Ministry of Health of Ukraine • Poltava State Medical University
All-Ukrainian Scientific and Practical Conference with International Participation
«PERIODONTOLOGY AND ORAL MEDICINE: SCIENCE, PRACTICE, INTERNATIONAL EXPERIENCE»
Dedicated to the 105th anniversary of PDMU, the 150th anniversary of the birth of Professor Yu. M. Gofung, and the 105th anniversary of the Department of Therapeutic Dentistry

ASSESSMENT OF THE CLINICAL AND PSYCHOSOMATIC STATUS OF CIVILIAN PATIENTS WITH GENERALIZED PERIODONTITIS AND ANXIETY DISORDERS IN THE CONTEXT OF MILITARY THREATS

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Poltava, Ukraine • November 20, 2026

RELEVANCE OF THE STUDY

Epidemiological & Social Burden

- **Rising Morbidity:** Destructive periodontal lesions show a steady upward trend among working-age civilians (**35–55 years**), markedly impairing quality of life.
- **Impact of Martial Law:** Prolonged exposure to military threats in major Ukrainian cities causes severe psychological trauma and post-traumatic stress disorder (**PTSD**).
- **Stress as a Primary Trigger:** Persistent psychoemotional distress alters oral tissue resistance and compromises standard generalized periodontitis (GP) therapy.

Regulatory Framework

- Regulated by the Unified Clinical Protocol approved by **Order № 1265 of the Ministry of Health of Ukraine (July 19, 2024)**.
- Mandates multidisciplinary non-pharmacological interventions alongside specialized dental care.

«Periodontal Emotional Stress Syndrome» Cycle

1. Chronic Threat to Life
Activation of the hypothalamic-pituitary-adrenal (HPA) axis in civilians

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2. Neuroendocrine & Vascular Shift
Catecholamine-mediated cortisol release, systemic inflammation, microcirculatory vasospasm

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3. Local Oral Manifestations
Stress-induced bruxism, xerostomia, chronic mechanical & occlusal overload

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4. Tissue Destruction
Gingival ischemia and accelerated resorption of the alveolar bone

AIM OF THE STUDY

Primary Objective

To provide a scientific basis for a **differentiated strategy to prevent the progression of generalized periodontitis** among the civilian population under martial law, grounded in a comprehensive evaluation of their sociopsychological characteristics and emotional stress levels.

Task 1: Clinical Profiling

Evaluate the prevalence of subjective somatic complaints, oral hygiene indices, mineralized deposits, and periodontal pocket depth in civilians aged 35–55 years.

Task 2: Psychosomatic Assessment

Quantify reactive state anxiety and dental anxiety (dentophobia) levels and establish their correlation with clinical periodontal severity.

Task 3: Gender Stratification

Identify gender-specific behavioral coping mechanisms and oral hygiene patterns to tailor preventive and therapeutic protocols.

MATERIALS AND METHODS

82
Civilian Patients with Generalized Periodontitis (Aged 35–55 Years)

45 (54.9%)
Men

37 (45.1%)
Women

Clinical Base & Period

- **Study Type:** Cross-sectional clinical and psychological study.
- **Timeline:** 2022–2024 (during active military threats).
- **Institution:** University Dental Center (UDC) of Kharkiv National Medical University (KhNMU).

