intervention, implementation, plans and programs that reflect the level of oral and dental health and which are being made to improve the current situation. Although these criteria are readily available through routine health records, can be seen that there is a similar shortage of experienced other health records in Turkey and therefore need countries is necessary to conduct fundamental research in order to achieve the overall and regional criteria (75). Within the scope of these researches, differences in the prevalence of the most basic and common oral-dental diseases affecting the whole society, the level of the disease, the severity of the subgroups of the population and the need for treatment should be determined (76).

There are some age groups recommended by WHO in determining the oral and dental health levels of people. These age groups; 5 years, 12 years, 15 years, 35-44 and 65-74 age groups (77).

5 years of age is important in determining the decay level in primary teeth. This age group shows the changes in caries levels in a relatively short time compared to the changes in permanent teeth in the other index age groups. The 12-year-old group is the age group in which the other permanent teeth are erupted except the third molars. By the age of 15, the permanent teeth have been in the mouth of the person for 3-9 years and this is a period in which the effects in the oral environment have been affected. On the other hand, 15 years of age is also very important in terms of evaluating the indicators of periodontal diseases in adolescence. The 35-44 age group is a standard monitoring group for the follow-up of oral and dental health of adult individuals. The full effect due to dental caries, the level of severe periodontal diseases and the general effects of oral health services can also be monitored with the data obtained from this age group. It is seen that 65-74 age group is gaining more importance by considering the changes in the distribution of age groups together with the prolonged life span. The data obtained from this age group are not only necessary for the planning of appropriate and necessary oral

and dental health services for the elderly, but also for monitoring the general impacts of oral care services in the society (77).

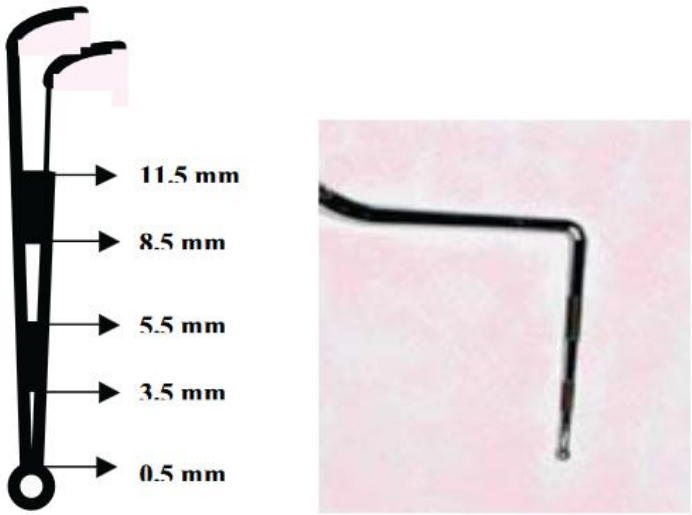
Standard forms, coding system and tools developed by WHO are used for the purpose of collecting the data that will form the basis for calculating the criteria related to oral health (77,78). Oral examinations should be carried out by graduates of dental faculties who are appropriately trained and competent in their field or dentist candidates who are students in the last year of the faculty of dentistry.

In addition, some of the other conditions that may be examined by WHO during the clinical evaluation in oral health research include extra oral examination, temporomandibular joint assessments, oral mucosa assessment, enamel opacities / hypoplasia, attachment losses, need for treatment, prosthesis conditions and prosthesis need, identification of prosthesis and dentofacial anomalies. and emergency care-consultation requirements (77,78).

In order to calculate all of the above mentioned basic criteria, it is necessary to specify WHO standard coding systematic on the examination form. According to these criteria, the conditions of the teeth are “intact”, “decay”, ulu filled and decayed ”, ulu filled, no decayed”,, missing, due to decay ”,“ missing, other reason ”,“

fissure sealant “,“ bridge leg, special crown or veneer / implant ”,“ uncovered tooth (crown) / unexposed root ”, and“ trauma ”should be coded as (77).

In the community periodontal index (CPI), individuals in all categories are expressed as percentages. The CPI probe, which is specially designed for use in these measurements, has a 5.5 mm bulk, black tape between 3.5 and 5.5 mm and the marking at 8.5 and 11.5 mm (Figure 1).



Picture 1: The CPI Sond (77)

The most frequently used dental caries assessment index systems in the dental literature are DMFT / DMFS and dmft / dmfs. In 1997, WHO published a guideline that the dental caries examination was carried out using visible balloon periodontal endings (CPI) of the WHO (WHO 973/80 - Martin, Solingen, Germany) under the visible light, and that only the Frank cavity was used as a decayed tooth. proposed to be accepted (76,77-78). These index systems; It refers to the total number of teeth or surfaces extracted due to caries, fillings or caries in the individual and shows the experience of caries in many individuals and is widely used. The dmft or dmfs indexes are used to show the number or surface of decayed, decayed or filled milk teeth during the milk dentition period. dft index is specified as a value between 0-20; dfs index is calculated as a value between 0-88 (77).

2.2.1. Caries Risk

Tooth decay is one of the most common diseases in humans. In order to cope with this very common health problem, first of all, the awareness of protection should be generalized and then the most appropriate treatment should be applied.Worldwide, it is known that many studies have been conducted to determine the prevalence and severity of tooth decay since the second half of the 20th century (79,80). It is noteworthy that there are more studies in recent years to evaluate the need for treatment.

In order to perform individual caries prophylaxis, firstly, caries risk factors should be evaluated. In this evaluation, anamnesis evaluates the social status of the individual, general health, diet and fluoride use, clinical examination and the number of decayed, filled, missing teeth, saliva flow rate, buffering capacity and plaque amount. According to these factors, it can be decided that the individual is in the middle, high and low caries risk group.

In addition, some systemic diseases, drug treatments, socioeconomic level, feeding habits, oral hygiene habits, fluoride intake are among the important factors that may directly or indirectly affect caries risk (81).

In the"Determination of Caries Risk Guide", which was renewed by AAPD in 2011, the presence of active cavity or active caries in the mother or caregiver, poor socioeconomic status, feeding the child with a bottle, consuming sugar-containing foods more than 3 times a day, children requiring special health care immigrants, clinically white lesions or enamel defects, visible cavities or fillings, dental plaque, caries filling or loss on more than one face, multiple interproximal lesions (especially for children 6 years and older), increased S Inadequate level of mutans and saliva flow indicate a high risk of caries, while taking optimal fluoride-containing water or fluoride supplements, daily tooth-brushing with fluoride-containing toothpaste, topical fluoride from health personnel, and regular dental care for children aged 6 years and over. In addition, additional measures implemented at home (xylitol, antimicrobial agents, etc.) is a low risk indicator (82).

The age of 1-3 years, the first molars of the first molars and the occlusal surfaces of which are at great risk, and the last molar teeth are more susceptible to decay. important factors to be taken (82)

2.2.2. Periodontal Diseases

Periodontal diseases are one of the most common health problems in dentistry. These diseases include gingivitis, localized or common periodontitis and periodontal diseases associated with systemic diseases (83).

Periodontal diseases are infectious diseases that affect gingiva and other dental supporting tissues. When these diseases are diagnosed in the early period, they can be easily and successfully treated. Prevention or treatment of gum diseases; long-term preservation of natural teeth, easier chewing and more effective digestion. Gingivitis is the early stage of periodontal disease. During this period, the gums were bleeding and red and grew in volume. Gingivitis may not cause too much discomfort in the early period, but if it is not treated, the disease can progress to periodontitis and cause irreversible damage to the alveolar bone supporting the gums and teeth.Periodontitis is an advanced period of periodontal diseases. Destruction occurs in the alveolar bone along with other tissues supporting the teeth. A "periodontal pocket" occurs between the tooth and the gum. The presence of periodontal pocket causes inflammation to become permanent and the disease to progress. As the disease progresses, the teeth begin to shake and may even go up to extraction (83).

Although the general public considers these diseases to be more likely to affect adults, studies show that children and young adults are also affected more than periodontal diseases. Periodontium; gingiva, alveolar bone, cementum and periodontal ligament. In children and adolescents, the clinical and radiographic appearance of the gingiva and periodontium is different from that of adults due to changes that occur during the growth and developmental period. In children, the gums are more red, loose, dished, sulcular in depth, and lacking roughness. Thickness of cementum is less calcifying and tends to hyperplasia. The periodontal membrane is thicker and contains less density fiber bundles and more blood vessels. Alveolar bone has a thinner lamina dura and shows less trabeculation. The bone marrow cavities are wider, less calcified, and have more blood supply and lymphatic drainage. During puberty, due to the increase in estrogen and progesterone levels, dilatation of small blood vessels in the gums begins, which causes

redness, swelling and gum bleeding. In addition, it has been reported that sex hormones increase endothelial destruction and vascular permeability, affect leukocyte migration to

inflamed tissue, affect granulation tissue formation and cause changes in subgingival flora composition (83).

Indexes Used for Evaluation of Oral Hygiene Condition

A) Plaque Index

In order to evaluate the amount of plaque on the teeth, the Silness & Lee plaque index is one of the frequently used indices. For each tooth, plaque evaluation is performed from 4 regions (mesial, distal, labial, lingual) and each surface is given a value between 0-3. The individual plaque index score is obtained by dividing the total score by the number of tooth surfaces examined.

Classification of plaque index:

PI <0.1: absence of plaque
PI = 0.1-1.0: small amount of plaque deposition
PI = 1.1-2.0: moderate plaque deposition
PI = 2.1-3.0: dense plaque deposition

B) Gingival Index

In order to evaluate the severity of gingival inflammation, the Löe & Silness gingival index is one of the frequently used indexes. In order to evaluate the gingival appearance on 4 gingival surfaces of the teeth, bleeding period is evaluated by wandering the WHO periodontal catheter with a force not exceeding 20 grams. 0-3 is given for each surface. The personal gingival index score is calculated by dividing the total score by the number of tooth surfaces examined.

Classification of gingival index:

GI <0.1: absence of inflammation
GI = 0.1 - 1.0: mild inflammation
GI = 1.1 - 2.0: moderate inflammation
GI = 2.1 - 3.0: severe inflammation (86)

2.2.3. Protective Applications

The results of the survey in Turkey indicate an integral part of the overall health of the oral and dental health can not come to the desired level. Oral hygiene education, attitude, knowledge and behavior of the society were also found to be insufficient. However, programs aimed at improving oral and dental health towards society are not very common (84).

During the World Health Congress held in 1977, it was determined that the aim of reaching a health level that would allow societies to live a more productive life in terms of socio-economic life was determined as the main objective and the studies in this field were defined with the phrase Health for All in 2000 ". It has been reported that the concept of "Primary Health Care" will play a key role in raising the level of health, and countries have decided to prepare their own health policies and action plans with the support of WHO.

The working groups formed by the Ministry of Health came together in the workshops held in 1992-93 and set goals and strategies to reduce tooth decay and periodontal disorders. In the scope of "Goal 24,, the integration of the services to be provided in the oral and dental health with primary health care services until 2000, the value of Dec Decayed-Missing-Filled Teeth (DMFT) value for and the Community Community Periodontal Index (CPI) value for children in the 15-year age group can reach "0 de level in at least three sections in 90% of the population.

In our country, due to the fact that preventive dental health programs are not widespread in schools, decreases in the prevalence and severity of caries cases could not

be achieved and in other words, “Goal 24” criteria could not be reached. For this reason, it was not possible to adapt to WHO's objectives for the 21st century (Table 1) (84).

Table 1. WHO Targets and Turkey (94)

21. Yüzyıl Hedefleri	2000 Yılı Hedefleri	Türkiye 1990
2020 yılına kadar 6 yaş grubunun %80’i çürüksüz	5-6 yaş grubunun %50’si çürüksüz	5-6 yaş grubunda %12’si çürüksüz
12 yaş grubunda DMFT en fazla 1,5	12 yaş grubunda DMF 3 veya daha az	12 yaş grubunda DMF 2,73
2015 yılında anaokullarının en az yarısında ve diğer okulların %95’inde CPITN=9 değeri %90	18 yaş grubunda en az 3 bölümde diş sağlığı geliştirme programlarının uygulanmaya başlanması	15-19 yaş grubunda CPITN=0 değeri %67,2

In our country, 19% of the children starting primary education and 77% of the 11-year-old children have tooth decay problems. Among advanced age groups, the prevalence of dental caries has increased to 90%. In terms of primary teeth, it is seen that there is an average of 4.5-5 caries in the 6-8 age group, but its prevalence exceeds 80%. It has been reported that the treatments required for all age groups have not been performed (82%) and that decay is preferred instead of being treated (86).

Basic prevention in dentistry aims to eliminate the socio-economic and cultural reasons that cause the increase in dental and gum diseases of the society. Primary prevention is called primary prevention by controlling the causes and risk factors leading to dental caries and gum diseases and aiming to prevent them before they occur. Primary protection aims to ensure that individuals are healthy. Primary prevention is the preparation and implementation of trainings, plans and programs that provide information on the causes, spreading patterns and prevention methods of diseases in the society. With the help of screening programs, specific measures can be taken by identifying individuals in high risk groups in the community. The basic and

primary prevention of society is to be strong against diseases and the most effective forms of prevention in preventing these diseases. Early diagnosis and treatment of the disease is still in the early stage of the disease and is covered by secondary prevention. Improvement practices (rehabilitation) in the future tertiary protection. Tertiary protection also aims to prevent recurrence of the disease (Table 2) (96).

Table 2. Protection Levels in Dentistry (96)

Temel (Primordiyal) Koruma
Birincil (Primer) Koruma 1. Sağlığın İyileştirilmesi • Oral sağlık bilgisi eğitimi ve isteklendirme • Diyet analizi ve öneriler • Ebeveynlere ve gebelere ağız ve diş sağlığı eğitimi (kitle iletişim araçlarının kullanılması, klinikte bireysel eğitim ve danışmanlık) 2. Koruyucu Önlemlerin Alınması • Dişlerin florlu diş macunu ile fırçalanmasının teşvik edilmesi • Özellikle çocuklarda diş hekimi tarafından düzenli aralıklarla flor jeli uygulanması • Hekim tarafından fissür örtücülerin uygulanması • Okulda öğretmen gözetiminde florlu gargaraların kullanımı • Kreş, anaokulu ve ilköğretim okullarında koruyucu diş hekimliği servislerinin kurulması
İkincil (Sekonder) Koruma 1. Erken Tanı • Yılda iki kere diş hekimi kontrolü • Gerektiğinde Radyolojik inceleme 2. Uygun Tedavilerin Zamanında Yapılması • Diş dolgu ve tedavileri • Diş yüzeyi temizliği ve kök yüzeyi düzleştirmesi
Tersiyer Koruma • Diş eksikliklerinin protetik tedavilerle tamamlanması

2.3. Education

It is a fact that the concept of “education olan which is used in the expression of situations with teaching, promotion, experience, action and all kinds of educational activities directed towards nature, society, people, culture, art, in short, all assets, knowledge and values, has a very rich content. Therefore, it is difficult to make a complete definition of education which includes all elements and excludes foreign

elements. Educators and those who think about education make the most general definition of education as yetiştirme raising people according to certain purposes (90).

