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## PSYCHOEMOCIAL STATUS IN CHILDREN WITH BRONCHIAL ASTHMA

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## PSYCHOEMOCIAL STATUS IN CHILDREN WITH BRONCHIAL ASTHMA

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### **Resume**

*In the structure of allergic diseases, one of the first places belongs to bronchial asthma, in connection with which it has now become a serious medico - social problem that deserves further study in terms of an in-depth study of developmental mechanisms, as well as predisposing and causally significant factors. Bronchial asthma has a significant impact on the psyche of children and adolescents. The high frequency of asthma attacks with psychogenic provocation makes it necessary to identify the psych vegetative syndrome for the purpose of psychotherapeutic and pharmacological correction.*

*Materials and Methods: The examination of children with bronchial asthma was carried out using the adapted modified children's and adolescent variants of the personality questionnaire of R. Kettel.*

*Results: The influence of the disease on the structure of the personal characteristics of patients was revealed. Bronchial asthma changes the child's lifestyle, has a negative impact on the psychological state and the process of personality formation. It is possible to prevent the occurrence of negative social consequences of the disease, to smooth out their severity by providing psychological and pedagogical assistance to the child and his family from the moment the disease is detected and throughout all stages of treatment.*

*Conclusion, the basis of the study was the creation and implementation of programs of psychological support for families raising children with bronchial asthma, at various stages of treatment are extremely important and represent a prospect for the study.*

*Key words: bronchial asthma in children, personality traits, emotional stress, psychosomatic illness.*

## **ПСИХОЭМОЦИОНАЛЬНЫЙ СТАТУС У ДЕТЕЙ, СТРАДАЮЩИХ БРОНХИАЛЬНОЙ АСТМОЙ**

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*Резюме,*

*В структуре аллергических болезней одно из первых мест принадлежит бронхиальной астме, в связи с чем она в настоящее время стала серьезной медико - социальной проблемой, заслуживающей дальнейшего изучения в плане углубленного исследования механизмов развития, а также предрасполагающих и причинно - значимых факторов. Бронхиальная астма оказывает значительное влияние на психику детей и подростков. Высокая частота приступов БА с психогенной провокацией делает необходимым выявление психовегетативного синдрома с целью психотерапевтической и фармакологической коррекции.*

*Материал и методы: Проведено обследование детей с бронхиальной астмой с использованием адаптированного модифицированного детского и подросткового вариантов личностного опросника Р. Кеттела.*

*Результаты: Выявлено влияние заболевания на структуру личностных особенностей больных. Бронхиальная астма меняет образ жизни ребенка, оказывает негативное влияние на психологическое состояние и процесс становления личности. Предупредить возникновение негативных социальных последствий болезни, сгладить их выраженность можно путем оказания психолого-педагогической помощи ребенку и его семье с момента выявления болезни и на протяжении всех этапов лечения.*

*Заключение, основой исследования было создание и реализация программ психологической поддержки семей, воспитывающих детей с бронхиальной астмой, на различных этапах лечения являются чрезвычайно важными и представляют собой перспективу исследования.*

*Ключевые слова: бронхиальная астма у детей, личностные особенности, эмоциональный стресс, психосоматическое заболевание.*

## **BRONXIAL ASTMA BILAN KASALLANGAN BOLALARDA PSIXIKOEMIK HOLAT**

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### **Rezyume**

*Allergiya kasalliklari tarkibida birinchi o'rinlardan biri bronxial astmaga tegishli bo'lib, shu sababli u hozirgi kunda rivojlanish mexanizmlarini chuqur o'rganish nuqtai nazaridan chuqur o'rganishga loyiq bo'lgan jiddiy tibbiy-ijtimoiy muammoga aylandi. predispozitsiya qiluvchi va sababchi ahamiyatga ega bo'lgan omillar. Bronxial astma bolalar va o'spirinlarning ruhiyatiga sezilarli ta'sir ko'rsatadi. Psixogen provokatsiya bilan astma xurujlarining yuqori chastotasi psixoterapevtik va farmakologik tuzatish maqsadida psixologik vegetativ sindromni aniqlash zarurligini keltirib chiqaradi.*

*Materiallar va usullar: Bronxial astma bilan kasallangan bolalarni tekshirish R. Kettelning shaxsiy so'rovnomasining moslashtirilgan modifikatsiyalangan bolalar va o'spirin variantlari yordamida amalga oshirildi.*

