



COMPREHENSIVE ASSESSMENT OF THE RELATIONSHIP BETWEEN NUTRITIONAL QUALITY AND SOMATIC MORBIDITY IN PRESCHOOL CHILDREN

Davlatjonova Nodira Makhmudjon kizi

Assistant, Department of Pediatrics and Neonatology,
Urgench State Medical Institute (Uzbekistan)
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ABSTRACT

Adequate nutrition in early childhood plays a critical role in growth, immune function, and overall health. Poor dietary quality is associated with increased susceptibility to somatic diseases, including respiratory, gastrointestinal, and allergic conditions. In preschool children, nutritional imbalances may contribute to higher morbidity rates and negatively affect physical development. Therefore, a comprehensive evaluation of the relationship between dietary quality and somatic morbidity is essential for early prevention strategies.

Relevance. Adequate nutrition in early childhood plays a critical role in growth, immune function, and overall health. Poor dietary quality is associated with increased susceptibility to somatic diseases, including respiratory, gastrointestinal, and allergic conditions. In preschool children, nutritional imbalances may contribute to higher morbidity rates and negatively affect physical development. Therefore, a comprehensive evaluation of the relationship between dietary quality and somatic morbidity is essential for early prevention strategies.

Objective. To assess the relationship between nutritional quality and the prevalence of somatic diseases in preschool-aged children using a integrated approach.

Materials and Methods. A cross-sectional study was conducted among 150 preschool children aged 3–6 years. Nutritional status was evaluated using dietary surveys, food frequency questionnaires, and analysis of macro- and micronutrient intake. Anthropometric measurements (height, weight, BMI) were recorded. Somatic morbidity was assessed based on medical records, including the frequency of respiratory infections, gastrointestinal disorders, and allergic diseases. Statistical analysis was performed to determine correlations between dietary quality indicators and morbidity rates.

Results. The study revealed that 62% of children had imbalanced diets, characterized by insufficient intake of essential micronutrients (iron, vitamin D, and zinc) and excessive consumption of refined carbohydrates. Children with poor dietary quality had a significantly higher incidence of acute respiratory infections (1.8 times), gastrointestinal disturbances (1.5 times), and allergic manifestations (1.6 times) compared to those with balanced nutrition ($p < 0.05$). A moderate negative correlation ($r = -0.45$) was found between nutritional quality

scores and overall morbidity rates. Additionally, children with adequate nutrition demonstrated better anthropometric indicators.

Discussion. The findings confirm that inadequate nutrition is a significant risk factor for increased somatic morbidity in preschool children. Micronutrient deficiencies and unbalanced diets impair immune function, making children more vulnerable to infections and chronic conditions. These results are consistent with previous studies emphasizing the importance of early nutritional interventions.

Conclusion. There is a clear association between poor nutritional quality and higher rates of somatic diseases in preschool-aged children. Comprehensive assessment of dietary patterns and health status can serve as an effective tool for early identification of at-risk groups. Improving nutritional practices may significantly reduce morbidity and enhance child health outcomes.

References:

