M00-M99 OSTEO-MUSCULAR SYSTEM DISEASE	**77**	41,4	**55**	29,1	**99**	**22,6**
N00-N99 URINARY DISEASE	**79**	42,5	**109**	57,7	**180**	**41,1**

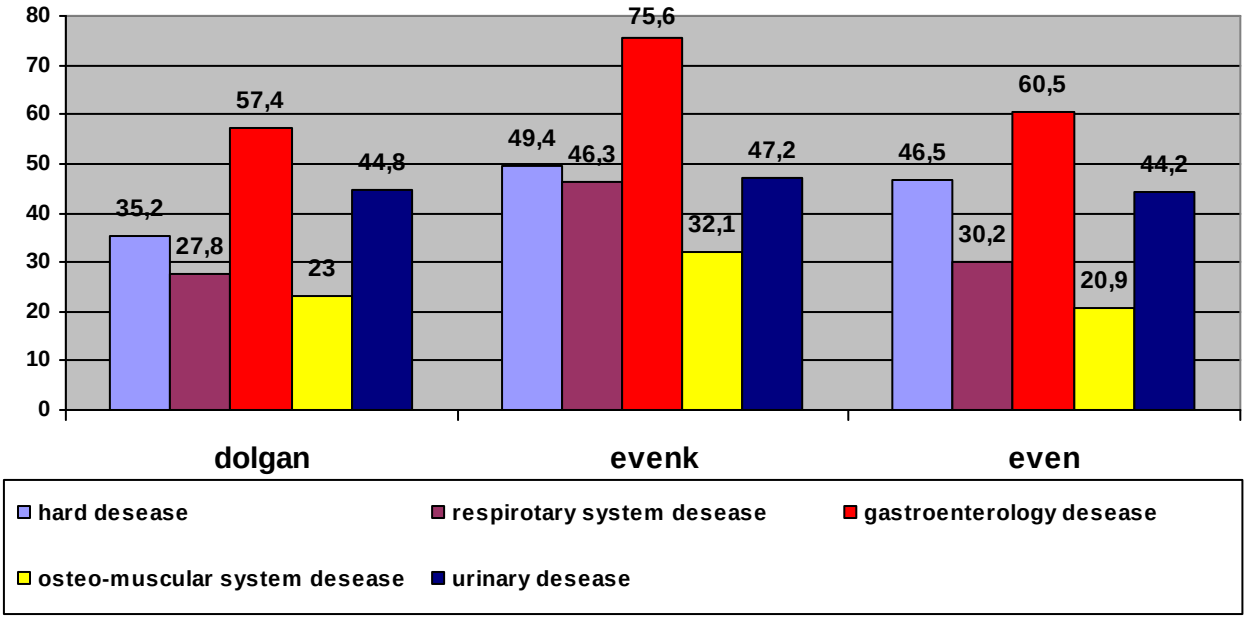

DIAGRAM 1
PATHOLOGY STRUCTURE FOR NATIVE PEOPLE

N.B.Semenova, T.F.Martynova

THE PREVALENCE OF EMOTIONAL AND BEHAVIOR DISORDERS IN CHILDREN IN THE NORTH OF SAKHA REPUBLIC (YAKUTIA)

The prevalence of emotional and behavior disturbances in children, living in the North of Sakha Republic (Yakutia), is presented. We characterized a group of schoolchildren with neural psychic disorders. We marked that schoolchildren of early ages showed disturbances in the processes of adaptation to school, reflected in poor school performance, regular absence from

school, no respect from classmates. In adolescents complex of the problems and school disadaptation signs are growing.

Key words: children, emotional and behavior disorders, prevalence.

Emotional and behavior disturbances in children are serious problem due to disorders in adaptation to organized group as well as future difficulties in socialization in adult life. We studied disorders of inner and outer behavior, which can be divided into three groups: disorders, which show internal problems of a child (anxiety, discomfort, shyness, aloofness, timidity); disorders, which lead to external problems (violence, aggression, disobedience, tantrums, lie, theft) and disorders, which provoke both internal and external problems.

Main criteria for defining disorders in internal and external behavior as signs of psychic pathology are: polymorphism of clinical signs, combination of behavior disorders with neurotic disturbances and dynamics of aberrant behavior with the tendency to pathologic transformation in a person [1].

Emotional and behavior disturbances cause disorders in adaptation of a child to schooling and exacerbation of learning abilities [8]. Behavior disturbances in children can lead to serious influences upon their adult lives: social adaptation difficulties, asocial behavior, predisposition to crime and alcoholism [4, 10, 11]. In terms of further social adaptation especially unfavorable are combinatory forms of disorders: combination of behavior and emotional disturbances, with depression in particular. According to the opinion of many foreign researchers, combinatory forms of pathology in children is a high risk factor of suicidal, asocial behavior, crime, alcohol and drug addiction in adult ages [12, 13].