*Natijalar: Kasallikning bemorlarning shaxsiy xususiyatlarining tuzilishiga ta'siri aniqlandi. Bronxial astma bolaning turmush tarzini o'zgartiradi, psixologik holatga va shaxsni shakllantirish jarayoniga salbiy ta'sir ko'rsatadi. Kasallik aniqlangan paytdan boshlab va davolanishning barcha bosqichlarida bolaga va uning oilasiga psixologik-pedagogik yordam ko'rsatish orqali kasallikning salbiy ijtimoiy oqibatlarining oldini olish, ularning og'irligini yumshatish mumkin.*

*Xulosa, tadqiqotning asosini davolashning turli bosqichlarida bronxial astma bilan kasallangan bolalarni tarbiyalayotgan oilalarni psixologik qo'llab-quvvatlash dasturlarini yaratish va amalga oshirish tashkil etdi.*

*Kalit so'zlar: bolalarda bronxial astma, shaxsiy xususiyatlar, hissiy stress, psixosomatik kasallik.*

### Relevance

Bronchial asthma (BA) is one of the most common chronic lung diseases representing a serious social, economic and medical problem. The urgency of the problem is determined, first of all, by the fact that the disease, appearing at an early age, retains clinical manifestations throughout the patient's life, which determines the low quality of life (QOL) of patients. QOL completely depends on the state of health, psychological state, level of independence, social status, and environmental factors and on the personality of a person [3].

Over the past 30 years, the prevalence of asthma worldwide has more than doubled and this trend continues. Of particular concern is the fact that BA spreads in children much faster than in adults. Epidemiological studies of recent years indicate that in different regions of the world from 4 to 8% of the population suffers from BA, and in the child population this figure rises to 5-10% [4].

Despite the many works on the study of bronchial asthma, little attention is paid to the study of the ways in which children and adolescents with bronchial asthma respond to stressful situations, unconscious and conscious protective strategies (mechanisms of psychological defense, coping strategies), their subjective perception of the quality of their own life, ways to respond to negative emotions.

In studies of children of primary school age, personal characteristics are not sufficiently taken into account in the formation of a pathological psychosomatic functional system. In the sources available to us, there is no indication of a connection between the age of a sick child and his internal picture of the disease, protection from an unfavorable psychological environment, the way of perception of the disease and other features. In this connection, the task of studying the contribution of individual psychological characteristics of children and adolescents to the formation of a pathological psychosomatic functional system is actualized.

Given the significant prevalence of males among children and adolescents suffering from bronchial asthma (1: 3), there is a need for a deeper study of this particular group of patients. Analysis of the clinical and psychological characteristics of children of different age groups, healthy and sick, allows a more complete study of the components of the pathological psychosomatic system, which, in turn, makes it possible to optimize measures for the prevention and timely correction of factors aggravating the course of this disease [6].

Currently, there are several directions in the study of the role of psychological factors in the etiology and pathogenesis of bronchial asthma. The problem of psychological disorders in children is currently particularly relevant. This is primarily due to the increased prevalence of this pathology among children and adolescents up to 10-30% [17], as well as its significant maladaptive effect.

Psychological factors can be internal and external. Some of the child's personality traits belong to the internal ones: mental infantilism, increased anxiety, emotional lability, decreased self-esteem, aggressiveness directed at others. To external ones - improper upbringing, unfavorable microsocial and living conditions, difficulties in adapting to kindergarten and school. Despite the large number of works devoted to the study of the QOL of children with BA, the studied literature does not provide data on the causal relationships of the quality of life of children and psychological factors that determine the characteristics of the course of their disease. It is these factors that make the maximum contribution to the decrease in QOL indicators in children with BA [10].

Clinicians have long noticed that the severity of asthma, the severity of somatic disorders, episodes of exacerbations and relapses largely depend on the psychoemotional state. The severity of somatic disorders in a quite definite way affects the personality and typological characteristics of the patient, determining the psychoemotional state. Despite this, insufficient attention is paid to the study of the place of the patient's personality, his psychological status and psychosocial factors in the clinic of allergic diseases (14).

**Purpose of the study.** Revealing the influence of bronchial asthma on the structure of personal characteristics of children.

### **Material and methods**

This study was conducted from 2017 to 2019 on the basis of the Allergology Department of the 1-City Clinical Children's Hospital No. 1 in Tashkent, at the Department of Allergology, Clinical Immunology, and Microbiology of the Tashkent Pediatric Medical Institute of the Republic of Uzbekistan.

Psychological examination using the children's version of the personality questionnaire of R. Cattell was carried out in 29 patients with bronchial asthma (BA) and 39 healthy children aged 8-11 years, using the adolescent version in 28 patients with BA, 11 children with urticaria and 35 healthy children aged 12-15 years old.

