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Timing and Sequence Polymorphism of Primary Teeth Emergence in Children Living in Edirne, Turkey: A Cross-Sectional Study

Edirne'de Yaşayan Çocuklarda Süt Dişlerinin Sürme Zamanı ve Sıra Polimorfizmi: Kesitsel Bir Çalışma

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ABSTRACT Objective: Variation in both the sequence and timing of primary tooth emergence across the different societies necessitates population-specific research. The aim of the present study is to determine median emergence times of primary teeth and the sequence polymorphism in Turkish children living in Edirne. **Material and Methods:** The research was performed on sample of 1315 children (684 boys and 631 girls) aged between 4-42 months, who were born and have been living in city of Edirne. Dental examination was carried out in family medicine centers by one investigator and primary teeth were assigned as 'emerged' when any part of it was appeared from the surface of gingiva. Median tooth emergence times were evaluated by probit regression analysis. **Results:** The first emerged teeth were mandibular central incisors with a median value of 6.9 months. The tooth emergence sequence was found as follows: mandibular central incisor, followed by maxillary central incisor, maxillary lateral incisors, a group with similar emergence timings; mandibular lateral incisor, mandibular and maxillary first molars, followed by canines and finally second molars in both arches. First molar and lateral incisor reverse sequence was found in 7% of girls in the maxilla, 5% of boys and 10% of girls in the mandible. 52-51 reverse sequence was found in 18% of boys and 9% of girls. 53-54 reverse sequence was detected in 6% of girls. **Conclusion:** The first standards of the timing and sequence of primary teeth emergence specific to children living in Edirne were provided.

Keywords: Deciduous tooth; tooth eruption; polymorphism; child

ÖZET Amaç: Farklı toplumlarda süt dişi sürmesinin hem sırası hem de zamanlamasındaki çeşitlilik, popülasyona özgü araştırmayı gerektirir. Bu çalışmanın amacı, Edirne'de yaşayan popülasyonda süt dişlerinin medyan çıkış sürelerini ve sıra polimorfizmini belirlemektir. **Gereç ve Yöntemler:** Bu araştırma, Edirne ilinde doğup yaşamakta olan 4-42 aylık 1.315 çocuktan (684 erkek, 631 kız) oluşan örneklem üzerinde gerçekleştirildi. Aile hekimliği merkezlerinde bir araştırmacı tarafından diş muayenesi yapılmış ve süt dişlerinin herhangi bir kısmı diş eti yüzeyinden göründüğünde "çıkmış" olarak belirlendi. Ortanca diş çıkış süreleri probit regresyon analizi ile değerlendirildi. **Bulgular:** İlk süren dişler medyan değeri 6,9 ay olan mandibular santral kesici dişlerdi. Dişlerin sürme sırası şu şekilde bulundu: mandibular santral kesici diş, ardından maksiller santral kesici, maksiller lateral kesici dişler, benzer çıkış zamanlamalarına sahip olan mandibular lateral kesici diş, mandibular ve maksiller 1. molarlar, ardından kanin dişleri ve son olarak her 2 arkta 2. molarlar. Birinci süt molar ve süt lateral dişlerin sürmesi maksillada kızların %7'sinde, mandibulada ise erkeklerin %5'inde ve kızların %10'unda ters sekans olarak bulundu. Erkeklerin %18'inde ve kızların %9'unda 52-51 ters sekans bulundu. Kızların %6'sında 53-54 ters sekans tespit edildi. **Sonuç:** Edirne'de yaşayan popülasyona özgü süt dişlerinin sürme zamanı ve sırası ile ilgili ilk standartlar sağlandı.

Anahtar Kelimeler: Süt dişi; diş sürmesi; polimorfizm; çocuk

The terms tooth eruption and tooth emergence are used interchangeably. Actually there is a nuance between the two. While eruption refers to the process of the tooth movement from the alveolar bone to its functional position in the oral cavity, the term tooth emergence refers to the moment when the tooth is first detected in the oral cavity after cutting through the gingiva. Some authors prefer to use the term clinical eruption which better corresponds to the term tooth emergence.[1]

Information on standard primary tooth emergence times and sequences is valuable for the fields of forensic dentistry, anthropology, pedodontics, and orthodontics. These information helps both in estab-

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lishing the correct diagnostic approach and in treatment planning in the dental clinic.[2] Sequence polymorphism information can change clinicians' view of about the patient as it shows the probability of development outside the expected sequence. Rare sequence differences may indicate an additional underlying pathology.[3]

