

## Preparation and Quality Assessment of a Dental Trauma Website

### Dental Travma ile İlgili İnternet Sitesinin Hazırlanması ve Kalite Değerlendirmesi

Ezgi YILMAZ<sup>a</sup>, Ece EDEN<sup>b</sup>

<sup>a</sup>Edirne Provincial Health Directorate, Oral Dental Health Center, Edirne, Türkiye

<sup>a</sup>Edirne İl Sağlık Müdürlüğü Ağız Diş Sağlığı Merkezi, Edirne, Türkiye

<sup>b</sup>Ege University, School of Dentistry, Department of Pedodontics, İzmir, Türkiye

<sup>b</sup>Ege Üniversitesi, Diş Hekimliği Fakültesi, Pedodonti AD, İzmir, Türkiye

#### ABSTRACT

**Background:** The aim of the study was to create a website in Turkish with adequate information on emergency care for dental trauma patients and to determine its effect by assessing the users' level of knowledge.

**Materials and Methods:** The domain "disacil.ege.edu.tr" hosts a Turkish website regarding immediate treatment options for dental trauma in University's server. Information on the emergency management of dental trauma in both dentitions and the mobile application "ToothSOS", along with the addresses of facilities operating around-the-clock in the city of İzmir were provided. Keywords as "tooth injury, emergency tooth injury, tooth dislocation, İzmir, dental trauma, tooth fracture, dental emergency, emergency tooth" were used to display the webpage. The website was assessed using the standards set out by DISCERN, JAMA, and Ensuring Quality Information for Patients (EQIP). The texts readability was rated using the Cetinkaya-Uzun Readability Index. The website's comprehension was tested on 200 parents of patients who applied to the pediatric dentistry clinic at the university using pre- and post-tests.

**Results:** The website met JAMA requirements and obtained 64 points for the DISCERN instrument and 75 scores on EQIP. "Educational" and "Independent Readability Level" were assigned to the texts. In the post-test, there was an increase in number of right answers. The rate of correct answers was higher in the 'high education' group. The answers related to the storage media for an avulsed tooth showed the greatest improvement with statistically significant difference ( $p < 0,05$ ), from 17% to 57%. When using a 5-Point Likert Scale, the average understandability score was 4.5.

**Conclusion:** The findings showed that the website may increase knowledge on health information related to dental trauma. Online clear, accurate, and trustworthy information regarding dental trauma in Turkish may help trauma sufferers for better outcomes in Turkey and may serve as a good model for other countries.

**Keywords:** Website, Dental trauma, Health information, JAMA, DISCERN, EQIP

#### INTRODUCTION

Traumatic dental injuries involve hard and soft tissues of the teeth and the surrounding tissues. Every year, several million people suffer a traumatic dental injury with varying consequences.<sup>1</sup> Head, face, and dental injuries are generally more common in the first decade of life, and the incidence of these decreases as time passes.<sup>2</sup> The oral area constitutes 1% of the whole body, but injuries in the oral area compose 5% of the whole-body injuries.<sup>1</sup> While dental and surrounding tissue injuries were observed in 92% of patients presenting with dental trauma, soft tissue injuries were detected in only 28% of them.<sup>1,3</sup> Fractures in the jawbone are much rarer and occur at a rate of 6%.<sup>3</sup> Although certain groups are more affected by these sudden and unexpected injuries, the risk of dental trauma is present for everyone.<sup>4</sup>

The likelihood of the treatment being successful declines, and the prognosis of the tooth is negatively impacted when the correct information on emergency-care cannot be obtained in a timely manner and the medical facilities cannot be reached for treatment on time.<sup>5</sup> To reduce traumatic aftereffects, it is crucial to avoid dental trauma instances with precautions and provide information about appropriate and prompt treatment.<sup>6</sup> Unfortunately, a few countries have taken

#### ÖZ

**Amaç:** Bu çalışma, dental travma hastaları için acil bakım konusunda yeterli bilgi içeren Türkçe bir web sitesi oluşturmayı ve kullanıcıların bilgi düzeyini değerlendirerek etkisini belirlemeyi amaçlamaktadır.