To identify and measure individual psychological personality traits, there are special methods of psychodiagnostics, such as questionnaires, tests, sociological

questionnaires, scales, indices. They allow you to collect diagnostic information in a relatively short time, provide data not in general about a person, but specifically on certain of his features (intelligence, anxiety, self-attitude, the most significant personality traits, etc.). The information obtained with their help can be used in complex patient rehabilitation programs.

To study the psychological status, we used an adapted modified version of the children's personality questionnaire by R. Cattell (1) and the teenage version of the personality questionnaire of R. Cattell (3).

The test is the most adequate for solving the task, as it allows you to assess a wide range of personal characteristics: temperament, character, some features of motivation. The identified personality components are the most stable and relatively independent of the motivational factors of the external situation.

The test allows you to quantify the severity of the following personality traits, denoted by the letters of the Latin alphabet: sociability (A), formation of intellectual functions (B), self-confidence (C), excitability (D), dominated (E), propensity to take risks (F), conscientiousness (G), social courage (H), sensitivity (I), individualism (J), anxiety (O), degree of group dependence (Q2), self-control (Q3), tension Q4). There is no Q2 scale in the children's version. In the teenage version, the B scale reflects the sincerity of the answers. The number of points for each factor was calculated using a special key. The value of the points according to the table was converted into standard marks - walls. High values of factors (8-10 walls) indicate a significant severity of the corresponding personal property, low (1-3 walls) - a weak one.

High values of factors are coded by a + sign, low by a sign - and are placed next to the alphabet letter denoting this factor.

The index of introversion - extraversion (Q I), was calculated by the formula (2):

$$QI = [(2A + 3E + 4F + 5H) - (2Q2 + 11)] : 10$$

All digital data were processed by the method of variation statistics: mean values, error of mean values, reliability of numerical differences were calculated. Differences were considered significant at  $t \geq 2$  and  $P < 0.05$ .

### **Results and its discussion.**

Analysis of the data obtained revealed differences in personal characteristics in the groups of healthy and sick children. The average values of personality factors are presented in Table 1.

**Table 1 The structure of personality traits in children with BA (M ± m)**

<b>Factor P</b>	<b>healthy (n = 74)</b>	<b>patients (n = 57)</b>	<b>P</b>
<b>A</b>	<b>6,52±0,2</b>	<b>5,96±0,2</b>	<b>&lt; 0,05</b>
<b>C</b>	<b>4,98±0,1</b>	<b>5,26±0,2</b>	<b>&gt; 0,1</b>
<b>D</b>	<b>5,27±0,2</b>	<b>4,71±0,2</b>	<b>&lt; 0,05</b>
<b>E</b>	<b>5,01±0,2</b>	<b>5,59±0,2</b>	<b>&lt; 0,05</b>
<b>F</b>	<b>6,55±0,2</b>	<b>5,17±0,3</b>	<b>&lt; 0,001</b>
<b>G</b>	<b>5,02±0,2</b>	<b>5,45±0,2</b>	<b>&gt; 0,1</b>
<b>H</b>	<b>4,82±0,2</b>	<b>4,59±0,2</b>	<b>&gt; 0,1</b>
<b>I</b>	<b>5,8±0,2</b>	<b>6,59±0,2</b>	<b>&lt; 0,01</b>
<b>O</b>	<b>6,47±0,2</b>	<b>6,11±0,3</b>	<b>&gt; 0,1</b>
<b>Q3</b>	<b>4,58±0,2</b>	<b>5,29±0,2</b>	<b>&lt; 0,05</b>
<b>Q4</b>	<b>5,94±0,3</b>	<b>6,24±0,2</b>	<b>&gt; 0,1</b>

In BA patients, there is a significant decrease in standard estimates for factor A ( $p < 0.05$ ), D ( $p < 0.05$ ), F ( $p < 0.01$ ), intraextroversion index (QI) ( $p < 0.01$ ), and increase in factors E ( $p < 0.05$ ), I ( $p < 0.01$ ) and Q3 ( $p < 0.01$ ). The value of factor A in BA children characterizes them, in comparison with children in the control group, as less sociable, more distrustful and withdrawn; negativism is more often observed in their behavior. The relatively low value of factor D indicates the phlegmatic, emotional balance and restraint of patients.

Children with asthma are more prudent, reasonable and careful (factor F).

- Sick children are less extroverted. They have an increase in aggressiveness and talkativeness (factor E), dependence on others and sensitivity (factor I). They are distinguished by increased self-control and adaptability to environmental conditions (factor Q3)

The greatest changes in the structure of personal properties that have occurred in connection with the disease are observed in adolescent girls.