Genetic features, congenital anomalies, gender, ethnicity, geographical differences, nutrition, hormones, socioeconomic factors can affect the tooth emergence time. Genetic and environmental factors may differ significantly between populations. Supporting this, variations have been reported in primary and permanent dentition times between different populations.[4-8] For this reason, it is recommended that the standard emergence times of primary teeth be based on population-specific studies, if possible. If population-specific studies are not available, study data based on different populations may be used, but it should be kept in mind that these can be misleading.[5,9]

Researches on the emergence of primary teeth in various populations and races are available in the literature. But, there is only one study specific to the population in Turkey, regarding timing of whole primary teeth emergence.[10] Therefore, still the data of different populations are used in the evaluation of pediatric patients in Turkey.[11]

The aim of the present study is to report data on sequence and timing of primary tooth emergence obtained from a large population in Edirne province which is located in northwestern Turkey. This is the first research about timings of primary teeth emergence conducted in Edirne, Turkey. Additionally, this is the first research regarding the sequence polymorphism of primary teeth conducted in Turkey.

MATERIAL AND METHODS

STUDY DESIGN AND PARTICIPANTS

The cross-sectional study was performed between March and November 2019 in Edirne, Turkey. The study was approved by the Trakya University Scientific Research Ethics Committee (no: 10/21, date: 8.6.2020) and Edirne Provincial Directorate of Health and followed the Declaration of Helsinki. A signed informed consent form was obtained from the parents of each child.

The following formula was used to calculate the sample size:

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

z: In normal distribution, the Z value at 95% confidence interval is 1.96. e: It is the margin of error expressed in decimal form. N: The size of the population from which the sample was taken. p: Prevalence

According to TURKSTAT's population data based on residence information in 2018, there were 20,395 children between the ages of 0-4 in Edirne. Approximately 78% of them live in urban areas. 95% confidence interval and 0.03 margin of error, prevalence: 0.5 was found to be at least 1,015 patients in the study. With this aim, visits were made to all family medicine centers in the central district of Edirne and the study population was selected to have an urban/rural ratio of 78%/22%.

Inclusion criteria of volunteers in the study;

Having no diagnosed or suspected systemic illness or syndrome,

4-42 months of age

No familial genetic tooth deficiency,

To be born in Edirne,

Being Turkish in etnicity,

Signed parental approval to participate in the study.

Familial tooth deficiency was addressed according to parental dental history. With this method, we aimed to identify families with tooth deficiencies and to exclude them from the study. Additional radiological tests have not been carried out because they are non-feasible and unethical. Patients who did not meet the inclusion criteria or had deficient information were excluded from the study. Eventually, this cross-

sectional study included 1,315 children. The ages of the patients were grouped at 3-month intervals to make it more suitable for statistical analysis. Each patient was included in 3-month age group closest to his/her chronological age.

CLINICAL ORAL EXAMINATION

Dental examination was carried out under day light with tongue depressor and dental mirror using lap to lap position. During intraoral examination, primary teeth was considered emerged if any part of the tooth had, on direct inspection of the mouth, pierced the gum line (clinical emergence).[2,3,12] The examinations were carried out by one investigator to avoid a potential inter-examiner discrepancy. Sex, date of birth, personal information about medical and dental history and the teeth emerged in the oral cavity were noted.

STATISTICAL ANALYSIS

As a data processing and analysis tool, IBM SPSS 20.0 was used. In order to test the intra-observer reliability, 30 patients were examined for a second time at 7th day after the first examination. The difference between the two examinations in terms of the number of emerged teeth was evaluated by t-test in dependent samples. Median tooth emergence times were evaluated by probit regression analysis. Probit regression analysis is suitable for situations in which a dichotomous dependent result is influenced to by an independent explanatory. In this study, the dichotomous result is the presence/absence of the tooth, while the independent variable is the patients' chronological age. The probability of 0.5 response level (median potency) found in the probit analysis was expressed as the median emergence time. Response level probabilities of 0.05 and 0.95 were also used to reflect the 5th and 95th percentile values. Again, in probit analysis, by choosing a grouping factor, the relative median potency (age) between the groups can be found in 95% confidence intervals. The relative median potency is the ratio of the potencies of the two groups at the 0.5 probability level. When the relative median potency is 1.0, the two groups are equivalent for the respective outcome. If the value of 1.0 (null) is within the 95% confidence interval of the relative median potency, it is accepted that the two groups are not different from each other at the 0.05 significance level.[13] In this study, differences in teeth emergence times between right-left, maxillary-mandibular tooth pairs, and differences according to sex were investigated with this method. In addition, each tooth was compared with all other emerged teeth to reveal the tooth emergence sequence.

