



GLOBAL JOURNAL OF MEDICAL RESEARCH: K
INTERDISCIPLINARY
Volume 21 Issue 2 Version 1.0 Year 2021
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Intensity Prevalence and Hygienic State of the Oral Cavity in Preschool Children Living in the Southern Regions of the Republic of Uzbekistan

By Nodirkhan Sh. Akhrorkhujaev, Saidmurodkhan S. Murtazaev
& Foziljon K. Khasanov

Tashkent State Dental Institute

Abstract- Early childhood caries was and remains one of the most pressing and acute problems of modern dentistry. The increasing intensity and prevalence of early childhood caries in young children is an increasing medical, social and economic problem [6, 9].

Caries prevention includes a whole range of measures. The use of special therapeutic and prophylactic agents as a necessary element of maintaining rational individual hygiene is a prerequisite in the complex of these measures [11, 12]. This, in turn, contributes to a significant reduction in the incidence of dental caries [4, 10]. Prevention of dental caries includes a whole range of measures aimed at its prevention. A necessary condition in the complex of these measures is a rational individual oral hygiene, which includes the use of special therapeutic and prophylactic agents [10]. Properly organized high-quality oral hygiene can significantly reduce the incidence of dental caries [4, 10].

Keywords: early childhood caries, caries prevention, therapeutic agents, oral hygiene, prophylactic agents.

GJMR-K Classification: NLMC Code: WU 290



Strictly as per the compliance and regulations of:



Intensity Prevalence and Hygienic State of the Oral Cavity in Preschool Children Living in the Southern Regions of the Republic of Uzbekistan

Nodirkhan Sh. Akhrokhujayev ^α, Saidmurodkhan S. Murtazaev ^ο & Foziljon K. Khasanov ^ρ

Abstract- Early childhood caries was and remains one of the most pressing and acute problems of modern dentistry. The increasing intensity and prevalence of early childhood caries in young children is an increasing medical, social and economic problem [6, 9].

Caries prevention includes a whole range of measures. The use of special therapeutic and prophylactic agents as a necessary element of maintaining rational individual hygiene is a prerequisite in the complex of these measures [11, 12]. This, in turn, contributes to a significant reduction in the incidence of dental caries [4, 10]. Prevention of dental caries includes a whole range of measures aimed at its prevention. A necessary condition in the complex of these measures is a rational individual oral hygiene, which includes the use of special therapeutic and prophylactic agents [10]. Properly organized high-quality oral hygiene can significantly reduce the incidence of dental caries [4, 10].

Keywords: early childhood caries, caries prevention, therapeutic agents, oral hygiene, prophylactic agents.

I. INTRODUCTION

According to the latest developments of the world's leading dentists, training in rational oral hygiene and teeth cleaning should be carried out in stages, starting from the age of 3. Parents should be involved in this work, since at this age child are too young to understand the need for oral care. It has been established that it is precisely the skills acquired at this age that become especially strong, assimilated for the whole life [1, 2, 5]. In addition, at this age, the foundations of personality formation are laid. The recommended stages of teaching a child to rationalize cleaning of teeth, gums and tongue are explained by the fact that up to 3 years of age, carious cavities are more often formed in places of the enamel that is viciously developed in the antenatal period: on the labial and chewing surfaces of the tooth, and from 4 years old, if the child does not learned to brush his teeth, remove food from the interdental spaces, then carious cavities appear on the lateral surfaces of the teeth, which are poorly formed and poorly hold fillings. Therefore,

prevention of caries prevention of this localization should be started before 4 years [7, 8].

a) Purpose of the research

The aim of the research is to study the intensity, prevalence and hygienic state of the oral cavity in preschool children living in the southern regions of the Republic of Uzbekistan.

II. MATERIALS AND METHODS

For the study, we examined 280 children aged 3 to 6 years. Attending preschool educational institutions of Kashkadarya and Surkhandarya regions. Preschool children from various districts of the Kashkadarya region (240 children, 129 boys and 111 girls) were included in the main group; children (40 children; 23 boys and 17 girls) of the Mountain region of the Boysun district of the Surkhandarya region were involved as a control group, this region, according to ecologists is the most ecologically favorable southern region of the republic.

