

Oral Hygiene Study in Late Adolescence

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ABSTRACT: The objective of this study is to determine prevalent behaviors and knowledge of oral hygiene on the late adolescents. Only individuals in the late stage of adolescence, specifically between the ages of 18 and 24, that were students from the "Ovidius" University of Constanta were chosen. The involvement was optional. A printed questionnaire was provided for them to complete. A total of 50 participants took part in this study, consisting of 26% (n=13) males and 74% (n=37) females. When asked about their toothbrush preference, 50% (n=25) individuals indicated using just manual toothbrushes. Out of all individuals who have utilized orthodontic appliances, 70.8% (n=17) reported that the dentist recommended for them to receive professional dental hygiene care while undergoing treatment. 78.0% (n=39) individuals reported participating in oral hygiene meetings and would be interested for additional information regarding the topic. It is essential to provide youngsters with early instruction about the importance of oral hygiene in order to develop long-lasting healthy habits.

KEYWORDS: Late adolescence, oral health, hygiene.

Introduction

Adolescence, which starts with the beginning of puberty and ends in the mid-20s, is a crucial phase of growth where important regions of the brain undergo development and reach maturity [1].

As the number of people maintaining their teeth and the importance of having aesthetically pleasing teeth increases, there is a growing public recognition of the importance of personal oral hygiene.

Personal oral hygiene refers to the practice of sustaining oral cleanliness in order to sustain good oral health.

This involves the removal and prevention of pathogenic plaque from collecting on teeth and gums.

Plaque is the main cause of gingivitis and periodontal diseases [2,3].

Oral cavity diseases are prevalent health issues.

The conditions encompassed are the most widespread, such as dental caries and periodontal diseases, which have an impact on all demographics and age groups [4,5].

Both diseases have a complex and multifaceted cause.

To minimize the likelihood of their occurrence, individuals should adopt healthy practices, such as physically removing plaque and maintaining a balanced diet [6,7,8].

Effective plaque reduction is crucial for preventing oral illnesses.

Plaque buildup is necessary for the formation of caries and periodontal diseases [9].

Furthermore, inadequate oral hygiene practices, low educational attainment, substandard living conditions, and orthodontic treatment may further contribute to the likelihood of developing dental caries [10,11,12].

In a longitudinal cohort study conducted by Warren et al. [13], it was discovered that scholastic achievement, frequency of brushing, fluoride levels in household water, and consumption of 100% juice were all linked to a higher occurrence of dental caries in adolescents [13].

Research has demonstrated a clear association between dental caries and malocclusion, with specific types of malocclusions showing a particularly strong correlation with the rate of caries [10,14].

When performed properly, a single presentation on oral hygiene along with professional mechanical plaque removal can lead to a substantial decrease in gingival inflammation [15].

Nevertheless, commitment of patients to oral hygiene recommendations has been identified as an issue [15].

Materials and Methods

Students from the "Ovidius" University of Constanta from different years of enrollment participated in this study.

Only late adolescents that had between 18 and 24 years old were selected.

The participation was voluntary.

With the approval from the bioethics committee from the "Ovidius" University of Constanta, the goal of the investigation was

explained to the participants, they completed the informed consent and granted permission to utilize the gathered data.

Utmost confidentiality was ensured for all of them and everyone involved were also notified that they have the option to withdraw at any point without incurring any additional repercussions.

They were given the printed Oral Hygiene in Adolescence questionnaire [16].

It was translated into Romanian.

The questionnaire was segmented into four sections: general information, oral hygiene practices at home, professional oral hygiene, and oral hygiene education and consisted of one open question and 18 multiple-choice questions, with 15 having a single possible answer and 2 allowing for multiple choices [16].

Certain questions were interconnected, meaning that the outcome of the response to one question determined whether or not the respondent could answer the following question [16].

All of the answers were analyzed and compared to the ones in the Oral Hygiene in Adolescence questionnaire [16].

The questionnaires were completed by the participants in the first half of the year 2024.