**Gereç ve Yöntemler:** "disacil.ege.edu.tr" alan adı, Üniversite sunucusunda dental travma için acil tedavi seçeneklerini listeleme Türkçe bir web sitesine ev sahipliği yapmaktadır. Her iki dişte de diş travmasının acil yönetimi ve "ToothSOS" mobil uygulaması hakkında bilgi ve İzmir'de 24/7 hizmet veren tesislerin adresleri verilmiştir. Web sayfasını tanımlamak için "diş yaralanması, acil diş yaralanması, dişin yerinden oynaması, İzmir, dental travma, diş kırığı, dental acil durum, acil diş" gibi anahtar kelimeler kullanılmıştır. Web sitesi DISCERN, JAMA ve Ensuring Quality Information for Patients (EQIP) tarafından belirlenen standartlar kullanılarak incelenmiştir. Metnin okunabilirliği Çetinkaya-Uzun Okunabilirlik Endeksi kullanılarak değerlendirilmiştir. Web sitesinin anlaşılabilirliği, üniversitedeki çocuk diş hekimliği kliniğine başvuran 200 hasta ebeveyni üzerinde ön ve son testler kullanılarak test edilmiştir.

**Bulgular:** Web sitesi JAMA gerekliliklerini karşılamaktadır ve DISCERN için 64 ve EQIP için 75 puan almıştır. Metin okunabilirliği "Eğitici" ve "Bağımsız Okunabilirlik Düzeyi" olarak saptanmıştır. Son testte doğru cevap sayısında artış görülmüştür. Doğru cevap oranı 'yüksek eğitim' grubunda daha yüksektir. Avulse bir dişin saklanma ortamıyla ilgili cevaplar %17'den %57'ye çıkarak istatistiksel olarak anlamlı bir fark ( $p < 0,05$ ) göstermiştir. 5'li Likert Ölçeği kullanıldığında, ortalama anlaşılabilirlik puanı 4,5 olmuştur.

**Sonuçlar:** Bulgular, web sitesinin dental travma ile ilgili sağlık bilgisini artırabileceğini göstermiştir. Dental travma ile ilgili Türkçe olarak çevrimiçi açık, doğru ve güvenilir bilgi, Türkiye'de travma hastalarına acil durumda daha iyi sonuçlara ulaşmak için yardımcı olabilir ve diğer ülkeler için iyi bir model olabilir.

**Anahtar Kelimeler:** Web sitesi, Diş travması, Sağlık bilgisi, JAMA, DISCERN, EQIP

dental injuries as seriously as other emergencies by appointing an organized national emergency dental service and have sought to promote emergency response at the accident site.<sup>7-9</sup>

Improvements in knowledge of lay people on dental trauma through the media and comprehensive dentistry education programs are helpful to provide first-aid in the accident site.<sup>10-15</sup> Studies showed that visiting schools, giving lectures, distributing brochures, making television advertisements, or making posters may be used to minimize the sequels of dental trauma.<sup>11,12</sup> It is important to note that raising awareness of dental trauma management among the public, including children, is a good way to improve the prognosis of avulsed teeth.<sup>16</sup> It seems wise to disseminate information regarding dental trauma management through publicly accessible communication platforms in order to ensure such benefits.

The internet and widely used mobile applications are some of the simplest methods to obtain information nowadays, making them useful for obtaining first aid instructions at the scene of an accident. The International Association of Dental Traumatology (IADT) has developed a mobile application, entitled ToothSOS, with the aim of providing assistance to patients suffering from trauma, as well as to professionals

Gönderilme Tarihi/Received: 3 Aralık, 2024

Kabul Tarihi/Accepted: 28 Mart, 2025

Yayınlanma Tarihi/Published: 21 Nisan, 2025

Atıf Bilgisi/Cite this article as: Yılmaz E, Eden E. Preparation and Quality Assessment of a Dental Trauma Website. Selcuk Dent J 2025;12(1): 104-109 [Doi: 10.15311/selcukdentj.15595491](https://doi.org/10.15311/selcukdentj.15595491)

Sorumlu yazar/Corresponding Author: Ece EDEN

E-mail: ece.eden@ege.edu.tr

[Doi: 10.15311/selcukdentj.1595491](https://doi.org/10.15311/selcukdentj.1595491)

and educators in this field. The application contains IADT guidelines for the professionals and first aid management with photographs are available for lay people. ToothSOS allows users to quickly get the information they require via their smartphones.<sup>17,18</sup> This helpful application is translated to many languages and available free of charge. However, this application needs to be installed by people who are not widely aware of its existence in general. Therefore, internet, one of the most convenient sources of health information, may be used to provide clear, precise guidance and instructions on how to deal with dental trauma when needed. ToothSOS application may also be introduced and promoted through the website.

However, as the internet is not subject to the oversight of any specific governing body, it is imperative to ensure the reliability of health-related information that is accessible online. Quality standards like JAMA benchmarks or DISCERN criteria may be used to provide efficiency. Authorship, citing sources, disclosure and the indication of the time when the content was created and updated are the four criteria of JAMA benchmarks.<sup>19</sup> DISCERN is a tool that uses 16 questions scored by 5-point Likert scale allowing users to systematically judge the reliability and usefulness of the online health information.<sup>20</sup> Ensuring Quality Information for Patients (EQIP)<sup>21</sup> involves 20 questions, with responses evaluated as follows: 1 point for a response that is true, 0.5 points for a response that is partly true, and 0 points for a response that is not true. The total score is then multiplied by 100 to provide an overall percentage.