With the birth of a field called ’science de I’education’ in French, the concept of education has gained new definitions. According to this, “Education is the use of all the unique opportunities on them and each of them is itself to ensure the growth and development of a human being. Ası This understanding of education has shown that it has an interdisciplinary characteristic and showed that it has relations with many areas of expertise and ancillary disciplines. As a matter of fact, Educational Philosophy, Educational Psychology, Sociology of Education, History of Education, and Economics of Education constitute some of the special areas of specialization. There are also side branches of education that arise in itself. These include: Measurement and Evaluation and Curriculum Development, Non-Formal Education, Distance Education, Special Education, Education Management, Education Planning, Vocational and Technical Education and so on. (91).

Communication between the teacher and the learner, defined as the exchange of messages, should be established during the teaching activity. While some of the tools, materials and materials that emerge with technological developments affect one sensory organ, some affect multiple sensory organs. Edgar Dale's Cone Cone helps to classify the educational tools in this process (Figure 1) (92).

The scientific principles on which the Cone of Life is based:

• The higher the number of sensory organs involved in learning, the better we learn and forget late.

• The best way of learning is self-learning.

• Most of the things learned can be learned with the help of our eyes.

• The best teaching is teaching from concrete to abstract and from simple to complex (98).

Today, instructional materials have many options such as visual (books, magazines, brochures, etc.), audio (radio, tape, etc.), audiovisual (video, TV, VCD, DVD, etc.) and multimedia (multimedia system). accommodates (91).

When designing appropriate materials in learning, the target should be determined first and the target is related to cognitive, psychomotor and sensory target areas. In addition, the past target of the target audience is examined and the content of the message to be transmitted is analyzed and the appropriate format is selected (91).

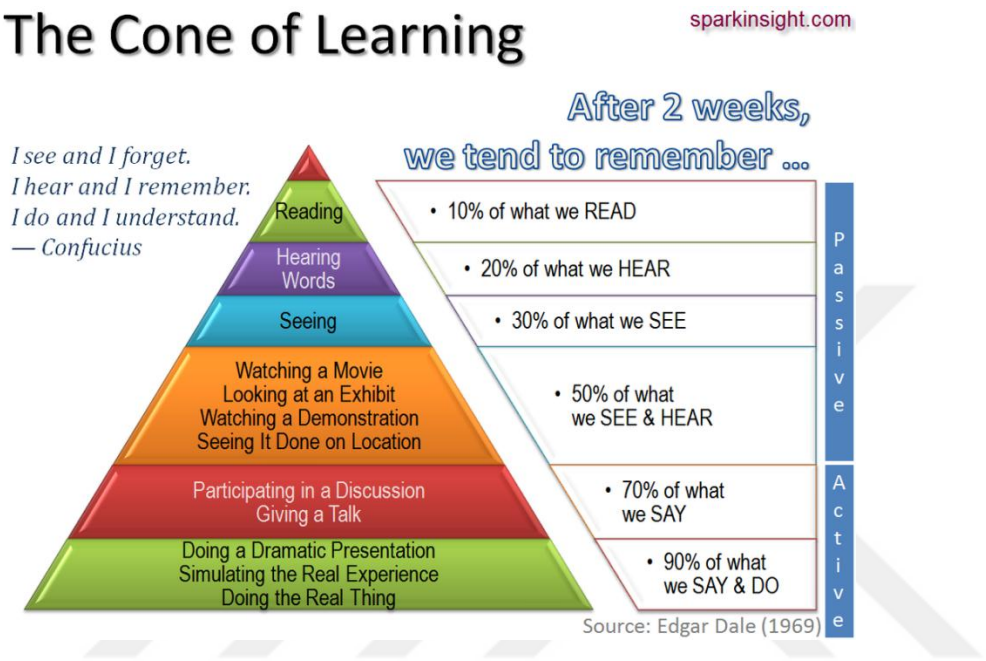


Figure 1. Edgar Dale Experience Cone (92)

The effect of the five senses on learning is as follows:

• Sense of vision: 75%
• Hearing sense: 13%
• Touch sense: 3%
• Sense of taste: 3%

The more an educator turns to the senses of the learners in the education process, the more effective the education will be (92).

2.3.1. Visual Materials

Some individuals learn more easily through visual descriptions, and even those who learn verbally need visual support. Many materials used in teaching also have a visual aspect. Visual elements draw the attention of the learner and embody the concepts, simplifying the concepts that are difficult to understand and facilitate the acquisition of information through figures. Visual materials should be legible and ensure effective participation and focus on message (91).

2.3.2. Audio Materials

Audio tools are not used very often in education (radio, tape, etc.). Today, auditory education is most commonly used for language education purposes such as CD, tape recorder, etc. used. The use of audio tools is easy and inexpensive, but there is a risk of distraction in the use of these tools (91).

2.3.3. Audio-Visual Materials

The more the learning appeals to the senses, the better the learning event and the more difficult it is to forget. Audiovisual tools such as TV and video encourage learning, are engaging, immersive and explanatory, bring events to the classroom, and streamline the transfer of information. If television is used as an educational tool; it increases the quality of education and accelerates social development by reducing the cost of education. The most common way of using television in classrooms is video or VCD and DVD. The use of video in education is becoming widespread. Video presentations should be kept short and important information should be explained by demonstration and modeling considering that a visual film or cartoon can be effective (91).

2.3.4. Multimedia (Multimedia Systems)

Multimedia environments; many learning tools (sound, text, graphics, pictures, moving pictures, etc.) combined with the computer environment is expressed as environments

that appeal to the eyes, ears and touch (93,94). More active and interactive learning can be realized in multimedia environments and learning can be facilitated by stimulating the student's interest and motivation (91).

2.4. Oral and Dental Health Education

Health education is any kind of learning activities and learning process designed to ensure the voluntary adaptation of the individual with the aim of improving health, making positive behaviors related to health a social value or developing collective behavior. Short-term outcomes of the health education process; reduction of risk factors, outcomes in the medium term; increased demand for preventive health services, increased self-esteem, and adoption of positive health behaviors and long-term outcomes; diseases, prolongation of life, increase in quality of life, increase in quality of health services and ultimately turn into “healthy society” output (95).

In order to preserve and improve oral health, first of all, a supportive social and physical environment that provides health education, individual, community and positive approach health professionals who believe in the importance of oral dental health and knowledge are required. The European Society of Oral and Dental Health (EADPH) report in 2000 emphasized the importance of community participation as well as the development of personal and professional knowledge and skills in health promotion and improvement, and emphasized the importance of efforts for effective information as well as treatment in improving oral and dental health. In the EADPH report, families, young children, young adults, teachers, elderly and disadvantaged social groups are shown as the primary target groups in the promotion of oral health (96).

Repeated behaviors such as brushing teeth and personal care are performed as part of a person's daily life. Behaviors can become habit if they are done continuously and attitude can change in this process. Healthy behavior associated with oral health; effective oral hygiene, controlled consumption of sugar-containing foods and beverages, fluoride use and oral health service includes the concepts of correct and

widespread use. Dental caries and periodontal diseases can be defined as a behavioral disease when examined (95).

Oral dental health education aims to provide a painless, functional and socially acceptable dental sequence in the individual and in the community. In this process, by providing information, awareness is provided about the risks that may occur and the ways of protection from risks, and lastly, it is ensured that general health is protected by the appropriate behavior (94). It is also possible to make the informations by using visual tools such as verbal, animation, slides and illustrated posters and in the form of practical training on a model. These trainings, which are very easy to implement, practical and at the same time economic, constitute a very important part of protective programs (95). Before the information is given, the level of oral hygiene in children and the level of tooth brushing habits that they apply at home should be determined. the importance of using, the effective role of brushing twice a day in the prevention of tooth decay and the most basic principles that should be paid attention in terms of dental health should be tried to explain (97).

It has been shown that the educational level of the parents is related to the presence of ECC in pediatric patients. The incidence of low caries and low risk of caries have been found in children of high-educated families (98). Milgrom et al. (99) reported that the mother is not only a reservoir of caries-causing bacteria, but that her knowledge and attitude about oral and dental health as well as her meticulousness to the general health of her child include several important factors to reduce the risk of caries. It was found that mothers with low educational level had insufficient knowledge about oral health of their children (100). It is also very difficult to encourage mothers with low educational levels to participate in preventive health programs (Figure 2) (101).

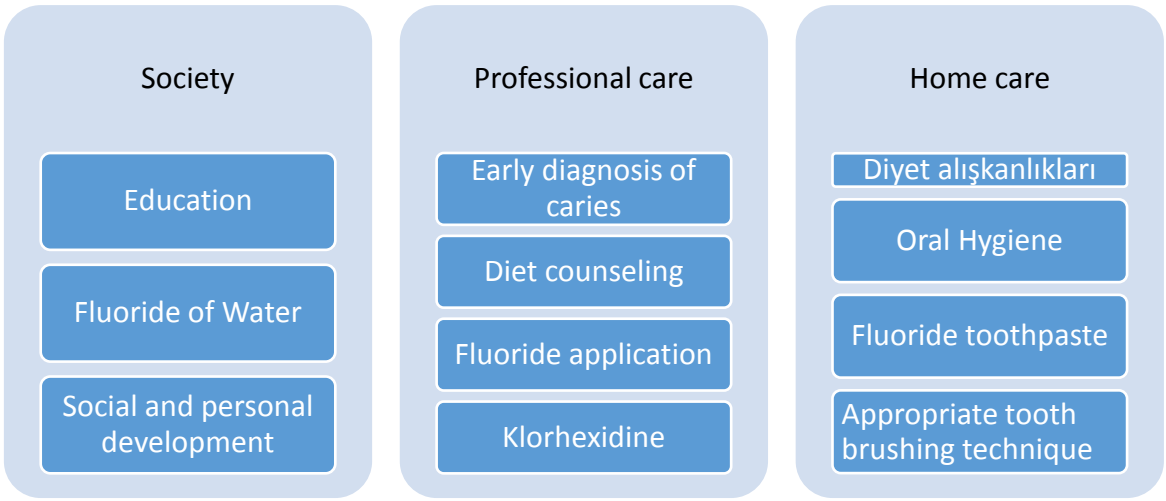


Figure 2. Strategies for Preventing ECC (101)

3. MATERIALS AND METHODS

In this section; research model, working group, data collection tools, data collection and analysis.

3.1. Research Model

Oral education and oral-written trainings will be given to families of children diagnosed with early childhood caries between the ages of 4-6 and whose treatments are performed under general anesthesia; The aim of this study is to compare the effects of oral health status on oral health status on oral hygiene level. The experimental model of the research is shown in Table 3.

Table 3. Experimental Model of Research

Grup	**Uygulama Öncesi**		**Uygulama**	**Uygulama Sonrası (1 Hafta Sonra)**	**Uygulama Sonrası (1 Ay Sonra)**	
	Ön-Tesr	**1. Muayene**		**2. Muayene**	**Son-Test**	**3. Muayene**
Kontrol Grubu	Bilgi Düzeyi Anketi	Plak ve Gingival İndekslerin Kaydedilmesi	Sözlü Eğitim	Plak ve Gingival İndekslerinin Kaydedilmesi	Bilgi Düzeyi Anketi	Plak ve Gingival İndekslerinin Kaydedilmesi
Deney Grubu	Bilgi Düzeyi Anketi	Plak ve Gingival İndekslerin Kaydedilmesi	Sözlü Eğitim + Broşür	Plak ve Gingival İndekslerinin Kaydedilmesi	Bilgi Düzeyi Anketi	Plak ve Gingival İndekslerinin Kaydedilmesi

3.2. Working Group

This study was conducted by T.C. Ministry of Health, Turkey Pharmaceuticals and Medical Devices Agency was conducted by the Ethics Committee of the date 13.03.2019 and No. 92 347 E-check (Further 1). This study included 90 pediatric patients aged

between 4 and 6 years who applied to Yeditepe University Faculty of Dentistry Department of Pediatric Dentistry with the complaint of caries in their teeth. Patients with mental and physical disabilities, ASA-2 and above and teeth with developmental disorders were excluded from the study. A total of 90 children / parents, 45 of whom were in the experimental and control groups, participated in the study. Before starting the study, voluntary information and consent forms were obtained from the parents of the pediatric patients who participated in the study (Further-2).

3.3. Data Collection Tool

Research data were collected through a questionnaire consisting of three parts. The survey; - Bilgi Personal Information Form yönelik for the determination of socio-demographic characteristics in the first part, - "Knowledge Level Scale" for the responsible parent / carer who brought the child to the institution in the second part, - In the last part, ında Examination Form to evaluate gingival index and plaque indexes (Annex-3).

3.3.1. Personal Information Form

In the questionnaire used in the survey; the demographic characteristics of the responsible parent / caregiver who brought the child to the institution, and 23 questions about child nutrition and dental health practices were included (Appendix-3).

3.3.2. Knowledge Level Scale

The parent / caretaker who brought the child to the institution in the study; In order to measure the level of knowledge about oral dental care, proper eating habits, early childhood caries and their treatments, the knowledge level scale developed by the researcher was used.

The scale consists of 18 questions. The answers given within the scope of the knowledge level scale were compared with the answer key, "1" score was given for each correct answer and "0" score was given for the wrong or blank items (Annex-3).

3.3.2. Examination Form

The contents of the examination form prepared for recording the examination data are; oral hygiene and gum health. Plaque and gingival index values of the patients were recorded on the examination form (Appendix-3).

3.3.2.4. Indexes Used in Examination Form

In this study, in order to evaluate the amount of plaque on teeth Silness & Löe plaque index; Löe & Silness gingival index was used to evaluate the severity of gum inflammation

3.4. Data Collection

In this study, early childhood caries was diagnosed and dental treatment was performed under general anesthesia, children were randomly divided into two groups and experimental and control groups were formed.
First of all, a questionnaire (pre-test) was applied to both groups in order to measure their knowledge about oral dental care, proper feeding habits, early childhood caries and their treatment.

Before the training, the patients were examined and plaque and gingival indices (1st examination) were recorded. Afterwards, the parents of the patients in both groups were given oral training on oral dental care, proper eating habits, early childhood caries and their treatments, and the training group was given a training brochure.

