Date: 13thMarch-2026

REGIONAL AND AGE-SPECIFIC PATTERNS OF GENERAL MORBIDITY AMONG SCHOOL-AGE CHILDREN IN THE FERGANA VALLEY - AN EPIDEMIOLOGICAL ANALYSIS

Ermatov Nizom Jumakulovich
Head of the Department of Children
Adolescents and Nutrition Hygiene
Tashkent State Medical University, DSc, Professor
Nasirdinov Mavlonjon Ziyomiddinovich
Associate Professor, Central Asian Medical University, PhD

Annotation: This thesis examines regional and age-related morbidity patterns among school-age children in the Fergana Valley (Fergana, Andijan, and Namangan regions) based on a decade-long epidemiological dataset. A comparative, cross-sectional analytical approach was applied. Findings reveal statistically significant inter-regional disparities and age-dependent disease burden distributions, with hematological, respiratory, and infectious pathologies dominating younger cohorts. The results provide a scientific basis for differentiated preventive strategies in public health planning.

Keywords: morbidity structure, school-age children, epidemiology, primary morbidity, nosological distribution, age cohort, urbanization factor, hematological pathology

Today, the health status of school-age populations is recognized as a primary indicator of a nation's future public health potential. In Uzbekistan, general morbidity among schoolchildren in the Fergana Valley reaches 845 ± 32 cases per 1,000 students, substantially exceeding the national average. Epidemiological data collected from 2013 to 2023 across three regions - Fergana, Andijan, and Namangan - demonstrate that Namangan region consistently records the highest morbidity rates, reaching 1,456.2 per 1,000 in 2022, while Fergana region maintains relative stability around 1,110-1,119 per 1,000. These disparities underscore the urgent need for regionally differentiated public health interventions targeting specific age groups and disease clusters.

Analysis of morbidity structure by age cohort reveals that in children aged 0 to 14 years, diseases of the blood and blood-forming organs occupy the leading position across all three regions: Fergana - 297.7 ± 0.5‰, Andijan - 335.9 ± 0.5‰, and Namangan - 348.9 ± 0.6‰. Respiratory diseases rank second, with notably higher rates in Andijan (248.5 ± 0.5‰) and Namangan (256.5 ± 0.5‰) compared to Fergana (67.6 ± 0.3‰), suggesting differential ecological and sanitary-hygienic exposure levels across subregions. Infectious and parasitic diseases in Andijan and Namangan are observed at rates of 98.3-101.3‰, nearly fourfold higher than in Fergana (28.1 ± 0.2‰), which reflects persistent epidemiological risk factors in densely populated and industrially affected zones. In the 15-17 year age group, hematological diseases reach their maximum values in Namangan (378.5 ± 1.7‰) and Andijan (362.5 ± 1.6‰), indicating that pathological processes initiated in early childhood continue unresolved into adolescence. The proportion of primary

morbidity within overall morbidity varies substantially across regions: Fergana - 52.7%, Andijan - 64.2%, Namangan - 65.4%, reflecting differences in diagnostic coverage and the prevalence of newly detected versus pre-existing chronic conditions. Urban-rural stratification analysis identifies that children in Namangan's urban settings face disproportionately high morbidity in the 0-14 cohort (1,506.8±0.2‰), while rural adolescents in the same region also demonstrate elevated rates (1,310.7±0.3‰), pointing to multifactorial environmental and social determinants at play.

The study demonstrates that morbidity among school-age children in the Fergana Valley is shaped by a complex interaction of regional ecological conditions, age-specific physiological vulnerabilities, and healthcare accessibility. Targeted, age-stratified preventive programs and enhanced primary screening are urgently required across all three regions.

REFERENCES:

1. Khuzikhhanov F.V., Mukhametdinova A.A. Study of medico-biological, medico-social and organizational factors influencing the morbidity of school-age children // Kazan Medical Journal. - 2018. - Vol. 99, No. 3. - P. 467-472. - DOI: 10.17816/kmj2018-467.

2. Devrishov R., Kolomin V.V., Filyaev V.N., Kudryasheva I.A. Hygienic aspects of influence of environmental factors on formation of schoolchildren's health // I. P. Pavlov Russian Medical Biological Herald. - 2020. - Vol. 27, No. 4. - P. 530-535. - DOI: 10.23888/pavlovj2019274530-535.

3. Gasangadzhieva A.G., Gabibova P.I., Daudova M.G., Mirzoeva S.N. Medico-geographical assessment ecological-dependent incidence of adolescent and child population of the Republic of Dagestan // South of Russia: Ecology, Development. - 2015. - No. 3. - P. 146-157. - DOI: 10.18470/1992-1098-2014-3-146-157.

4. Radchenko O.R., Urazmanov A.R., Valiev R.I. Scientific substantiation of medico-hygienic measures to reduce the incidence of digestive diseases in adolescents // The Bulletin of Contemporary Clinical Medicine. - 2022. - Vol. 15, No. 3. - P. 80-86. - DOI: 10.20969/vskm.2022.15(3).80-86.