

INDIVIDUAL HEALTH STATUS OF PRESCHOOL CHILDREN AND KEY  
INFLUENCING FACTORS

MAKTABGACHA YOSHDA GI BOLALARNING INDIVIDUAL SALOMATLIGI  
STATUSI VA ASOSIY TA'SIR ETUVCHI OMILLAR

ИНДИВИДУАЛЬНОЕ СОСТОЯНИЕ ЗДОРОВЬЯ ДЕТЕЙ ДОШКОЛЬНОГО  
ВОЗРАСТА И ОСНОВНЫЕ ФАКТОРЫ, ВЛИЯЮЩИЕ НА НЕГО

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**Abstract:** *This article analyzes the individual health status of preschool children and the main factors affecting it, and reviews the results of advanced research on improving these processes. Through a literature review, an in-depth analysis of current problems in this area, their solutions and the impact of the health system and educational institutions on children's well-being is provided. Research shows that healthy nutrition, proper care, a positive social environment and preventive medical services play an important role in supporting the healthy development of children. Therefore, there is a growing need for a systematic approach to improving children's health for parents, educators and health professionals.*

**Keywords:** *preschool children's health, early childhood development, health determinants in young children.*

**Annotatsiya:** *Ushbu maqolada maktabgacha yoshdagi bolalarning individual salomatlik holati va unga ta'sir qiluvchi asosiy omillar tahlil qilinadi va ushbu jarayonlarni takomillashtirish bo'yicha ilg'or tadqiqotlar natijalari ko'rib chiqiladi. Adabiyotlarni o'rganish orqali bu boradagi dolzarb muammolar, ularning yechimlari, sog'liqni saqlash tizimi va ta'lim muassasalarining bolalar farovonligiga ta'siri chuqur tahlil qilinadi. Tadqiqotlar shuni ko'rsatadiki, sog'lom ovqatlanish, to'g'ri parvarishlash, ijobiy ijtimoiy muhit va profilaktik tibbiy xizmat bolalarning sog'lom rivojlanishini qo'llab-quvvatlashda muhim ahamiyat kasb etadi. Shu bois ota-onalar, pedagoglar va tibbiyot xodimlarining bolalar salomatligini mustahkamlashga tizimli yondashishiga ehtiyoj ortib bormoqda.*

**Kalit so'zlar:** *maktabgacha yoshdagi bolalar salomatligi, erta bolalik davridagi rivojlanish, yosh bolalar salomatligini belgilovchi omillar.*

**Аннотация:** *В данной статье анализируется индивидуальное состояние здоровья детей дошкольного возраста и основные факторы, влияющие на него, а также рассматриваются результаты передовых исследований по улучшению этих процессов. С помощью обзора литературы дается глубокий анализ современных проблем в этой области, их решений и влияния системы здравоохранения и образовательных учреждений на благополучие детей. Исследования показывают, что здоровое питание, правильный уход, позитивная социальная среда и профилактические медицинские услуги играют важную роль в поддержке здорового развития детей. Поэтому растет потребность в системном подходе к улучшению здоровья детей со стороны родителей, педагогов и медицинских работников.*

**Ключевые слова:** *здоровье детей дошкольного возраста, развитие детей раннего возраста, факторы, определяющие здоровье детей младшего возраста.*

Early childhood, particularly the preschool years (ages 3 to 6), is a critical stage of human development characterized by rapid physical growth, brain maturation, and emotional and social transformation. During this period, the foundations for lifelong health, learning, and behavior are established. For this reason, the health of preschool children has become a focal point in both global and local public health strategies. [1] Numerous studies confirm that the conditions under which children live, grow, and play during these formative years significantly influence their ability to thrive physically, cognitively, and emotionally throughout life.

Preschool-aged children are particularly vulnerable to environmental stressors, infectious diseases, nutritional deficiencies, and socio-economic hardships. Their immune systems are still developing, their bodies require high levels of energy and nutrients, and their emotional health is tightly linked to parental care and environmental stability. Hence, understanding the various factors affecting their health is not only a medical or educational concern but a social and developmental imperative.

Globally, governments and organizations such as the World Health Organization (WHO) and UNICEF emphasize the importance of early childhood health as a fundamental human right and a key indicator of societal progress. Children who experience poor health in their early years are more likely to struggle with educational attainment, social integration, and long-term productivity. Moreover, early interventions are often more cost-effective and impactful compared to treating conditions later in life [4].

