JBACHS
Journal of Basic and Clinical Health Sciences

J Basic Clin Health Sci 2023; 7: 131-138
https://doi.org/10.30621/jbachs.1230992
RESEARCH ARTICLE

ORAL HEALTH STATUS OF JUVENILE INMATES IN A DETENTION CENTER IN TURKEY

Sevgi Zorlu[1], Didem Oner Ozdas[1], Cenker Zeki Koyuncuoglu[2], Nurcan Tezci Ozgur[2], Utku Gaye Dikme Guveli[2], Burcu Karaduman[2]

[1] Istanbul Aydin University, Faculty of Dentistry, Department of Pediatric Dentistry, Istanbul, Turkey
[2] Istanbul Aydin University, Faculty of Dentistry, Department of Periodontology, Istanbul, Turkey

ORCID: S.Z. 0000-0003-3435-6833; D.O.O. 0000-0002-0112-1539; C.Z.K. 0000-0002-5866-5860; N.T.O. 0000-0002-0219-5070; U.G.D.G. 0000-0001-8555-0121; B.K. 0000-0002-8162-3896

Corresponding author: Sevgi Zorlu, **E-mail:** sevgizorlu@aydin.edu.tr
Received: 07.01.2023; **Accepted:** 19.07.2023; **Available Online Date:** 30.09.2023

Cite this article as: Zorlu S, Oner-Ozdas D, Koyuncuoglu CZ, Tezcİ-Ozgur N, Dikme-Guveli UG, Karaduman B. The Oral Health Status of Juvenile Inmates in A Detention Center in Turkey. J Basic Clin Health Sci 2023; 7: 131-138.

ABSTRACT

Purpose: There are very few studies about the oral health status of juvenile inmates. This study aimed to determine past dental attendance, medicament usage, and smoking habits, besides oro-dental status, including caries prevalence and periodontal health status of juvenile inmates in detention centers.
Material and Methods: This cross-sectional study was conducted on 232 juvenile male inmates (mean-age:16.65±0.91) in a detention center in Istanbul-Turkey. After taking general demographic information, the subjects were clinically examined according to WHO criteria. In addition, the Plaque Index (PI) and Gingival Index (GI) were recorded at Ramfjord teeth to evaluate periodontal status. All data were statistically analyzed using the IBM Statistical Package for Social Sciences (SPSS) 22.0 programme, Pearson correlation coefficient, Spearman's rho correlation coefficient, chi-square test, Fisher's exact test, Kruskal-Wallis test, and One-way ANOVA test.
Results: Average length of stay was 6.54±8.38 months. 44.4% of inmates have never visited a dentist. The mean DMF-T, PI, and GI scores of the subjects were 6.78±4.07, 1.18±0.55, and 1.13±0.47, respectively. In addition, 80.2% of inmates smoked before being taken to the detention center.
Conclusion: This study indicated that the oral health of detained inmates was poor. Prison health services should not be isolated but integrated into national and regional health systems.

Keywords: Detention center, Juvenile delinquency, Oral health status

INTRODUCTION

Parenting has a significant effect on children's behaviors. The type of parenting may affect the child's entire life. Teenagers who feel rejected are more likely to have concomitant feelings of shame, which can result in depression or delinquency (1).

According to many countries' crime statistics, the dramatic increase in juvenile delinquency is a major social problem (2-4). Child intelligence, abilities, family's social environment, and living conditions are the factors that affect juvenile delinquency. Juveniles who commit illegal acts are often victims of neglect, abuse, addiction, deprivation, poverty, and similar situations (5). These juveniles are also a genuinely neglected group. They are often deprived of traditional health services in the community, and there is no proper care for their health and well-being (2,4). As a result of this, it has been observed that detained or incarcerated persons have worse health than the general population, including oral health

(4,6-9). Conditions may have existed before they were imprisoned; they may be closely related to legal issues arising from parental negligence, psychological and physical disorders, drug or sexual abuse, or developing within the corporate environment (4). Of their bad habits and low level of knowledge, most detainees enter the detention center with poor oral health requiring immediate treatments (6-8,10). Drug addiction, alcohol abuse, and tobacco use increase the incidence of high levels of dental caries and the prevalence and severity of periodontal diseases (6,10). Children are more likely to be reintegrated into society if these conditions are improved (11). Re-socialization is the sum of the penitentiary institutions' efforts, which enable the prisoner to live a future life of social responsibility without any relationship with crime (12).

