



Evaluation of causes of primary tooth extraction by age and gender in pediatric patients admitted to a university hospital

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Original Article

Abstract

BACKGROUND AND AIM: Determining the reasons for the extraction of primary teeth is of high importance for countries in terms of taking precautions while establishing their health policies. The aim of this study was to investigate the main causes of primary tooth extraction and the most commonly extracted tooth type in children aged 0-13 years.

METHODS: The records of patients aged 0-13 years admitted to the Department of Pediatric Dentistry, School of Dentistry, Trakya University, Edirne, Turkey, between 2016 and 2020 were collected. The patients' age, gender, number of extracted teeth, and causes of extraction were analyzed retrospectively. Data were analyzed using SPSS software. Descriptive statistics and Mann-Whitney U, independent samples t-test, Welch ANOVA with post-hoc Tamhane, and Pearson's chi-square test were used for analyses. Statistical significance was considered at $P < 0.05$.

RESULTS: In this study, 3076 deciduous teeth of 1363 pediatric patients aged 0-13 years (mean age of 7.8 ± 2.1 years) were evaluated. No difference was found between the genders in terms of the number of extractions ($P = 0.489$). The most common reasons for extraction were caries and mobility/root resorption, which constituted 55.1% and 42.4% of the extractions, respectively.

CONCLUSION: In this study, the teeth extraction in patients aged 0-13 years were investigated. Dental caries (55.1%) was the most common cause of deciduous teeth extraction. Moreover, it was the most common reason for deciduous teeth extraction in the age groups of 0-5 and 6-9 years. Primary molar teeth were the most commonly extracted teeth. Although there was no significant difference between genders, striking results were recorded regarding teeth types in different age groups. According to the results obtained in this study, steps should be taken regarding the implementation of preventive dentistry programs.

KEYWORDS: Primary Tooth; Tooth Extraction; Tooth Loss; Children; Factor

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Oral health plays an important role in maintaining oral functions in children and is essential for eating, speech development, and a positive self-image. Tooth decay can lead to poor nutrition and quality of life (QOL), especially in children of low socioeconomic status families. Early childhood caries (ECC) is a major oral health problem, especially in socially disadvantaged populations. ECC affects babies and preschoolers worldwide.¹ It begins with white spot lesions in the upper primary incisors along the edge of the gums.

If the disease persists, caries may progress and cause loss of the crown.²

A literature review on ECC can provide information about tooth loss in a population, the availability of dental care, its frequency, and attitudes towards tooth extraction. According to the results of many studies, caries and the resulting pulpal pathology are the most common causes of primary tooth extraction. Studies have shown that acute trauma, periodontal disease, and orthodontic requirements are the other main causes.^{3,4}

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According to the results obtained from the literature review, the early loss of primary teeth reduces the arch length required for succeeding teeth, and therefore, may cause malocclusions in permanent teeth arch by causing crowding, rotations, and impaction of the permanent teeth.⁵⁻⁷ When the symptoms of malocclusion were evaluated separately, early primary tooth losses were found to have a significant association with mesial molar occlusion (Angle's class III molar classification).⁸

Primary teeth are generally considered as a low priority for parents because these teeth are temporary. However, the tooth loss process involves pain and suffering and is also associated with high costs. Therefore, reporting the causes of primary teeth extraction is crucial for communities to take the necessary steps, such as designing cost-effective and widespread preventive dentistry programs, and developing and implementing their own health policies to eliminate these negative consequences.^{3,5,8,9}

The aim of this study was to examine the archive records of patients who had had primary teeth extraction under local anesthesia at the Department of Pediatric Dentistry, School of Dentistry, Trakya University, Edirne, Turkey, and to determine the reasons for the extraction of primary teeth and their relative importance. This study can be considered as a data source for increasing the practices that will enable children to benefit more from preventive dentistry and school screening, by drawing attention to the causes of primary tooth loss.

Methods

Sample size was calculated using the following formula:

$$\text{Sample size} = \frac{\frac{z^2 \times p(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p(1-p)}{e^2 N} \right)}$$

Where z is the number of standard deviations above and below the average in an observation. The z value varies according to the selected confidence interval (CI). In a normal

distribution, the z value in 95% CI is 1.96.

In this formula, e is the margin of error expressed in decimal form, N is the size of the population from which the sample was taken. The sample size calculated for the present study was 27684 children aged 0-13 years in Edirne center according to the latest updated population data in January 2019.