The understandability of the health information by lay people is closely related with the readability of the text. Çetinkaya-Uzun Readability Index is a formula specifically designated to measure readability of Turkish texts.<sup>22</sup>

The paucity of trustworthy and easily understandable websites on health information in native languages is a matter of some significance. As an example, no websites that give complete, accurate, and immediate information regarding emergency interventions were found when the internet pages concerning dental trauma created in Turkish were investigated.<sup>23</sup>

In the context of acute dental trauma, it is imperative to have ready access to reliable information that is devoid of advertisements, succinct, and unambiguous. The objective of this study is to develop a website that is user-friendly, contains sufficient information, and can provide accurate data to individuals who have experienced dental trauma and their parents in a timely manner. The study will also assess the effectiveness of the website by evaluating the users' knowledge levels.

## Materials and Methods

The study is comprised of two stages. The initial stage is the creation of a website on emergency dental first aid. The second stage involves conducting a survey to evaluate the impact of the website on users' knowledge levels.

Several learning objectives that constitute the information that needs to be delivered to the person searching for help in a traumatic dental emergency were determined. The website's learning objectives include the knowledge on distinction between primary and permanent anterior teeth, the importance of application time after dental trauma, appropriate transport solution of an avulsed tooth, the place where dental trauma frequently occurs, and the information on mobile application about dental trauma (ToothSOS). The survey part of the study is conducted in the city of Izmir, and therefore the institutions that are open 24 hours 7 days in the city center were included on the website along with the generalized information on where to apply in an emergency out of business hours was given at a national level.

The website is hosted on the university sub-domain "disacil.ege.edu.tr", where "disacil" signifies "tooth emergency" in Turkish. E.E. and E.Y. have been identified as the website's managers.

The primary title "First Aid in Emergency Tooth Injuries" was followed by four sub-titles. These subtitles are "First Aid in Primary Tooth Injuries", "First Aid in Permanent Tooth Injuries", "First Aid in Cases of Complete Displacement of the Tooth" and "Where to Apply for an Emergency Tooth Injury?"

The tab "Where to apply for emergency dental injuries?" included the contact details of the institutions in Izmir that are available twenty-four hours a day, seven days a week for patients to apply. The main page's running banner included several images of dental trauma patients. Links to YouTube videos that are titled as "Avulsion" and "ToothSOS" prepared using the Powtoon program have also been added to the page, along with figures made with the Storyboard program. The keywords "tooth injury, emergency tooth injury, tooth dislocation, Izmir, dental trauma, tooth fracture, emergency dental, and dental emergency" were chosen and uploaded to the system to define this website so that the website would appear when these search terms are entered in search engines. The readability of Turkish texts on the website was determined using the Çetinkaya-Uzun Readability Index.<sup>22</sup> JAMA<sup>19</sup>, DISCERN<sup>20</sup> and Ensuring Quality Information for Patients (EQIP)<sup>21</sup> criteria were used to ensure the quality of the health information on the website.

Ethical approval has been obtained (1075 / 31.08.2021) for the assessment of user's knowledge levels. Based on power analysis conducted to achieve 95% statistical significance, minimum of 72 was required for the sample size. Parents of dental patients who applied to the Department of Pediatric Dentistry during September 2021 till January 2022 with simple random sampling were included in the study. Baseline knowledge level on dental trauma and sociodemographic data (age, gender, education level) were obtained by a pre-test. The survey questions were in accordance with the learning objectives of the website's content (Table 1). Preliminary information about the study was given and written consent was obtained. The applicants completed the pre-test, and they access the website on their personal mobile phones and went through the content at their own pace and then answered the questions on the post-test. On a Likert scale ranging from 1 to 5, participants were asked to rank the intelligibility of the material they read on the website, with 5 representing the best score at the end of the post-test. The Chi-square test was used for statistical analysis of pre- and post-tests in relation to gender, age groups and education level. P-value of <0.05 was considered significant.