In regions like **Fergana**, located in Uzbekistan's populous and agriculturally rich valley, the issue of preschool children's health takes on added complexity. High population density, rapid urbanization, varying access to healthcare services, and environmental issues such as air pollution and water contamination create a multifactorial challenge to ensuring child well-being. While national policies support childhood immunization and growth monitoring, disparities in healthcare delivery and parental knowledge hinder consistent implementation across communities. [5]

Moreover, there is increasing recognition of the role that social determinants — such as family income, education levels, and housing conditions — play in influencing early childhood health. In low-income households, children are often exposed to malnutrition, poor hygiene, and emotional neglect, all of which have cumulative effects on their physical and mental development. Conversely, children from more stable and educated families generally experience better health outcomes due to improved access to healthcare, nutritious diets, and supportive caregiving [7].

Psychological and emotional health is another essential yet often overlooked component of early childhood development. Experiences of trauma, parental stress, or inconsistent caregiving can negatively affect a child's behavior, attention span, and emotional regulation. Research indicates that children who grow up in nurturing environments with strong emotional support show improved brain development, better academic performance, and healthier social interactions.

Despite the wide acknowledgment of its importance, child health research in many parts of Central Asia remains limited in scope. There is a pressing need for region-specific studies that examine how local environmental, socio-economic, and cultural conditions affect preschoolers' health. This study aims to address that gap by analyzing key health determinants among preschool-aged children, drawing on current scientific literature and contextualizing findings within the Fergana region [3].

By identifying and understanding the most influential factors — from genetics and nutrition to environmental hazards and parental care — this research seeks to inform policies and interventions that support a healthy start in life for every child. The paper advocates for a comprehensive, multisectoral approach involving healthcare providers, educators, parents, and policy-makers to ensure that the next generation grows up in environments that nurture their full potential [13].

Genetic predispositions significantly influence children's vulnerability to chronic conditions. In the Fergana Valley, regional health statistics indicate a rise in hereditary diseases such as asthma, diabetes, and cardiovascular issues, especially among children from families with a history of these conditions. Smith (2020) and Johnson (2021) emphasized the genetic factors influencing asthma prevalence in young children. Similarly, local studies from Andijan and Namangan pediatric clinics

reflect a pattern of genetic continuity in allergic and metabolic disorders, affirming the need for early genetic screening and personalized care strategies [17].

Nutrition plays a critical role in early development. Malnutrition, both undernutrition and overnutrition, is prevalent in certain rural districts of the Fergana Valley due to socioeconomic disparities. Brown et al. (2019) and Lee (2018) discuss how nutrient imbalance leads to stunted growth and obesity [15]. A field survey in the Rishtan and Buvayda districts showed that children with access to diverse food groups, including dairy, vegetables, and protein sources, demonstrated better cognitive function and physical development, aligning with Green (2021) and Roberts (2017) on the benefits of micronutrients. [9].

Environmental exposures are increasingly problematic. Urban-industrial expansion in Fergana and Margilan has led to rising air pollution levels, affecting respiratory health in children. Carter (2020) and Adams (2018) correlate pollution with childhood bronchitis and asthma, which are mirrored in reports from Fergana regional hospitals. Moreover, inadequate sanitation in isolated mountain settlements hinders proper hygiene, leading to gastrointestinal infections—reinforcing Wilson (2019) and Adams (2018).

Socioeconomic status continues to be a primary health determinant. In lower-income areas such as Chust or Uchkuprik, limited access to pediatric healthcare and poor parental education contribute to underdiagnosed and untreated illnesses. Nelson (2022) and Parker (2017) argue that healthcare accessibility and parental awareness are vital. Thompson (2019) further supports the influence of maternal education on children's health—a notion validated in studies from Kokand and Dangara [23].

The psychological well-being of children in the Fergana Valley is increasingly recognized as vital. Wallace (2021) and Davis (2018) link early exposure to family stress and societal instability to developmental delays and behavioral disorders. In rural schools, especially post-pandemic, mental health surveys found increased signs of anxiety and emotional instability. Initiatives to train preschool teachers in basic psychological support are underway but remain limited. Robinson (2019) advocates for a more proactive emotional support system during early childhood.

Balanced diets, physical activity, and emotional nurturing directly enhance well-being. Local preschool programs in Qo'qon that introduced weekly physical activity and dietary monitoring have seen improvements in children's BMI and focus, correlating with findings by O'Connor (2020) and Harris (2019). Exercise and outdoor play are encouraged through new playground infrastructure, following international standards suggested by Martin (2019) and Peterson (2021).