In addition, p refers to the prevalence or rate of a particular condition in the population; it is recommended that 50% of the sample size calculation be taken if multiple data are being analyzed, it is recommended to take 50% of the sample size calculation.

At least 1028 patients were planned to be included in the study based on the calculation made with a 95% CI, a margin error of 0.03, and a prevalence of 50%. In this study, archived information of patients who were treated at the Department of Pediatric Dentistry, School of Dentistry, Trakya University (Edirne, Turkey), between 2016 and 2020 was evaluated.

The Pediatric Dentistry Clinic at the School of Dentistry of Trakya University (Turkey) provides primary dental care to patients with special needs from the local community and from a wider geographical area. From the clinical archive records and Turcasoft database records used in the clinic, the information of 1363 patients including age, gender, radiography, tooth number, and reason for teeth extraction were analyzed. In this retrospective study, children were examined and treated by various clinicians. The study protocol was approved by the Ethics Committee of Trakya University (Ethical code: TÜTF-BAEK 2020/199).

The inclusion criteria include children aged 0-13 years who had at least 1 primary tooth removed under local anesthesia.

The reasons for tooth extraction in this study were defined based on the classification proposed by other researchers^{3,5,9-11} and included caries, physiological mobility, orthodontic causes, trauma, over retention, periodontal problems, systemic causes, economic causes, and patient/parent wishes (Table 1).

Table 1. Reasons for extraction

1. Caries	Primary and secondary caries plus all sequelae including periapical abscess and failed pulpotomy, and endodontics
2. Orthodontic	Tooth removed to prevent or correct malocclusion
3. Trauma	Tooth extracted as a direct result of acute trauma
4. Mobility/root resorption	Primary tooth in exfoliation period with increased mobility
5. Overretention	Prolonged retention of primary teeth
6. Periodontal disease	Loss of function, periodontal abscess, and pain
7. Systemic causes	Prophylactic extraction
8. Economic reasons	Due to the economic situation, the patients prefer not to participate in the sessions
9. Patient/Parent request	The tooth could have been repaired instead of extracted
10. Other reasons	

Reasons of extraction were analyzed for each tooth number in the maxillary and mandibular arch.

For each extracted primary tooth, the reason for the extraction, the type of tooth extracted, and the patient's age and gender were recorded using Excel software (Excel, Office 365, Microsoft, Redmond, WA, USA). Data were analyzed using SPSS software (version 20, IBM Corp., Armonk, NY, USA). Age was detected to be normally distributed, whereas extracted teeth number was detected not to be normally distributed. In addition to descriptive statistics, Mann-Whitney U test was used to compare the number of extracted teeth between groups. Independent samples t-test was used for comparison of age between 2 groups. Welch ANOVA test with post-hoc Tamhane test was used for comparison of age between more than 2 groups. Pearson's chi-square test was used for evaluations in Crosstabs. Statistical significance was considered at $P < 0.05$.

Results

In this study, 3076 deciduous teeth of 1363 pediatric patients aged 0-13 years (mean age of 7.8 ± 2.1 years) were evaluated. The gender distribution and the number of

extractions associated with gender are shown in table 2 and no difference was found between the genders in terms of the number of extractions ($P = 0.489$).

The distribution of the causes of deciduous tooth extraction in the whole population and the age subgroups is presented in table 3. The most common reasons for extraction were caries and mobility/root resorption, which constituted 55.1% and 42.4% of the reasons for extractions, respectively. The majority of the extracted teeth in the study belonged to children aged 6-9 years (42.0%). While the most common reason for extraction in the age groups of 0-5 and 6-9 years was dental caries, the most common reason for extraction in the age group of 10-13 years was the presence of mobility/root resorption. Extractions due to overretention were performed at an average age of 10.4 ± 1.4 years, and were performed at a significantly higher age compared to extractions due to other reasons ($P < 0.001$). Extractions due to trauma were performed at an average age of 4.1 ± 2.0 years, and were performed at a significantly lower age compared to extractions due to other reasons ($P < 0.001$).

Table 2. The gender distribution included in the study and the number of extractions associated with gender

Gender	Patients	%	Number of extracted teeth	%	Median number of extracted teeth per patient	Age (mean \pm SD)
Girl	673	49.4	1525	49.6	2*	$8.1 \pm 2.0^{**}$
Boy	690	50.6	1551	50.4	2*	$7.9 \pm 2.0^{**}$

SD: Standard deviation

*Mann-Whitney U test ($P = 0.489$), **Independent samples t-test ($P = 0.055$).