The responses were evaluated using Microsoft Excel (Microsoft Corporation, Washington, USA) and the T-test was applied there to determine connections between various

groups and obtain a p-value. The decision of the significance level was $p \leq 0.05$.

Results

Fifty (100%) individuals participated in this study, 13 (26%) males and 37 (74%) females.

All participants (100%) responded that they had visited a dentist.

There were different age groups to assess the initial dental appointment. 4 (8.0%) of total participants had been at the dentist between 0-4 years old, 1 (7.7%) man and 3 (8.1%) of them females.

At the 5-9 years old age group there were many of the participants, 35 (70.0%) total out of which 8 (61.5%) were male and 27 (73.0%) were female.

Between 10-12 there were 9 (18.0%), 3 (23.1%) males and 6 (16.2%) females and only 2 (4.0%) of them, 1 (7.7%) male and 1 (2.7%) female had been to the dentist at the over 13 years old period.

Upon being questioned about the type of toothbrush they utilized, the responses were: 25 (50%) use only manual, out of them 9 (69.2%) being male and 16 (43.2%) female; 14 (28.0%) use only electric, 3 (23.1%) male and 11 (29.7%) female; only 1 (2.7%) female out of the total 1 (2%) uses just the sonic one; 9 (18.0%) use the electric and the manual ones, 1 (7.7%) male, 8 (21.6%) females and 1 (2%) uses the manual and the sonic, being 1 (2.7%) female (Figure 1).

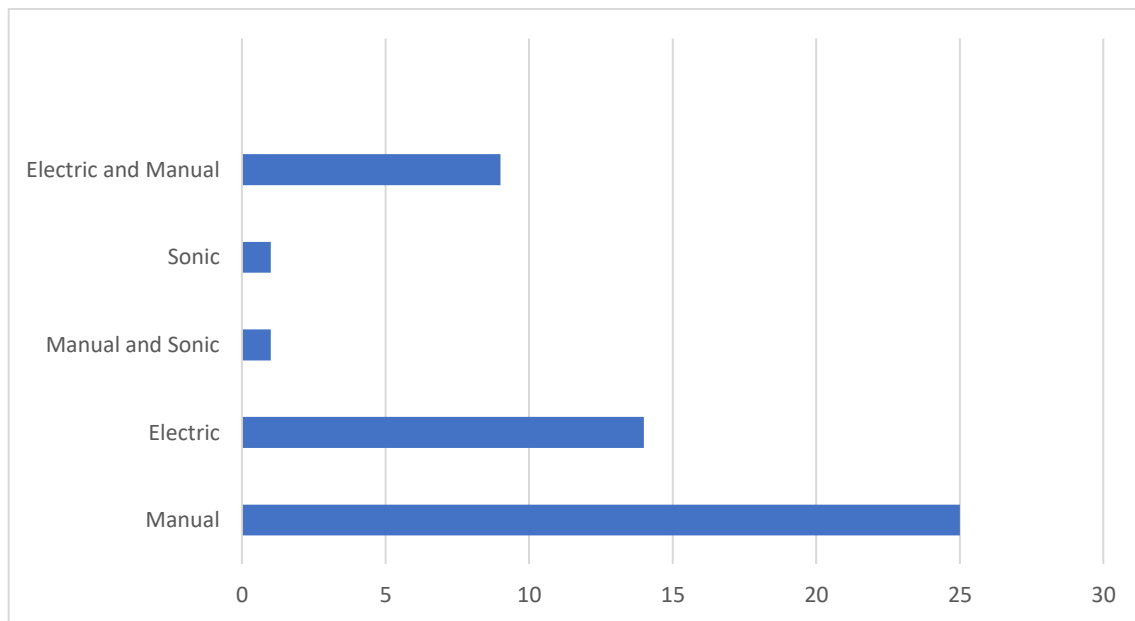


Figure 1. Types of toothbrushes utilized by all of the participants.

There was a significant difference between the answers given by the groups of males compared to those given by the females

($p=0.037664$) when they were asked if they used other tools for oral hygiene at home (Table 1).