**Table 1. Pre-test and post-test questions (correct answers are indicated with bold letters)**

Questions	Multiple Choice Answers
1) Which of the following is not one of the most appropriate health centers to contact in the event of an emergency dental injury?	a. Dentist b. Pediatric Dentist <b>c. Faculty of Medicine Emergency Service</b> d. Oral and Dental Health Center e. No idea
2) What is the most appropriate way to carry an avulsed tooth to the dentist?	a. Dry napkin <b>b. Milk</b> c. Tap water d. Saline physiological e. No idea
3) Which of the following should not be done when a permanent tooth has avulsed?	<b>a. The tooth is held by the root.</b> b. It is washed under running water for ten seconds. c. The tooth is placed in its socket by looking at the adjacent tooth. d. The patient bites a clean gauze or handkerchief to hold the tooth in place. e. No idea
4) Which of the following is the institution for a person who has a dental accident in Bostanlı park at 10.00 on Monday to apply?	a. Katip Çelebi University Dental School <b>b. Karşıyaka Oral and Dental Health Center</b> c. Torbalı Oral and Dental Health Center d. Bornova Oral and Dental Health Center e. No idea
5) At what age do the child's permanent front teeth erupt?	a. 3-4 years old <b>b. 7-8 years old</b> c. 10-11 years old d. 15-16 years old e. No idea
6) When is the best time to visit the dentist after a tooth injury for a more successful outcome?	<b>a. In the first hour</b> b. Within 10-12 hours c. Within the first day d. Within the first week e. No idea
7) Where do injuries usually occur in children aged 0-6 years?	a. Gym b. School <b>c. House</b> d. Street e. No idea
8) Which of the following is the institution for a person who had a dental accident in Urla on Sunday?	a. Private dental practice <b>b. Narlıdere Oral and Dental Health Centre</b> c. Ege University Dental School d. Dokuz Eylül University Faculty of Medicine Emergency Service e. No opinion
9) A milk tooth that has been dislodged as a result of a fall or impact must be replaced immediately.	a. True <b>b. False</b>
10) There is a mobile phone application for intervention in dental injuries.	<b>a. True</b> b. False

## Results

Readability of the Turkish text on the website evaluated by Çetinkaya-Uzun Index revealed that the sub-headings "First Aid in Primary Tooth Injuries", "First Aid in Permanent Tooth Injuries" and "Where to Apply for Emergency Dental Injuries" were found to be at the level of 'independent readability'. The page titled "Emergency Dental Injuries" and "First Aid in Cases of Complete Displacement of the Tooth" were found to be at the 'educational readability level'.

The website was prepared in accordance with JAMA, DISCERN and Ensuring Quality Information for Patients (EQIP) criteria. The website met all JAMA criteria as the authorship, references, the upload date and the aim of the website were clearly reported. The DISCERN score of the website was 64 out of 80 because some DISCERN questions were not suitable for the website prepared such as "Does it provide support for shared decision-making?" and "Does it describe how the treatment choices affect overall quality of life?" since the website was mainly giving information on emergency treatment. This score is well above the average, offering generally trustworthy and high-quality information but lacks perfection in some areas that are out of scope of the aim of the page.

The EQIP score was 75 out of 100 because some EQIP questions were inappropriate for the website prepared because of its construction, such as "Does the document have a space for the reader to make notes?" This score indicates a patient-centered, high level of quality in the written information presented on the website.

The study was conducted on a sample of 200 parents of dental patients who had applied to the Department of Pediatric Dentistry between September 2021 and January 2022 in Izmir. Demographic data of applicants who were involved in the study are reported on Table 2. One participant did not answer the question about education status. Education level of the participants was divided into two groups as 'high education' (University and postgraduate education) and 'minimum education' (primary, secondary, and high school education) for further statistical evaluations. Survey questions were statistically evaluated in terms of gender, age in three subgroups (18-30, 31-50, 51+) and educational status using chi-square test.

**Table 2. Demographic findings of the study group**

Demographic characteristics		Number	%
Gender (n=200)	Female	128	64
	Male	72	36
Age (n=200)	18-30 years old	37	18.5
	31-50 years old	150	75
	51 years and older	13	6.5
Education level (n=199)	Primary school	17	8.5
	Secondary school	25	12.6
	High school	63	31.7
	University	89	44.7
	Postgraduate	5	2.5

The difference in correct answers among pre- and post-tests showed no statistical significance in relation to age ( $p > 0.05$ ). The rate of correct answers was higher in the 'high education' group.

There was a statistically significant difference for two questions in relation to gender and education level (Table 3).

Participants were asked to rate the text they read on the website with a Likert scale scoring from 1 to 5 in terms of intelligibility as 5 being the highest score. 15 participants (7.5%) rated the website with "3", where 60 participants (30%) rated as "4", and most of them (121 participants- 60.5%) as "5". Four participants (2%) did not answer this question. Accordingly, the intelligibility of the website was calculated as 4.5 on average.