Table 3. Distribution of the causes of deciduous tooth extraction in the whole population and age subgroups

Reasons	Mean \pm SD*	Ages 0-5 [n (%)]	Ages 6-9 [n (%)]	Ages 10-13 [n (%)]	Total (%) [n (%)]
Caries	7.4 \pm 1.7**	230 (75.4)	1292 (63.4)	174 (23.7)	1696 (55.1)
Orthodontic	8.2 \pm 1.9**,#	0 (0)	11 (0.5)	5 (0.7)	16 (0.5)
Trauma	4.1 \pm 2.0##	18 (5.9)	5 (0.3)	0 (0)	23 (0.7)
Mobility/Root resorption	8.9 \pm 2.0#	53 (17.4)	713 (35)	539 (73.4)	1305 (42.4)
Overretention	10.4 \pm 1.4 [§]	0 (0)	4 (0.2)	14 (1.9)	18 (0.6)
Parent request	7.0	0 (0)	1 (0.1)	0 (0)	1 (0.0)
Other (natal tooth, cyst)	7.0 \pm 3.7**,#,##	4 (1.3)	11 (0.5)	2 (0.3)	17 (0.6)
Total	8.0 \pm 2.0	305 (9.9)	2037 (66.2)	734 (23.9)	3076

The percentage values used in the table reflect the ratio in the row except for the last column.

SD: Standard deviation

*Welch ANOVA test ($P < 0.001$) with Tamhane post-hoc test: Different symbols indicate statistically significant difference between groups.

The distribution of tooth extractions by tooth types and age can be seen in table 4. The average extraction ages from low to high according to tooth types are listed as follows: maxillary incisors and mandibular incisors, mandibular molars, maxillary molars, mandibular canines, and maxillary canines. The most frequently extracted teeth in the age group of 0-5 years were maxillary incisions (42.3%), while in the age groups of 6-9 and 10-13 years were the mandibular molar (42.1%) and maxillary molars (40.2%), respectively. The extraction of maxillary canine teeth was most frequently performed in the age group of 10-13 years, while all other teeth were most frequently extracted in the age group of 6-9 years.

The distribution of the number of deciduous tooth extraction according to tooth types and reasons of extraction is presented in table 5. The rates of mandibular and maxillary tooth extraction were similar. The most frequently extracted teeth were mandibular molars (40.3%), followed by maxillary molar teeth (31.3%) and maxillary incisors (13.4%), respectively. While extractions due to dental caries and other causes were observed more frequently in the mandibular jaw, extractions due to trauma, orthodontic causes, mobility/root resorption, and overretention were performed more frequently in the maxillary jaw. The most common reason for the extraction was mobility/root resorption in tooth types of maxillary incisors (61.1%), maxillary canines (86.2%), mandibular incisors

(97.9%), and mandibular canines (73.8%), whereas the most common reason for the extraction was the presence of dental caries in tooth types of maxillary molars (61.6%) and mandibular molars (76.1%). All of the extracted teeth due to trauma were maxillary incisors (100%), while the majority of the extractions due to overretention were performed for maxillary incisions (88.9%).

Discussion

Tooth loss in a community can provide information about the availability of dental care, the prevalence of dental disease, and attitudes towards the idea of tooth extraction.^{3,12,13} Tooth extraction is a widely preferred procedure in the treatment of children who refer to dental clinics, especially in developing countries.¹⁴ In order to plan oral and dental health services and to reduce tooth loss, first, the reasons for tooth extraction should be analyzed.^{5,15,16} Although many studies have investigated the causes of permanent tooth extraction, there are few studies on the early loss of primary teeth.

