



# Comparative Investigation of the Periodontal Status in Two Groups of Children and Adolescents with Different Standard of Life

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## Abstract

Nowadays there is a great diversity of investigations among children and adolescents concerning the specific morphological, physiological and functional characteristics and clinical traits of the periodontal apparatus. An issue of significant scientific interest represents the periodontal status in healthy children with various standard of living. Not to neglect the fact that social-economic characteristics of the area of living influence periodontal health. The aim of this study has been to perform a detailed research of the periodontal health in children of different regions and standard of living and to seek for answers to some questions: Are children with improved oral-dental status in conditions of extensive increase of the costs for public health services? Do children visit their dentists only in a case of emergency or do they perform regular dental visits? For the purpose of the study we included children and adolescents between 2 and 18 years of age with different place and conditions of living. We recorded the plaque index, papilla bleeding index, bleeding on probing index, clinical attachment level, gingival margin contours in the context of primary, mixed and permanent dentition. We established deviations from the norm of periodontal health in children living in unfavorable conditions, with limited access to specialized dental cares. In conclusion, the environmental factors have to be taken into consideration in periodontal status assessment in healthy children and adolescents.

**Key words:** oral health, adolescent, child, epidemiology, gingivitis, periodontal disorders, socioeconomic factors, quality of life

## Background

Nowadays there is a great diversity of investigations among children and adolescents concerning the specific morphological, physiological and functional characteristics and clinical traits of the periodontal apparatus. An issue of significant scientific interest represents the periodontal status in healthy children living in various conditions. [1, 2, 3] Not to neglect the fact that social-economic characteristics of the area of living influence periodontal health. [4, 5]

## Objective

The objective of this study is to examine and make a record of the periodontal status of the young Bulgarian population in correspondence with the results obtained by other explorers in this scope of investigation.

## Materials and methods

The investigation includes a control group of 32 healthy children, 16 girls and 16 boys-residents of the city of Varna. A group of 38 adolescents is also involved- 20 of them girls and 18 boys from the town of Tervel, North-Eastern Bulgaria. There are representatives with primary, mixed and permanent dentition.

A wide variety of methods is implemented in the research:

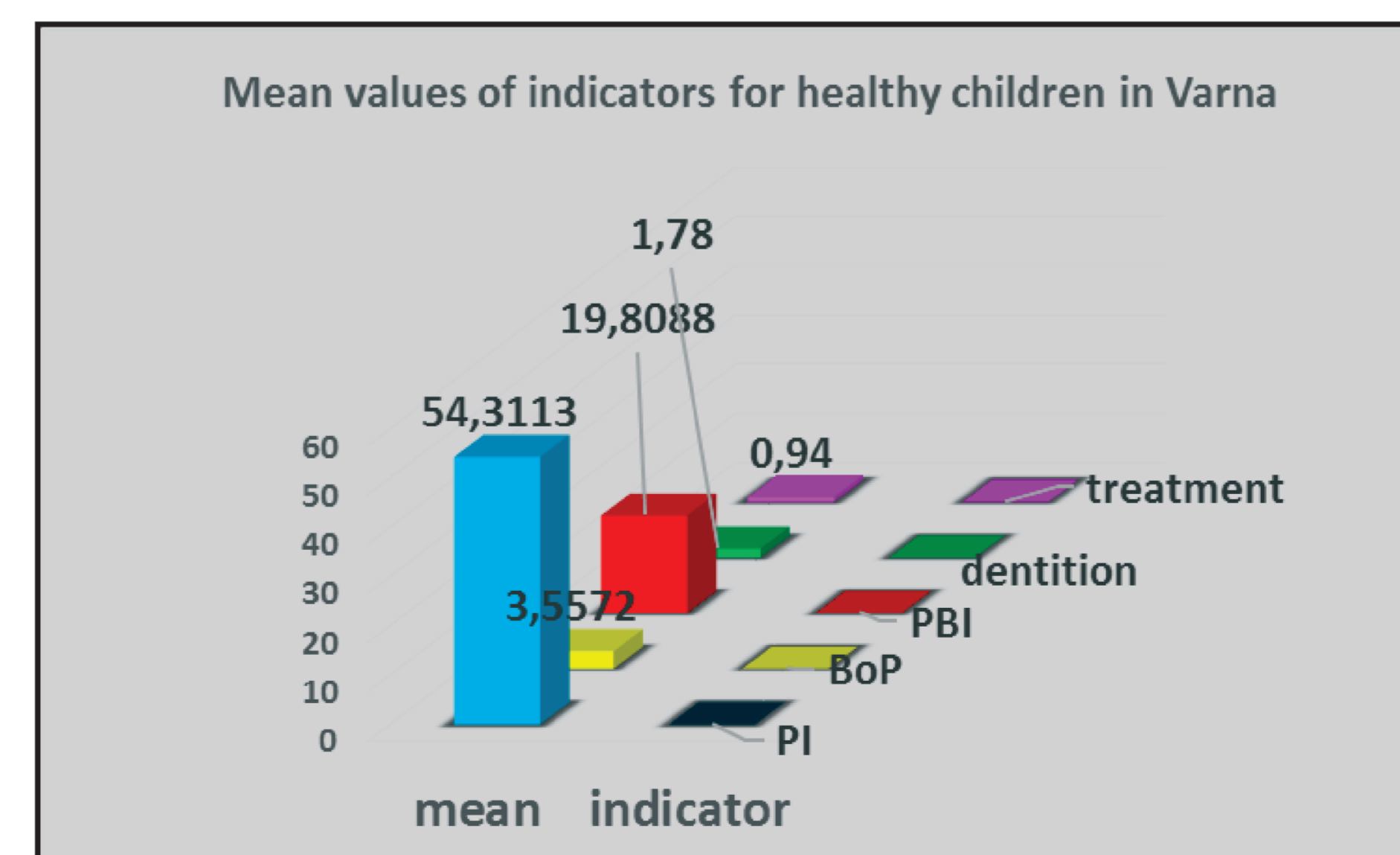
- records of the teeth to be treated;
- dental plaque scores- presence or absence of plaque on each dental surface- PI;
- Papilla bleeding index;
- Bleeding on probing;
- statistical analysis accentuating on descriptive statistics, T-Student test and correlation analysis;
- gingival margin investigation, afterwards excluded in analysis because of the enormous number of teeth in pre-functional eruptive phase.