Table 1. Oral Hygiene at home.

	Total 50 (100%)	Males 13 (26%)	Females 37 (74%)	p-value
How many times a day do you brush your teeth?				0.213137
Never	0 (0%)	0 (0%)	0 (0%)	
Once (in the morning)	2 (4%)	0 (0%)	2 (5.4%)	
Once (in the evening)	1 (2%)	0 (0%)	1 (2.7%)	
Twice (both in the morning and in the evening)	38 (76.0%)	10 (76.9%)	28 (75.7%)	
Three times	7 (14.0%)	2 (15.4%)	5 (13.5%)	
More than three times	2 (4%)	1 (7.7%)	1 (2.7%)	
Have you ever used dental floss?				0.066629
No, I have never used it	1 (2%)	1 (7.7%)	0 (0%)	
No, I tried it, but I did not like it	7 (14%)	2 (15.4%)	5 (13.5%)	
Yes, once a week	11 (22%)	1 (7.7%)	10 (27%)	
Yes, more than once a week	18 (36%)	6 (46.2%)	12 (32.4%)	
Yes, once a day	13 (26%)	3 (23.1%)	10 (27%)	
Other	0 (0%)	0 (0%)	0 (0%)	
Do you use any other tools for your oral hygiene at home?				0.037664
Yes, I do	29 (58.0%)	9 (69.2%)	20 (54.1%)	
No, I do not	21 (42.0%)	4 (30.8%)	17 (45.9%)	
Do you also clean your tongue after tooth brushing?				0.254176
Yes, I do	44 (88.0%)	13 (100%)	31 (83.8%)	
No, I do not	6 (12.0%)	0 (0%)	6 (16.2%)	

Among all responders who that have used orthodontic appliances, 17 (70.8%) noted that the dentist advised undergoing professional oral hygiene during the treatment, 4 (80%) males, 13 (68.4%) females, and 7 (29.2%) declared the opposite, 1 (20%) male, 6 (31.6%) female.

There was a notable disparity in the compared responses provided by the male and female groups ($p=0.049876$) when asked about the frequency of their professional oral hygiene procedure each year (Table 2).

Table 2. Professional Oral Hygiene.

	Total	Males	Females	p-value
Have you ever undergone professional oral hygiene?				0.308139
Yes, I have	46 (92.0%)	10 (76.9%)	36 (97.3%)	
No, I have not	4 (8.0%)	3 (23.1%)	1 (2.7%)	
If so, how many times a year?				0.049876
I did it only once	11 (23.9%)	1 (10.0%)	10 (27.8%)	
Less than once a year	6 (13.0%)	2 (20.0%)	4 (11.1%)	
Once a year	19 (41.3%)	4 (40.0%)	15 (41.7%)	
Twice a year	9 (19.6%)	3 (30.0%)	6 (16.7%)	
More than twice a year	1 (2.2%)	0 (0%)	1 (2.8%)	
Do you wear braces?				0.308032
Yes, I do	2 (4.0%)	1 (7.7%)	1 (2.7%)	
No, I do not	48 (96.0%)	12 (92.3%)	36 (97.3%)	
Have you ever worn it?				0.059765
Yes, I have	23 (46.0%)	4 (30.8%)	19 (51.4%)	
No, I have not	27 (54.0%)	9 (69.2%)	18 (48.6%)	

Most respondents 39 (78%) reported attending oral hygiene sessions and expressed a desire for additional learning on the topic. 16 (32.0%) stated that the training on oral hygiene has been conducted by both parents and dental professionals, like as dentists or oral

hygienists and only 1 (2%) has found information on the internet.

There was a notable differential in the responses offered by the male compared with the female groups ($p=0.039349$) when asked about who provided their oral hygiene training (Table 3).

Table 3. Oral hygiene instructions.