Improved oral health for these individuals can improve their quality of life once released from prison due to oral health association with speech, social mobility, employability, self-image, and esteem (13). In addition, improved quality of life may translate into smoother reintegration into their communities and a reduced probability of reoffending (14). Unfortunately, many detained youths are released without aftercare and reentry planning, leaving them to navigate transitions to the community with limited support (15). Moreover, it is accepted that prison has profound negative effects on the health and development of children (12).

Yet, detention often represents the first meaningful opportunity to identify physical and mental health needs and initiate appropriate health care for these children (4,14,16). In fact, most prisoners reach the dentist only when imprisoned; Outside the prison, they usually only seek emergency dental care (14,17). Pediatricians and correctional health systems have the opportunity and responsibility to help improve the health of this underserved and vulnerable group of adolescents (4).

Furthermore, in a guideline to good practice, Bedi suggested, "Any health system that aims to improve the health of the population it serves and reduce inequalities between those with the best and those with the worst health should pay close attention to the most deprived and excluded sections of the population." (9).

The World Health Organization urges prison administrators to be aware of and responsive to different prison populations' dental health needs and strive to improve dental service offerings (6,14).

Very few studies have been conducted on detained juveniles' oral health status and treatment needs. As a result, this area has a significant knowledge gap (16). Therefore, the present study aims to evaluate the oral health status and treatment needs of juvenile inmates in Istanbul-Turkey.

MATERIALS AND METHODS

The present cross-sectional study was conducted on 232 inmates ages 13-19 years (mean age: 16.65±0.91) residing in a detention center in İstanbul/ Turkey. Ethical approval was obtained from the Istanbul Aydin University Faculty of Dentistry Research Ethics Committee (Date: 15.03.2016; B.30.AYD0.00.00-480.2/029). The inmates and their legal guardians were informed of the study's objectives, and informed consent was obtained from the legal guardian and the three legal-age participants. Only volunteer inmates were included in the study, while those who refused to participate were excluded even if their legal guardians approved.

A face-to-face questionnaire was performed to evaluate the inmates, including general demographic information, education level, detention period, smoking habits, tooth brushing habits, history of a systemic disease, and medication status. The frequency of brushing was recorded according to the answers individuals gave to the "Do you brush your teeth?". When the answer was yes, the researcher asked how often he does. If the brushing frequency is less than once a day, the answer was recorded as sometimes; if once or more a day, the answer was yes.

All subjects were intraorally examined in the center's rehabilitation room according to World Health Organisation (WHO) criteria (18). During the examination, subjects were seated on a chair in front of the dentist. The examination was carried out using a fixed overhead light to illuminate the mouth. The recording assistant sat on a chair close enough to the examiner's front left to allow the viewing of the recorded codes by the examiner. Two pediatric dentists and two periodontologists performed the dental examinations. The oral health status of each subject was measured and recorded by using the gingival index (GI), plaque index (PI), and the number of decayed (D), missing (M), and filled (F) teeth (DMF-T) index.

All teeth in each participant's mouth were examined for DMF-T index. Caries with visible cavitations were

Table 1. Demographic Characteristics and Oral Health Status of Subjects

		N	%
Age	**13**	1	0.4
	14	6	2.6
	15	17	7.3
	16	50	21.6
	17	136	58.6
	18	19	8.2
	19	3	1.3
Education Level	**None**	10	4.3
	Primary school dropout	3	1.3
	Primary school	21	9.1
	Secondary school dropout	12	5.2
	Secondary school	97	41.8
	High school dropout	36	15.5
	High school	48	20.7
	Unknown	5	2.2
Smoking before detention	**Yes**	186	80.2
	No	44	19
	Unanswered	2	0.9
Regular medication	**Yes**	199	85.8
	No	30	12.9
	Unanswered	3	1.3
Systemic disease	**No**	175	75.4
	Yes	42	18.1
	Shortness of breath, asthma, bronchitis	12	5.2
	Sinusitis	7	3
	Heart disease, rhythm disorder	6	2.6
	Other	17	7.3
	unknown	9	3.9
	Unanswered	6	2.6
Experience of visiting a dentist before detention	Yes	120	51.7
	No	103	44.4
	Unanswered	9	3.9
Bleeding gums	Yes	153	65.9
	Spontaneously	14	6
	While eating	12	5.2
	By brushing	104	44.8
	No	72	31
	I don't know	1	0.4
	Unanswered	6	2.6
Brushing teeth	Yes	170	73.3
	No	28	12.1
	Sometimes	30	12.9
	Unanswered	4	1.7
Dentition	Mixed dentition	5	2.2
	Permanent dentition	227	97.8

recorded as present, and all suspicious lesions were considered sound.