**Table 3. Percentage of correct answers for questions that showed statistically significant difference within the study group**

Question	Correct answer %	
	Pre-test	Post-test
What is the most appropriate way to carry an avulsed tooth to the dentist? *	17,5	57
At what age do the child's permanent front teeth erupt? **	79	86

\* Statistically significant difference in gender in favor for 'female participants' ( $p=0,01$ )

\*\* Statistically significant difference in education level in favor for 'high education level' ( $p=0,01$ )

## Discussion

Dental trauma is a public health problem that affects mostly children and teenagers and calls for quick action.<sup>24</sup> It can manifest itself in several ways, from a straightforward enamel break to complex maxillofacial injury that affects the teeth and surrounding tissues.<sup>25</sup> Given that it is a costly condition that necessitates lifetime therapy, it is a serious worry for patients, parents, and dentists.<sup>26</sup> The prognosis of the treatment depends heavily on timely and proper intervention of the injured teeth and surrounding tissues at the time of the accident.

In today's world, access to healthcare services and online resources for health information are increasing because of the rapid development of information and communication technologies. Many studies have shown that the internet is becoming increasingly popular as a source of health information for both consumers and information providers.<sup>27,28</sup> The use of health systems in this way provides important benefits in the field of patient-doctor relations and individuals' easy access to health information.<sup>27</sup> In a circumstance that necessitates emergency treatment, such as dental trauma, it is crucial to be able to get accurate and trustworthy information where internet may be an easily accessible platform for the public.<sup>23,26</sup>

People's lack of knowledge about dental trauma and its emergency treatment is one of the main reasons why adequate and emergency care cannot be provided in a timely manner.<sup>5,26</sup> The results of a study carried out in Izmir which is the third largest city in Turkey showed that caregivers of child patients who experienced dental trauma did not know where to apply for emergency treatment and that there was a lack of information on the subject, leading to most of them applying to emergency clinics of general hospitals and losing time.<sup>5</sup> According to this study, only 19.3% of trauma patients were able to receive a suitable intervention in time which showed the importance of the critical knowledge.<sup>5</sup>

In the study by Quaranta A et al,<sup>29</sup> families were invited to specify the sources from which they had obtained information regarding the appropriate course of action to take in the event of dental trauma. The results showed that most of the information came from health professionals, mostly dentists (72%), and family doctors (8%), and very few from media like television (3%) and the internet (2%).<sup>29</sup> A variety of training tools such as a storybook, a poster or the ToothSOS application for training non-dentist on emergency management in avulsion were used and found similarly effective in increasing level of knowledge.<sup>30</sup> Youtube has been used as a source of health information on many topics and studies on evaluating the information on dental avulsion showed that it generally hosts videos with low usefulness in regard to the management of avulsed teeth.<sup>31,32</sup> A recent study of YouTube content revealed that high-content videos constituted a mere 21.2% of all videos pertaining to dental trauma in children.<sup>33</sup>

The findings of a study on the quality of Turkish websites on dental trauma<sup>23</sup> and the low rate of treatment accessibility in an emergency dental trauma situation in a Izmir<sup>5</sup> established the need for the creation of a Turkish information source in this field that may also present as a good example for international literature. Within the limitations of this study, the impact of web-based information on laypeople was assessed using questionnaires. The results indicated a rise in knowledge level; however, the difference was not particularly pronounced. Despite the creation of a high-quality and intelligible website, the low percentage of right answers given to some questions in our study may be linked to low health literacy.<sup>34</sup> On the other hand, the applicants were not self-related with the issue but rather were parents of patients who applied to the clinic for ordinary dental treatments, hence the percentage of right responses given to some questions has not changed much. It may be anticipated that they probably did not extensively review the website since this was not their main priority. Additionally, when you browse down the website's pages, less people were viewing the subheadings. One explanation for this is that patients were not searching for information on their individual needs for dental trauma and probably did not read all the information provided or continued their surfing. The improvement in knowledge and the number of pages viewed would likely have been higher if this study had been limited to parents of trauma victims. Another drawback is that the participants may not be savvy internet

users and might simply access the main page when they click on the link, not clearly understand how to continue with the sub-pages. A systematic review reported a positive correlation between eHealth literacy and health-related behavior.<sup>35</sup> Therefore, further studies may be planned to link the technological capability as 'internet user ability' by eHealth literacy level and improvement in knowledge obtained from the website.

The extent to which laypeople's knowledge on dental trauma is evaluated is negligible, and a significant lack of knowledge, awareness, and skills related to the prevention, identification, and management of dental injuries is prevalent in the population.<sup>36-38</sup> Maganur et al.<sup>36</sup> reported that only 10.8% of subjects preferred to store the avulsed tooth in milk, Kaul et al.<sup>38</sup> reported that 20.65% correctly answered the appropriate storage medium, whereas in our study it was 17.5%. The current evidence demonstrates suboptimal levels of understanding regarding TDIs and their management, particularly among parents, who exhibit a marked paucity of knowledge regarding avulsions to permanent teeth, which necessitate prompt and adequate management.