## Results

**Table 1 Statistical data concerning the main indices for healthy children from Varna**

indicator	PI	BoP	PBI	primary/mixed/permanent dentition	teeth to be treated
mean	54.3113	3.5572	19.8088	1.78	0.94

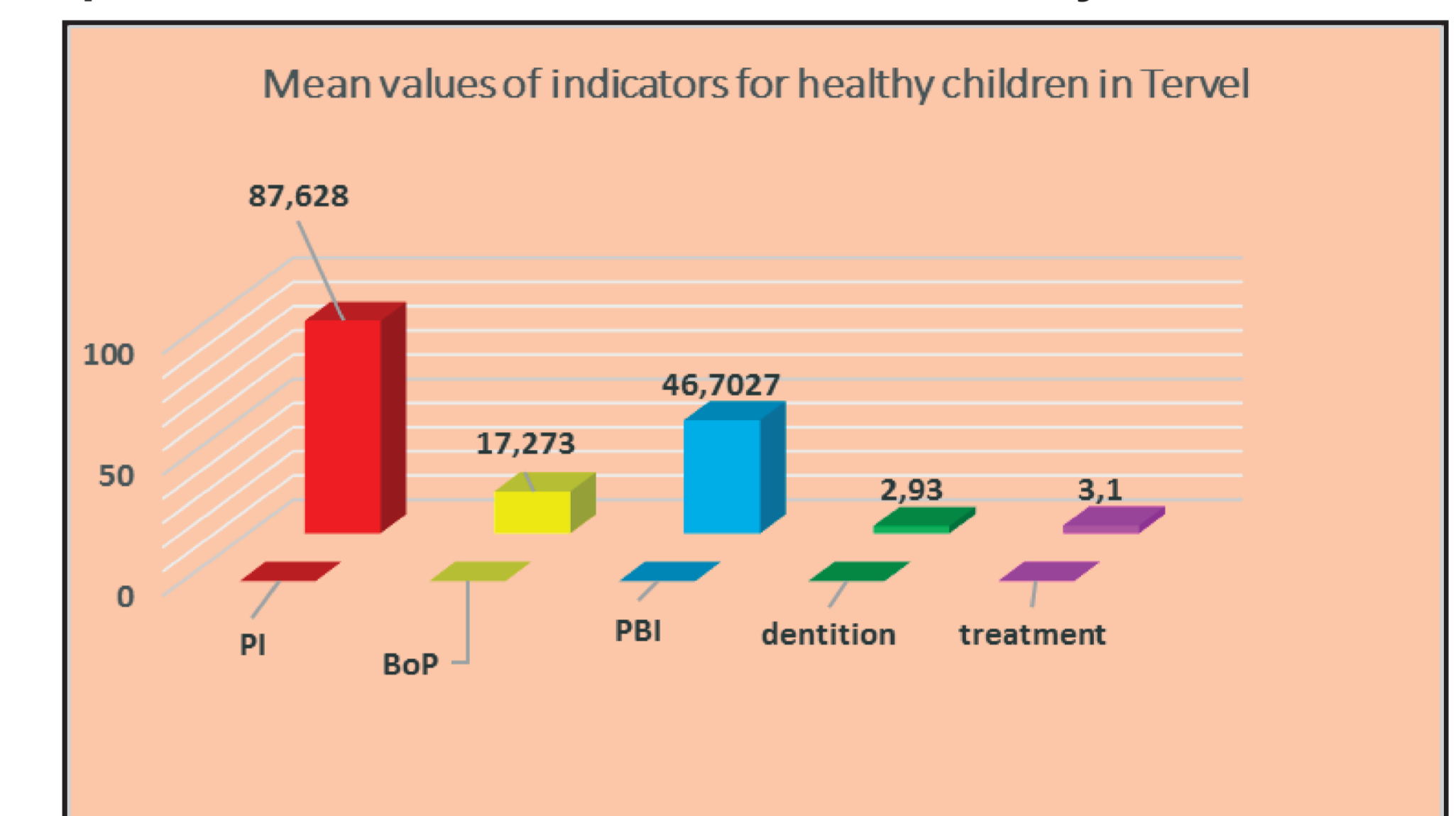
**Graphic 1 Mean values of indicators for healthy children in Varna**



**Table 2 Statistical data regarding some indices of healthy children from Tervel**

indicator	PI	BoP	PBI	primary/mixed/permanent dentition	teeth to be treated
mean	87.6280	17.2730	46.7027	2.93	3.10

**Graphic 2 Mean values of indicators for healthy children in Tervel**



**Summary:** We established deviations from the norm of periodontal health in children living in unfavorable conditions, with limited access to specialized dental cares.

### Conclusions:

- ❖ Predominance of gingival inflammation in children living in the smaller town of Tervel, because of actual limitation of the access to specialized dental cares.
- ❖ Both of the investigated groups of children are characterized with satisfactory level of Plaque Index.
- ❖ Concerning children living in the smaller town prosthetic dental treatment has been performed. Nevertheless, the number of teeth to be treated in these children is almost 3 times greater than the same indicator in children living in the city of Varna.