Gingival Index (GI) was scored according to Löe and Sillness criteria (19). The plaque index (PI) was scored according to the criteria of Sillnes and Löe (20). Measurements were taken at four sites (mesio-vestibule, vestibule, disto-vestibule, lingual) on six teeth (Ramfjord's teeth: 16, 21, 24, 36, 41, 44), which are considered reliable indicators for different oral areas (21).

As a social responsibility, after completing the surveys and oral examinations, oral hygiene and healthy nutrition education were given to all inmates who participated or did not in the detention center classrooms.

Statistical Analyses: All data were statistically analyzed by the IBM Statistical Package for Social Sciences (SPSS) 22.0 programme using the chi-square test, Fisher's exact test, Kruskal-Wallis test, and One-way ANOVA test, Pearson correlation

Table 2. Oral Health Indexes and Duration Time Of Detention

	Min-Max	Mean±SD
Duration time (months)	0.03-48	6.54±8.38
GI	0-2.3	1.13±0.47
PI	0-2.7	1.18±0.55
DMF-T	0-23	6.78±4.07

GI: Gingival index PI: Periodontal index DMF-T: Decay-Missing-Filling Teeth index

coefficient, Spearman's rho correlation coefficient. p <0.05 was considered to indicate a statistically significant difference.

RESULTS

The cross-sectional survey was conducted to evaluate adolescents' oral health status in a detention center in Istanbul, Turkey. The data was collected from May to June 2014, and 232 adolescent male inmates ages 13-19 years were examined in the study. The results of demographic characteristics and systemic and oral health status are given in Tables 1 and 2. There were no correlations between oral health indexes and the participants' medical status, educational level, tooth brushing habit, and duration of detention (Table 3).

DISCUSSION

The meaning of needs assessment differs depending on who, when, and where used. Nevertheless, healthcare needs assessments are essential as they provide primary data to guide appropriate and relevant interventions for the target group (22). There are very few studies about juvenile prisoners' oral health status and treatment needs, especially adolescent inmates (16,23). The present study aims to evaluate the oral health status and treatment needs of adolescent inmates in Istanbul-Turkey.

The increase in juvenile delinquency worldwide remains on the agenda as a significant social problem (2-4). However, on the contrary, the General Directorate of Criminal Records and Statistics reported that the number of juvenile delinquents in Turkey decreased by 19.2% from 2012 to 2019 (24).

12 and 15 age children become a criminal liability only if it is determined that they have the ability to direct their behavior in terms of the crime they committed (25). The mean age of the inmates was 16.65 years, while only seven were younger than 15 years in the present study.

According to the Nations Child Rights Convention's rule, if a child inmate committed a crime, his conviction should be limited to the shortest possible time and carried out separately from adults in education-based institutions (26). Because regardless of the conditions in which it is held, it is known that even short-term imprisonment can harm a child's mental and physical health, limit cognitive development, and cause problems such as depression, anxiety, and post-traumatic stress disorder (12). In the present study, the average duration of detention was six months, while the longest was 48 months. The incarceration duration of inmates was less than one month for 31%, 1-12 months for 46%, and more than one year for 22%. The ranges were 50.3%, 34.8%, and 15%, respectively, in a report by Barnert et al., indicating less duration term than the present study results (27). Most detained children run away and spend one or more nights on the streets for some reason before committing a crime. Children who frequently run away from home or live on the streets do not regularly attend school leads to dropping out of school. It has been reported that of 120 inmates in Turkey's reformatory institutions, 92,5% dropped out the school before confinement. However, 51.7% of the inmates want to continue their education after the correction; if they have a chance (11). Consistent with the present study revealed that 22% of inmates dropped out of school, 4.3% never attended school, and 9.1% did not attend school after primary school. But there was no significant relationship between oral health findings and education levels.