The plaque and gingival index values of the patients were re-measured during the control appointments given after 1 week (2nd examination) and 1 month (3rd examination). After 1 month, the information level questionnaire (post-test) was reapplied and the obtained data were compared with the baseline data. .

This study sought to answer the following questions:

1. Is there a significant difference between the pre-test and first examination scores / values of the control group where verbal education is given and the experimental group where verbal-written education is given together?

2. Pre-test / 1st examination, 2nd examination and post-test of the control group where verbal training was given / 3. Is there a significant difference between examination scores / values?

3. Is there a significant difference between the pre-test / 1st examination, 2nd examination and post-test / 3rd examination scores / values of the experimental group where verbal-written education is given together?

4. Is there a significant difference between the 2nd examination and post-test / 3rd examination scores / values of the control group where verbal education is given and the experimental group where verbal-written education is given together?

3.5. Evaluation of Data

SPSS 24.0 software was used in the analysis of the research data. In this context, the following statistical tests / analyzes were performed:

• Kolmogorov-Smirnov Normality Test was applied to determine which parametric or non-parametric tests are applied. As a result of the normality test of the knowledge level scale for the experimental and control groups, it was observed that the data conformed to the normal distribution (p = 0,200). In addition, homogeneous distribution of the data was determined by Levene test. In this context, parametric tests were used to analyze all data.

• Descriptive Statistics were conducted on the socio-demographic characteristics of the participants.

• In the research, unrelated T-test was used to determine the differences between the groups in the comparison of plaque and gingival index values and knowledge levels (pre-test and post-test scores) of the experimental and control groups.
The unrelated t-test is used to determine whether there is a statistically significant difference between the mean scores of tests applied to a group at certain intervals (111).
The significance level of 0.05 was used to interpret the tests / analyzes within the scope of the research.

4. RESULTS

In this section, the data obtained by the method determined for the purpose of research are analyzed and interpreted by tabulating. The research findings are explained in two parts:

- In the first part, the findings related to the demographic characteristics of the participants,
- In the second part; findings obtained from research questions.

4.1. Findings on Demographic Characteristics of Participants

The frequency distribution of the demographic characteristics of the children who were diagnosed with early childhood caries between 4-6 years old and the responsible parents / caregivers who brought the child to the institution are presented in Table 4.

Table 4. Descriptive Statistics of Participants.

Demographic Characteristics of the Parent Responsible for Bringing the Child to the Institution	
Gender, N(%)	
Kadın	74 (82,2)
Erkek	16 (17,8)
Age (Year)	
Ortalama ± SS	35,82±5,926
Aralık	23-46
Education, N(%)	
Primaryy School	26 (28,9)
High School	24 (26,7)
University	26 (28,9)
Masters/ Doctorate	14 (15,6)
Working Type, N(%)	
Not working	50 (55,6)
Full-time working	40 (44,4)
Marital Status, N(%)	
Maried	82 (91,1)

Divorced	8 (8,9)
Demographic Characteristics of Children	
Gender, N(%)	
Girl	38 (42,2)
Boy	52 (57,8)
Age (Month)	
Ortalama ± SS	60,33 ± 6,918
Aralık	48-73
Brother/Sisters Status, N(%)	
Yes	72 (80)
No	18 (20)
Birth Order, N(%)	
One	40 (44,4)
Two	40 (44,4)
Three	10 (11,1)
Breastfeeding Time (Month)	
Avarage ± SS	19,13±10,089
Time	1-36
Feeding Bottle Time (Month)	
A ± SS	14,69±16,641
Time	1-48
Hazır Mama Kullanma Süresi (Ay)	
Ortalama ± SS	10,60±16,364
Aralık	1-48
Sugared Milk/ Biscuit / Feeding Condition with Bottle, N(%)	
Yes	42 (46,7)
No	48 (53,3)
Night Feeding Habits, N(%)	
Yes	32 (35,6)
Hayır	58 (64,4)
Daily Sugary Food/ Drink Consuption Frequency in Main Meals, N(%)	
1- 3 times a day	32 (35,6)
4- 6 times a day	54 (60,0)
7 – 10 times a day	4 (4,4)
Daily Sugary Food/ Drink Consuption Frequency in Snacks, N(%)	
Günde 1 -2 kez	20 (22,2)
Günde 3 kez veya daha fazla	60 (66,7)
Her gün olmamakla beraber ara sıra	10 (11,1)
First Time Brushing (Month)	
A ± SS	36,67±14,778
Time	12-60
Helping to Brushing for Children, N(%)	
Yes	52 (57,8)
No	38 (42,2)

Frequency of Brushing, N(%)	
1 time a day	30 (33,3)
2 time a day and more	28 (31,1)
1 time a week	26 (28,9)
No brushing	6 (6,7)
Using Toothpaste for Brushing, N(%)	
Yes	80 (88,9)
No	10 (11,1)
Flouride Toothpaste or not	
Yes	80 (88,9)
No	10 (11,1)
Flossing for children, N(%)	
Yes	6 (6,7)
No	84 (93,3)
Frequency of Flossing, N(%)	
1 time a aday	6 (6,7)

SS: Standart Sapma

While 28.9% of the 90 parents who participated in the study were primary school graduates, 26.7% were high school graduates, 28.9% were university graduates, the lowest participation rate was for graduate / doctorate graduates with 14%.57.8% of the children participated in the study were boys and 42% were girls. When the age groups of the children were examined; It was seen that the rate of children between 48-53 months was 22.2%, the rate of children between 54-59 months was 26.6%, the rate of children between 60-65 months was 20% and the rate of children who were 66 months and over was 31.2%.

When the breastfeeding status of the children participating in the study was examined; It was determined that children take breast milk for an average of 19 months. When the distribution of breastfeeding periods is examined; The rate of breastfeeding up to 6 months was 20%, the rate of receiving 7-12 months was 2.2%, the rate of receiving 13-24 months was 53.4%, the rate of breastfeeding 25 months or more was 24.4%.

When the bottle usage period of the children was examined, it was determined that they used bottles for an average of 15 months. When the bottle usage time distribution is examined; The usage rate between 0-6 months is 49%, the usage rate

between 7-12 months is 15.5%, the usage rate between 13-24 months is 15.5%, and the rate of users who use 25 months or more is 20%.

It was determined that the children participating in the study used ready food for an average of 10 months. When the nutritional ratios with ready formula are examined;
68.9% of the children were fed with ready-made food for 6 months, 4.4% were ready-made food for 7-12 months, 11.3% were ready-made food for 13-24 months. 15.6% of the children were fed with ready-made food for more time. While the rate of giving milk, biscuits / formula to the children with a bottle was 46.7%, the rate of non-feeding was 53.3%. While 35.6% of children had a habit of sleeping with a bottle, 64.4% had no habit.

It was determined that 60% of children consumed sugary foods and drinks 4-6 times a day and 35.6% of those consumed 1-2 times a day. Similar to the main meals, it was learned that 66% of children consume 3 times or more sugary foods and beverages in intermediate meals.

The age of 36-48 months is in the first place with 55.5% and the age of 35 months and younger is the second with 33.3%. The lowest rate for starting tooth brushing is 11.1% for children aged 49-60 months. In 57.8% of the children, parents were found to help brushing their teeth.
When parents were asked about the frequency of brushing their children's teeth; It was learned that 33.3% received once or twice a day and 31.1% received 2 or more responses daily, 28.9% several times a week and 6% did not brush less or less. It was determined that the majority of children (88.9%) used fluoride-containing putty. In this study, it was determined that dental flossing was not preferred by parents and was used only once per day by 67%.

4.2. Findings Related to Research Questions

4.2.1. Findings Related to the First Research Question

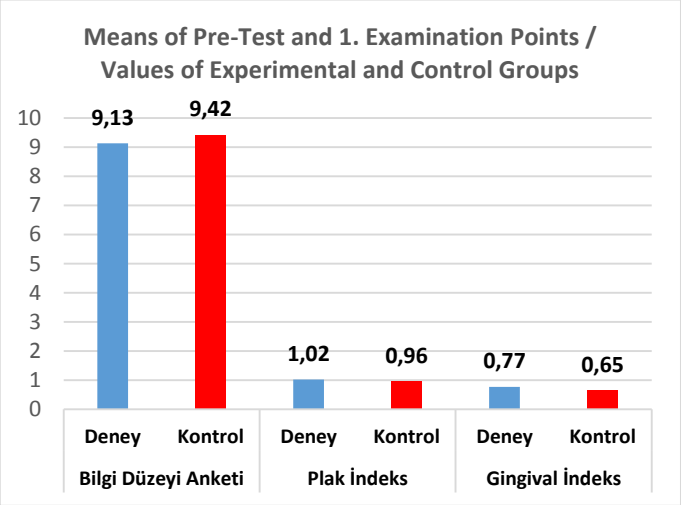
The first question of the study is mı Is there a significant difference between the pre-test and first examination scores / values of the control group where verbal education is

given and the experimental group where verbal and written education are given together? Birinci. Results of the pre-test and 1st Examination scores / values of the experimental and control groups are as shown in Table 5 and Graph 1.

Table 5. Results of Experimental and Control Groups Pre-Test and 1. Examination Scores / Values.

Application	Group	N	X	S	t	p
Knowledge Level Survey	Experimental	45	9,13	2,191	-0,584	0,561
	Control	45	9,42	2,491		
Plaque Index	Experimental	45	1,02	0,419	0,680	0,498
	Control	45	0,96	0,355		
Gingival Index	Experimental	45	0,77	0,306	1,832	0,070
	Control	45	0,65	0,304		

X: Ortalama, S: Standart Sapma, t: *t* değeri, p: Anlamlılık Derecesi.



Graph 1. Means of Pre-Test and 1. Examination Points / Values of Experimental and Control Groups

According to t-test results of independent groups, there was no statistically significant difference between pre-test and 1st examination scores / values of experimental and control groups (p> 0.05). In other words, it was observed that the participants' level of knowledge about oral dental care, proper feeding habits, early

childhood caries and treatments were similar with the values of plaque and gingival indices.

4.2.2. Findings Related to the Second Research Question

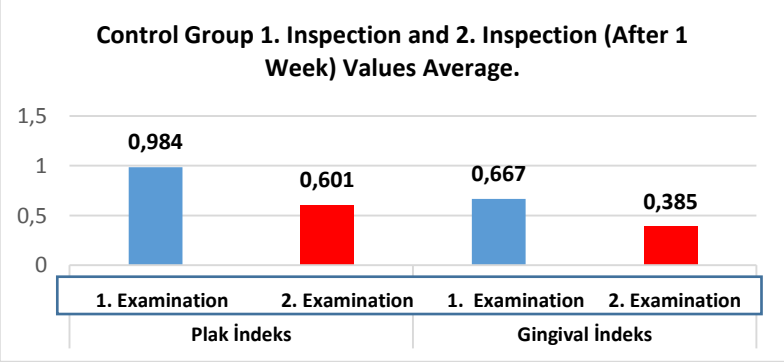
The second question of the study was mı Is there a significant difference between the pre-test / 1st examination, 2nd examination and post-test / 3rd examination scores / values of the control group where oral training is given? ".

Results of the 1st and 2nd examination (1 week later) scores / values of the control group are as shown in Table 6 and Graphic 2.

Table 6. Control Group 1 Examination and 2 Examination (After 1 Week) Findings of the values

Application	Test	N	X	S	t	p
Plaque Index	1. Examination	45	0,984	0,352	7,796	**0,000***
	2. Examination	45	0,601	0,280		
Gingival Index	1. Examination	45	0,667	0,303	10,098	**0,000***
	2. Examination	45	0,385	0,217		

X: Ortalama, S: Standart Sapma, t: *t* değeri, p: Anlamlılık Derecesi, *p<0,05



Graph 2. Control Group 1. Inspection and 2. Inspection (After 1 Week) Values Average.

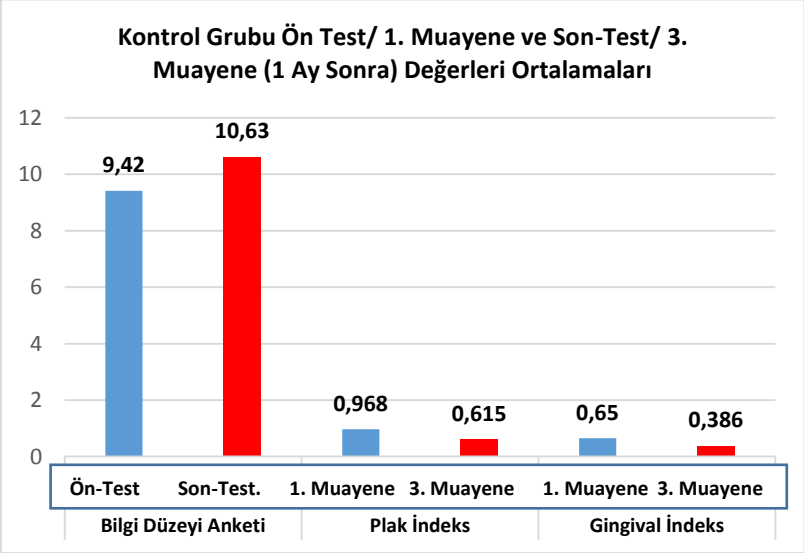
There was a statistically significant difference between the first and second examinations of the control group according to the t-test results of the dependent groups ($p < 0.05$). Accordingly, the plaque and gingival index values determined in the second examination in the control group were significantly lower than the first examination ($p < 0.05$).

Results of the pre-test / 1st examination and post-test / 3rd examination (after 1 month) scores / values of the control group are as in Table 7 and Chart 3.

Table 7. Control Group Pre-Test / 1st Inspection and Post-Test / 3rd Inspection (After 1 Month) Findings Regarding Score / Values.

Application	Test	N	X	S	t	p
Knowledge Level Survey	Pre-Test	45	9,42	2,491	-3,874	**0,010***
	Post-Test	45	10,63	2,320		
Plaque Index	1. Examination	45	0,968	0,359	8,211	**0,000***
	3. Examination	45	0,615	0,250		
Gingival Index	1. Examination	45	0,650	0,307	9,026	**0,000***
	3. Examination	45	0,386	0,215		

X: Ortalama, S: Standart Sapma, t: *t* değeri, p: Anlamlılık Derecesi, *p<0,05



Graph 3. Control Group Pre-Test / 1. Inspection and Post-Test / 3. Inspection (After 1 Month) Values Averages.

Dependent groups of the control group according to the results of the t-test There was a statistically significant difference between pre-test / 1st examination and post-test / 3rd examination (after 1 month) scores / values ($p < 0.05$). While the post-test results of the patients in the control group were significantly higher than the pre-test results after one month, the plaque and gingival index values determined at the third examination were significantly lower than the first examination ($p < 0.05$).