- ❖ The value of PBI is more than twice higher in children living in the town of Tervel compared with the same index values in participants of the bigger town of Varna.
- ❖ The value of the index BoP is almost 5 times higher in children of the smaller town compared with these of the bigger one.
- ❖ The participants of the smaller town of Tervel are more predisposed to periodontal inflammatory diseases, related with greater risk of initiation and progression of periodontitis in older age.

## References

1. Periodontal and Dentition Status among Orphans and Children with Parents in Mysore City, India: A Comparative Study; Thetakala, R.K., Sunitha, S., et al., J Clin Diagn Res. 2017.
2. Sharma A, Gaur A, Pareek S, Raja V, Sanadhya S, Sharma AV. Oral health status and treatment needs among orphanage children of Jaipur City. Sch J App Med Sci. 2014;2(5D):1776-80.
3. Periodontal Pathogens and Clinical Periodontal Status of School Children: A Cross-Sectional Study; Cortelli, S.C., Aquino, D.R., et al.; Journal of Oral Hygiene & Health; 2014.
4. Sukhabogi JR, Shekar C, Hameed IA, Ramana IV, Sandhu G. Oral health status among 12- and 15-year-old children from government and private schools in Hyderabad, Andhra Pradesh, India. Ann Med Health Sci Res. 2014; 4:272-77.
5. Teodora T, Danila I. Socio-economic status and oral health. The Journal of Preventive Medicine. 2005; 13(2):116-21