In the present study, there was a statistically significant improvement in the knowledge on transport solution for an avulsed tooth. This may show that a well-organized website is an effective tool to spread the right health information to the public. The dissemination of health and medical information via the Internet has the potential to enhance the transfer of knowledge from health professionals to the public, thereby facilitating the maintenance and improvement of public health.

While English is a widely used language globally, it is crucial to understand the importance of localizing webpages in the native languages of each country to ensure effective communication with the public. In addition to the quality of the website, it is essential to consider strategies for increasing its popularity in order to reach the intended target audience more effectively. The website's popularity may be increased by a combination of strategies that target enhanced visibility, engagement, and user experience. The utilisation of relevant keywords is a technique employed to optimise website content for search engines.<sup>39</sup> The use of compelling, keyword-rich titles and descriptions has been demonstrated to attract more people from search engines. The utilisation of links to relevant external web pages and the active engagement with social media platforms can broaden the reach of the website, thereby enhancing its visibility in search engine results.<sup>31-33,39</sup> It is hypothesised that emergency interventions for patients suffering from dental trauma will be enhanced via the internet by the creation of a high-quality website. Such webpages in the native language of the intended audience with the source being from national health service or government will facilitate access to health-related materials for people who may otherwise encounter difficulties in obtaining such information. Further studies with a longitudinal design are required to investigate this hypothesis.

**Değerlendirme / Peer-Review**

İki Dış Hakem / Çift Taraflı Körlleme

**Etik Beyan / Ethical statement**

Bu makale, 11. CONSEURO Antalya Kongre'sinde poster olarak sunulan ve 'Dış Hekimliği Eğitimi' konusunda üçüncülük ödülü kazanmış ancak tam metni yayımlanmayan "Preparation of Website Containing Information About Dental Trauma and Evaluation of Its Quality and Readability" adlı tebliğin içeriği geliştirilerek ve kısmen değiştirilerek üretilmiş hâlidir.

Bu çalışma Prof.Dr. Ece EDEN danışmanlığında 28.02.2022 tarihinde sunduğumuz/tamamladığımız 'Dental Travma ile İlgili Bilgi İçeren İnternet Sitesinin hazırlanması ve Kalitesi ile okunabilirliğinin Değerlendirilmesi' başlıklı yüksek lisans/doktora tezi esas alınarak hazırlanmıştır.

Bu çalışmanın hazırlanma sürecinde bilimsel ve etik ilkelere uyulduğu ve yararlanılan tüm çalışmaların kaynakçada belirtildiği beyan olunur.

This article is the version of the presentation named "Preparation of Website Containing Information About Dental Trauma and Evaluation of Its Quality and Readability", which was presented as a poster at the 11<sup>th</sup> Conseuro Antalya Congress and won Third Best Prize in 'Dental Education' topic, but whose full text was not published, by improving and partially changing the content.

This study has been prepared on the basis of the master's/doctoral thesis titled "Preparation of Website Containing Information About Dental Trauma and Evaluation of Its Quality and Readability" which we submitted/completed on 28.02.2022 under the supervision of Prof.Dr. Ece EDEN.

It is declared that during the preparation process of this study, scientific and ethical principles were followed and all the studies benefited are stated in the bibliography.

**Benzerlik Taraması / Similarity scan**

Yapıldı - ithenticate

**Etik Bildirim / Ethical statement**

dishekimligidergisi@selcuk.edu.tr

**Telif Hakkı & Lisans / Copyright & License**

Yazarlar dergide yayınlanan çalışmalarının telif hakkına sahiptirler ve çalışmalarını CC BY-NC 4.0 lisansı altında yayımlanmaktadır.

**Finansman / Grant Support**

Yazarlar bu çalışma için finansal destek almadığını beyan etmiştir. | The authors declared that this study has received no financial support.

**Çıkar Çatışması / Conflict of Interest**

Yazarlar çıkar çatışması bildirmemiştir. | The authors have no conflict of interest to declare.