During the examination period, all children were practically healthy and were not registered under observation of related specialists. Children were examined using a standard set of dental instruments in natural light. All data were entered in a special questionnaire card, with the help of preschool educators, parents were questioned to obtain complete information about the child. During the examination, the generally accepted sequence was followed: external examination, assessment of the location of the teeth, dentition, assessment of oral hygiene, study of dental hard tissues.

Hygienic history: when, how many times a day, what and how the child brushes his teeth. As a result of the conducted examinations of children, it was found that all children needed special individual training in hygienic skills and careful, regular quality control of hygienic oral care. The intensity of caries was determined by the average value of the indices CPR + cfc of the teeth of the cavities (T.F. Vinogradova, 1988). To assess the hygienic state of the oral cavity, the hygiene index was determined by the method of Yu.A. Fedorov and V.V. Volodkina. (1972). To assess the severity of gingivitis (and subsequently to register the dynamics of the process), the papillary-marginal-alveolar index (PMA) was used.

Author ^α ρ: Assistant, Tashkent State Dental Institute. Tashkent, Uzbekistan. e-mails: Axrorxodjayev880@mail.ru, xasanovfoziljon1985@mail.ru

Author ^ο: MD, Professor, Tashkent State Dental Institute. Tashkent, Uzbekistan. e-mail: murtazaevss@mail.ru

Statistical research methods included methods of variation statistics (determination of the arithmetic mean value - M, and their mean standard error - m,

Student's significance criterion - t). The data were processed using the Statistica software package.

Table 1: Dental status of preschool children in Kashkadarya and Surkhandarya regions

Index	Control (n=40)	Maingroup (n=240)	R
CPR + cf (cf)	2,4±0,3	4,84±0,19	<0,001
PMA	15,04±1,01	19,08±0,67	<0,001
HI	1,75±0,1	2,29±0,05	<0,001
Prevalence of dental caries	85%	90,6%	

The prevalence of caries is not significantly different in both areas. However, the intensity index in the main group was 2 times higher than in the control group ($R < 0.001$). In comparative characteristics, it was shown that the hygienic state according to the Fedorov-Volodkina index, the oral cavity of children and the values of the PMA index were also higher in relation to the control group. In children of the main group, the average value of the Hygiene Index (HI) was 2.29, which corresponded to an unsatisfactory state, in children of the control group, the index value was 1.75, which corresponded to satisfactory.

To find out the hygiene habits of preschoolers living in the southern regions, a survey was conducted

on the study of dental hygiene, during which the questionnaires were distributed to parents of children of the younger age group and filled out by questioning older children. Based on the questionnaire survey, it was found that the children of the control group did not brush their teeth twice a day, most of them brushed their teeth once a day and 2-3 times a week. Fortunately, there were no children in this group who did not wash at all. In the main group, children who wash twice a day make up 10%, those who wash once - 43%, those who wash 2-3 times a week - 25%, and children who do not wash at all - about 3%.