4.2.3. Findings Related to the Third Research Question

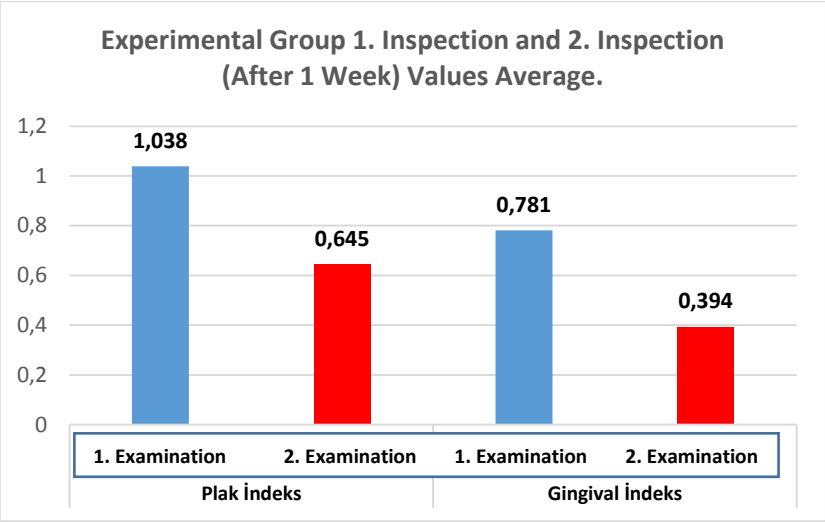
The third question of the research is mı Is there a significant difference between the pre-test / 1st examination, 2nd examination and post-test / 3rd examination scores / values of the experimental group in which oral and written education is given together? ”.

Results of the first and second examinations (1 week later) scores / values of the experimental group are as shown in Table 8 and Graphic 4.

Table 8. Experimental Group 1. Examination and 2. Examination (After 1 Week) Findings of the values.

Application	Test	N	X	S	t	p
Plaque Index	1. Examination	45	1,038	0,419	8,943	**0,000***
	2. Examination	45	0,645	0,306		
Gingival Index	1. Examination	45	0,781	0,306	9,775	**0,000***
	2. Examination	45	0,394	0,239		

X: Ortalama, S: Standart Sapma, t: *t* değeri, p: Anlamlılık Derecesi, *:p<0,05.



Graph 4. Experimental Group 1. Inspection and 2. Inspection (After 1 Week) Values Average.

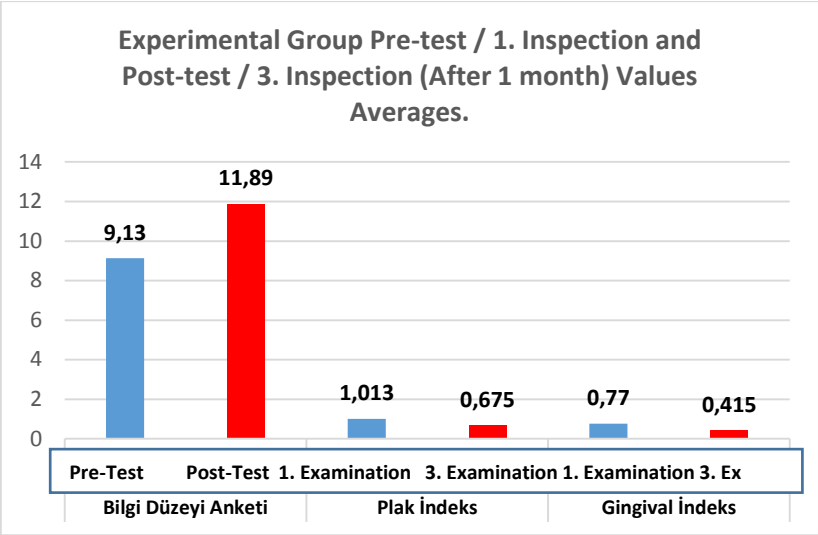
According to the t-test results of the dependent groups, there was a statistically significant difference between the first examination and second examination values of the experimental group ($p < 0.05$). Accordingly, the plaque and gingival index values determined in the second examination in the experimental group were significantly lower than the first examination ($p < 0.05$).

Results of the pre-test / 1st examination and post-test / 3rd examination (after 1 month) scores / values of the experimental group are as shown in Table 9 and Chart 5.

Table 9. Experimental Group Pre-test / 1. Inspection and Post-test / 3. Inspection (1 month later) Findings Regarding Score / Values.

Application	Test	N	X	S	t	p
Knowledge Level Survey	Pre-Test	45	9,13	2,191	-2,584	**0,000***
	Post-Test	45	11,89	2,790		
Plaque Index	1. Examination	45	1,013	0,409	8,325	**0,000***
	3. Examination	45	0,675	0,304		
Gingival Index	1. Examination	45	0,770	0,309	9,189	**0,000***
	3. Examination	45	0,415	0,242		

X: Ortalama, S: Standart Sapma, t: *t* değeri, p:Anlamlılık Derecesi, *:p<0,05



Graph 5. Experimental Group Pre-test / 1. Inspection and Post-test / 3. Inspection (After 1 month) Values Averages.

According to the t-test results of the dependent groups, there was a statistically significant difference between the pre-test / 1st examination and post-test / 3rd examination scores / values of the experimental group ($p < 0.05$). The last test of the patients in the experimental group after 1 month
Results were found to be significantly higher than the pre-test results, and the plaque and gingival index values determined at the third examination were significantly lower than the first examination ($p < 0.05$).

4.2.4. Findings Related to the Fourth Research Question

The fourth research question of the study is mı Is there a significant difference between the control group in which oral education is given and the second examination and post-test / 3rd examination scores / values of the experimental group where verbal and written education are given together?

Results of the second examination (after 1 week) of the experimental and control groups are as shown in Table 10 and Figure 6.

Table 10. Experimental and Control Group 2. Examination (1 week later) Findings on the values.

Application	Group	N	X	S	t	p
Plaque Index	Experimental	45	0,645	0,306	0,694	0,489
	Control	45	0,601	0,280		
Gingival Index	Experimental	45	0,394	0,239	0,179	0,858
	Control	45	0,385	0,217		

X: Ortalama, S: Standart Sapma, t: *t* değeri, p:Anlamlılık Derecesi.

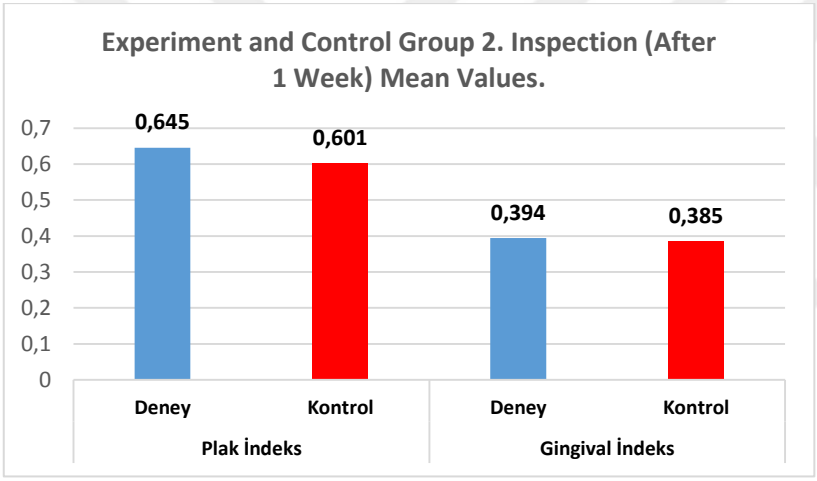


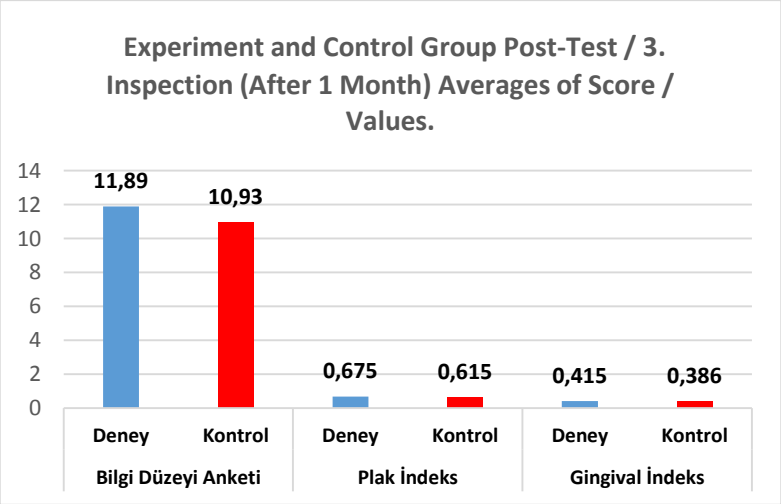
Chart 6. Experiment and Control Group 2. Inspection (After 1 Week) Mean Values.

According to the results of independent groups t-test, there was no difference between plaque and gingival index values of experimental and control groups within the second examination after 1 week (p> 0.05). Results of the post-test / 3rd examination (after 1 month) scores / values of the experimental and control groups are as in Table 11 and Chart 7.

Table 11. Experimental and Control Group Post-Test / 3rd Examination (1 Month Later) Findings Regarding Score / Values.

Application	Group	N	X	S	t	p
Knowledge Level Survey	Experimental	45	11,89	2,790	5,767	**0,040***
	Control	45	10,93	2,320		
Plaque Index	Experimental	45	0,675	0,304	1,011	0,315
	Control	45	0,615	0,250		
Gingival Index	Experimental	45	0,415	0,242	0,590	0,557
	Control	45	0,386	0,215		

X: Ortalama, S: Standart Sapma, t: *t* değeri, p: Anlamlılık Derecesi, *:p<0,05



Graph 7. Experiment and Control Group Post-Test / 3. Inspection (After 1 Month) Averages of Score / Values.

According to the independent groups t-test, there was a statistically significant difference between the mean knowledge level of the experimental and control groups within the scope of the post-test 1 month later (p <0,05), but there was no difference between the plaque and gingival index values (p> 0.05). Accordingly, the results of the post-test knowledge level survey of the experimental group were found to be significantly higher than the control group.

.

5. DISCUSSION

Today, oral and dental health problems are seen as one of the most common health problems worldwide, especially in developing countries. While these problems make it difficult to control a number of chronic diseases and affect general health on individuals and societies, on the other hand, they pose a serious economic burden for the countries due to the high costs required for their treatment. In order to prevent these diseases, it is important to gain oral hygiene habits to individuals from early childhood and childhood with some behavioral skills that may direct general health and hygiene habits in the future (105).

Early childhood is a period in which the child acquires habit about cleaning, feeding and similar behaviors. In this period, in education of children; their parents, who are the first educators, affect their cognitive, social, emotional and psycho-motor development (106). In this period, the importance of the oral and dental health and nutrition of the children of the families and having sufficient information about these issues and the behaviors to be exhibited are of great importance for the children. The education to be given to children in early childhood includes their families and families become a part of children's education (107).

In this study; Oral and oral-written training for the families of children diagnosed with early childhood caries between the ages of 4-6 and treated under general anesthesia were given in two different ways; The aim of this study is to compare the knowledge level of the family with the effects of oral health status and oral hygiene of children. The results obtained are presented in the articles.

It is known that there are many etiologic factors that may cause ECC. These include; nutritional habits of children, inadequate oral hygiene behaviors, educational status of families and socio-demographic characteristics (16,27-29). Feeding / feeding with milk, especially before sleep, increases the risk of ECC due to decreased saliva flow during night sleep. In addition, long-term intake of breast milk has been associated with ECC (24,27,29,31). In this study, ages ranging from 4-6 years and

When the demographic characteristics of children diagnosed with ECC were examined, it was found that the children were breastfed for 19 months, 53.4% between 13-24 months and 24.4% of them received 25 months or more. It was observed that 15.5% of the children who were fed with bottles for an average of 15 months used bottles between 13-24 months and 20% used bottles for 25 months or more. In addition, 46.7% of the children consumed baby milk / biscuits / baby food with a bottle and 35.6% had a habit of sleeping at night. 60% of the main meals, 66% of the meals consumed by children who eat sugary drinks, tooth brushing on average 36.67. It was determined that they started from the month. In 93.3% parents do not use dental floss in their children. When all these data are evaluated, it is seen that there are many of the risk factors reported to cause ECC in children included in the study. This shows how important it is for these children and their parents to receive oral dental education.

In this study, families were informed about oral and dental health by using two different methods: oral education and oral education. In the scope of the study, firstly, the effectiveness of education methods in terms of informing families about oral and dental health was examined. When the control group in which only verbal education was given was compared with the pre-test conducted before the application and the post-test information level within the scope of the post-test performed one month after the application, there was a significant difference between the pre-and post-application knowledge level scores and the mean score after the application was significantly higher. It was determined that. Similarly, when verbal-written training was applied together, it was found that there was a significant difference between the pre-test and post-test knowledge level scores of the pre-test and post-test 1 month after the application and there was a significant difference between the pre-test and post-test knowledge level scores and the mean score of 1 month after the application. It was determined to be higher. It can be said that both education methods applied in accordance with these results have positive effects on informing families about oral and dental health.

Another question in this study is whether written education in addition to oral education is more effective than informal education alone. In order to find an answer to

this question, when the control and experimental groups compared their knowledge level
scores within the scope of the post-test after 1 month; It was determined that the knowledge level score average of the experimental group in which verbal and written education was applied together was higher than the average knowledge level score of the control group where only verbal education was applied. According to this result, it can be stated that giving verbal-written education applications together is more effective than informal education.
Similarly to this study, when the literature was examined to increase the oral health knowledge level of individuals; Although different methods are considered, it is seen that all education methods are effective in informing individuals and it is seen that education applications involving more than one education methods are more effective than applications with a single education method.

Sadana et al. (2017), in the study examined the effect of three different education methods on the knowledge level of children in the 10-12 age group; verbal-visual, verbal-written and verbal-only education practices were found to be effective in increasing the level of knowledge in children, however verbal-visual and verbal-written education practices were found to be more effective than verbal education practices alone (108).

Malik et al. (2017), the effect of oral dental health education given by play and video on children's knowledge of oral hygiene was examined. While both groups showed an increase in knowledge levels, the change in knowledge level and plaque scores in the game group was statistically significant compared to the other group (109).

Taş (2016), in his study, examined the effectiveness of written and video education methods in terms of oral and dental health information in school age children; As a result, both methods are effective in informing children oral dental health, video training application is more effective than brochure with the education method reported (110).

Lee et al. (2015) reported that orthodontic patients were informed by brochures, videos and dental hygienists that video information was more effective than written materials (111).