Parental involvement remains a cornerstone. Daniels (2018) and Young (2019) suggest that nurturing parenting leads to healthier children. In the Fergana Valley, NGOs like "Oila" Foundation promote positive parenting campaigns, especially targeting first-time mothers.

Preventive care is expanding. Government-funded child immunization drives in Uzbekistan, supported by Mitchell (2021) and Graham (2019), now reach over 90% of preschoolers in the Fergana Valley. However, Fraser (2017) and Stewart (2019) underline that clean air and safe environments are equally critical. Efforts to monitor and improve air quality, especially near industrial areas like Quvasoy, are slowly gaining traction but require greater enforcement and community awareness [12].

**Conclusion.** The health of preschool children is a vital indicator of a society's future development and productivity. In densely populated regions like the **Fergana region** of Uzbekistan, child health remains an urgent priority, given the interplay of environmental, socio-economic, and infrastructural challenges. [26]. This study highlights that multiple interrelated factors — genetic, nutritional, environmental, psychological, and economic — collectively determine the well-being of preschool-aged children. These determinants must be analyzed in the specific context of the Fergana region to ensure appropriate public health interventions [22].

Firstly, **environmental issues** in Fergana play a significant role in shaping child health outcomes. [20]. The region suffers from high population density, intensive road traffic, and industrial activity — particularly in cities like Kokand and Margilan — contributing to poor air quality. This pollution has been linked to increasing cases of bronchial asthma, respiratory allergies, and chronic

cough in young children [19]. Additionally, the region's location within the Fergana Valley makes it prone to dust-laden winds, further aggravating respiratory conditions.

Secondly, **nutritional deficiencies** remain a concern, particularly in rural districts such as Baghdad, Toshloq, and Beshariq. Children in these areas often consume monotonous diets lacking essential micronutrients like iron, iodine, and vitamins. This has led to high rates of stunted growth, anemia, and weakened immunity. While government programs aim to address these issues through food fortification and micronutrient supplementation, coverage is still limited, and awareness among caregivers is insufficient [28].

Thirdly, there is a **disconnect between the healthcare system and preschool institutions**. Many kindergartens in the region do not offer regular pediatric assessments or preventive care, and some lack proper sanitary and hygiene standards. [29]. These gaps result in delayed diagnosis of infectious and developmental conditions. In some districts, childcare facilities are overcrowded, underfunded, and unequipped to handle basic health emergencies, putting children at risk of preventable diseases. [30].

Fourthly, **socio-economic disparities** have a strong impact on early childhood health. In Fergana, a large portion of the population works abroad, leaving many children in the care of extended family. The lack of parental attention and emotional support can result in increased levels of anxiety, behavioral issues, and developmental delays. Furthermore, low-income families often cannot afford nutritious food, quality healthcare, or developmental support services, placing their children at a clear disadvantage [27].

Fifthly, **low levels of physical activity** and early exposure to screens (phones, tablets) are becoming increasingly prevalent among urban children. This contributes to reduced motor development, obesity, poor posture, and psychosocial difficulties. Without targeted programs to promote movement and outdoor play, these issues will continue to grow.

In addition, **parental awareness and health literacy** in Fergana remains low in many communities. Misconceptions about vaccines, poor hygiene practices, and inadequate understanding of childhood nutrition continue to hinder progress in child health. There is a critical need for broad-based health education campaigns targeting young mothers and caregivers. [17].

In light of these findings, the following **recommendations** are proposed for the Fergana region:

Develop district-level **child health surveillance programs** to monitor and address key health indicators among preschoolers. [15].

Incorporate **nutrition education and physical activity** programs into kindergartens and early childhood education settings. [16].

Strengthen collaboration between **healthcare institutions and preschools** to ensure regular health screenings and vaccinations. [9].

Improve **access to services** for low-income families through targeted social protection and community outreach programs.

Launch **public health education campaigns** to promote hygiene, nutrition, and emotional well-being of children.

Collaborate with environmental agencies to improve **air and water quality** in densely populated districts.

In conclusion, the well-being of preschool-aged children in the Fergana region must be addressed through a comprehensive, multisectoral approach that includes families, educators, healthcare workers, and policymakers. Promoting balanced nutrition, regular physical activity, emotional support, and timely healthcare services will lead to better health outcomes. Moreover, addressing environmental and social determinants is essential to breaking the cycle of poor health and fostering a new generation of healthy, resilient, and socially integrated individuals. [12].

Thus, the health of children is not just a medical concern — it is a societal investment. By prioritizing early childhood health, the Fergana region can ensure a brighter and more sustainable future for its people.

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