**Yazar Katkıları / Author Contributions**

Çalışmanın Tasarlanması | Design of Study: EE (%65) EY (%35)  
Veri Toplanması | Data Acquisition: EY (%60) EE (%40)  
Veri Analizi | Data Analysis: EE (%10) EY (%90)  
Makalenin Yazımı | Writing up: EE (%60) EY (%40)  
Makale Gönderimi ve Revizyonu | Submission and Revision: EY (%10) EE (%90)

## REFERENCES

- Petti S, Glendor U, Andersson L. World traumatic dental injury prevalence and incidence, a meta-analysis—One billion living people have had traumatic dental injuries. *Dental Traumatology*. 2018;34(2):71-86. doi:10.1111/edt.12389
- Lauridsen E, Hermann NV, Gerds TA, Kreiborg S, Andreasen JO. Pattern of traumatic dental injuries in the permanent dentition among children, adolescents, and adults. *Dental Traumatology*. Published online 2012. doi:10.1111/j.1600-9657.2012.01133.x
- Andersson L. Epidemiology of traumatic dental injuries. *Pediatr Dent*. 2013;35(102-5).
- Lam R. Epidemiology and outcomes of traumatic dental injuries: A review of the literature. *Aust Dent J*. Published online 2016. doi:10.1111/adj.12395
- Kayılıoğlu Zencircioğlu Ö, Eden E, Öcek ZA. Access to health care after dental trauma in children: A quantitative and qualitative evaluation. *Dental Traumatology*. 2019;35(3):163-170. doi:10.1111/edt.12467
- Toprak ME, Tuna EB, Seymen F, Gençay K. Traumatic dental injuries in Turkish children, Istanbul. *Dent Traumatol*. 2014;30(4):280-284. doi:10.1111/edt.12092
- Zaitoun H, North S, Lee S, Albadri S, McDonnell ST, Rodd HD. Initial management of paediatric dento-alveolar trauma in the permanent dentition: a multi-centre evaluation. *Br Dent J*. 2010;208(6):E11; discussion 254-5. doi:10.1038/sj.bdj.2010.254
- Sigurdsson A. Evidence-based review of prevention of dental injuries. *J Endod*. 2013;39(3 Suppl):S88-93. doi:10.1016/j.joen.2012.11.035
- Evans DJ, Smith MP, Grant SM, Crawford MA, Bond J. Out-of-hours emergency dental services--development of one possible local solution. *Br Dent J*. 2001;191(10):550-554. doi:10.1038/sj.bdj.4801230
- Addo ME, Parekh S, Moles DR, Roberts GJ. Knowledge of dental trauma first aid (DTFA): The example of avulsed incisors in casualty departments and schools in London. *Br Dent J*. 2007;202(10):1-6. doi:10.1038/bdj.2007.328
- Al-Asfour A, Andersson L. The effect of a leaflet given to parents for first aid measures after tooth avulsion. *Dental Traumatology*. 2008;24(5):515-521. doi:10.1111/j.1600-9657.2008.00651.x
- Al-Asfour A, Andersson L, Al-Jame Q. School teachers' knowledge of tooth avulsion and dental first aid before and after receiving information about avulsed teeth and replantation. *Dental Traumatology*. 2008;24(1):43-49. doi:10.1111/j.1600-9657.2006.00476.x
- Filippi C, Kirschner H, Filippi A, Pohl Y. Practicability of a tooth rescue concept - The use of a tooth rescue box. *Dental Traumatology*. 2008;24(4):422-429. doi:10.1111/j.1600-9657.2008.00598.x
- Al-Sane M, Bourisly N, Almulla T, Andersson L. Laypeople's preferred sources of health information on the emergency management of tooth avulsion. *Dental Traumatology*. 2011;27(6):432-437. doi:10.1111/j.1600-9657.2011.1025.x
- Lieger O, Graf C, El-Maaytah M, Von Arx T. Impact of educational posters on the lay knowledge of school teachers regarding emergency management of dental injuries. *Dental Traumatology*. 2009;25(4):406-412. doi:10.1111/j.1600-9657.2009.00798.x
- Arikan V, Sönmez H. Knowledge level of primary school teachers regarding traumatic dental injuries and their emergency management before and after receiving an informative leaflet. *Dental Traumatology*. 2012;28(2):101-107. doi:10.1111/j.1600-9657.2011.01042.x
- Duruk G, Gümüşboğa ZŞ. Effectiveness of the ToothSOS App as a training tool for the emergency management of traumatic dental injuries among non-dentists. *Dental Traumatology*. 2022;38(3):229-237. doi:10.1111/edt.12742
- Khehra A, Cohenca N, Cehreli ZC, Levin L. The International Association of Dental Traumatology ToothSOS mobile app: A 2-year report. *Dent Traumatol*. 2021;37(1):145-150. doi:10.1111/edt.12609
- Silberg WM, Lundberg GD, Musacchio RA. Assessing, controlling, and assuring the quality of medical information on the Internet: Caveant lector et viewer--Let the reader and viewer beware. *JAMA*. 1997;277(15):1244-1245.