Thus, for factors A ( $p < 0.05$ ), D ( $p < 0.05$ ), Q ( $p < 0.001$ ), O ( $p < 0.02$ ), Q 4 ( $p < 0.002$ ), significant changes

were revealed. Compared to the children of the control group, they are more withdrawn, unhurried, reasonable, and executive. Adolescent boys with AD are distinguished from healthy boys by their increased dependence on others, irritability and aggression.

For all age and sex groups, there is a significant decrease in the value of factor F.

Chronic illness leads to a limitation of social contacts, social activity, and one would expect, given the progressive nature of the process, changes in the personal properties of sick children, depending on the duration of the disease. In this regard, we studied the structure of the personality of patients depending on the duration of the disease (Table 2).

Table 2 shows that the duration of the disease makes children more practical, realistic, more self-reliant, not paying attention to physical ailments.

This tendency, possibly, indicates psychological adaptation to the disease in the process of illness of a sick child.

The results of the study indicate a wide range of features of the psychoemotional status in families with children with bronchial asthma.

Characteristic is the heterogeneity of characteristics in this regard in sick and healthy children, their parents. The revealed interrelation of a number of categories of psychoemotional status of sick children with BA and indicators of external respiration deserves further attention. Early detection of psychopathological symptoms and timely provision of psychotherapeutic assistance to children with bronchial asthma will increase the effectiveness of treatment of mental disorders in this category of patients, improve social adaptation, and correct the system of intra-family relations, which will generally have a positive effect on the course of the underlying disease.

**Table 2 The structure of personality traits in children with BA depending on the duration of the disease (M ± m)**

Factor P	Duration of the disease, years		
	up to 3 (n = 33)	more than 3 (n = 24)	P
A	5,5±0,3	6,33±0,4	< 0,05

<b>C</b>	<b>5,30±0,3</b>	<b>5,29±0,3</b>	<b>&gt; 0,1</b>
<b>D</b>	<b>4,85±0,3</b>	<b>4,54±0,3</b>	<b>&gt; 0,1</b>
<b>E</b>	<b>5,79±0,3</b>	<b>5,13±0,3</b>	<b>&gt; 0,1</b>
<b>F</b>	<b>5,21±0,4</b>	<b>5,13±0,4</b>	<b>&gt; 0,1</b>
<b>G</b>	<b>5,64±0,4</b>	<b>5,46±0,4</b>	<b>&gt; 0,1</b>
<b>H</b>	<b>4,73±0,3</b>	<b>4,33±0,4</b>	<b>&gt; 0,1</b>
<b>I</b>	<b>7±0,3</b>	<b>5,88±0,3</b>	<b>&lt; 0,02</b>
<b>O</b>	<b>5,97±0,4</b>	<b>6,33±0,4</b>	<b>&gt; 0,1</b>
<b>Q<sub>3</sub></b>	<b>5,24±0,3</b>	<b>5,25±0,3</b>	<b>&gt; 0,1</b>
<b>Q<sub>4</sub></b>	<b>6,52±0,3</b>	<b>6,13±0,3</b>	<b>&gt; 0,1</b>

### Conclusion

As a result of the studies conducted, it was found that violations of the emotional response, that is, blocking the behavioral component of the emotional response, caused by the mechanisms of psychological control, is accompanied by the formation of a state of psychoemotional stress with concomitant asthenization. And are associated with health disorders by the mechanisms of psychosomatic illness, in particular, adolescents and young men with bronchial asthma differ from their healthy peers in the qualitative characteristics of emotional response.

### Findings:

1. BA contributes to the formation in children of such personality traits as prudence and caution, restraint, isolation and indifference, increased self-control, dependence on others, aggressiveness.
2. Psychological characteristics of the personality of BA patients depend on gender and age. Personality changes are more significant in adolescent girls.
3. The duration of the disease does not affect the psychological status of the patient.
4. The use of complex therapy, taking into account the characteristics of psychoemotional disorders, personality traits, autonomic, somatic reactions and including an appropriate range of therapeutic and preventive measures, statistically

significantly increases the effectiveness of psychosomatic disorder therapy in adolescence.

5. Bronchial asthma changes the child's lifestyle, has a negative impact on the psychological state and the process of personality formation. It is possible to prevent the occurrence of negative social consequences of the disease, to smooth out their severity by providing psychological and pedagogical assistance to the child and his family from the moment the disease is detected and throughout all stages of treatment. The creation and implementation of programs of psychological support for families raising children with bronchial asthma at various stages of treatment are extremely important and represent a research perspective.

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