In order to evaluate the frequency of polymorphism during primary tooth emergence, the present-absent and absent-present states of all teeth in the quadrant were determined by binary comparisons. The present-present and absent-absent situations were excluded from the analysis; because the presence or absence of both teeth does not provide information about the emergence sequence. The proportions of the expected and unexpected sequence form the abovementioned data. The ratios were expressed by rounding to the nearest full percentage in accordance with the literature, unexpected sequence ratios below 5% were considered as rare whereas values above 5% were considered as polymorphic.[14]

RESULTS

1,315 patients meeting the criteria were included in the study, and the mean age of the patients was found to be 22.8±11.1 months. Girls constituted 48% of the patients. The distribution of the children by age groups formed at 3-month intervals is shown in Table 1.

TABLE 1: Number of boys, girls and total individuals in groups formed with age intervals of 3 months.

Age in months	n (Boys)	n (Girls)	Total n (%)
3	20	13	33 (2.5)
6	60	40	100 (7.6)
9	45	44	89 (6.8)
12	60	52	112 (8.5)
15	57	56	113 (8.6)
18	53	44	97 (7.4)
21	58	57	115 (8.7)
24	59	55	114 (8.7)
27	49	57	106 (8.1)
30	46	43	89 (6.8)
33	44	40	84 (6.4)
36	49	47	96 (7.3)
39	51	43	94 (7.1)
42	33	40	73 (5.6)
Total sample	684	631	1315 (100.0)

TABLE 2: Median primary teeth emergence times, standard error, 5th and 95th percentile values in the total sample.

Tooth number	Median	5.-95. percentiles	Tooth number	Median	5.-95. percentiles	*p
51	9.3	5.6-15.4	61	9.2	5.7-14.7	>0.05
52	10.6	6.2-18.0	62	10.6	6.3-17.8	>0.05
53	18.4	12.6-26.9	63	18.4	12.6-26.9	>0.05
54	14.9	10.2-21.7	64	14.6	10.0-21.4	>0.05
55	26.7	19.2-37.0	65	26.8	19.4-37.0	>0.05
81	6.9	3.6-12.8	71	6.9	3.9-12.2	>0.05
82	12.7	7.8-20.7	72	12.9	7.9-21.2	>0.05
83	19	13.1-27.4	73	19	13.1-27.4	>0.05
84	15.3	10.6-22.1	74	15.3	10.6-21.9	>0.05
85	26	18.9-35.9	75	26	19.0-35.5	>0.05

Probit regression analysis

SE: Standard error.

*The value of the probability that the emergence times of identical teeth in the right and left jaws are the same.

No significant difference was found between the two examinations performed for intra-observer reliability assessment (p=0.326).

Median emergence time, 5th and 95th percentile values of primary teeth are shown in Table 2. Since no significant difference was detected for any tooth in terms of the median emergence time between identical teeth in the right and left jaws, the right side data results were used for the rest of the study to provide simplicity.

According to the median values we obtained in the study, the emergence of primary teeth started with mandibular central incisors at 6.9 months and completed at 26.8 months, that is, it took approximately 19.9 months. All possible intramaxillary, intramandibular and intermaxillary teeth comparisons were made in terms of median emergence time and the obtained tooth emergence sequences are shown in Table 3. While each tooth emergence time in the maxilla was found to be statistically significantly different ($p<0.05$), there was no significant difference between the emergence times of teeth numbered 82 and 84 in the mandible ($p>0.05$).

According to 5th and 95th percentiles, we may calculate expected emergence interval time. It is seen that the teeth with the widest emergence interval are the maxillary 2nd molar teeth (5th-95th percentile difference: 17.8 months in the right jaw, 17.6 months in the left jaw), and the teeth with the narrowest emergence interval are mandibular central incisors (5th-95th percentile difference: 9.2 months in the right jaw, 8.3 months in the left jaw).

The emergence times of the right side teeth according to gender are shown in Table 4. While the median emergence times of both mandibular and maxillary second molars were found to be almost the same for both genders, it was observed that the median emergence times of all other teeth were slightly earlier in the boys, but these differences were not statistically significant ($p>0.05$).