Tooth decay was lower in higher socioeconomic groups in some developed countries. Levine et al. investigated dental caries and tooth extraction in children aged 1-12 years and found that the total patient/tooth extraction ratio was 12%.¹⁷ Jamieson and Koopu reported that in New Zealand a lower tooth extraction ratio (13.5%) was observed in children from high household income families.¹⁸

Table 4. Distribution of tooth extractions by tooth types and ages

Age (year)	Maxillary incisors	Maxillary canine	Maxillary molars	Mandibular incisors	Mandibular canine	Mandibular molars	Maxillary/Mandibular %
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	
0-5	129 (42.3)	0 (0)	29 (9.5)	38 (12.5)	0 (0)	109 (35.7)	51.8/48.2
6-9	266 (13.1)	46 (2.3)	639 (25.0)	156 (31.4)	72 (3.5)	858 (42.1)	46.7/53.3
10-13	16 (2.2)	99 (13.5)	295 (40.2)	0 (0)	50 (6.8)	274 (37.3)	55.9/44.1
Mean \pm SD*	6.3 \pm 1.8 [#]	10.1 \pm 1.5 [¥]	8.6 \pm 1.8 [€]	6.3 \pm 1.3 [#]	9.3 \pm 1.4 [§]	8.0 \pm 1.9 [€]	8.1 \pm 2.1/7.9 \pm 1.9 ^{**}

The percentage values used in the table reflect the ratio in the row except for the last column.

SD: Standard deviation

*Welch ANOVA test ($P < 0.001$) with Tamhane post-hoc test: Different symbols indicate statistically significant difference between groups. **Independent samples t-test ($P = 0.003$).

Table 5. Distribution of the number of deciduous tooth extraction according to tooth types and reasons of extraction

Age (year)	Maxillary incisors	Maxillary canine	Maxillary molars	Mandibular incisors	Mandibular canine	Mandibular molars	Maxillary/Mandibular %
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	
Caries	121 (7.1) [#]	13 (0.8) ^{#¥}	594(35.0) [#]	1 (0.1) ^{#¥}	23(1.4) ^{#¥}	944 (55.7) [#]	42.9/57.1 [#]
Orthodontic	0 (0) [#]	5 (31.3) [€]	4 (25.0) ^{#¥}	0 (0) ^{#¥€}	6 (37.5) [€]	1 (6.3) ^{¥€}	56.3/43.7 ^{#¥}
Trauma	23 (100) [€]	0 (0) [#]	0 (0) [€]	0 (0) [¥]	0 (0) [#]	0 (0) [€]	100/0 [€]
Mobility/Root resorption	251 (19.2) [¥]	125 (9.6) AD	362 (27.7) [¥]	190 (14.6) C	90 (6.9) AD	287 (22.0) [€]	56.6/43.4 [¥]
Overretention	16 (88.9) [€]	0 (0) [#]	0 (0) [€]	0 ABC	0 (0) [#]	2 (11.1) ^{¥€}	88.9/11.1 [€]
Parent request	0 (0)	0 (0)	1 (100)	0 (0)	0 (0)	0 (0)	100/0
Other (natal tooth, cyst)	0 (0) [#]	2 (11.8) ^{#€§}	2 (11.8) ^{¥€}	3(17.6) ^{¥€}	3 (17.6) ^{#€§}	7(41.2) ^{#€}	23.5/76.5 [#]
Total	411 (13.4)	145 (4.7)	964 (31.3)	194 (6.3)	122 (4.0)	1241 (40.3)	49.4/50.6

*The percentage values used in the table reflect the ratio in the row except for the last column.

Pearson's chi-square test: Different letters indicate statistically significant difference between groups in the rows.

These differences can be due to methodological differences and differences in socioeconomic levels between countries.

In the present study, dental records of 1,363 children (673 girls, 690 boys) aged 0-13 years were examined in order to evaluate the frequency of tooth extraction, tooth types, and causes of tooth extraction. Although the awareness of oral and dental health in society has increased compared to previous years, tooth decay is still one of the main causes of tooth extraction today.^{3,5} In the study by Alsheneifi and Huges (2001), dental caries were reported as the main reason (53%) for extraction of primary teeth.³ Chukwumah et al.¹⁴ (2014) reported that 46.3% of extractions of primary teeth were due to dental caries, while Mansour and Bagesund¹⁹ (2010) (3) reported this rate at 60.5% and Ashiwaju et al.²⁰ (2011) at 62.5%. Similar results have been reported in studies conducted in Turkey. In the study by Demiriz and Hazar Bodrumlu (2018), 1812 patient aged 7-11 years were evaluated.⁹ Dental caries were reported as the main reason (51.6%) for the extraction of primary teeth and the total number of primary teeth extracted was 2429. In the study by Bani et al. (2015), 1755 patients aged 2-13 years and 2508 primary teeth extracted were evaluated.⁵ The rate of dental caries, which was the main reason for the extraction of primary teeth, was 57.4%. Analysis of the results of the present study showed that regardless of the tooth type and age group, most of the primary tooth extractions in children were due to dental caries (55.1%), which is consistent with the findings of other studies.^{3,5,6,9,14,19-21} Furthermore, Koruyucu et al. (2017) reported that the main reason (51.6%) for primary tooth extraction was dental caries, which was 72.8%.²¹ The reason for this result, which is slightly higher than the rates in other studies, may be the inclusion of the first permanent molars in the analysis. In the study by Koruyucu et al., a total of 1405 (16 permanent and 1389 primary teeth) extractions were performed in 825 patients aged 3-8 years.