Studies assessing prisoners' self-rated health and chronic conditions showed a perceived poor health status and high morbidity, especially among the general population (28-30). In the present study, 12.9% of inmates were prescribed at least one medicine due to systemic diseases such as asthma and arthritis, cardiac, mental, or dermatological disorders.

The prison dental service has two challenges. First, to provide all prisoners with high-quality dental services according to their dental needs and imprisonment length. Second, to apply preventive dental care to reduce the number of dental diseases

Table 3. Evaluation of Oral Index Values and Study Parameters

		GI (Mean±SD)	PI (Mean±SD)	DMF-T (Mean±SD)
Systemic disease	Yes	1.19±0.51	1.23±0.62	7.43±4.68
	No	1.12±0.46	1.19±0.54	6.70±3.99
	p	[1]0.147	[1]0.206	[2]0.817
Regular medication	Yes	1.11±0.49	1.23±0.62	7.17±3.12
	No	1.13±0.47	1.18±0.55	6.68±4.19
	p	[1]0.803	[1]0.627	[2]0.339
Tooth brushing	Yes	1.10±0.48	1.15±0.55	6.9±3.79
	No	1.27±0.39	1.31±0.41	5.71±4.84
	Sometimes	1.13±0.48	1.22±0.63	6.9±4.75
	p	[1]0.205	[1]0.316	[1]0.330
Education level	Illiterate, Primary school and dropout	1.24±0.40	1.30±0.41	5.44±3.33
	Secondary school and dropout	1.14±0.43	1.20±0.50	7.21±4.22
	High school and dropout	1.04±0.52	1.09±0.64	6.88±4.12
	p	[1]0.076	[1]0.101	[2]0.126
Duration time	r	[3]-0.083	[3]-0.083	[4]0.056
	p	0.207	0.282	0.399

SD: Standard deviation

[1]Oneway ANOVA test; [2]Kruskal Wallis test; [3]Pearson correlation coefficient; [4]Spearman's rho correlation coefficient

in the prisoners' future lifetime. Solving these challenges requires advice and education on healthy lifestyles, such as regular and adequate tooth brushing with fluoride toothpaste, ending tobacco use, and making healthy choices regarding diet and nutrition (9). After oral examinations, all detained youths received training about appropriate toothbrushing and healthy nutrition in the present study. A toothbrush and a tube of toothpaste were also presented to motivate them. In addition, although 80.2% had been smoking before detention, they stopped during the detention center period because of smoke prohibition.

The oral health needs of this particular population are higher than the rest of society. An important but poorly understood determinant of children's dental care utilization includes where children are born, grow, and live (31). Therefore, routine dental care and daily oral hygiene are not components of the prisoners' lifestyle (10). On the contrary, in this study, prisoners were aware of their oral health condition, endeavoring to brush their teeth. Detention center officers encourage adolescent inmates to increase their daily self-care habits regularly. It is seen that, although the jail authorities do not provide oral cleaning materials to the inmates, 73.3% of all participants used toothbrushes and toothpaste to clean their teeth. This finding shows that adolescent inmates are at least concerned about the importance of their oral health. Almost one-third of all inmates (31%) declared "no bleeding" on their gums; the rest suffered from spontaneously bleeding while eating or brushing their teeth. The number of gingival bleeding complaints was high. This finding may be caused by answering "the tooth brushing" question in the wrong way. Most participants thought putting the toothbrush on the tooth surface meant brushing the teeth. The complaint about gingival bleeding may be an obvious sign of ineffective toothbrushing.

In fact, most prisoners face dental care in prison for the first time in their lives (14,17). Many are unaware of their poor oral health until incarceration. Furthermore, when they move away from substances that mask dental disease due to their analgesic properties, such as opiates or alcohol, they may experience severe pain and seek emergency dental care (32). Hein et al. reported that 90% of 47288 adolescent (mean age: 15 years) prisoners had inadequate dental care before detention (33). Morosini et al. reported that 103 (44.4%) inmates had never visited a dentist before admission to the juvenile detention facility (34). Osborn et al.'s research revealed that prisoners used dental services in prison more than before incarceration (general dentists) (35). In the present study, 120 (51.7%) inmates had visited a dentist before being detained.