TABLE 3: Right maxillary, right mandibular and both right side jaws emergence order.

Emergence sequence	Maxillary teeth	Mandibular teeth	Intermaxillary teeth
1	51	81	81
2	52	82,84	51
3	54	83	52
4	53	85	82,84,54
5	55		53,83
6			55,85

Teeth with significantly different emergence times listed in different rows.

TABLE 4: Median primary teeth emergence times in the girls and boys, standard error, 5th and 95th percentile values.

Tooth number	Girls		Boys		*p
	Median	5.-95. perscentiles	Median	5.-95. perscentiles	
51	9.8	6.2-15.6	8.8	5.2-15.1	>0.05
52	11.2	65-19.1	10.1	6.1-16.8	>0.05
53	18.9	13.6-26.2	18.0	11.8-27.5	>0.05
54	15.4	11.1-21.3	14.4	9.5-21.9	>0.05
55	26.6	20.0-35.5	26.7	18.6-38.4	>0.05
81	7.4	4.0 -13.8	6.5	3.3-12.8	>0.05
82	13.5	8.9-20.4	12.1	7.1-20.8	>0.05
83	19.2	14.0-26.3	18.8	12.5-28.4	>0.05
84	15.5	11.5-21.0	15.0	9.9-22.9	>0.05
85	26.0	19.1-35.5	26.0	18.7-36.2	>0.05

Probit regression analysis

SE: Standard error.

*The value of the probability that the emergence times of identical teeth in girls and boys are the same.

The emergence sequence polymorphism in the primary tooth is presented in Table 5. In the table, the teeth are lined up according to the emergence order we found in our study. The cells above the diagonal line show the percentages of the expected sequences, while the cells below show the percentages of the unexpected sequences. Teeth pair of 51-52 (girl: 9%, boy: 18%), and teeth pair of 82-84 (girl:10%, boy:5%) showed a significant sequence polymorphism in both boys and girls. A significant polymorphism was also observed in pairs of 52-54 (7%) and 54-53 (6%) in girls.

DISCUSSION

Although there are numerous studies reporting emergence times of primary teeth, there are very limited number of publications conducted in Turkish populations.[10] Since tooth emergence is affected by genetic and environmental factors, there may be differences between different populations. It is recommended to conduct population-specific researches to find the most accurate values.[2,10,15] To our best knowledge, this is the first study which simultaneously determine both emergence timing, sequencing and emergence polymorphism of deciduous teeth in Turkey.

Teething times can be determined more accurately in longitudinal studies compared to cross-sectional studies. However, cross-sectional studies are advantageous, as is the case with the current research in tooth emergence, to represent the population, as it is possible to provide a higher sample size with less bias.[12]

In some studies, information about emergence times is obtained by survey method which may cause serious errors due to memory bias.[16] In the present study, the emergence state of the teeth was determined by the intraoral examination method. However, radiological examination was not performed due to ethical concerns, so there was a possibility that teeth that were recorded as absent might not have emerged due to congenital absence. Primary teeth hypodontia rate in Turkey is 0.2%, so this possibility is not expected to have a significant impact on the results.[17]

The statistical methods used to calculate the teething ages differ between studies. In some studies, the average age of emergence is calculated in a subset of patients, which is obtained by excluding the age groups in which the particular tooth did not emerge at all or the particular tooth emerged in all.[18-20] In this method, since the age of the subject is accepted as the emergence age, it may give misleading results when the sample size is small and if there is no homogeneous distribution between the age groups. In addition, patients described as outlier may need to be

TABLE 5: Matrices of pairwise frequencies (%) of emergence sequences separated by arch and gender.

Girl-Maxilla

- / +	51	52	54	53	55
51		91* (32)	100 (92)	100 (153)	100 (289)
52	9**				100 (263)
54	0	7			99 (203)
53	0	0	6		100 (136)
55	0	0	1	0	

Girl-Mandible

- / +	81	82	84	83	85
81		100 (96)	100 (129)	100 (193)	100 (314)
82	0		90 (41)	100 (97)	100 (218)
84	0	10		96 (70)	99 (189)
83	0	0	4		100 (121)
85	0	0	1	0	

Boy-Maxilla

- / +	51	52	54	53	55
51		82 (34)	100 (101)	100 (169)	100 (324)
52	18		96 (85)	100 (147)	100 (302)
54	0	4		99 (70)	99 (227)
53	0	0	1		99 (157)
55	0	0	1	1	

Boy-Mandible

- / +	81	82	84	83	85
81		100 (101)	100 (152)	100 (223)	100 (350)
82	0		95 (57)	99 (124)	100 (249)
84	0	5		97 (75)	100 (198)
83	0	1	3		100 (127)
85	0	0	0	0	

Teeth listed horizontally are 'absent (-)' and teeth listed vertically are 'present (+)'.

