

# MEDICAL-SOCIAL ASPECTS OF CHILD DISABILITY

**Short title:** Child disability, risk factors for childhood disability

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**ABSTRACT---***The aim of the study was to examine the age characteristics of childhood disability, identifying risk factors contributing to its formation.*

**Materials and methods.** *The prevalence of childhood disability in Tashkent studied a continuous method in dynamics over the period 2010-2018. Investigation of causes of disability, circumstances and lifestyles of children with disabilities and their families conducted in 2016-2018.*

**Results.** *The study found that among children with disabilities make up 31,3% of preschool children, 51,3% of school-age children. Disabled children aged 15-16 years was 17,4%. Consequently, 82,6% of children disability has been established in pre-primary, secondary and primary school age. Among boys with disabilities was higher (54,8%) than girls.*

**Conclusion.** *Child disability in Tashkent have specific age-sex characteristics: one third of disability is established in the preschool years. With increasing age of child birth causes of childhood disability significantly reduced, and acquired increased: in all age groups takes place to identify children with congenital disorders.*

**Keywords---***Child disability, risk factors for childhood disability, health care for children with disabilities.*

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## I. INTRODUCTION

Disability in childhood is not only a complex medical and social problem, but also brings significant economic loss to society from the sphere of public activity is excluded adult family members caring for a disabled person from childhood. Heavy moral and psychological climate in families where there are disabled from birth, as a rule, lower material wealth, cannot say a negative impact on quality of life of the family as a whole [1, 2].

In the Republic of Uzbekistan is one of socio-economic, medical and preventive measures to protect the health of mothers and children to their harmonious development [3, 4].

One of the priorities in health care reform is the prevention of disability in childhood development of medical and social assistance to families with children with disabilities. This is especially true for large cities, which is the Tashkent.

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The act of recognition and urgency of the problem of child disability is the current federal target program “Children with Disabilities”, in the framework of which a mass examination of newborns for hereditary diseases, prenatal diagnosis of severe disabling congenital and hereditary pathology is carried out, factors contributing to the increase in the incidence and disability of the child population are studied, and new forms and methods of rehabilitation of children with disabilities. A complex of factors affecting the level of primary disability de population, and their priority will be different for each individual subject of Uzbekistan, which determines the relevance of studying the medical and social causes of child disability and factors contributing to the disability of the child population in administrative territories, including in the Tashkent region.

A study of childhood disabilities at the regional level is necessary to develop comprehensive programs for the prevention and social protection of children with disabilities.

However, despite the social significance of these issues, so far only a few dissertations have been completed to study the socio-hygienic aspects of child disability in individual regions of the Republic of Uzbekistan. For the formation of comprehensive programs for medical and social rehabilitation of children with disabilities in each region, detailed information is needed on the main displays): children, on the state and dynamics of child disability, the contingent of children with disabilities, its socio-hygienic characteristics, and on the characteristics of families in which children live disabled people.

The social significance of diseases of the skin and subcutaneous tissue in children is due to their widespread prevalence, the complexity of prevention, diagnosis, treatment and rehabilitation.

In the last decade, an increase in the incidence of children by this class of diseases has been noted in Uzbekistan.

Diseases of the skin and subcutaneous tissue in childhood often acquire a chronic relapsing course, leading to disability. Children's disability is one of the most acute problems of modern society. In the Republic of Uzbekistan annually are recognized as disabled due to diseases of the skin and subcutaneous tissue more than 5 thousand children. Knowing the regional characteristics of the formation of disability makes it possible to plan priority measures to reduce it. Disability due to pathology of the skin and subcutaneous tissue is preventable, provided that high-quality medical care is provided. Today, the priorities for the protection and promotion of the health of Uzbekistan's population are in the economic sphere. An economic assessment of the nature of the incidence and its consequences is a prerequisite for improving medical care.

The few works devoted to the study of the organization of medical care for patients with chronic dermatoses indicate the need for its improvement.

**Purpose of the study** of the study was to examine the age characteristics of childhood disability, identifying risk factors contributing to its formation.