Kumar et al. (2015), in a study they conducted, 60 students aged between 8-10 years

were given regular oral hygiene training with information cards every day for seven days, and the second group was provided with computer games in addition to information cards. Mean level of knowledge about oral hygiene was found to be statistically higher in the computer game group than the information card group (112).

In many studies, it was found that as the number of sensory organs addressed by education increased, the effectiveness of education increased. Similarly, in this study, oral training and written training in addition to oral training were found to be effective in improving oral hygiene behaviors, while written training in addition to oral training was found to be more successful in terms of improving knowledge levels compared to oral training.

Halawany et al. (2018), in their study conducted with girls studying in primary school, oral oral health education given to children was reported to be effective in terms of increasing the level of oral health knowledge (113).

Kuru et al. (2015), verbal and video education practices were found to be effective in increasing both child and family knowledge level in a study conducted on children with low socio-economic level 4-8 age group and their families (114).

Alaçam et al. (2012), in their study for parents, three different education methods, which are only information brochure, only visual / audio and both visual / audio and information brochure, were found to be effective in increasing the level of knowledge in the short and long term. no difference was reported in terms of activity levels (115).

Alsada et al. (2005), in their study on parents, it was found that both auditory and visual education methods provide an increase in the level of knowledge of parents about dental health (116).

In this study, unlike the above studies; In addition to oral education, written education was found to be more successful than oral education in terms of improving knowledge levels.

One of the topics examined in this study is the effect of education on the change
of oral dental care behavior on children of families. In this context, it was determined that when the plaque and gingival index values were compared within the scope of the second examination and third examination of the children in the control group, where only oral education was given, one week after and one month later, both plaque and gingival index values decreased significantly compared to the pre-application. Similarly, when the verbal and written education was applied together, the difference between the plaque and gingival index values in the second examination and the third examination after one week and one month was found to be significantly different and the plaque and gingival index values decreased significantly compared to the pre-application. . In the light of these results, it can be said that both methods decreased plaque and gingival index values and therefore both methods were effective in terms of oral dental care behaviors on children of families.

Finally, verbal education and verbal-written education methods were compared in terms of their effectiveness in changing the oral and dental behaviors of children. In this context, the plaque and gingival index values of the experimental and control groups in the third examination were compared and no significant difference was found between them. According to this result, it can be stated that verbal education and verbal-written education methods have a similar effect on changing oral dental care behaviors of children.

When the effects of oral health education on oral dental care behaviors in individuals are examined; It was determined that the trainings were effective in gaining the care behaviors of the individuals, and the activity levels differed.

Halawany et al. (2018) stated that oral dental education given verbally in their studies is effective in terms of increasing oral hygiene in children (112).

Ramezaninia et al. (2018) examined the effectiveness of oral, written and video and educational methods for tooth brushing in adolescents and found that all three methods were equally effective in oral dental care behavior (117).

Taş (2016) reported that brochure and video training methods were effective in gaining oral dental care behavior, whereas it was not effective in creating oral dental care habit in the long term (110).

Picard et al. (2014), in their study in which parents compared only oral and verbal-visual education practices in terms of oral hygiene, it was stated that the rate of oral hygiene and tooth brushing was increased in the parents of the children in both groups, and there was no difference in the level of effectiveness of both methods of oral hygiene (118).

Mohebbi et al. (2009), similarly, in their studies on early childhood caries, verbal education and verbal education along with reminder (2 months to inform parents by expert staff) is an effective and important tool to prevent tooth decay in children stated that both methods reported that there is a difference (119).

Sanlier and Ozgen (2005), children's oral dental health behaviors in terms of demonstration, dramatization and expression methods all three positively cause changes, it was stated that they are effective at a similar level (120).

In this study; It is stated that both education methods given similar to the above studies have a similar effect in terms of the formation of oral dental care behavior of children.

Olubunmi and Olushola (2013) evaluated the effectiveness of oral and video and educational practices in terms of oral hygiene in children at low socio-economic level, and found that video training was more effective than oral education (121).

In this study, unlike the above study, the education methods were found to be effective in terms of oral dental care behavior, but no superiority of the education methods compared to each other.

6. CONCLUSION

1) In this study, no statistically significant difference was found between the pre-test and 1st examination scores / values of both groups.
2) Plaque and gingival index values determined in the second examination in the control group were significantly lower than the first examination. The results of the last test of the patients in the control group after 1 month were found to be significantly higher than the pre-test results.

3) Plaque and gingival index values determined in the second examination in the experimental group were significantly lower than the first examination. While the post-test results of the patients in the experimental group after 1 month were significantly higher than the pre-test results, the plaque and gingival index values determined at the third examination were significantly lower than the first examination.

4) There was no significant difference between plaque and gingival index values of experimental and control groups within the scope of second examination after 1 week. In the post-test one month later, there was a statistically significant difference between the mean knowledge level of the experimental and control groups, but there was no difference between the plaque and gingival index values. Accordingly, the results of the post-test knowledge level questionnaire of the experimental group were found to be significantly higher than the control group.

As a result, it was concluded that both verbal and verbal-written education methods applied to parents were successful in increasing the level of knowledge in families, however, in addition to verbal education, written education was more effective at this point. In addition, it was found that both education methods were effective in changing the dental care behavior of the family on the child; however, there was no significant difference between them.

In the light of the results obtained and the information in the literature;

- Taking into account the fact that the effectiveness of a training is directly proportional to the number of sensory organs addressed to both children and families within the scope of oral and dental health, considering the use of different educational methods together.

- In order to transform the information learned through trainings into behaviors and habits, it is considered appropriate to provide continuous training through national broadcasting television channels and social media in order to increase the duration of training.

- Longer follow-up studies are needed to evaluate the effects of different education methods on the knowledge level of families and the conversion of oral care behaviors into habit.

REFERENCES

1) Öztek Z, Üner S, Eren N. Halk Sağlığı Kavramı ve Gelişmesi. In: Güler Ç, editor. *Halk Sağlığı Temel Bilgiler.* 2. Baskı. Ankara: Hacettepe Üniversitesi Yayınları; 2005: 3-12.

2) World Health Organization. The World Health Report 2002. Reducing Risks, Promoting Healthy Life. Geneva: *World Health Organization*, 2002.

3) Gökalp S, Güçiz Doğan B, Tekçiçek M, Berberoğlu A, Ünlüer Beş Ş. On iki ve on beş yaş çocukların ağız diş sağlığı profili, *Hacettepe Diş Hekimliği Fakültesi Dergisi*. 2007;31(4):3–10.

4) Yazıcıoğlu B. Ağız ve Diş Sağlığı. In: Güler Ç, Akın L., editor. *Halk Sağlığı Temel Bilgiler*. Ankara: Hacettepe Üniversitesi Yayını; 2006: 146-149.

5) Santrock JW. Giriş. In: Yükse G, editor. *Yaşam Boyu Gelişim*, Gelişim Psikolojisi. 13. Baskı. Ankara: Nobel Yayın; 2011.

6) American Academy of Pediatric Dentistry; American Academy of Pediatrics. Policy on early childhood caries (ECC): classifications, consequences, and preventive strategies. *Pediatr Dent* 2008-2009;**30**(7):40-43.

7) Özşin Özler C. Altındağ İlçe Milli Eğitim Müdürlüğü'ne bağlı anaokullarındaki 3-6 yaş çocukların ağız-diş sağlığı durumunun belirlenmesi. Ankara, Hacettepe Üniversitesi, 2015.

8) Kay EJ, Locker D. Is dental health education effective?. A systematic review of current evidence. *Community Dent Oral Epidemiol*. 1996;**24**(4):231-235.

9) Eronat N, Koparal E, Ertuğrul F. Etkili bir ağız–diş sağlığı eğitimi nasıl olmalı? *Akad Dent Diş Hekim Derg.* 2000;**2**(4):38–44.

10) Ramos-Gomez FJ, Shepard DS. Cost-effectiveness model for prevention of early childhood caries. *J Calif Dent Assoc*. 1999;27:539–544.

11) Luzzi V, Fabbrizi M, Coloni C. Experience of dental caries and its effects on early dental occlusion: a descriptive study. *Ann Stomatol (Roma)*. 2011;**2**(1-2):13–18.

12) Senesombath S, Nakornchai S, Banditsing P, Lexomboon D. Early childhood caries and related factors in Vientiane, Lao PDR. *Southeast Asian J Trop Med Public Health.* 2010;**41**(3):717-725.

13) De Grauwe A, Aps JK, Martens LC. Early childhood caries (ECC): What's in a name? *Eur J Paediatr Dent.* 2004;**5**(2):62–70.

14) Wyne AH. Early childhood caries: nomenclature and case definition. *Community Dent Oral Epidemiol.* 1999 Oct;**27**(5):313-315.

15) Petti S, Cairella G, Tarsitani G. Rampant early childhood dental decay: an example from Italy. *J Public Health Dent*. 2000;**60**(3):159-166.

16) Weinstraub JA. Prevention of early childhood caries: a public health perspective. *Community Dent Oral Epidemiol*. 1998; 26: 62-66.

17) Dye BA, Tan S, Smith V, Lewis BG, Barker LK, Thornton-Evans G, Eke PI, Beltrán- Aguilar ED, Horowitz AM, Li CH. Trends in oral health status: United States. 1988- 1994 and 1999-2004. *Vital Health Stat* 11. 2007;**3**(248):1-92.

18) Peressini S. Pacifier use and early childhood caries: an evidence-based study of the literature. *J Can Dent Assoc.* 2003;**69**(1):16-19.

19) Prakash P, Subramaniam P, Durgesh BH, Konde S. Prevalence of early childhood caries and associated risk factors in preschool children of urban Bangalore, India: A cross- sectional study. *Eur J Dent.* 2012;**6**(2):141-152.

20) Qin M, Li J, Zhang S, Ma W. Risk factors for severe early childhood caries in children younger than 4 years old in Beijing, China. *Pediatr Dent.* 2008;**30**(2):122-128.

21) Quinonez R, Santos RG, Wilson S, Cross H. The relationship between child temperament and early childhood caries. *Pediatr Dent*. 2001;**23**(1):5-10.

22) Nelson S, Albert JM, Geng C, Curtan S, Lang K, Miadich S, Heima M, Malik A, Ferretti G, Eggertsson H, Slayton RL, Milgrom P. Increased enamel hypoplasia and very low birthweight infants. *J Dent Res.* 2013;**92**(9):788-794.

23) Targino AG, Rosenblatt A, Oliveira AF, Chaves AM, Santos VE. The relationshion of enamel defects and caries: a cohort study. *Oral Dis.* 2011;**17**(4):420-426.

24) Davey AL, Rogers AH. Multiple types of the bacterium Streptococcus mutans in the human mouth and their intra- family transmisison. *Arch Oral Biol*. 1984; 29: 453-460.

25) Caufield PW, Li Y, Bromage TG. Hypoplasia-associated severe early childhood caries a proposed definition. *J Dent Res*. 2012;**91**(6):544–550.

26) Salanitri S, Seow WK. Developmental enamel defects in the primary dentition: aetiologyand clinical management. *Aust Dent J*. 2013;**58(**2):133-140.

27) Tyagi R. The prevalence of nursing caries in Davangere preschool children and its relationship with feeding practices and socioeconomic status of the family. *J Indian Soc Pedod Prev Dent.* 2008;**26**(4):153-157.

28) Tinanoff N, Kanellis MJ, Vargas CM. Current understanding of the epidemiology mechanisms, and prevention of dental caries in preschool children. *Pediatr Dent.* 2002 Nov-Dec;**24**(6):543-551.

29) Cameron AC, Widmer RP. Dental Caries. In: Cameron AC, Widmer RP, editor. *Handbook of Pediatric Dentistry*. 4th ed. Elsevier; 2013.

30) Du M, Luo Y, Zeng X, Alkhatib N, Bedi R. Caries in preschool children and its risk factors in 2 provinces in China. *Quintessence Int.* 2007 Feb;**38**(2):143-151.

31) Begzati A, Berisha M, Meqa K. Early childhood caries in preschool children of Kosovo - a serious public health problem. *BMC Public Health.* 2010;**10**(8):788.

32) Yonezu T, Ushida N, Yakushiji M. Longitudinal study of prolonged breast- or

bottle-feeding on dental caries in Japanese children. *Bull Tokyo Dent Coll*. 2006;**47**(4):157-160.

33) Li Y, Wang W, Caufield PW. The fidelity of mutans streptococci. transmission and caries status correlate with breast-feeding experience among Chines families. *Caries Res.* 2000;**34**(2):123-132.

34) Meurman PK, Pienihäkkinen K. Factors associated with caries increment: a longitudinal study from 18 months to 5 years of age. *Caries Res.* 2010;**44**(6):519-524.

35) Hallett KB, O'Rourke PK. Pattern and severity of early childhood caries. *Community Dent Oral Epidemiol.* 2006;**34**(1):25-35.

36) Van WH, Soe W, Vantof MA. Risk factors of early childhood caries in a Southeast Asian population. *J Dent Res.* 2006;**85**(1):85- 88.

37) Erickson PR, Mazhari E. Investigation of the role of human breast milk in caries development. *Pediatr Dent.* 1999;**21**(2):86-90.

38) Dasanayake AP, Caufield PW. Prevalence of dental caries in Sri Lanka aboriginal Veddha children. *Int Dent J.* 2002 Dec;**52**(6):438-344.

39) Berkowitz RJ. Mutans streptococci: acquisition and transmission. *Pediatr Dent.* 2006;**28**(2):106-109.

40) Campus G, Lumbau A, Sanna AM, Solinas G, Lugli P, Castiglia P. Oral health condition in an Italian preschool population. *Eur J Paediatr Dent.* 2004 Feb;**32**(1):41-48.

41) Misra S, Tahmassebi JF, Brosnan M. Early childhood caries--a review. *Dent Update.* 2007;**34**(9):556-564.

42) Hooley M, Skouteris H, Boganin C, Satur J, Kilpatrick N. Parental influence and the development of dental caries in children aged 0-6 years: a systematic review of the literature. *J Dent.* 2012;**40**(11):873–885.

43) Alaki SM, Burt BA, Garetz SL. The association between antibiotics usage in early childhood and early childhood caries. *Pediatr Dent.* 2009;**31**(1):31-37.

44) Tanaka K, Miyake Y, Sasaki S. The effect of maternal smoking during pregnancy and postnatal household smoking on dental caries in young children. *J Pediatr.* 2009;**155**(3):410-415.

45) Hanioka T, Nakamura E, Ojima M, Tanaka K, Aoyama H. Dental caries in 3-year-old children and smoking status of parents. *Paediatr Perinat Epidemiol.* 2008;**22**(6): 546-550.