*This cell represents the situation when 51 is emerged and 52 did not. Number outside the parenthesis reflects the percentage of expected sequence for the pair of teeth 51 and 52; number inside the parenthesis reflects total number of patients suitable for this calculation.

**This cell represents the situation when 52 is emerged and 51 did not. Number reflects the percentage of unexpected sequence for the pair of teeth 51 and 52.

excluded from the study in order to make calculations. For these reasons, Heidmann said that the probit analysis is the most appropriate analysis for tooth emergence. In this analysis, a probit regression curve is produced from the data and it can be determined how many percent of the subjects have an emerged particular tooth at a certain age. The age that 50% of the patients had the particular tooth emerged is reported as the median emergence age for that tooth. With this analysis, binary comparisons can be made in terms of various factors, but the differences can only be obtained as significant or not significant ($p<0.05$, $p>0.05$) instead of specific p values.[13] Probit analysis was used in our study.

In tooth emergence studies, the average/median age of tooth emergence is usually determined and the emergence sequence is evaluated by ordering these values.[2,10,20] However, only the expected sequence can be determined from this data, alternative sequence probabilities cannot be determined. For this reason, it is not possible to comment to what extent an unexpected tooth emergence sequence is abnormal. In order to overcome this problem, sequence polymorphism was evaluated with the matrices created in the present study.

It should be kept in mind that all the aforementioned methodological differences are disadvantageous in comparing emergence time studies.

It is accepted that right and left homologous teeth emerge in the same period, since no significant differences were detected between right and left side emergence in most of the published studies.[2,12] Our findings suggest that the emergence times of the right and left sides are quite symmetrical, so only right-side teeth were used in subsequent analyzes to avoid confusion.

It is controversial whether there is a difference in teething times between the sexes. In many studies, no statistically significant difference was observed between genders.[2,9,10,15] However, there are many studies reporting earlier primary teeth emergence in boys.[12,18,20-23] Although few, there are also studies reporting in girls.[15,19] As can be seen, a consensus has not been reached in this area. Differences between studies suggest that factors may have an effect on these differences between studies. In the present study, although the median teeth emergence values were slightly lower in men, we could not detect a significant difference between the genders.

In the vast majority of the studies, emergence order was reported according to simple ranking of the median/mean teeth emergence times and statistical tests were not applied. According to this reporting method, in almost all studies, the order observed in both maxilla and mandible is as follows: central incisor, lateral incisor, first molar, canine, second molar.[2,10,12,20,24] In this study, a sequence consistent with the literature was detected in both maxilla and mandible. Unlike this order, the order of the lateral incisor and first molar in the mandible may change in some studies.[9,18,22] Considering the order between the arches, most of the studies report that central incisor and second molars emerge earlier in the mandible, while other teeth emerge earlier in the maxilla.[12,18,20,24] The results of the present study are also compatible with this sequence. In another study conducted in Turkish population by Çoban et al., central incisor, lateral incisor and canine emerged earlier in the mandible, and other teeth emerged earlier in maxilla.[10] Similar sequencing in many studies suggests an extremely coordinated underlying process.

There are few publications that examine the tooth order with statistical significance tests. Al-Batayneh et al. examined statistical differences of emergence times both within and between the arches in their study.[2] In the maxilla, central incisors were the earliest emerged teeth, followed by lateral incisor, first molar canine and second molar teeth respectively, and the differences between the emergence times of all teeth were found to be significant. Although the same sequence was followed in the mandible, there was no significant difference between emergence times of the lateral incisors and first molars. Between the arches, it has been reported that only the mandibular central incisor emerged significantly earlier than its maxillary counterpart and the emergence times of the other teeth that did not differ between arches. Torres et al. conducted a statistical analysis only between the arches and reported that the central incisor and second molar teeth emerged significantly earlier in the mandible and the lateral incisor in the maxilla.[18] In the present study, in addition to these studies, not only homologous teeth but all teeth between the arches were compared, and the following order was obtained: mandibular central incisor, maxillary central incisor, followed by maxillary lateral incisors, a group with similar emergence timings; mandibular lateral incisor, mandibular and maxillary first molars. After this group, without any difference between arches, canines emerged and they were finally followed by second molars in both arches.