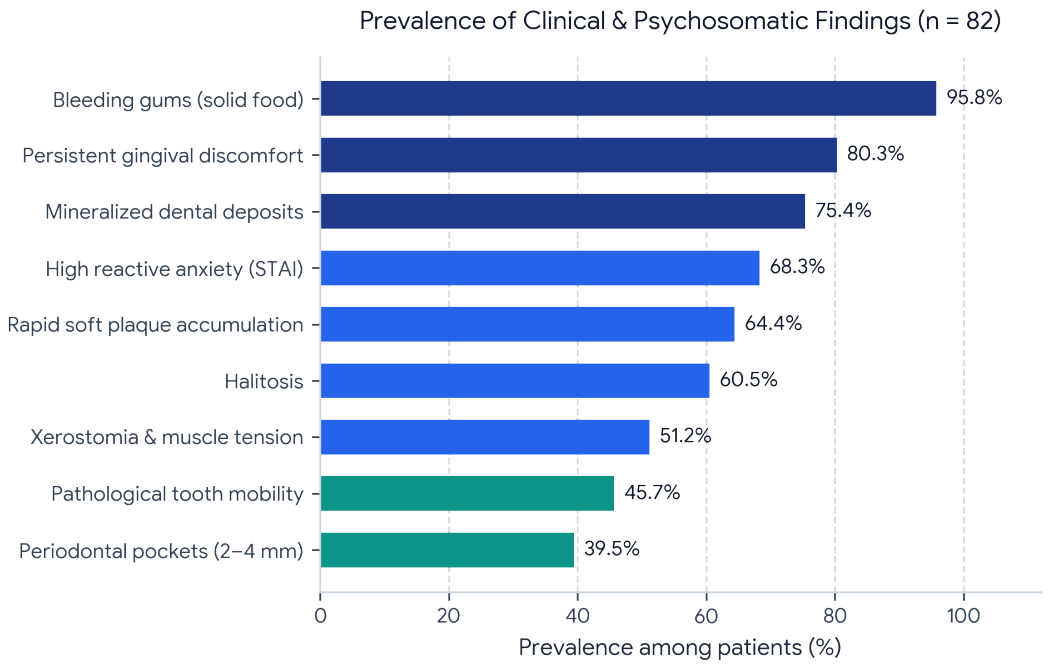
1. Clinical Periodontal Examination

- Detailed collection of somatic complaints (gingival bleeding, discomfort, halitosis, xerostomia, morning masticatory muscle tension).
- Objective evaluation of marginal gingiva (hyperemia, cyanosis, edema, interdental papillae deformation).
- Assessment of oral hygiene status, supra- and subgingival mineralized dental deposits, tooth mobility, and periodontal probing pocket depth.

2. Psychometric & Anxiety Assessment

- **STAI (Spielberger-Hanin State-Trait Anxiety Inventory):** Evaluated individual reactive anxiety (state anxiety) levels under chronic war-related stress.
- **DAS (Corah Dental Anxiety Scale):** Assessed dentophobia levels before and during dental procedures (including reactions to dental drill operation).
- **Statistical Analysis:** Non-parametric and parametric comparisons of gender subgroups (significance threshold $p < 0.05$).