46) Milsom KM, Blinkhorn AS, Tickle M. The incidence of dental caries in the primary molar teeth of young children receiving National Health Service funded dental care in practices in the North West of England. *Br Dent J.* 2008;**205**(7): 384-385.

47) Meyer F, Enax J. Early Childhood Caries: Epidemiology, Aetiology, and Prevention. *Int J Dent*. 2018; **3**(12): 121-123.

48) Milnes AR. Description and epidemiology of nursing caries. *J Publ Health Dent* 1996; **56**(8): 38 – 50.

49) Vadiakas G. Case definition, aetiology and risk assessment of early childhood caries (ECC): a revisited review. *Eur Arch Paediatr Dent*. 2008;9:114–125.

50) Namal N, Vehit HE, Can G. Risk factors for dental caries in Turkish preschool children. *Indian Soc Pedod Prev Dent.* 2005; 23:115–118.

51) Chrisopoulos S, Harford JE, Ellershaw A. Oral health and dental care in Australia: key facts and figures 2015. [Internet]. Oral health and dental care in Australia: key facts and figures 2015. *Australian Institute of Health and Welfare*; 2015. Erişim: 05.05.2018 https://www.aihw.gov.au/reports/dental-oral-health/oral-health-and-dental-care-in-australia-key-facts-and-figures-2015/contents/table-of-contents.

52) Alkhtib A, Ghanim A, Temple-Smith M, Messer LB, Pirotta M, Morgan M.Prevalence of early childhood caries and enamel defects in four and five-year old Qatari preschool children. *BMC Oral Health*. 2016;**16**(1):73.

53) Oulis CJ, Tsinidou K, Vadiakas G, Mamai-Homata E, Polychronopoulou A, Athanasouli T. Caries prevalence of 5, 12 and 15-year-old Greek children: a national pathfinder survey. *Community Dent Health.* 2012; **29**(1):29-32.

54) Bugis BA. Early childhood caries and the impact of current U.S. Medicaid program: An overview. *Int J Dent*, 2012.

55) Basner R, Santamaria RM, Schmoeckel J, Schuler CS. *Epidemiologische Begleituntersuchungen zur Gruppenprophylaxe*. Bonn, Germany: 2018.

61) Kılınç G, Koca H, Ellidokuz H. 3-4 yaş grubu çocukların ağız sağlık durumlarının iki yıllık takibi. *DEÜ Tıp Fakültesi Dergisi.* 2013; **27**(1): 25-31.

62) Aydınoğlu S. Trabzon ili ve çevresinde 3-6 yaş grubu hastalarda dmf-t indeksi ve çürük prevalansının değerlendirilmesi. Trabzon, Karadeniz Teknik Üniversitesi, 2015.

63) Bodrumlu EH, Avşar A. Erken çocukluk dönemi çürükleri. *GÜ Diş Hek Fak Derg.* 2011;**28**(2):131–140.

64) Douglass JM, Douglass AB, Silk HJ. A practical guide to infant oral health. *Am Fam Physician*. 2004;**70**(11):2113-2120.

65) Ripa LW. Nursing caries: a comprehensive review. *Pediatr Dent.* 1988;**10**(4):268–282.

66) Selvi S, Kavaloğlu Çıldır Ş, Sandallı N. Erken çocukluk dönemi çürükleri: etiyolojisi, epidemiyolojisi, Koruyucu yaklaşımlar ve tedavisi. *Yeditepe Klin. Der.* 2008;1:48–55.

67) Motisuki C, Santos-Pinto L, Giro EM. Restoration of severely decayed primary incisors using indirect composite resin restoration technique. *Int J Ped Dent*. 2005;**15**(4):282-286.

68) Bayrak S, Tunc ES, Tuloglu N. Polyethylene fiber-reinforced composite resin usedas a short post in severely decayed primary anterior teeth: a case report. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*. 2009;**107**(5):60-64.

69) Grewal N, Seth R. Comparative in vivo evaluation of restoring severely mutilated primary anterior teeth with biological post and crown preparation and reinforced composite restoration. *J Indian Soc Pedod Prev Dent.* 2008 Dec;**26**(4):141-148.

70) Tinanoff N, O'Sullivan DM. Early childhood caries: overview and recent findings. *Pediatr Dent.* 1997;**19**(1):12-16.

71) Almeida AG, Roseman MM, Sheff M, Huntington N, Hughes CV. Future caries susceptibility in children with early childhood caries following treatment under general anesthesia. *Pediatr Dent*. 2000;**22**(4):302-306.

72) Lopez L, Berkowitz R, Spiekerman C, Weinstein P. Topical antimicrobial therapy in the prevention of early childhood caries: a follow-up report. *Pediatr Dent.* 2002 May-Jun;**24**(3):204-206.

73) Zhan L, Featherstone JDB, Gansky SA, Hoover CI, Fujino T, Berkowitz RJ. Antibacterial treatment needed for severe early childhood caries. *J Public Health Dent.* 2006; 1:48–55.

74) Eriş O. Süt dişlenme, karışık dişlenme ve sürekli dişlenme dönemindeki çocukların çürük risk faktörlerinin değerlendirilmesi. *GÜ Diş Hek Fak Derg.* 2011; **28**(2):131.

75) Doğan BG, Gökalp S. Türkiye'de diş çürüğü durumu ve tedavi gereksinimi. *Hacettepe Diş Hekimliği Fakültesi Dergisi* .2008; **32**(2): 45

76) Sheiham A, Spencer J. Health needs assessment. In: Pine CM, editor. *Community Oral health.* Bath-Great Britain: Elsevier Sciences Limited; 2002: 33–59.

77) World Health Organization. Oral health surveys: basic methods. Geneva,

Switzerland: *World Health Organization;* 2013.

78) Gökalp S, Güçiz Doğan B, Tekçiçek M, Berberoğlu A, Ünlüer Ş. Erişkin ve yaşlılarda ağız-diş sağlığı profili. *Hacettepe Diş Hekim Derg.* 2007;31:11–18.

79) Hugoson A, Koch G, Bergendal T, Hallonsten AL, Slotte C, Thorstensson B, et al. Oral health of individuals aged 3-80 years in Jonkoping, Sweden in 1973, 1983, and 1993. *Swed Dent J.* 1995;**19**(6):243–260.

80) Wang H-Y, Petersen PE, Bian J-Y, Zhang B-X. The second national survey of oral health status of children and adults in China. *Int Dent J.* 2002; **52**(4):283–290.

81) Dhar V, Jain A, Van DE. Prevalence of dental caries and treatment needs in the school-going children of rural areas in Udaipur district. *J Indian Soc Pedod Prev Dent.* 2007;119:112–114.

82) AAPD Caries-risk Assessment and Management for Infants, Children, and Adolescents. *Int Dent J.* 2011;**34**(6): 118-125.

89) Oh T-J, Eber R, Wang H-L. Periodontal diseases in the child and adolescent. *J Clin Periodontol*. 2002;**29**(5):400–410.

90) Özyavaş S. Türkiye'de ağız diş sağlığı politikası: mevcut durum analizi . *Hacettepe Sağlık İdaresi Dergisi.* 2018; **21**(4): 789-805.

91) Erdoğan Y, Küçükeşmen Ç. Çocuklarda ve Adölesanlarda Periodontal Hastalıklar. *Turkiye Klinikleri J Dent Sci* . 2009;15:196–204.

92) Löe H, Silness J. Periodontal Disease in Pregnancy. I. Prevalance and Severity. *Acta Odontol Scand*. 1963;21:533-551.

93) Gökalp S, Koç Vural U. Türkiye'de Koruyucu Diş Hekimliği. *Turkiye Klin J Dent*. 2015; **1**(2):1–6.

94) Çubukçu Elbek Ç. Neden koruyucu diş hekimliği. *Hacettepe Toplum Hekim Bülteni.* 2003; 1:1–4.

95) Murray JJ. *Oral Health for the 21st Century*. Oxford University Press; 1996: 234 –249.

96) Dirican R, Bilgel N. *Halk Sağlığı (Toplum Hekimliği)*, Uludağ Üniversitesi Basımevi, 2. Baskı, Bursa. 1993;361–376.

97) Değirmencioğlu C. Eğitime Bilimsel Yaklaşım. In: Küçükahmet L, editor. *Eğitim Bilimlerine Giriş*. Ankara: Gazi Kitabevi Yayınları; 1997: 1–17.

98) Dale E. Audio-Visual Methods in Teaching. 3rd Ed. New York: Holt, Rinehart &Winston; 1969.

99) Bahar Özvarış Ş. Sağlık Eğitimi ve Sağlığı Geliştirme. In: Güler Ç, Akın L, editors. *Halk Sağlığı Temel Bilgiler.* Ankara: Hacettepe Üniversitesi; 2006, 132–185.

100) Yılmaz M, Akkoyunlu B. Farklı öğrenme ortamlarının kalıcılığa etkisi. *Eğitim Araştırmaları Dergisi*. 2006; 23, 209- 218.

101) Guarnizo-Herreño CC, Watt RG, Fuller E. Socioeconomic position and subjective oral health: findings for the adult population in England, Wales and Northern Ireland. *BMC Public Health*. 2014; **14**:827.

102) Shah PV, Lee Y, Wright JT. Clinical success and parental satisfaction with anterior prevenered primary stainless steel crown. Peddiatr Dent. 2004;**26**(5):391-395.

103) Saydam G, Oktay İ, Möller I. *Türkiye'de ağız diş sağlığı dırum analizi.* İstanbul, 1990.

104) Bhardwaj VK, Sharma KR, Luthra RP, Jhingta P, Sharma D, Justa A. Impact of school-based oral health education program on oral health of 12 and 15 years old school children. *J Educ Health Promot*. 2013;**31**(2):33.

105) Stephen A, Krishnan R, Ramesh M, Kumar VS. Prevalence of early childhood caries and its risk factors in 18-72 month old children in Salem, Tamil Nadu. *J Int Soc Prev Community Dent.* 2015**;5**(2):95–102.

106) Milgrom P, Riedy CA, Weinstein P, Tanner AC, Manibusan L, Bruss J. Dental caries and its relationship to bacterial infection, hypoplasia, diet, and oral hygiene 6- to 36-month-old children. *Community Dent Oral Epidemiol.* 2000;**28**(4):295-306.

107) Jin BH, Ma DS, Moon HS, Paik DI, Hahn SH, Horowitz AM. Early childhood caries: prevalence and risk factors in Seoul, Korea. *J Public Health Dent.* 2003;**63**(3):183-188.

108) Jose B, King NM. Early childhood caries lesions in preschool children in Kerala, India. *Pediatr Dent.* 2003 Nov-Dec;**25**(6):594-600.

109) Halawany HS, Salama F, Jacob V, et al. A survey of pediatric dentists' cariesrelated treatment decisions and restorative modalities - A web-based survey. *Saudi Dent J*. 2017;**29**(2):66–73.

110) Büyüköztürk Ş. *Deneysel Desenler*. Pegem Akademi Yayıncılık. 5. Baskı. Ankara, 2005.

111) Ekiz D. *Bilimsel Araştırma Yöntemleri*. Anı Yayıncılık; Ankara, 2015.

112) Ersoy Ö, Sahin T. 0-6 yaş döneminde anne baba eğitiminin önemi. *Mesleki Eğitim Fakültesi Dergisi,* 1999;**1**(1), 58-62.

113) Çavuş ZS. Okul Öncesi Dönem Çocuklarının Ağız ve Diş Sağlığına Aile Tutumlarının ve Beslenme Alışkanlıklarının Etkisinin İncelenmesi. Bolu, Abant İzzet Baysal Üniversitesi, 2010.

114) Sadana G, Gupta T, Aggarwal N, Rai H. K, Bhargava A, & Walia S. Evaluation of the impact of oral health education on oral hygiene knowledge and plaque control of school-going children in the city of Amritsar. *J. Int. Soc. Pre Com Dent.* 2017;**7**(5): 259.

115) Malik A, Sabharwal S, Kumar A, Singh Samant P, Singh A, Kumar Pandey V. Implementation of game-based oral health education *vs* conventional oral health education on children's oral health-related knowledge and oral hygiene tatus. *Int J. Ped Dent*. 2017;**10**(3):257-260.

116) Taş N. Okul çağı çocuklarının ağız ve diş sağlığı eğitiminde broşür ve video yöntemiyle bilgilendirmenin karşılaştırmalı olarak değerlendirilmesi. Ankara, Hacettepe Üniversitesi, 2016.

117) Lees A, Rock WP. A comparison between written, verbal, and videotape or hygiene instruction for patients with fixed appliances. *J Orthod*. 2000;**27**(4):323-328.

118) Kumar Y, Asokan S, John B, Gopalan T. Effect of conventional and game-based teaching on oral health status of children: a randomized controlled trial. *Int J Ped Dent*. 2015;**8**(2):123-126.

119) Halawany HS, Al Badr A, Al Sadhan S, Al Balkhi M, Al-Maflehi N, Abraham NB,Jacob V, Al Sherif G. Effectiveness of oral health education intervention among female primary school children in Riyadh, Saudi Arabia. *Saudi Dent J*. 2018;**30**(3):190-196

120) Kuru N, Kuru N, Akman B. Düşük Sosyo-Ekonomik Seviyedeki 4-8 Yaş Grubundaki Çocuklara ve Ailelerine Verilen Ağız ve Diş Sağlığı Eğitiminin Aileler Üzerindeki Etkililiğinin Değerlendirilmesi. *Hacettepe Üniversitesi Sağlık Bilimleri Fakültesi Dergisi.* 2015;**8**(2), 235.

121) Alaçam A, Tulunoğlu Ö, Bodur H, Çınar Ç, Tüzüner E, Cula, S. Ebeveynlere yönelik ağız diş sağlığı eğitim programlarının kısa ve uzun dönem etkileri. *Gazi Üniversitesi Diş Hekimliği Fakültesi Dergisi.* 2012; **29**(3):139-146.

122) Alsada LH, Sigal MJ, Limeback H, Fiege J, Kulkarni GV. Development and testing of an audio-visual aid for improving infant oral health through primary caregiver education. *J Can Dent Assoc.* 2005;**71**(4):241.

123) Ramezaninia J, Naghibi Sistani MM, Ahangari Z, Gholinia H, Jahanian I, Gharekhani S. Comparison of the effect of toothbrushing education via video, lecture and pamphlet on the dental plaque index of 12-year-old children. *Children (Basel).* 2018;11:**5**(4):211.

124) Picard AJ, Estrella MR, Boynton J, Maxwell A, Inglehart MR. Educating parents of children receiving comprehensive dental care under general anesthesia with visual aids. *Pediatr Dent.* 2014;**36**(4):329-335.