There are few studies examining sequence polymorphism. Al-Batayneh et al. reported a reverse sequence that the first molars emerged earlier than the lateral incisors at a rate of 5% in the maxilla and 14% in the mandible in both sexes.[2] Indira et al. reported the same reverse sequence in 35% of boys, 18% of girls in mandible, and 9% of boys in maxilla. In the present study, the same reverse sequence was found in 7% of girls in the maxilla, 5% of boys and 10% of girls in the mandible. Apart from this, the incidence of maxillary lateral incisor emergence before central incisor was found in 18% of boys and 9% of girls. Finally, earlier emergence of maxillary canine than maxillary first molar was detected in 6% of girls.

In order to compare the tooth emergence times, large-scale studies with desired reachable data were selected and presented in Table 6. Accordingly, the

TABLE 6: Right side or combined right and left sides data from several studies and present data.

	Nepaleses[9]	Egyptians[25]	Saudis[26]	Jordanians[2]	Spanishs[18]	Indians[12]	Americans[22]	Nigerians[15]	Turkishs[10]	The present study
51 (61)	11.1	9.7	11.2	10.5	14.9	9.7	9.4	10.5	9.8	9.3
52 (62)	13.2	12.3	13.2	13.0	15.2	11.6	10.6	12.9	12.4	10.6
53 (62)	19.0	19.3	21.1	20.3	25.3	18.6	19.5	19.4	17.9	18.4
54 (64)	15.3	17.0	16.9	15.5	21.3	14.7	15.7	16.6	14.8	14.9
55 (65)	25.7	25.2	28.2	27.5	33.2	27.8	27.9	25.3	24.7	26.7
81 (71)	10.0	8.1	8.5	8.2	10.9	8.3	6.6	8.1	6.9	6.9
82 (72)	12.8	13.2	14.5	14.3	23.2	14.1	12.5	13.1	11.8	12.7
83 (73)	21.4	20.2	21.1	20.4	26.1	20.6	19.5	19.8	18.9	19
84 (74)	15.2	17.0	17.2	16.0	21.5	16.2	16.0	16.3	14.6	15.3
85 (75)	25.6	25.7	28.0	27.5	32.6	26.8	27.0	24.9	23.3	26

data of the present study are very similar to the study conducted by Çoban et al. in Turkish population.[10] Apart from this, it can be said that the American and Indian population data are also close to the data of the present study.[12,22] These studies mentioned above show earlier emergence compared to other population studies.[2,12,15,22,25] The latest emergence times appear to belong to the Spanish population.[18] The differences between studies are probably due to socioeconomic factors, nutritional differences and racial differences. However, it is suggested that some of the differences in the values presented in the studies may also be due to methodological differences.

This study has some limitations and strengths that must be taken into account when interpreting its results. This study provided the standards of the timing and sequence of primary teeth emergence specific to the children aged 4-42 months in Edirne. Thus, our findings could not be generalized to the population of Turkey. Future studies should be conducted to investigate the primary tooth emergence time and sequence in other parts of Turkey for finding standards belong to all Turkish children.

CONCLUSION

The present study determined the first standards of emergence time of primary teeth specific to children in Edirne, Turkey. Such new standards are envisaged to be used in conjunction with recently published permanent dentition standards in branches of pediatric dentistry, orthodontics, forensic research, anthropology, and academically for future reference. In addition, the current research will be beneficial for the timing of caries prevention programs by the public health services in Edirne as it gives the emergence times of primary teeth.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: *Neslihan Özveren;* ***Design:*** *Sinem Batur Kara, Neslihan Özveren;* ***Control/Supervision:*** *Neslihan Özveren;* ***Data Collection and/or Processing:*** *Sinem Batur Kara;* ***Analysis and/or Interpretation:*** *Sinem Batur Kara, Neslihan Özveren;* ***Literature Review:*** *Sinem Batur Kara, Neslihan Özveren;* ***Writing the Article:*** *Sinem Batur Kara, Neslihan Özveren;* ***Critical Review:*** *Neslihan Özveren;* ***References and Fundings:*** *Sinem Batur Kara, Neslihan Özveren;* ***Materials:****Sinem Batur Kara, Neslihan Özveren.*

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