

## Psychoemotional Stress as a Predictive Factor for Inflammatory Periodontal Diseases in Adolescents

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### Abstract

**Background:** Psychoemotional stress may be associated with changes in oral hygiene behavior and periodontal health in adolescents [4, 9]. Identifying its relationship with clinical periodontal parameters may contribute to improved risk assessment and preventive strategies.

**Objective:** To investigate the relationship between psychoemotional stress and periodontal status in adolescents and assess the potential value of stress assessment for predicting inflammatory periodontal diseases [5, 7].

**Materials and Methods:** The planned study includes 310 adolescents aged 13–17 years. Oral hygiene status is assessed using the Simplified Oral Hygiene Index (OHI-S), gingival inflammation by bleeding on probing (BOP), and perceived stress using the 10-item Perceived Stress Scale (PSS-10) [5]. Associations between stress levels and clinical periodontal parameters will be evaluated using appropriate statistical methods [4, 8].

**Conclusion:** The study may help clarify the relationship between psychoemotional stress and periodontal health in adolescents and provide a basis for developing individualized preventive approaches [4, 8].

**Keywords:** adolescents, psychoemotional stress, gingivitis, periodontal health, oral hygiene, risk assessment.

**Introduction.** Inflammatory periodontal diseases, particularly gingivitis, are common oral health problems among adolescents [3]. Their development is associated with dental biofilm accumulation, inadequate oral hygiene, and hormonal changes

related to puberty [6]. At the same time, psychoemotional factors become increasingly important during adolescence due to academic demands, sleep disturbances, and changes in social behavior [7, 9].

Stress may be associated with reduced motivation to maintain oral hygiene and may potentially influence the mechanisms underlying the inflammatory response . Therefore, investigating the relationship between psychoemotional stress and periodontal status is important for improving preventive strategies and assessing the risk of inflammatory periodontal diseases in adolescents [4, 8].

**Aim:** To determine the relationship between psychoemotional stress and clinical periodontal parameters in adolescents and to assess the potential use of these indicators for predicting the risk of inflammatory periodontal diseases [4, 5].

### **Materials and Methods**

The planned study population comprises 310 adolescents aged 13–17 years, divided into two age groups: 13–14 and 15–17 years. The clinical examination includes assessment of gingival status, dental deposits, and bleeding on probing.

Oral hygiene is evaluated using the Simplified Oral Hygiene Index (OHI-S), while gingival inflammation is assessed using the bleeding on probing (BOP) parameter. Perceived psychoemotional stress is measured using the 10-item Perceived Stress Scale (PSS-10) [1, 2].

The study is designed to examine the relationship between stress levels, oral hygiene status, and the prevalence of inflammatory periodontal diseases. If a complete dataset is available, multivariable statistical analysis will be performed to determine the independent contribution of the investigated factors to the risk of inflammation [8].

### **Discussion and Conclusion**

Investigating psychoemotional stress alongside clinical periodontal parameters may contribute to improving risk assessment for inflammatory periodontal diseases in

adolescents [4, 8]. The practical value of this approach will depend on the statistical analysis and confirmation of the predictive value of the identified factors [8]. The findings may provide a basis for developing individualized preventive recommendations aimed at maintaining periodontal health during adolescence.

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