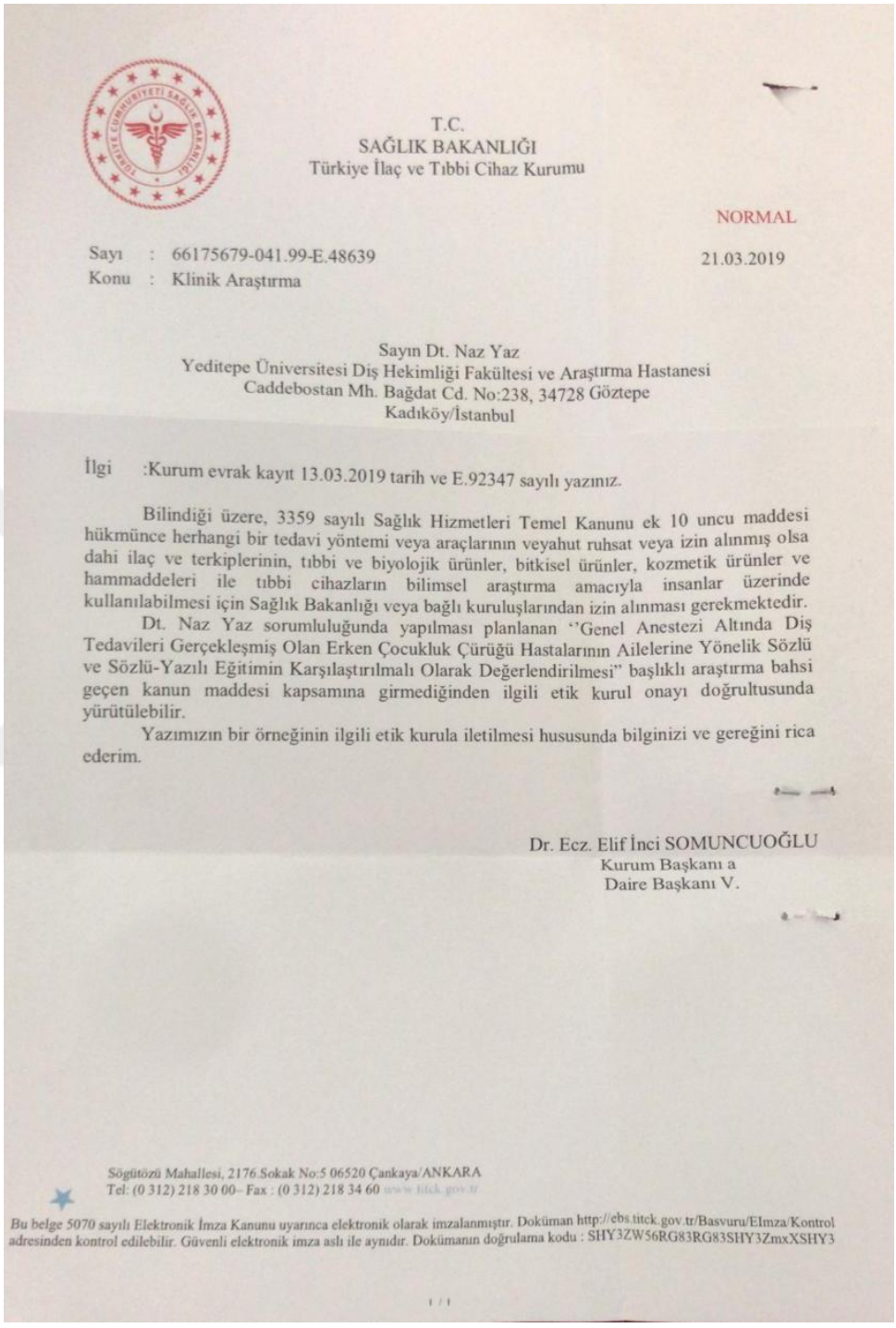
125) Mohebbi S, Virtanen J, Vahid-Golpayegani M, Vehkalahti M. A cluster randomised trial of effectiveness of educational intervention in primary health care on early childhood caries. *Caries Res.* 2009; **43**(2), 110-118.

126) Şanlıer N, Özgen L. Öğrencilere Farklı Yöntemlerle Verilen Eğitimin Ağız-Diş Sağlığı Ve Beslenme Bilgisi Üzerine Etkisi. *Türk Eğitim Bilimleri Dergisi*. 2005;**3**(3):351-365.

127) Olubunmi B, Olushola I. Effects of information dissemination using video of indigenous language on 11-12 years children's dental health. *Ethiopian J Health Sci.* 2013; **23**(3), 201-208.

APPENDICES

APPENDIX-1: Ethics Committee Approval



T.C.
SAĞLIK BAKANLIĞI
Türkiye İlaç ve Tıbbi Cihaz Kurumu

NORMAL

Sayı : 66175679-041.99-E.48639 21.03.2019
Konu : Klinik Araştırma

Sayın Dt. Naz Yaz
Yeditepe Üniversitesi Diş Hekimliği Fakültesi ve Araştırma Hastanesi
Caddebostan Mh. Bağdat Cd. No:238, 34728 Göztepe
Kadıköy/İstanbul

İlgi :Kurum evrak kayıt 13.03.2019 tarih ve E.92347 sayılı yazınız.

Bilindiği üzere, 3359 sayılı Sağlık Hizmetleri Temel Kanunu ek 10 uncu maddesi hükmünce herhangi bir tedavi yöntemi veya araçlarının veyahut ruhsat veya izin alınmış olsa dahi ilaç ve terkiplerinin, tıbbi ve biyolojik ürünler, bitkisel ürünler, kozmetik ürünler ve hammaddeleri ile tıbbi cihazların bilimsel araştırma amacıyla insanlar üzerinde kullanılabilmesi için Sağlık Bakanlığı veya bağlı kuruluşlarından izin alınması gerekmektedir.

Dt. Naz Yaz sorumluluğunda yapılması planlanan ''Genel Anestezi Altında Diş Tedavileri Gerçekleşmiş Olan Erken Çocukluk Çürüğü Hastalarının Ailelerine Yönelik Sözlü ve Sözlü-Yazılı Eğitimin Karşılaştırılmalı Olarak Değerlendirilmesi" başlıklı araştırma bahsi geçen kanun maddesi kapsamına girmediğinden ilgili etik kurul onayı doğrultusunda yürütülebilir.

Yazımızın bir örneğinin ilgili etik kurula iletilmesi hususunda bilginizi ve gereğini rica ederim.

Dr. Ecz. Elif İnci SOMUNCUOĞLU
Kurum Başkanı a
Daire Başkanı V.

Söğütözü Mahallesi, 2176.Sokak No:5 06520 Çankaya/ANKARA
Tel: (0 312) 218 30 00– Fax : (0 312) 218 34 60 www.titck.gov.tr

Bu belge 5070 sayılı Elektronik İmza Kanunu uyarınca elektronik olarak imzalanmıştır. Doküman http://ebs.titck.gov.tr/Basvuru/EImza/Kontrol adresinden kontrol edilebilir. Güvenli elektronik imza aslı ile aynıdır. Dokümanın doğrulama kodu : SHY3ZW56RG83RG83SHY3ZmxXSHY3

1 / 1

APPENDIX-2: Volunteer Information and Approval Form

ARAŞTIRMA AMAÇLI ÇALIŞMA İÇİN VELİ AYDINLATILMIŞ ONAM FORMU

Çalışmanın Adı: **Genel Anestezi Altında Diş Tedavileri Yapılmış Olan Erken Çocukluk Çürüğü Hastalarının Ailelerine Yönelik Sözlü ve Sözlü-Yazılı Eğitimin Karşılaştırmalı Olarak Değerlendirilmesi**

Sayın Veli,

Ülkemizdeki birçok anne-baba, ağız diş sağlığı ve temizliği konusunda yeterli bilgiye sahip değildir ve bunun sonucunda ağız diş sağlığının en önemli iki problemi olan diş çürükleri ve dişeti hastalıkları ile sıklıkla karşılaşmaktayız. Bir toplumun geleceği olan çocukların ailelerine yönelik eğitim verilmesi ileride oluşabilecek ağız diş hastalıklarında olduğu kadar sağlık giderlerinde de önemli bir azalmayla sonuçlanacaktır.

Çocuğunuzun dahil edileceği etkili ağız diş sağlığı eğitimini belirlemeyi hedefleyen bu çalışma, Yeditepe Üniversitesi Diş Hekimliği Fakültesi Çocuk Diş Hekimliği bölümünde gerçekleşecektir. Bu çalışmaya katılmanız için sizden herhangi bir ücret istenmeyecektir. Gönüllülük esasına dayanan bu çalışma sonucu elde edeceğimiz bulgular konusunda sizleri ayrıca bilgilendireceğiz.

Bu kayıtlar bilimsel nitelikte yayınlarda kullanılacak, sizin ve çocuğunuzun kimliği kesinlikle gizli tutulacaktır. Bu amaçların dışında bu kayıtlar kullanılmayacak ve başkalarına verilmeyecektir. Bu araştırmaya katılmak tamamen isteğe bağlıdır. Önceden haber vermek koşuluyla, bu araştırmadan herhangi bir sebep göstermeden geri çekilebilirsiniz.

Katılımcı Velisi

Adı, soyadı:

İmza:

Katılımcı ile Görüşen Hekim

Adı soyadı :

İmza:

YEDİTEPE ÜNİVERSİTESİ DİŞ HEKİMLİĞİ FAKÜLTESİ VE DİŞ HASTANESİ

Adres : Bağdat Cd. No: 238 34728 Göztepe, Kadıköy, İstanbul

Telefon : 0216 468 08 00

Faks : 0216 363 62 11

E-Mail : info@yeditepedishastanesi.com

APPENDIX-3: Survey form

ANKET

Değerli Velimiz,

Bu anket, **"Genel Anestezi Altında Diş Tedavileri Gerçekleşmiş Olan Erken Çocukluk Çürüğü Hastalarının Ailelerine Yönelik Sözlü ve Sözlü-Yazılı Eğitimin Karşılaştırmalı Olarak Değerlendirilmesi"** konulu yüksek lisans tezinde bulunan araştırma bölümü için hazırlanmıştır. Bu formla toplanacak bilgiler yüksek lisans tezinde bilimsel bir araştırmanın temelini oluşturacak ve başka bir amaçla kullanılmayacaktır.

Araştırma çerçevesinde aşağıda yer alan iki kısımdan oluşan bir anket hazırlanmıştır. Ankette yer alan soruların cevaplandırılmasında gösterilecek dikkat ve samimiyet araştırmanın değerini ortaya koyacaktır. Araştırma kapsamında gizlilik ilkesi uyarınca isim talep edilememekte olup, verilecek yanıtlar saklı kalacaktır.

Zaman ayırarak sunacağınız katkılar için teşekkürlerimi sunarım.

Dt. Naz Yaz Çakır

KISIM-1: KİŞİSEL BİLGİ FORMU

Çocuğu Kuruma Getiren Sorumlu Velinin/Bakıcıya İlişkin Hususlar		
1	Cinsiyeti?	( ) Bayan ( ) Bay
2	Yaşı?	
3	Öğrenim Durumu?	( ) Hiçbir Okul Mezunu Değil ( ) İlköğretim(İlk/Orta) ( ) Lise ( ) Üniversite ( ) Yüksek Lisans Doktora
4	Çalışma Şekli?	( ) Çalışmıyorum ( ) Tam zamanlı çalışıyorum ( ) Yarı zamanlı çalışıyorum ( ) Evden çalışıyorum ( ) Öğrenciyim ( ) Diğer …….
5	Medeni Durumu?	( ) Evli ( ) Bekar () Dul/Boşanmış
Çocuğa İlişkin Hususlar		

6	Cinsiyeti?	( ) Bayan ( ) Bay
7	Doğum Tarihi (gün/ay/yıl):	
8	Kardeşi var mı?	( ) Evet ( ) Hayır
9	Varsa kaçıncı sırada doğdu?	…...
Çocuğun Beslenme ve Diş Sağlığına İlişkin Hususlar		
1	Çocuğunuz ne kadar süre anne sütü aldı? (eğer kullanmadıysa değeri 0 olarak giriniz)	….. ay
2	Çocuğunuz ne kadar süre biberon kullandı? (eğer kullanmadıysa değeri 0 olarak giriniz)	….. ay
3	Çocuğunuz ne kadar süre hazır mama kullandı? (eğer kullanmadıysa değeri 0 olarak giriniz)	….. ay
4	Çocuğunuza biberon ile şekerli süt / sütlü bisküvi/ mama verildi mi ?	( ) Evet ( ) Hayır
5	Çocuğunuzun gece biberonla uyuma alışkanlığı var mı?	( ) Evet ( ) Hayır
6	Çocuğunuz gün içinde ana öğünlerde kaç kez şekerli yiyecek ve içecek tüketiyor?	( ) Günde 1 -2 kez ( ) Günde 4- 6 kez ( ) Günde 7 – 10 kez ( ) Böyle bir alışkanlığım yok
7	Çocuğunuz gün içinde ara öğünlerde kaç kez şekerli yiyecek ve içecek tüketiyor?	( ) Günde 1 -2 kez ( ) Günde 3 kez veya daha fazla ( ) Her gün olmamakla beraber ara sıra ( ) Böyle bir alışkanlığım yok
8	Çocuğunuzun dişlerini ilk kez kaç yaşındayken fırçalamaya başladınız?	….. ay
9	Çocuğunuzun dişlerini fırçalarken yardımcı oluyor musunuz?	( ) Evet ( ) Hayır
10	Çocuğunuzun dişlerini genellikle hangi sıklıkta fırçalıyorsunuz?	( ) Günde bir kere ( ) Günde 2 veya daha fazla ( ) Haftada birkaç kez ( ) Daha seyrek / hiç diş fırçalamıyorum
11	Dişlerini fırçalarken diş macunu kullanıyor musunuz?	( ) Evet ( ) Hayır
12	Diş macununun içeriğinde flor bulunuyor mu?	( ) Evet ( ) Hayır

13	Çocuğunuza diş ipi uyguluyor musunuz?	( ) Hayır ( ) Evet
14	13. soruya cevabınız evet ise diş ipini hangi sıklıkta uyguluyorsunuz	( ) Günde 2 veya daha fazla ( ) Günde 1 ker ( ) Haftada birkaç kez ( ) Ayda birkaç kez veya daha seyrek

KISIM-2: BİLGİ DÜZEYİ ÖLÇEĞİ

Her ifadeye ilişkin olarak aşağıda belirtilen seçeneklerden yalnız birini işaretleyiniz.