	Total	Males	Females	p-value
Who provided you with training on oral hygiene?				0.039349
My parents	9 (18.0%)	3 (23.1%)	6 (16.2%)	
My parents, Dentist and/or oral hygienist, I found out information on the internet and on social networks	11 (22.0%)	2 (15.4%)	9 (24.3%)	
My parents, Dentist and/or oral hygienist	16 (32.0%)	5 (38.5%)	11 (29.7%)	
Dentist and/or oral hygienist	7 (14.0%)	1 (7.7%)	6 (16.2%)	
Dentist and/or oral hygienist, I found out information on the internet and on social networks	2 (4.0%)	1 (7.7%)	1 (2.7%)	
I found out information on the internet and on social networks	1 (2.0%)	0 (0%)	1 (2.7%)	
My parents, I found out information on the internet and on social networks	2 (4.0%)	0 (0%)	2 (5.4%)	
No one	2 (4.0%)	1 (7.7%)	1 (2.7%)	
Have you ever attended meetings on oral hygiene held by a dentist or dental hygiene at school or anywhere else?				0.223715
Yes, I have	39 (78.0%)	10 (76.9%)	29 (78.4%)	
No, I have not	11 (22.0%)	3 (23.1%)	8 (21.6%)	
Would you like to receive more information about oral health?				0.223715
Yes, I would	39 (78.0%)	10 (76.9%)	29 (78.4%)	
No, I would not	11 (22.0%)	3 (23.1%)	8 (21.6%)	

In this study, the majority (70%) of participants reported visiting the dentist between 5-9 years.

50% of participants use only a manual toothbrush and 76% brush their teeth twice a day.

36% of participants floss more than once a week, and 88.0% clean their tongue.

All participants (100%) are aware of what professional oral hygiene entails, and 92% have undergone professional hygiene procedures.

However, only 41.3% of participants have professional hygiene done once a year.

32% of participants reported that their parents and dentist have provided them with training on oral hygiene.

Additionally, 78% of participants have attended meetings related to oral hygiene and expressed a desire for more information on the topic.

Discussion

The findings of the questionnaire conducted by Sbricoli L. et. al. [16] can be summarized as follows: 64% of the participants typically began visiting a dentist between the ages of 5 and 9, the majority of them used a manual toothbrush (75.6%) and brushed their teeth twice a day (60.1%), tried (35.2%) but did not like flossing, did not clean their tongue (51.2%), possess understanding of professional oral hygiene (83%) and had undergone such treatment once (36%), most of them reported (60.1%) that their parents were responsible for their oral hygiene education, they did not attend any oral hygiene

meetings (87.8%), and expressed a desire for more information on the subject (82.2%) [16].

The majority (70%) of the participants in this study visited the dentist between 5-9 years and all of them (100%) are aware of what professional oral hygiene is but only 41.3% of them had professional hygiene done once a year.

This research has been done to assess the oral habits of university level late adolescents.

Only 19.6% of responders had a professional hygiene done twice a year.

54.0% had never worn braces and only 26% flosses once a day.

42.0% noted that they did not use any other tools for oral hygiene at home.

Most women 97.3% had done a professional oral hygiene compared to men 76.9%.

Men exhibit a greater tendency to neglect their oral health, display inadequate oral hygiene practices, and experience elevated incidence of periodontal diseases, mouth cancer, and tooth trauma.

Moreover, when compared to women, males mostly seek dental care when they experience a sudden and severe issue, rather than for the purpose of preventing oral diseases.

Women outperform males in activities related to oral health, such as brushing teeth more frequently, adopting a more effective oral hygiene routine, regularly flossing, and seeing the dentist more often [17], 27% of women from this article revealed flossing once a day compared to men 23.1%.

It was noted that females who had never encountered dental pain had a higher frequency

and better execution of fundamental oral hygiene practices compared to females who experienced tooth pain occasionally, often, or rarely [18].

A larger percentage of individuals in the higher dental neglect group were occasional users of dental services, meaning they only sought dental care when they had a specific issue.

Additionally, the average number of months since their last dental visit was nearly twice as long as that of the lower neglect group [19].