The 2004 Turkish national oral health survey revealed that 59% of 12-15 year-olds had visited a dentist. The

caries prevalence and caries experience (DMF-T) of 12-year-olds were 61% and 1.9 in 2004 (36). According to Sahin et al. study on male participants (mean age was 22,12 ±2,17 years old), the DMF-T score was 4.3 (37). The 2011 Eskisehir-Turkey general health survey revealed that 68.7% of male and 60,7% of female students (mean age was 13.5 years old) had dental caries (38). In the present study, 51.7% of inmates had visited a dentist in their previous life, and DMF-T scores were 6.78±4.07. This result is a bit higher than peers. However, up to imprisonment, adolescent inmates may not have a chance to look after themselves or access advice to improve their behavior.

DMF-T values of detained juveniles vary from 3.58 to 9.09, according to the study's societies (2,14,34,39). In a survey, 39.2% of dental problems were identified in 405 incarcerated youth in Spain (40). Nobile et al. reported that only 2% of examined prisoners had no history of caries (28,41). In the present study, only 9 out of 232 participants had no dental caries experience, and the DMF-T score of inmates was 6.78±4.07.

There are very few studies on the periodontal health status of juvenile detainees. Moreover, no standardization in the methods of these studies makes it difficult to discuss. However, different studies report that adult inmates had a Community Periodontal Index (CPI) score of 2, varying from 24.5% to 49.8% (10,42-44). The CPI score "1" demonstrates that bleeding was observed by probing, and score 2 shows that calculus was detected during probing, but all the black area on the probe was visible (18). In the school survey study by Bodur et al. in Turkey, the CPI scores of adolescents aged 14-15 were reported as 1 in 36% and 2 in 39% (45). In another study using PI and GI indices in the rural 15-year-old group, the scores were reported as 2.39 and 1.78, respectively (46). In the present study accordance with the previous studies, the GI score was 1.13±0.47, and the PI score was 1.18±0.55, indicating gingivitis and fair periodontal health status. However, the present study's slightly lower GI and PI results than those of a rural 15-year-old group (46) may be thanks to detention center staff's encouragement of adolescent inmates to maintain regular toothbrushing habits.

GI and PI scores of the present study subjects were not statistically correlated with the sociodemographic characteristics, detention duration times, systemic conditions, medications, education levels, and oral hygiene behaviors of individuals.

CONCLUSION

In conclusion, many prisoners suffer from poor oral health when they enter prison. Prison dental teams should be clinically experienced and competent. It was expected to correct some behaviors during imprisonment and not commit a crime again. In the present detention center, the mean age of the inmates was mainly under 18 years old. They were aware of the harmful effects of smoking, inadequate plaque control, the need for oral healthcare, and insufficient treatment facilities. Therefore it could be easily reinforced tooth brushing habits by providing toothbrushes and toothpaste. Prison health services should not be isolated but integrated into national and regional health systems. Treatment needs and approaches of prisoners as special care need patients should be implanted into the dental education curricula.

Acknowledgement: None.

Author contribution: All authors contributed to the intraoral examination. While the 1st, 2nd, 3rd, and 6th authors did the intraoral examinations, the 4th and 5th authors kept the records.

Conflict of interests: The authors declare that there is no conflict of interest regarding the publication of this article.

Ethical approval: Ethical approval was obtained from the Istanbul Aydin University Faculty of Dentistry Research Ethics Committee (Date: 15.03.2016; No: B.30.AYD0.00.00-480.2/029)

Funding No There are no sources of study funding, including those of an institutional or departmental nature, in connection with this paper.

Peer-review: Externally peer-reviewed.