NU	İFADE	Doğru	Yanlış	Emin değilim
1	Süt dişleri önemlidir.			
2	Süt dişlerinde oluşabilecek problemler alttan gelecek olan sürekli dişleri etkilemez.			
3	Süt dişleri kendilerinin yerine gelecek olan sürekli dişlerin yerini korurlar			
4	Çocuğunuzun ilk dişi çıktığından itibaren en geç 1 yaşına kadar ilk diş muayenesi yapılmalıdır.			
5	Ara öğünlerde sıkça şekerli yiyecek/içecek tüketimi çürük oluşumunu artırır.			
6	Çocuğunuzu gece boyunca anne sütü/ biberonla beslemek diş sağlığını olumsuz yönde etkilemez.			
7	Bir yaşından sonra bebeklere biberon bıraktırılmalı, bardak/ kaşık kullanarak beslenmeye alıştırılmalıdır.			
8	Çocuğunuzun bal/pekmez/reçelle tatlandırılmış sütle beslenmesi diş çürüğü oluşumuna neden olmaz.			
9	Diş çürüklerine neden olan bakteriler anne babadan çocuklara bulaşabilir.			
10	Fissür örtücüler diş çürüklerinin önlenmesinde etkili bir tedavi yöntemi değildir.			
11	Flor uygulaması diş çürüklerini önlemede etkili bir yöntem değildir.			
12	Süt dişlerinin erken çekildiği durumlarda yerine gelecek sürekli dişin yerini korumak amacıyla yer tutucu yapılmalıdır.			
13	Dişler günde 2 kez 2 dk. fırçalanmalıdır.			
14	Bebeğinizin ilk dişi çıktığından itibaren fırçalanmalıdır.			
15	Çocukların dişleri 2 yaşından itibaren fluorlu diş macunuyla fırçalanmalıdır.			

NU	İFADE	Doğru	Yanlış	Emin değilim
16	Çocukların dişleri 2 yaşından itibaren bezelye büyüklüğünde macun kullanılarak fırçalanmalıdır.			
17	Diş fırçası yılda bir kez değiştirilmelidir.			
18	6 yaşından önce çocuklara diş ipi uygulanmamalıdır.			

KISIM-3: MUAYENE FORMU

Hastanın Adı-Soyadı:

Tarih:

PLAK İNDEKSİ:

Distal, Bukkal, Mesial											
16	**55**	**54**	**53**	**52**	**51**	**61**	**62**	**63**	**64**	**65**	**26**
Lingual											
46	**85**	**84**	**83**	**82**	**81**	**71**	**72**	**73**	**74**	**75**	**36**
Distal, Bukkal, Mesial											

GİNGİVAL İNDEKS:

Distal, Bukkal, Mesial											
16	**55**	**54**	**53**	**52**	**51**	**61**	**62**	**63**	**64**	**65**	**26**
Lingual											
46	**85**	**84**	**83**	**82**	**81**	**71**	**72**	**73**	**74**	**75**	**36**
Distal, Bukkal, Mesial											

APPENDIX-4: **Education Brochure**

YEDİTEPE ÜNİVERSİTESİ
DİŞ HEKİMLİĞİ FAKÜLTESİ ve
DİŞ HASTANESİ

GENEL ANESTEZİ ALTINDA DİŞ TEDAVİLERİ GERÇEKLEŞTİRİLECEK HASTALARIN AİLELERİNE YÖNELİK BİLGİLENDİRME BROŞÜRÜ

SÜT DİŞLERİNİN ÖNEMİ

Süt dişlerinin öncelikli görevi çocuğun düzgün beslenmesini sağlamaktır. Ayrıca konuşmanın düzgün gelişimi de süt dişlerinin varlığına bağlıdır. Süt dişleri kapladıkları alanı kendilerinin yerine gelecek olan sürekli dişler için korumakta ve bu dişler sürerken onlara rehberlik etmektedirler. Süt dişi erken çekildiği zaman bu doğal yer tutuculuk fonksiyonu da ortadan kalkmaktadır.Tedavi edilmeyen süt dişi çürükleri, ağrı, kötü koku, çiğneme zorluğu, beslenme bozukluğu ve kötü bir görüntüye yol açar. Bu dönemde tedavi edilmeyen diş hastalıkları, ilerde dişlerin çarpıklığına, çene gelişiminde bozukluğa ve genel sağlık problemlerine sebep olabilecektir. Dolayısıyla süt dişlerindeki çürükler, "nasıl olsa yerine yenileri gelecek" yanılgısına düşmeden tedavi edilmelidir.

BEBEKLERDE İLK DİŞ MUAYENESİ

Diş hekimiyle ilk randevunun ilk süt dişinin çıkmasından sonra en geç bir yaşına kadar gerçekleştirilmesi gerekmektedir.Ancak böyle olursa diş hekimi çocuğu sağlıklı diş gelişimi ve ağız diş sağlığı yönünden alıp edebilir takibe alabilir, yanlış beslenme alışkanlıkları konusunda aileyi uyarabilir ve doğru ağız bakımı çürükten koruyucu uygulamalar hakkında aileyi bilgilendirebilir.

BİBERON ÇÜRÜĞÜ

Annenin bebeğini gece uyku arasında emzirmesi ya da biberonla süt / mama vermesi süt dişlerinin çok erken dönemde çürümesine neden olur. Anne sütünün ve inek sütünün yapısındaki LAKTOZ isimli şekar çürük yapıcı bir maddedir.Bu nedenle gece beslenmesi sonrasında süt dişlerinin temizlenmesi gereklidir.Amerikan Çocuk Diş Hekimleri Birliği (AAPD) biberonla beslenmenin 12-18. aylardan itibaren bırakılmasını tavsiye etmektedir.

DİŞ ENFEKSİYONLARI

Diş dokuları canlılığını kaybettiğinde, ağrı ve şişliğe neden olabilir.Dişin canlılığını kaybetmesi, diş çürüğü veya dişe gelen bir travma sonucunda gerçekleşebilir.Dişte meydana gelen renk değişikliği ya da ilerlemiş çürükler, enfekalyonun habercisi olabilir. Enfeksiyon hem süt dişlerinde hem de sürekli dişlerde görülebilir.Dişte yaralanma ya da çürükten şüphe duyulduğunda en kısa sürede diş hekimine başvurulmalıdır.

TEDAVİLER

FİSSÜR ÖRTÜCÜ

Fissür örtücüler süt ve sürekli azı dişlerinin çiğneme yüzeylerindeki oluk ve çukurcuklan örten dolgu benzeri materyallerdir.Böylece bu bölgelere örtülerek bu bölgelere besin ve bakterilerin dolmasını ve çürük oluşmasını engellemektedir.Çürük oluşumu başlamadan önce, süt veya sürekli dişlerin sürmesinden hemen sonrası uygulanması için en uygun dönemdir.

FLOURİD UYGULAMASI

Fluorid uygulamaları süt ve sürekli dişleri çürük oluşumuna karşı güçlendirmek için yapılabilecek en etkili koruyucu uygulamalardan biridir. Fluorid ya da flor, dişin yapısına katılarak diş minesinin yapısını güçlendirir ve ağız içerisinde oluşan asidik ortama karşı diş minesinin daha güçlü olmasına yardımcı olur. Fluorid jelleri ve vernikleri, çocuk hastanın ait olduğu çürük risk grubuna uygun olarak 3 veya 6 aylık aralıklar ile düzenli bir şekilde uygulanmalıdır. Düşük ve orta risk grubundaki çocuklar 6 ayda bir, yüksek çürük risk grubundaki çocuklara ise 3 ay ara ile uygulanmalıdır. Fluorid jellerin ve vernliklerin uygulaması mutlaka bir diş hekimi kontrolünde yapılmalıdır.

DOLGULAR

Dolgu, dişlerin çürük yapıcı bakteriler tarafından zayıflatılarak harabiyete uğrayan kısmının uzaklaştırılarak, bu alana dişin yeniden fonksiyon görmesini sağlayacak özel maddelerin dişin şekline uygun olarak yerleştirilmesidir. Süt dişlerinin yapısı süreklî dişlerden farklı olduğu için onlara özel dolgu maddeleri kullanılmaktadır.

KURONLAR

Dolgu ile restore edilemeyecek kadar çok madde kaybı olan süt dişlerinin daha uzun süre ağızda kalabilmesi için metal ya da porselen kaplamalar ile tedavileri gerçekleştirilir

AMPUTASYON(YARIM KANAL TEDAVİSİ)

Amputasyon süt dişlerinde yaygın olarak kullanılan bir tedavi yöntemidir.Süt dişlerindeki derin çürüklər ve arayüz çürüklərində tercih edilmektedir. Dişin çürük kısmıyla birlikte çürük yapıcı bakterilər tarafından etkilenen sinir ve damarların uzaklaştırılmasıyla yapılır.

Bu sayede sinir ve damarların sadece bir kısmı uzaklaştırılarak dişin canlı kalması ve ağız içinde sağlıklı bir şekilde görev yapması sağlanır.

SÜT DİŞİ KANAL TEDAVİSİ

İleri derecede çürük olan dişlerin ağızda enfekte olmadan ağrısız ve sağlıklı şekilde kalabilmesi için çürükten etkilenen sinir ve damarların tümünün temizlenip dişin tedavi edilmesidir. Bu sayede diş çekilmekten kurtulur ve sürekli dişler sürene kadar ağızda kalır.

DİŞ ÇEKİMİ

Süt dişlerinin düşme yaşı, çürüğün derinliği ve oluşan doku kaybına bağlı olarak diş tedavi ve restore edilemeyecek durumda ise dişin çekilmesine karar verilir.

YER TUTUCU

Süt dişinin düşme yaşından önce çekilmesi gerekiyorsa yer kaybını engellemek için sabit ya da hareketli yer tutucu yapılmasına karar verilmelidir.Alttan beklenen sürekli diş gelinceye kadar yer tutucunun ağızda kalması gerekildir.

BESLENME ÖNERİLERİ

- Şekerli yiyecek ve içecekler iki öğün arasında verilmemelidir.
- Şekerli yiyecek/içecek tüketimi sınırlandırılmalıdır.
- Ara öğünlerde şekerli, yapışkan, asitli gıdalar yerine elma, havuç gibi dişleri temizleyici özelliği olan sert ve lifli gıdalar verilmelidir.
- Emziklerin bala, reçele vs. batırılarak bebeğe verilmesi süt dişlerinin çürümesine neden olmaktadır.
- Diş çürüğü bulaşıcı bir hastalıktır. Emzik, mama kaşığı, biberon annenin ağzından çıkarılıp bebeğe verilmemelidir. Bebek ağıza yakın yerinden öpülmemelidir.
- İlk süt dişinin sürmesiyle birlikte gece emzirmeleri sonrasında süt dişleri temizlenmelidir.
- Bebeğin 12.- 18. aydan itibaren biberonla uyumasına izin verilmemelidir.
- Biberon ile şeker içeren herhangi bir sıvı verilmemelidir.
- Bir, bir buçuk yaşından sonra bebeklere biberon bıraktırılmalı, bardak/ kaşık kullanarak beslenmeye

AĞIZ BAKIM ÖNERİLERİ

0-6 AYLIK

Bebeğin beslenme sonrası ağız içi ve diş etleri diş hekimin önerdiği parmak fırçası veya suyla ıslatılmış gazlı bez ile temizlenmelidir.

6-24 AYLIK

Bebeğinizin ilk dişi görüldüğü andan itibaren su veya florsuz diş macunu kullanarak yumuşak kıllı bir diş fırçası ile fırçalanmalıdır.Dişlerin günde 2 kere 2 dk. süre ile fırçalanması önerilmektedir.

2-6 YAŞ

AAPD, 2 yaşından itibaren dişlerin fluorürlü diş macunuyla fırçalanmasını önermektedir.Bu dönemde çocuklara diş fırçalama konusunda yardımcı olmaya devam edilmelidir. 3 yaşına kadar sürüntü ya da pirinç tanesi şeklinde, 3-6 yaş arası bezelye büyüklüğünde diş macunu kullanılmalıdır. Azı dişleri birbiriyle temas etmeye başladığından itibaren günde en az 1 kere aralıklar diş ipiyle temizlenmelidir.

NASIL FIRÇALARIM?

Önce üst dişlerin daha sonra da alt dişlerin dış yüzeylerini fırçalayın.

GÜNDE 2 KEZ 2 DK.

Önce üst dişlerin daha sonra da alt dişlerin iç yüzeylerini fırçalayın.

3-4 AYDA BİR DİŞ FIRÇASI DEĞİŞTİRİLMELİDİR

Bütün dişlerin çiğneme yüzeylerini yani üst yüzeylerini temizleyin.

DAİRESEL HAREKETLER

Daha ferah bir nefes için dili de fırçalamayı unutmayın.

DİŞ VE DİŞ ETLERİNE DEĞDİRMEK

DİŞ İPİ UYGULAMASI

1) Yaklaşık kırk santimetrelik diş ipi alarak, ipliğin büyük bir bölümünü orta parmaklarınızın çevresine sarın ve kullanmak için dört veya beş santimetrelik ipi açıkta bırakın.

2) Diş ipini, baş parmak ve işaret parmakları arasında gergin bir şekilde tutun.

3) Çocuğunuzun dişleri arasında nazikçe yukarı ve aşağı doğru hareket ettirin.

4) Diş ipini tüm diş arayüzlerinde nazikçe gezdirin ve ipin dişeti çizgisini geçtiğine emin olun.
Dişten dişe geçerken diş ipinin temiz bölümlerini kullanın.

CURRICULUM VITAE

Kişisel Bilgiler

Adı	Naz	**Soyadı**	Yaz Çakır
Doğum Yeri	Bartın	**Doğum Tarihi**	28.07.1992
Uyruğu	T.C.	**TC Kimlik No**	40754144346
E-mail	dtnazyaz@gmail.com	**Tel**	0536 413 79 55

Eğitim Düzeyi

Derece	**Alan**	**Mezun Olduğu Kurumun Adı**	**Mezuniyet Yılı**
Lisans/ Yüksek Lisans	Diş Hekimliği	Yeditepe Üniversitesi Diş Hekimliği Fakültesi	2016
Lise	-	Davut Fırıncıoğlu Anadolu Lisesi	2010

İş Deneyimi (Sondan geçmişe doğru sıralayın)

	Görevi	**Kurumu**	**Süre (Yıl-Yıl)**
1.	Diş Hekimi	Yeditepe Dişhekimliği Fakültesi Pedodonti Anabilimdalı	2016-2018

Bildiği Yabancı Dilleri	**Yabancı Dil Sınav Notu**
İngilizce	YDS (70.0)

Program	**Kullanma becerisi**
Microsoft Office	İyi