## II. MATERIALS AND METHODS

The prevalence of childhood disability in Tashkent studied a continuous method in dynamics over the period 2010-2018. Investigation of causes of disability, circumstances and lifestyles of children with disabilities and their families conducted in 2016-2018. Within the framework of a comprehensive program. The study included children up to age 16 who are on the dispensary in general practice family health centers of 4 districts of Tashkent, Mirzo Ulugbek, Chilanzar, Shayhontahur and Almazar. Collecting the material was carried out by polling interviews of mothers and vykapirovki data from the primary registration of medical records of the child with a disability. To unify the collection of information has developed a comprehensive questionnaire "Study of health and social care, environment and way of life of children with disabilities." Causes of disability studied almost 2000 children with disabilities, who constitute about 30% of the total

number of disabled children, born and living in Tashkent. In the case study was included every fourth child, selected at random - a mechanical process (300 - the main group). To establish the underlying causes and risk factors for the prevalence of childhood disability similar mechanical random selection formed a group of healthy children (300 - control group).

Analysis of causes of disability was carried out by the main classes of diseases, according to the ICD 10th revision. The results are processed by modern statistical methods, the methodology of evidence-based medicine (random sample, the method of "case-control" cohort method), contributing to the elimination of systematic and random error reduction.

The study found that among children with disabilities make up 31,3% of preschool children, 51,3% of school-age children. Disabled children aged 15-16 years was 17,4%. Consequently, 82,6% of children disability has been established in pre-primary, secondary and primary school age. Among boys with disabilities was higher (54,8%) than girls.

In general, Tashkent level of child disability varies from case to 98,1-105,6 10.tys. Children 0-16 - years old. In recent years the tendency to reduce child disability from 10,7 cases per 10.tys. 2004 BC to 98.1 cases per 10.tys. children in 2010. It is interesting to note that 67,6% of children with disabilities are congenital, 32,4% acquired a disability. In this age level with congenital disability is reduced, and acquired increased (Table 1).

### III. RESULTS AND DISCUSSIONS

**Table 1.** Contingent structure of disabled children, regarding to the nature of its origin and class of diseases.

Age years	The nature of disability		Class of diseases						
	Congenital	acquired	diseases of the nervous system	congenital diseases	Diseases of musculoskeletal system	mental disorders	diseases of ear and mastoid	eye diseases	disease of the endocrine system
0 - 2	89,0	11,0	24,6	43,8	20,5	-	2,7	-	2,7
3 - 4	70,3	29,7	29,7	28,8	11,0	1,7	6,8	2,5	7,6
5 - 6	27,5	27,5	43,9	20,9	6,6	3,3	5,5	4,4	6,6
7- 14	65,7	34,3	28,2	13,7	12,4	11,9	10,6	5,2	5,4
Total	69,6	30,4	30,0	19,	12,2	8,1	8,6	4,2	5,6

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15 -16	58,3	41,7	23,7	12,8	9,6	7,0	7,0	7,7	34,6
Total	67,6	32,4	28,9	17,9	11,8	11,8	8,3	4,8	8,0

Among all the causes of childhood disability classes of diseases occupy the first place nervous system diseases, congenital anomalies second, the third disease of the musculoskeletal system, the fourth mental and behavioral disorders, fifth disease of ear and mastoid. These classes are made up of the disease 75,0-80,1% of all causes of childhood disability over the years studied.

**Table 2.** Rasprostranennost childhood disability by disease classes

Class of diseases	For ten thousand children
Nervous system diseases	19,4
Congenital anomalies	12,0
Musculoskeletal System	7,9
Mental and behavioral disorders	6,3
Diseases of ear and mastoid	5,6
Endocrine, nutritional and metabolic diseases	3,2
Diseases of the eye and adnexa	4,0
Other	8,6
Total	67,0

Established that 45,4% of children treated in hospital, 38,7% of children were followed on an outpatient basis, ie treatment was reduced to the observation of experts in the clinical examination, 12,3% were treated in hospitals at home and only 3,7% for regenerative therapy using specialized health centers and rehabilitation centers.