CLINICAL AND PSYCHOSOMATIC STATUS



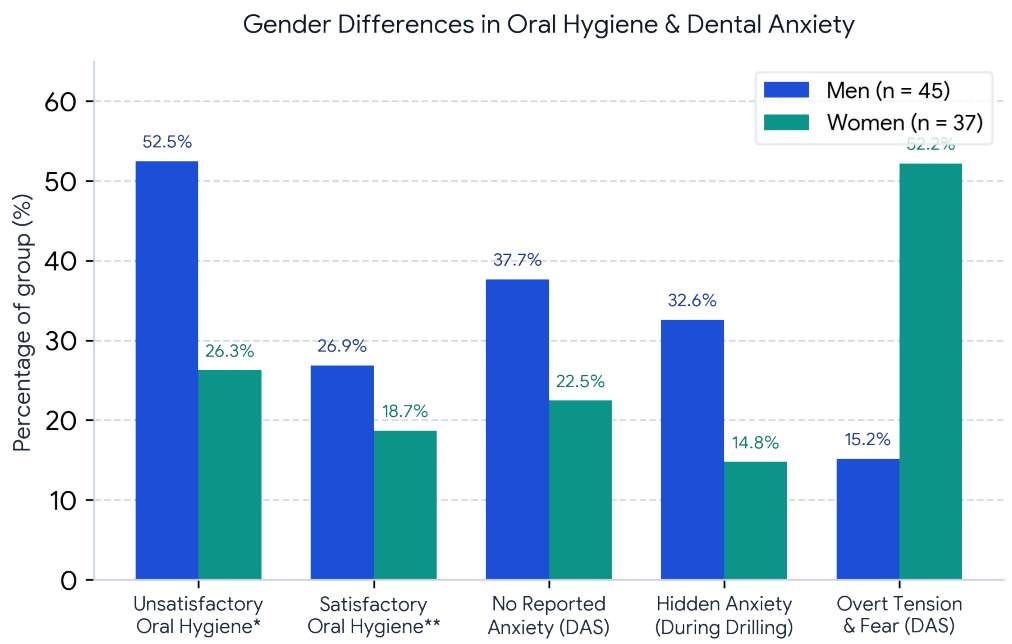
Objective Periodontal Findings

- **Inflammatory Signs:** Hyperemia, cyanosis of the marginal gingiva, swelling, and deformation of interdental papillae.
- **Dental Deposits:** Massive supragingival and subgingival mineralized calculus in **75.4%** of patients.
- **Periodontal Pockets:** Depth of **2.0–4.0 mm** detected in **39.5%**; individual tooth mobility in **45.7%**.
- **Bruxism Markers:** Xerostomia and morning masticatory muscle tension in **51.2%**.

Psychosomatic Correlation (STAI)

- **High reactive anxiety** was identified in **68.3%** of civilians (moderate in **24.4%**).
- Patients with high STAI scores exhibited **significantly deeper periodontal pockets** and more pronounced gingival bleeding compared to those with moderate anxiety (***p* < 0.05**).

GENDER DIFFERENCES & PATHOGENETIC DISCUSSION



* $p < 0.05$ between men and women; ** $p < 0.01$ between men and women. Overt tension (29.3%) + fear (22.9%) in women.

The «Male Coping» Effect (DAS)

- **Oral Hygiene Gap:** Unsatisfactory hygiene was twice as frequent in men (**52.5% vs. 26.3%**, $p < 0.05$), while satisfactory hygiene was lower in women (**18.7% vs. 26.9%**, $p < 0.01$).
- **Hidden vs. Overt Anxiety:** Although **37.7%** of men reported no initial anxiety (vs. **22.5%** of women), **32.6%** of men experienced hidden stress during dental drilling, whereas women showed overt tension (**29.3%**) and fear (**22.9%**).

International Scientific Context

- Results align with cross-sectional studies of civilians in conflict zones showing rapid deterioration of hygiene indices and alveolar bone loss.
- Prolonged distress triggers systemic **pro-inflammatory cytokines** that directly activate osteoclasts in the alveolar process, explaining high tooth mobility (**45.7%**).

CONCLUSIONS

1. Limitations of Isolated Dental Therapy

Isolated standard dental treatment of generalized periodontitis under conditions of chronic war-related psychoemotional stress is ineffective and yields only short-term clinical remission.

2. Synergistic Public Health & Preventive Strategy

- **Professional Dental Care:** Comprehensive oral sanitation, regular professional oral hygiene, and locally delivered sustained-release antioxidants.
- **Psychosomatic Support:** Integration of stress self-regulation techniques and appropriate sedation protocols to minimize systemic inflammation and improve tissue nutrition.
- **Crisis Self-Care Motivation:** Tailored behavioral counseling to stabilize alveolar bone tissue during prolonged crisis periods.

3A. Protocol for Male Patients

Requires **stricter oral hygiene monitoring**, more frequent scheduled visits for professional oral hygiene, and gentle handling to address hidden procedural anxiety.

3B. Protocol for Female Patients

Requires **enhanced psychosomatic support**, targeted alleviation of somatic anxiety and fear, and continuous reinforcement of home oral hygiene habits.

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