REFERENCES

1. Stuewig J, McCloskey LA. The relation of child maltreatment to shame and guilt among adolescents: psychological routes to depression and delinquency. Child Maltreat. 2005;10(4):324-36.
2. Alkhadra T. Prevalence of Dental Caries and Oral Hygiene Status among Juvenile Prisoners in the Kingdom of Saudi Arabia. J Contemp Dent Pract. 2017;18(11):991-995.
3. Agrawal A, Bhat N, Shetty S, Sharda A, Singh K, Chaudhary H. Oral hygiene and periodontal status among detainees in a juvenile detention center, India. Oral Health Prev Dent. 2011;9(3):281-7.
4. Committee on Adolescence. American Academy of Pediatrics: Health care for children and

adolescents in the juvenile correctional care system. Pediatrics. 2001;107(4):799-803.
5. Kurtulus A, Salman N, Gunbet G, Bora B, Cenger CD, Kemalettin A. Denizli ilinde 12-15 yaş arasındaki suça sürüklenen çocukların sosyodemografik özellikleri. Pamukkale Tıp Derg. 2009;1:8-14.
6. Bose A, Jenner T. Dental health in prisons. In: Health in prisons: Møller L, Stöver H, Jürgens R, Gatherer A, Nikogosiana H, editors. WHO guide to the essentials in prison health. Denmark, Regional Office Europe, 2007.p.147-155. Accessed 05 May 2022. https://www.euro.who.int/__data/assets/pdf_file/0009/99018/E90174.pdf
7. Berkman A. Prison health: the breaking point. Am J Public Health. 1995;85(12):1616-8.
8. Heidari E. Dickinson C. Fiske J. An investigation into the oral health status of male prisoners in the UK. Journal of Disability and Oral Health. 2008;9(1):3-12.
9. Harvey S, Anderson B, Cantore S, King E, Malik F, Bedi R. Reforming prison dental services in England–a guide to good practice. Health Educ J, 2005:64(Suppl. 4), ii-iii, 1-39.
10. Dhanker K, Ingle NA, Kaur N, Gupta, R. Oral Health Status and Treatment Needs of Inmates in District Jail of Mathura City--A Cross Sectional Study. Journal of Oral Health & Community Dentistry, 2013;7(1):24-32.
11. Coban S. Juvenile Justice System In Turkey And Children In Reformatory Centers. Hacettepe University Journal of Turkish Studies 2015;22:99-119.
12. Demir CS. Cocuk Ceza Adaletinde Infaz Sorunlari. Suç ve Ceza. 2019;1:45.
13. Allukian M Jr. The neglected epidemic and the surgeon general's report: a call to action for better oral health. Am J Public Health. 2000;90(6):843-5.
14. Van Harten MT, Lawrence HP, Quiñonez C, Goodman D. Predictors Of Dental Disease Among Youth Incarcerated At A Toronto-Area Youth Centre. J Oral Health Comm Dent 2015;9(2)138-148.
15. Barnert E, Applegarth DM, Aggarwal E, Bondoc C, Abrams LS. Health Needs of Youth in Detention With Limited Justice Involvement. Child Youth Serv Rev. 2020;118:105412.
16. Borschmann R, Janca E, Carter A et al. The health of adolescents in detention: a global scoping review. Lancet Public Health. 2020;5(2):114-126.
17. Bolin K, Jones D. Oral health needs of adolescents in a juvenile detention facility. J Adolesc Health. 2006;38(6):755-7. DOI: 10.1016/j.jadohealth.2005.05.029.
18. World Health Organization. (1997) Oral Health Surveys: Basic Methods, 4th ed. Geneva: WHO. Accessed 05 May 2022. https://apps.who.int/iris/bitstream/handle/10665/41905/9241544937.pdf?sequence=1&isAllowed=y
19. Löe H, Silness J. Periodontal disease in pregnancy. Acta Odontol Scand. 1963;21:533-551.
20. Silness J, Löe H. Periodontal disease in pregnancy II. Correlation between oral hygiene and periodontal condition. Acta odontologica scandinavica. 1964;22(1):121-135.
21. Ramfjord SP. Indices for prevalence and incidence of periodontal disease. J Periodontol 1959;30:51-59.
22. Kumwenda M, Nzala S, Zulu JM. Health care needs assessment among adolescents in correctional institutions in Zambia: an ethical analysis. BMC Health Serv Res. 2017;17(1):581.
23. Walsh T, Tickle M, Milsom K, Buchanan K, Zoitopoulos L. An investigation of the nature of research into dental health in prisons: a systematic review. Br Dent J. 2008;204(12):683-9; discussion 667. DOI: 10.1038/sj.bdj.2008.525.
24. T.R. Ministry of Justice, General Directorate of Judicial Registry and Statistics. Forensic Statistics 2019. Accessed 05 May 2022. https://adlisicil.adalet.gov.tr/Resimler/SayfaDokuman/1062020170359HizmeteOzel-2019-bask%C4%B1-%C4%B0SA.pdf page:62
25. Turkish Penal Code, 5237/31-2. Accessed 05 May 2022. https://www5.tbmm.gov.tr/kanunlar/k5237.html
26. United Nations Human Rights Office of The High Commissioner. Convention on the Rights of the Child. Accessed 05 May 2022. https://www.ohchr.org/sites/default/files/crc.pdf
27. Barnert ES, Dudovitz R, Nelson BB et al. How Does Incarcerating Young People Affect Their Adult Health Outcomes? Pediatrics. 2017;139(2):e20162624.
28. Nobile CG, Flotta D, Nicotera G, Pileggi C, Angelillo IF. Self-reported health status and