In males, 52.7% of individuals did not have any dental visits in the prior year, whereas in females, this proportion was 36.7%.

Of the individuals receiving dental care from a family dentist, 59.9% were males and 78.1% were females.

Regarding routine dental examinations, 3.4% of males and 12.8% of females had a good response [20].

Females had a higher level of belief in the significance of dental flossing in comparison to males ($p < 0.001$).

Both males and females held comparable ideas regarding the role of carbohydrates in causing dental caries and the need of regular dental visits for checkups.

However, their behaviors differed.

Women exhibited a higher frequency of dental visits compared to men, with a statistically significant disparity ($p < 0.001$).

However, men consumed significantly fewer carbs than women ($p = 0.04$) [21].

A correlation has been established between dental health and various systemic illnesses, including coronary heart disease, diabetes, asthma, and liver disease [22].

Women had higher rates of dental participation, more frequent tooth brushing, more regular use of dental floss, better dental information, and more favorable attitudes towards oral health compared to men.

Additionally, females exhibited superior general health practices compared to males [23].

Observations were made regarding variations based on urbanization, and a multiple linear regression analysis of dental caries experience indicated that the intake of sugary foods, place, and dental visits were the most significant independent variables [24].

Dentists are aware of the challenge involved in altering oral hygiene habits.

Modifying the behavior of an individual with a persistent pattern of inadequate oral care over their entire life is exceedingly challenging,

making it highly improbable to transform them into someone who diligently maintains oral hygiene [25].

Education plays a crucial role in bringing about behavioral change, particularly when it comes to improving oral hygiene.

Therefore, it is essential to prioritize education in any endeavor to promote oral hygiene.

The possibility for behavioral change is significantly enhanced when patients comprehend the rationale behind recommended modifications in oral hygiene practices and the repercussions of persisting with inadequate oral hygiene conditions [26].

Challenges in modifying behavior and patient consciousness regarding proper dental hygiene are significant issues in public health.

Research has revealed that individuals who have consistently neglected their dental hygiene struggle to develop a heightened understanding of the significance of oral hygiene, as well as to modify their mindset and actions in relation to it [4].

In this study, 46% of the participants have worn orthodontic appliances, 30.8% males and 51.4% females.

Out of all individuals who have utilized orthodontic appliances, 70.8% reported that their dentist recommended to receive professional oral hygiene treatment throughout the orthodontic treatment.

Among these, 80% were males and 68.4% were females.

On the other hand, 29.2% individuals, including 20% males and 31.6% females, stated that their dentist did not advise professional oral hygiene during the treatment.

Patients who are receiving orthodontic treatment with fixed appliances are more likely to develop gingival irritation due to the heightened difficulty in maintaining oral hygiene.

Gingivitis is primarily caused by dental plaque [27].

The insufficient capacity of the patient to effectively clean their teeth around fixed orthodontic devices increases the buildup of plaque, which can subsequently result in inflammation of the gums.

The presence of irregular tooth alignment can further complicate the process of plaque control [27].

Research has discovered a direct relationship between crowding and periodontal disease [28].

The presence of abnormalities in teeth has been found to create an unfavorable environment to sustain proper oral hygiene and gingival wellness [29].

Orthodontic patients, specifically, need to be educated on maintaining adequate oral hygiene and their brushing techniques should be constantly monitored.

Attaining and sustaining a superior level of oral health practices can be accomplished after receiving thorough instruction on individual oral hygiene [27].

Another study revealed that the oral hygiene of the patients tested was inadequate, regardless of the type of dental device utilized [30].

Tartar was commonly seen on mobile appliances, while fixed appliances exhibited a higher prevalence of plaque [30].

Smokers claim to have a lower frequency and duration of tooth-brushing compared to non-smokers of the same age group [31].

Inadequate oral hygiene and infrequent brushing are linked to dental lesions and the presence of debris and calculus deposits, indicating poor oral condition and hygiene, has a strong correlation with the existence of dental lesions [32].

Conclusion

The data indicate that 78.0% of the respondents expressed a need for additional information.