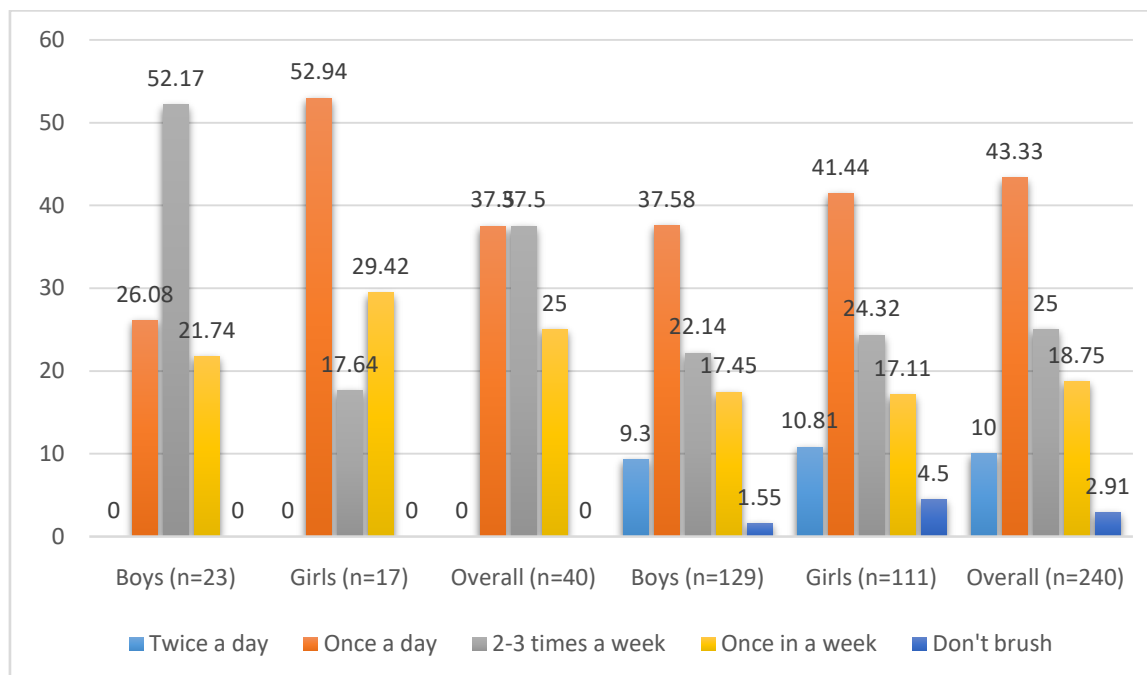


Figure 1: Percentage of teeth cleaning of preschoolers living in southern regions (%)

In the research of the situation with changing toothbrushes, all children in the control group have their own toothbrushes, but 85% of children change every 6 months, which shows that they do not have the appropriate skills in this regard. It turned out that 21% of

children in the main group change their toothbrushes every 3-4 months and 76% - every 6 months. These cases indicate that children and their parents do not know how often to change their toothbrushes.

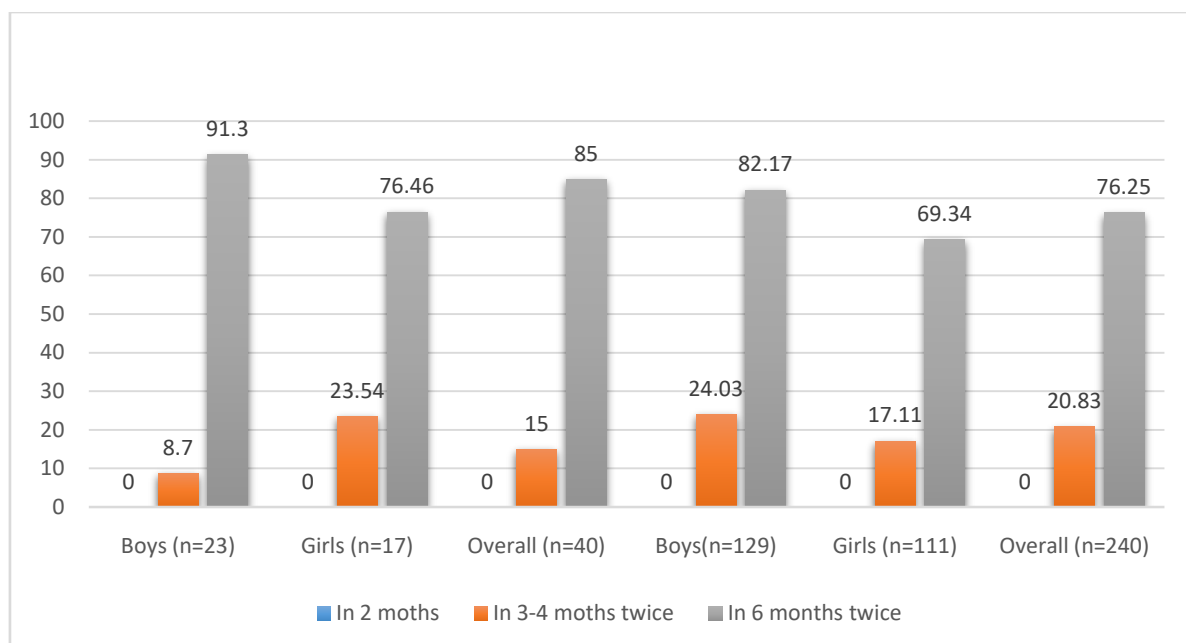


Figure 2: Preschool children living in the southern regions toothbrush replacement period (%)

Thus, the results obtained in the mode of the present study test the significant role of hygienic health status based on dental diseases. These data require further in-depth study of causal relationships in the occurrence of major dental diseases in this contingent of children.