In the present study, there was no statistically significant differences between the genders in terms of the number of extracted deciduous teeth, which is consistent with the results of previous studies.^{3,9,16,22} Moreover, in the studies by Bani et al.⁵ and Koruyucu et al.²¹, the number of tooth extractions in boys was higher than that in girls, but the difference was not statistically significant. Although the results obtained in these studies are consistent with the results of the present study, in the studies by Ashiwaju et al.²⁰ and Ahamed et al.⁶, the number of tooth extractions in boys was statistically higher.

Consistent with the results of other studies, the results of the present study showed that most of the tooth extractions, which were mainly due to caries, belonged to the age group of 6-9 years (42%). This also applies to the age group of 0-5 years. Most of the primary tooth extractions in this age group were due to caries. These results are consistent with the results of previous studies.^{3,6,19,22}

Similar results have been reported in studies conducted in Turkey. Burdurlu et al. (2020) examined children aged 2-14 years and reported the highest number of tooth extractions in the age group of 6-9 years.¹⁶ They stated that most of the extractions in this age group was significantly due to caries. They also reported that the main reason for extractions in the age group of 2-5 years was caries. In the study by Bani et al., the age group of 6-9 years showed the highest extraction rate among the other age groups and the main reason for extraction in this age group was caries.⁵ Similarly, Bani et al. have reported that the main reason for extraction in the age group of 2-5 was caries.⁵ Demiriz and Hazar Bodrumlu who evaluated a narrower age range compared to other studies, also reported the highest number of tooth extractions in the age group of 9 years.⁹ Koruyucu et al. examined children aged 3-8 years and reported the highest number of extractions in the age group of 8 years.²¹

In this study, the second most common reason for extraction of deciduous teeth was

mobility/root resorption (42.4%). In addition, it was the main reason for tooth extraction in the age group of 10-13 years, which is consistent with the findings reported by Burdurlu et al.¹⁶ and Demiriz and Hazar Bodrumlu.⁹ Unlike the present study, Alsheneifi and Hedges³ have reported orthodontic extractions and Samuel et al.²² have reported overretention as the second most common reason for primary teeth extractions.

In the present study, regardless of the type of tooth, the rates of teeth extracted in the mandible and maxilla were similar, which is consistent with the results of the study by Bani et al.⁵ However, there are studies in the literature that have reported different results. While Demiriz and Hazar Bodrumlu⁹ and Samuel et al.²² reported that the extraction rate in the maxilla was higher, Ashiwaju et al.,²⁰ Ahamed et al.,⁶ and Murshid et al.,²³ reported higher extraction rates in the mandible.

Without evaluating the reasons for the extraction and determining the jaw the teeth were in, primary molars were the most frequently extracted teeth (71.3%). In general, the most extracted tooth type was the mandibular molar (40.0%), followed by the maxillary molar (31.3%). This was followed by maxillary incisors (13.4%). In the present study, the most common reason for maxillary (61.6%) and mandibular (76.1%) molar tooth extraction was dental caries, which was the main cause of extraction in general. Alsheneifi and Hedges reported that the most frequently extracted teeth were the first primary molar and central incisors, respectively.³ Moreover, in the study by Alsheneifi and Hedges, similar to the present study, the reason reported for the extraction of molar teeth was mostly dental caries.³ In the studies by Burdurlu et al.¹⁶ and Mansour and Bagesund,²¹ the most frequently extracted teeth were mandibular molars, which is consistent with the results of the present study. Samuel et al.,²² Demiriz and Hazar Bodrumlu,⁹ and Ahamed et al.⁶ also reported primary molars as the most frequently extracted teeth in their studies.