access to health services in a sample of prisoners in Italy. BMC Public Health. 2011;11:529.
29. Cunningham C. Summary of: dental triage Hydebank Wood Prison and young offenders centre, Belfast. Br Dent J. 2014;216(9):524-5. DOI: 10.1038/sj.bdj.2014.379.
30. Gray R, Fawcett T. Dental triage Hydebank Wood Prison and young offenders centre, Belfast. Br Dent J. 2014;216(9):E19.
31. Chi DL, Leroux B. County-level determinants of dental utilization for Medicaid-enrolled children with chronic conditions: how does place affect use? Health Place. 2012;18(6):1422-9.
32. Enggist S, Møller L, Galea G, Udesen C. Prisons and health. WHO Regional Office for Europe; 2014:100.
33. Hein K, Cohen MI, Litt IF et al. Juvenile detention: another boundary issue for physicians. Pediatrics. 1980;66(2):239-45.
34. Morosini Ide A, de Oliveira DC, Ferreira Fde M, Fraiz FC, Torres-Pereira CC. Performance of distant diagnosis of dental caries by teledentistry in juvenile offenders. Telemed J E Health. 2014;20(6):584-9. DOI: 10.1089/tmj.2013.0202.
35. Osborn M, Butler T, Barnard PD. Oral health status of prison inmates--New South Wales, Australia. Aust Dent J. 2003;48(1):34-8.
36. T Gökalp SG, Doğan BG, Tekçiçek MT, Berberoğlu A, Unlüer S. National survey of oral health status of children and adults in Turkey. Community Dent Health. 2010 Mar;27(1):12-7.
37. Sahin S, Saygun I, Enhos S, Akyol M, Altug A, Tekbas OF. The evaluation of the effect of educational status on oral health in young adult men. GÜ Diş Hek Fak Derg. 2009;26(3):133-139.
38. Kalyoncu C, Metintas S, Baliz S, Arikan I. The level of health in elementary school students in training and research areas and evaluation of school screening examination results. TAF Prev Med Bull 2011;10(5): 511-518.
39. Bolin K, Jones D. Oral health needs of adolescents in a juvenile detention facility. J Adolesc Health. 2006;38(6):755-7.
40. Olivan G. The health profile of Spanish incarcerated delinquent youths. J Adolesc Health. 2001;29(6):384.
41. Nobile CG, Fortunato L, Pavia M, Angelillo IF. Oral health status of male prisoners in Italy. Int Dent J. 2007;57(1):27-35.
42. McGrath C. Oral health behind bars: a study of oral disease and its impact on the life quality of an older prison population. Gerodontology. 2002;19(2):109-14.
43. Dayakar MM, Shivprasad D, Pai PG. Assessment of periodontal health status among prison inmates: A cross-sectional survey. J Indian Soc Periodontol. 2014;18(1):74-7. DOI: 10.4103/0972-124X.128230.
44. Reddy V, Kondareddy CV, Siddanna S, Manjunath M. A survey on oral health status and treatment needs of life-imprisoned inmates in central jails of Karnataka, India. Int Dent J. 2012;62(1):27-32.
45. Bodur H, Bodur A, Yucesoy V, Balos K. The evaluation of dental caries prevalence and periodontal status in two different age groups. GÜ Dishek Fak Derg. 2004;21(1)35-39.
46. Chandrashekar BR, Suma S, Sukhabogi JR, Manjunath BC, Kallury A. Oral health promotion among rural school children through teachers: an interventional study. Indian J Public Health. 2014;58:235–240.