III. CONCLUSIONS

1. The prevalence and intensity of dental caries in children of the main group is 2 times ($R < 0.001$) higher than in the comparison group
2. The index of oral hygiene in children of the main group was 2.29 ± 0.05 and was significantly higher in relation to the control and corresponded to unsatisfactory.
3. On the basis of questionnaires, they indicate a low level of hygiene skills among children living in the southern regions, only 10% of children regularly brush their teeth and 3% of children do not brush their teeth at all.
4. Comprehensive dental prophylaxis in this contingent of children should be carried out with the inclusion of measures aimed at increasing the hygienic knowledge of parents and improving the hygienic state of the oral cavity in preschool children.

Conflict of Interests and Contribution of Authors

The authors declare the absence of obvious and potential conflicts of interest related to the publication of this article and report on the contribution of each author.

Source of Financing

No funding was required for this research.

REFERENCES RÉFÉRENCES REFERENCIAS

1. A longitudinal case-control study of caries development from birth to 36 months. K.A. Plonka, M.L. Pukallus, A.G. Barnett, T.F. Holcombe, L.G. Walsh, W.K. Seow. Caries Res. 2013; 47 (2): pp. 117-27.
2. Access to information on oral hygiene and tooth loss due to caries among adults. Desirée Sant`Ana Haikal, Desirée Sant`Ana Haikal, Andréa Maria Eleutério de Barros Lima Martins, Pedro Henrique Soares Aguiar, Marise Fagundes Silveira, Alfredo Maurício Batista de Paula, Efigênia Ferreira EFerreira. Cien Saude Colet. 2014 Jan; 19 (1): pp. 287-300.
3. A.M. Hegde, S. Joshi, K.Rai, S.Shetty. Evaluation of oral hygiene status, salivary characteristics and dental caries experience in acute lymphoblastic leukemia (ALL) children /J. Clin. Pediatr Dent. 2011 Spring; 35(3): pp. 319-23.
4. B. Kuter, N. Guler. Caries experience, oral disorders, oral hygiene practices and socio-demographic characteristics of autistic children. /Eur. J. Paediatr Dent. 2019 Sep; 20(3): pp. 237-241.
5. Caries experience of children in primary schools with long-term tooth brushing programs: A pilot Australian study. T. Cakar, L. Harrison-Barry, M.L. Pukallus, S. Kazoullis, W.K. Seow. Int. J. Dent Hyg. 2018 May; 16(2): pp. 233-240.
6. Case-control study of early childhood caries in Australia. W.K. Seow, H. Clifford, D. Battistutta, A. Morawska, T. Holcombe. Caries Res. 2009; 43(1): pp. 25-35.
7. Dental caries experience and its relation to oral hygiene in Mexican children. Nelly Molina-Frechero,

Denisse Durán-Merino, Enrique Castañeda-Castaneira, María Lilia Adriana Juárez-López. *Gac. Med. Mex.* Jul-Aug 2015; 151(4): pp. 485-90.

8. Development defects of enamel and dentine: challenges for basic science research and clinical management. W.K. Seow, *Aust. Dent. J.* 2014 June; 59 Supply 1: pp. 143-54.
9. Early Childhood Caries. Wan Kim Seow. *Pediatr. Clin. North Am.* 2018 Oct; 65(5): pp. 941-954.
10. E. Strömberg, M.L. Hagman-Gustafsson, A. Holmén, I. Wårdh, P. Gabre. Oral status, oral hygiene habits and caries risk factors in home-dwelling elderly dependent on moderate or substantial supportive care for daily living. *Community Dent. Oral Epidemiol.* 2012 Jun; 40(3): pp. 221-9.
11. Oral-dental hygiene in schoolchildren. Knowledge and prevention. J. Alvarez González, J. Cala Cordero, C. Piñera Palacio, J. Rubio Domínguez, A. Molejón Iglesias. *RevEnferm.* 1994 Jan; 17(185): pp. 19-23.
12. Relationship of dental treatment and oral hygiene to caries prevalence and need for periodontal treatment. A. Sicilia 1, B. Noguerol, R. Hernández, J. Cobo, J. Ainamo, A. Bascones, V. Lucas, J.S. LópezArranz. *Av.Odontoestomatol.* 1990 Jun; 6(6): pp. 343-9, 351-2.