According to the results of many studies in the literature, it can be concluded that primary molar teeth are lost earlier than other teeth. Therefore, it can be concluded that these teeth are prone to the colonization of *Streptococcus mutans*. Another reason for earlier loss of primary molar teeth would be that it is much more difficult to access molar teeth while brushing compared to incisors. In addition, the mixed dentition that occurs as the number of teeth in the mouth cavity increases, and the location of the first permanent molar teeth can create difficulties in removing the plaque from the primary molars.^{24,25}

In the present study, maxillary primary incisors were the most frequently extracted teeth after molars. This result is not consistent with that of the study by Mansour and Bagesund who reported that the teeth with the least number of extractions were primary incisors.¹⁹ Unlike the molar, the main reason for tooth extraction in the maxillary incisors was mobility/root resorption (61.1%). In addition, the main extraction causes of the maxillary canine (86.2%), mandibular incisor (97.9%), and mandibular canine (73.8%) teeth were mobility/physiological resorption. Similar to the present study, in the study conducted by Demiriz and Hazar Bodrumlu, it was reported that the main reason for extraction of primary molars was tooth decay, whereas the reason for the extraction of primary incisors and canines was physiological mobility.⁹

Alsheneifi and Hedges,³ Samuel et al.,²², Bani et al.,⁵ and Burdurlu et al.¹⁶ reported that the most commonly extracted tooth type in the age group of 2-5 years was the primary incisors. Analysis of the results of the present study showed that the rate of maxillary incisor extraction in the age group of 0-5 years was higher than that in the other groups. This can be attributed to early childhood caries (ECC) starting with white spot lesions in the upper primary incisors along the gum edge in 71-month-old (5 years old) and younger children, especially in socially disadvantaged communities.^{2,3,22} In

addition, it can be attributed to the increased incidence of trauma especially during 2-3 years of age when children learn to walk and coordination,^{22,26} which is consistent with the results of this study. All teeth removed due to trauma were maxillary incisors.

In previous studies on primary teeth extraction, natal tooth extractions and teeth extraction due to cystic lesions were not mentioned. Therefore, the present study is the first and only study conducted on these issues. In this study, infants referred to Trakya University Pediatric Dentistry Clinic for natal teeth by medical doctors, were also examined and evaluated. The mobility of these teeth was found to be significantly high during the examination. Parents stated that they had difficulty in feeding the baby. These teeth were removed in order to eliminate the risk of aspiration and swallowing of the tooth and to facilitate the feeding of the baby.^{23,29}

One of the most important factors related to tooth extraction in children is that parents do not care about primary teeth and do not regard their children as old enough to be treated. Despite many negative situations that may arise due to early tooth loss, many families do not care about deciduous teeth. These families do not take their children to the dentist unless they are experiencing pain while eating or other problems.^{6,9,23,30}

Another reason that affects the prevalence of tooth extractions is dentists' attitude towards tooth extraction. Ahamed et al stated that there are physicians who prefer extraction to dental treatment. There was no such reason in this study. All the tooth extractions were performed by pediatric dentists who were aware of the importance of deciduous teeth and aimed to protect them.

It is necessary to increase the awareness of parents in order to prevent oral health problems and malocclusion caused by early tooth loss. In schools, teachers and parents

can be trained as well as students. In order to examine children regularly and perform preventive practices, parents should bring their children for examination every 6 months. This can be facilitated by creating a system like family dentistry.

The present study had some limitations. One of the limitations is that the sample was selected from a population of patients at a single center in a city of Turkey. Thus, the results may not be generalizable to patients from other cities of Turkey. Another limitation is that the authors did not evaluate patients' income and oral hygiene status, which are related to early tooth loss.

Conclusion

In this study, tooth extraction was investigated among patients aged 0-13 years. According to the results of the present study, dental caries (55.1%) was the most common cause of deciduous tooth extraction. Moreover, it was the most common reason for tooth extraction in the age groups of 0-5 and 6-9 years. Primary molar teeth were the most frequently extracted teeth. Although there was no significant difference between genders, striking results were recorded regarding tooth types in different age groups. According to the results, steps should be taken towards the implementation of preventive programs related to dentistry. Moreover, further studies are needed to evaluate the reasons for extraction of primary teeth related to patients' sociodemographic factors, oral health status, and diet.

Conflict of Interests

Authors have no conflict of interest.

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