Additionally, most of them reported seeing the dentist within the 5-9-year age range.

These results emphasize the pressing need for enhanced awareness, early instruction and education on oral hygiene.

Early education on the significance of dental hygiene is crucial for children to cultivate enduring healthy habits.

This study, done on late adolescents, provided helpful insights into their oral routine, with the aim of enhancing our understanding and facilitating improvements.

Conducting research in this field is crucial for improving long-term dental well-being and decreasing systemic health problems linked to inadequate oral hygiene.

Conflict of interests

None to declare.

References

1. National Academies of Sciences, Engineering, and Medicine, Health and Medicine Division, Division of Behavioral and Social Sciences and Education, Board on Children, Youth, and Families, Committee on the Neurobiological and Socio-behavioral Science of Adolescent Development and Its Applications. Introduction. In: Backes EP, Bonnie RJ (Eds): *The Promise of Adolescence: Realizing Opportunity for All Youth*, National Academies Press, 2019, Washington DC, 17-35.
2. Choo A, Delac DM, Messer LB. Oral hygiene measures and promotion: Review and considerations. *Aust Dent J*, 2001, 46(3):166-173.
3. Loe M, Theilade E, Jensen SB. Experimental gingivitis in man. *J Periodontol*, 1965, 36:177-187.
4. Soldo M, Matijević J, Ivanišević AM, Čuković-Bagić I, Marks L, Borić DN, Krmek SJ. Impact of oral hygiene instructions on plaque index in adolescents. *Cent Eur J Public Health*, 2020, 28(2):103-107.
5. Petersen PE. The World Oral Health Report 2003: continuous improvement of oral health in the 21st century-the approach to the WHO Global Oral Health Programme. *Community Dent Oral Epidemiol*, 2003, 31(Suppl 1):3-24.
6. Sheiham A. Dietary effects on dental diseases. *Public Health Nutr*, 2001, 4(2B):569-591.
7. Achembong LN, Kranz AM, Rozier RG. Office-based preventive dental program and statewide trends in dental caries. *Pediatrics*, 2014, 133(4):e827-e834.
8. Julihn A, Barr Agholme M, Grindefjord M, Modéer T. Risk factors and risk indicators associated with high caries experience in Swedish 19-year-olds. *Acta Odontol Scand*, 2006, 64(5):267-273.
9. Axelsson P, Nyström B, Lindhe J. The long-term effect of a plaque control program on tooth mortality, caries and periodontal disease in adults. Results after 30 years of maintenance. *J Clin Periodontol*, 2004, 31(9):749-757.
10. Wang Z, Feng J, Wang Q, Yang Y, Xiao J. Analysis of the correlation between malocclusion, bad oral habits, and the caries rate in adolescents. *Transl Pediatr*, 2021, 10(12):3291-3300.
11. Tenelanda-López D, Valdivia-Moral P, Castro-Sánchez M. Eating Habits and Their Relationship to Oral Health. *Nutrients*, 2020, 12:2619.
12. Mattos MG, Fernandez CA, Masterson D, Maia LC, Neves AA. Is the caregivers' oral health related to dental caries in children or adolescents? A systematic review. *Clin Oral Investig*, 2019, 23(10):3843-3854.
13. Warren JJ, Van Buren JM, Levy SM, Marshall TA, Cavanaugh JE, Curtis AM, Kolker JL, Weber-Gasparoni K. Dental caries clusters among adolescents. *Community Dent Oral Epidemiol*, 2017, 45(6):538-544.
14. Martins MT, Sardenberg F, Bendo CB, Vale MP, Paiva SM, Pordeus IA. Dental caries are more likely to impact on children's quality of life than malocclusion or traumatic dental injuries. *Eur J Paediatr Dent*, 2018, 19(3):194-198.
15. Holloway JA, Seong J, Claydon N C.A., Davies M, Hellin N, Khan I, West NX. A pilot study to evaluate the impact of digital imaging on the delivery of oral hygiene instruction. *Journal of Dentistry*, 2022, 118:104053.