- Charnock D, Shepperd S, Needham G, Gann R. DISCERN: An Instrument for Judging the Quality of Written Consumer Health Information on Treatment Choices. Vol 53.; 1999.
- Moult B, Franck LS, Brady H. Ensuring quality information for patients: development and preliminary validation of a new instrument to improve the quality of written health care information. *Health Expect*. 2004;7(2):165-175. doi:10.1111/j.1369-7625.2004.00273.x
- Uzun GL. *Identifying and Classifying the Readability Levels of Turkish Texts*. www.atiner.gr/papers.htm
- Yılmaz E, Eden E. Evaluation of The Quality of Information About Dental Trauma on Internet. *Journal of Ege University School of Dentistry*. 2020;41(3):231-235. doi:10.5505/eudfd.2020.86570
- Bastone EB, Freer TJ, McNamara JR. Epidemiology of dental trauma: A review of the literature. *Aust Dent J*. 2000;45(1):2-9. doi:10.1111/j.1834-7819.2000.tb00234.x
- Petti S, Glendor U, Andersson L. World traumatic dental injury prevalence and incidence, a meta-analysis—One billion living people have had traumatic dental injuries. *Dent Traumatol*. 2018;34(2):71-86. doi:10.1111/edt.12389
- Glendor U. Has the education of professional caregivers and lay people in dental trauma care failed? *Dent Traumatol*. 2009;25(1):12-18. doi:10.1111/j.1600-9657.2008.00707.x
- Santana S, Lausen B, Bujnowska-Fedak M, Chronaki CE, Prokosch HU, Wynn R. Informed citizen and empowered citizen in health: results from an European survey. *BMC Fam Pract*. 2011;12:20. doi:10.1186/1471-2296-12-20
- Van de Belt TH, Engelen LJP, Berben SAA, Teerenstra S, Samsom M, Schoonhoven L. Internet and social media for health-related information and communication in health care: preferences of the Dutch general population. *J Med Internet Res*. 2013;15(10):e220. doi:10.2196/jmir.2607
- Quaranta A, De Giglio O, Coretti C, Vaccaro S, Barbuti G, Strohmeier L. What do parents know about dental trauma among school-age children? A pilot study. *Ann Ig*. 2014;26(5):443-446. doi:10.7416/ai.2014.1969
- Gümüşboğa ZŞ, Duruk G. Comparison of effectiveness of different training tools on the level of knowledge about emergency management of avulsed teeth in non-dentists. *Digit Health*. 2023;9. doi:10.1177/20552076231192148
- Hutchison CM, Cave V, Walshaw EG, Burns B, Park C. YouTube™ as a source for patient education about the management of dental avulsion injuries. *Dental Traumatology*. 2020;36(2):207-211. doi:10.1111/edt.12517
- Loureiro JM, Chaves VCV, Risso PA, Magno MB, Maia LC, Pithon M de M. YouTube™ as a source of tooth avulsion information: A video analysis study. *Dental Traumatology*. 2023;39(6):616-624. doi:10.1111/edt.12873
- Tozar KN, Yapıcı Yavuz G. Reliability of information on YouTube™ regarding pediatric dental trauma. *Dental Traumatology*. 2021;37(6):772-778. doi:10.1111/edt.12708
- Baskaradoss JK. Relationship between oral health literacy and oral health status. *BMC Oral Health*. 2018;18(1). doi:10.1186/s12903-018-0640-1
- Kim K, Shin S, Kim S, Lee E. The Relation Between eHealth Literacy and Health-Related Behaviors: Systematic Review and Meta-analysis. *J Med Internet Res*. 2023;25:e40778. doi:10.2196/40778
- Maganur PC, Vishwanathiah S, Bokhari AM, et al. Knowledge, Attitude, and Behavior toward Dental Trauma among Parents of Primary Schoolchildren Visiting College of Dentistry, Jizan. *Int J Clin Pediatr Dent*. 2024;17(9):1030-1034. doi:10.5005/jp-journals-10005-2936
- Shukr BS, Alshamrani HM, Alzubaidi MA, et al. Knowledge on Management of Traumatic Dental Injury and Related Predictors in Taif, Saudi Arabia: A Cross-Sectional Study. *Int J Dent*. 2025;2025(1). doi:10.1155/ijod/3623119
- Kaul R. Knowledge, Awareness and Attitude towards Emergency Management of Dental Trauma among the Parents of Kolkata-An Institutional Study. *JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH*. Published online 2016. doi:10.7860/JCDR/2016/20682.8208
- Simmons M, Flannery T. Maximizing Online Visibility, the Importance of Search Engine Optimization on Google. *International Journal of Research Publication and Reviews*. 2023;4(5):1462-1466. doi:10.55248/gengpi.234.5.38049