Of children with disabilities who need to study more than half (53,9%) receive education in schools, 24,9% are trained in specialized boarding schools, 8,0% of study at home, and 13,3% never attend.

Of great importance for health, social adaptation and integration and the formation of the child is his family. Families with disabled children are classified as high social risk. This is due, above all, a large number of negatively affecting the child's socio-hygienic, medical and demographic and psychological factors.

Our results suggest that in families with disabled children is relatively high proportion of mothers all older – 19,1% versus 6,7% in the controls ( $p < 0,001$ ); of every three women at the time of birth (33.9% ) had a history of gynecological and chronic extragenital pathology: 24,5% of mothers (in control 10,0%) with secondary special and higher education ( $p < 0,001$ ), not forced to work in the profession, 36,0% of mothers did not work, and are housewives and caring for a disabled child. In 34,0% of families hold unstable psychological situation. Many families have no hope for a favorable outcome. Set relatively low activity of medical families raising a disabled child:  $\frac{3}{4}$  of the parents carry a doctor's prescription, nearly half of families continue to recommend rehabilitation treatment at home. Only 31,6% of parents regularly engage with a child, instilling in him the development of necessary skills.

Study of awareness and health education of parents about the nature of the disease the child, how education and training revealed that most parents do not possess such knowledge. In addition, much of it ill informed about the causes, pathogenesis, and methods of secondary prevention.

All the above convinces us that the majority of families with disabled children disadvantaged by a number of medical and demographic and socio-psychological indicators.

Efficient operation of government services and NGOs to reduce child disability is represented as a coherent organism, the crucial issue at all stages of the health of children from prenatal period and ending the system of rehabilitation as a disabled child and his family.

The analysis of the real possibilities for the implementation of comprehensive rehabilitation of children with disabilities testified that in the Tashkent region there is an extensive infrastructure of rehabilitation institutions designed to rehabilitate children with disabilities and includes rehabilitation centers for children with disabilities, including the regional children's hospital for rehabilitation treatment, medical genetic center, allergy and immunology department, rehabilitation departments in preschool children institutions, boarding houses for children with disabilities, operating in the regime of rehabilitation institutions, correctional boarding schools, specialized fitness centers, a rehabilitation center for young disabled people. Social rehabilitation measures are carried out by social service centers of the population. These rehabilitation institutions are equipped with modern rehabilitation and technological equipment, technical means of individual and collective use rehabilitation, special literature, audio and video recordings for blind and deaf children, computer equipment, they hold creative contests, festivals and other activities for the socio-cultural rehabilitation of children with disabilities, with correctional development and social-rehabilitative oriented.

#### **IV. CONCLUSIONS**

1. Child disability in Tashkent have specific age-sex characteristics: one third of disability is established in the preschool years. With increasing age of child birth causes of childhood disability significantly reduced, and acquired increased: in all age groups takes place to identify children with congenital disorders.

2. The leading causes of childhood disability are diseases of the nervous system, congenital anomalies, diseases of the musculoskeletal and connective tissue disorders, diseases of ear and mastoid. These classes are 76,3% of the disease causes of childhood disability.

3. Given the low activity of the medical family, home and brought up a disabled child, you need to improve the quality of support they health and social care by enhancing the integration of healthy lifestyle, enhancing preventative public health system.

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## AUTHORS' CONTRIBUTIONS

This work was carried out in collaboration between all authors. Author GIS designed the study, wrote the protocol, and wrote the first draft of the manuscript. Author FLA and BSA managed the literature searches and manuscript editing. Author NJE did the manuscript review. All authors read and approved the final manuscript.

## CONFLICT OF INTERESTS

Authors have declared that no competing interests exist.

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## ETHICAL APPROVAL

All authors hereby declare that all investigations have been examined and approved by the appropriate ethics committee (Ethical Committee under the supervision of Ministry of Healthcare, Republic of Uzbekistan) and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki updated version adopted by the WMA General Assembly, in 2008.

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