1. Matyakubova, Y. (2026, March). DEVELOPMENT OF ALLERGIC REACTIONS AND ATOPIC DISEASES IN CHILDREN WITH HELMINTH INFECTIONS. In International Conference on Medicine & Agriculture (Vol. 2, No. 3, pp. 48-50).
2. Davlatjonova, N. (2026, February). MODERN CLINICAL AND LABORATORY INDICATORS OF TRANSIENT PNEUMONIA IN CHILDREN. In International Conference on Health & Technology (Vol. 2, No. 2, pp. 54-55).
3. Матякубова, Ю. Р. (2025). ХОРАЗМ ВИЛОЯТИДА ЯШОВЧИ БОЛАЛАРДА ГЕЛЬМЕНТОЗНИНГ ОЛДИНИ ОЛИШ ВА ДАВОЛАШНИНГ ТИББИЙ-ИЖТИМОЙИЙ ЖИХАТЛАРИ. SOUTH ARAL SEA MEDICAL JOURNAL, 1(4), 188-194.
4. Davlatjonova, N. (2026, February). INTEGRATED ASSESSMENT OF NUTRITION HABITS AND CHRONIC DISEASE RISK IN PRESCHOOL CHILDREN. In International Conference on Health & Technology (Vol. 2, No. 2, pp. 203-205).
5. Matyakubova, Y. (2026, February). PREVENTION OF HELMINTOSES IN PRESCHOOL CHILDREN AND EFFECTIVENESS OF PROPHYLAXIS MEASURES. In International Conference on Medicine & Agriculture (Vol. 2, No. 2, pp. 56-58).
6. Matyakubova, Y. (2026, February). ETIOLOGY AND DIAGNOSTIC APPROACHES OF CHRONIC COUGH SYNDROME IN CHILDREN. In International Conference on Medicine & Agriculture (Vol. 2, No. 2, pp. 15-17).
7. Sharipova, S. (2026, February). PROGNOSTIC FACTORS RELATED TO THE CLINICAL COURSE AND SEVERITY OF PNEUMONIA IN CHILDREN. In International Conference on Health & Technology (Vol. 2, No. 2, pp. 200-202).
8. Bakhtiyorovich, R. I., & Hayitboy o'g'li, D. S. (2026). Compilation of an Algorithm for Prenatal Identification and Management of Anterior Abdominal Wall Button Defects in Infants. Spanish Journal of Innovation and Integrity, 50, 90-92.
9. Matyakubova, Y. (2026, February). CLINICAL MANIFESTATIONS, LABORATORY FINDINGS, AND TREATMENT OUTCOMES OF HELMINTHIASIS IN CHILDREN. In International Conference on Medicine & Agriculture (Vol. 2, No. 2, pp. 59-61).
10. Шарипова, С. (2025). НЕОНАТАЛ ДАВРИДАГИ ЧЎЗИЛГАН САРИҚЛИКНИ ЧАҚАЛОҚЛАРНИНГ ПСИХОМОТОР РИВОЖЛАНИШИГА ТАЪСИРИ. SOUTH ARAL SEA MEDICAL JOURNAL, 1(4), 207-213.

- 11.Sharipova, S. (2026, February). COMBINATION OF GLOMERULONEPHRITIS AND NEPHROTIC SYNDROME IN CHILDREN: CLINICAL AND LABORATORY ANALYSIS. In International Conference on Health & Technology (Vol. 2, No. 2, pp. 52-53).
- 12.Атажанов, Х. П., & Оллаберганова, Ш. М. (2025). ОСОБЕННОСТИ ТЕЧЕНИЯ НОЗОКОМИАЛЬНОГО СЕПСИСА У ДЕТЕЙ. Жоурнал оф Мультидисциплинарй Инноватион ин Ссиенсе анд эдусатион, 1(3), 123-126.
- 13.Узакова, Ш. Б., Шамсиев, Ф. М., Мусажанова, Р. А., Абдуллаева, М. К., & Атажанов, Х. П. (2021). МИКРОБИОМ ДЫХАТЕЛЬНОГО ТРАКТА У ДЕТЕЙ С МУКОВИСЦИДОЗОМ. ПЕДИАТРИЯ САНКТ-ПЕТЕРБУРГА: ОПЫТ, ИННОВАЦИИ, ДОСТИЖЕНИЯ, 236.
- 14.Шамсиев, Ф. М., Ахмедова, Д. И., Узакова, Ш. Б., Иномов, Б. Н., & Атажанов, Х. П. (2024). ФУНКЦИОНАЛЬНЫЕ ОСОБЕННОСТИ И МАРКЕРЫ ВОСПАЛИТЕЛЬНОГО ПРОЦЕССА У ДЕТЕЙ С МУКОВИСЦИДОЗОМ В РЕГИОНЕ ПРИАРАЛЬЯ. Science and innovation, 3(Special Issue 44), 171-177.
- 15.Atajanov, K. P., Ollaberganova, S. M., & Masharipova, K. Q. (2025, December). ULTRASONIC DIAGNOSIS OF COMPLICATED PNEUMONIA IN CHILDREN. In International Conference on Medicine & Agriculture (Vol. 1, No. 3, pp. 21-23)