16. Sbricoli L, Bernardi L, Ezeddine F, Bacci C, Di Fiore A. Oral Hygiene in Adolescence: A Questionnaire-Based Study. *Int J Environ Res Public Health*, 2022, 19(12):7381.
17. Sfeatcu R, Balgiu BA, Mihai C, Petre A, Pantea M, Tribus L. Gender Differences in Oral Health: Self-Reported Attitudes, Values, Behaviours and Literacy among Romanian Adults. *J Pers Med*, 2022, 12(10):1603.
18. Aranza D, Nota A, Galić T, Kozina S, Tecco S, Poklepović Peričić T, Milavić B. Development and initial validation of the Oral Health Activities Questionnaire. *Int J Environ Res Public Health*, 2022, 19(9):5556.
19. Thomson WM, Locker D. Dental neglect and dental health among 26-year-olds in the Dunedin Multidisciplinary Health and Development Study. *Community Dent Oral Epidemiol*. 2000, 28(6):414-418.
20. Fukai K, Takaesu Y, Maki Y. Gender differences in oral health behavior and general health habits in an adult population. *Bull Tokyo Dent Coll*, 1999, 40(04):187-193.
21. Hamasha AA, Alshehri A, Alshubaiki A, Alssafi F, Alamam H, Alshunaiber R. Gender-specific oral health beliefs and behaviors among adult patients attending King Abdulaziz Medical City in Riyadh. *Saudi Dent J*, 2018, 30(03):226-231.
22. Hung M, Moffat R, Gill G, Lauren E, Ruiz-Negrón B, Rosales MN, Richey J, Licari FW. Oral health as a gateway to overall health and well-being: Surveillance of the geriatric population in the United States. *Spec Care Dent*, 2019, 39(04):354-361.
23. Furuta M, Ekuni D, Irie K, Azuma T, Tomofuji T, Ogura T, Morita M. Sex Differences in Gingivitis Relate to Interaction of Oral Health Behaviors in Young People. *J Periodontol*, 2011, 82(4):558-565.
24. Peng B, Peterson PE, Fan MW, Tai BJ. Oral health status and oral health behaviour of 12-year-old urban schoolchildren in the People's Republic of China. *Community Dent Health*, 1997, 14(4):238-244.
25. Rodrigues JA, dos Santos PA, Baseggio W, Corona SA, Palma-Dibb RG, Garcia PP. Oral hygiene indirect instruction and periodic reinforcement effects on index plaque in schoolchildren. *J Clin Pediatr Dent*, 2009, 34(1):31-34.
26. Christensen GJ. Special oral hygiene and preventive care for special needs. *J Am Dent Assoc*, 2005, 136(8):1141-1143.
27. Atassi F, Awartani F. Oral Hygiene Status among Orthodontic Patients. *J Contemp Dent Pract*, 2010, 11(4):25-32.
28. Buckley L. The relationship between malocclusion and periodontal disease. *J Periodontol*, 1972, 43(7):415-417.
29. Geiger AM, Wasserman BH, Turgeon LR. Relationship of occlusion and periodontal disease. 8. Relationship of crowding and spacing to periodontal destruction and gingival inflammation. *J Periodontol*, 1974, 45(1):43-49.
30. Wites M, Panuszka J, Dyras M. Evaluation of oral and orthodontic appliance hygiene in orthodontically treated patients. *Przegl Lek*, 2003, 60(Suppl 6):126-128.
31. Pușcașu CG, Caraiane A, Raftu G, Bartok-Nicolae C. Plaque control attitude and risk factors for periodontitis. A survey in a group of adults from Constanța, *International Journal of Medical Dentistry*, 2023, 27(1):54-62.
32. Popescu DM, Onea R, Maglaviceanu CF, Bataiosu M, Gheorghe DN, Rauten AM, Surlin P. Oral Health, Nutritional-Related Patterns and Body Mass Index in Children. *Curr Health Sci J*, 2021, 47(4):575-580.

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