Within the last 25 years foreign psychiatrists marked growth of behavior disturbances in children and adolescents among both males and females of all the social and family types [3]. He same situation is being observed in Russia as well.

Aim of the present research is to study the prevalence of emotional and behavior disturbances in children of Extreme North, inhabitants of Sakha Republic (Yakutia) (**SR(Y)).** To study the prevalence of neural-psychic diseases is essential for morbidity analysis and programming psychic health servicing for children.

Materials and Methods.

We examined 888 children and adolescents, schoolchildren of 1^{st} – 9^{th} forms of secondary schools (in ages from 7 to 16 years) by bulk selection, all of them being the inhabitants of northern district Ust-Yanskiy of SR(Y): villages of Deputatskiy, Kazachye, Sayulyk, Ust-Yansk,

Ust-Kuyga. Comparative characteristics for emotional (**ED**) and behavior (**BD**) disorders prevalence was worked out for two age groups: early school age (from 7 to 11 years) and among adolescents (from 12 to 16years).

To carry out the research we used adapted Russian version of M. Rutter questionnaire (Rutter, Tizard & Whitmore, 1970). In accordance with international requirements to epidemiology research in the sphere of psychiatry (Goodman R., Scott S., 1997) the study was structured into two stages. First stage included screening test (scale B – for teachers). Second stage included psychiatric examination for all "screen-positive" subjects and diagnosis for 20% subjects picked up by random. The procedure of diagnosis went in conformity with International statistical classification for diseases of X revision (MKB-10).

For processing statistical data we used STATISTICA for Window Version VI. Statistical analysis of binary signs was evaluated by relative frequency calculation (%) and 95% confidence interval (95% CI). Comparison between groups in accordance with binary attribute was carried out with χ^2 and Fischer's exact criterion. The value of distinction significance level was accepted under p=0.05, that is within an error of 5% (Rebrova O.Y., 2003).

Results and Discussions.

In children of early school ages the prevalence of emotional and behavior disturbances amount 14.2%. The share of emotional disorders (ED) was 1.6%, behavior disorders (BD) 11.9%, combined disorders 0.7% (Table 1). In adolescents the growth of the prevalence of psychic disturbances took place (21.4%) due to the growth of both ED (3.1%) and BD (16.5%) and also combined disorders (1.8%).

While comparing the indices for SR(Y) with the same indices for the other countries, we revealed they exceeded. Index for China was 8.6%, Great Britain 9.5% [6], Japan 14 to 16% [9], Scandinavia countries 14.3% [7], United Arab Emirates 11.8% [5].

Similar research in our country showed the indices of ED and BD prevalence in students of secondary schools of Novosibirsk as 15.3% [6]. In Tyva Republic indices of prevalence of the disturbances were from 15.3 to 19.4% in rural and from 28.2% to 30.7% in urban schoolchildren [2].

Analysis of psychic disorders in SR(Y) in terms of gender showed their predominance in boys (Table 2). In boys of early schoolchildren disorders were met 3.6 times more often than in girls (21.2% and 5.8% correspondingly, $p<0.001$) and in adolescents in 2.8 times more often (30.5% and 10.9% correspondingly $p<0.001$). Statistically meaningful distinctions were met only in regard to behavior deviations: in early school age behavior deviations in boys were 18.8% and in girls 3.5% ($p<0.001$), in adolescents 25.4% and 6.4% correspondingly ($p<0.001$). As for ED,

they were met with equal frequency both in boys (in early school ages in 1.4%, and in adolescent 3.7%) and in girls (in early school ages in 1.7%, and in adolescent 2.5%), p>0.05.

Among psychic disorders in early school ages the most frequent were BD (11.9%) and hyperkinetic disorders (6.6%). Anxiety disorders ranked third (3.9%). We marked the same structure of disorders in adolescents: BD were found in 16.5% children, hyperkinetic disorders in 6.3%, anxiety disorders in 4.9% children (Table 3).

Characteristics of children with border-line neural psychic disorders.

We examined group of children with disturbances of psychic health in early school ages totaling 54 subjects (14.2%). There were 22 children out of the group (40.7%) with single diagnosis, 32 (59.3%) with a combination of two or more diagnoses. The most prevalent type of comorbidity was a combination of hyperkinetic (F90) and behavior (F91) disorders. This comorbidity type was marked in 33.3% children. Among other comorbid disorders there were found combinations of anxiety (F93.8) and depressive (F32) disorders (in 5.6% children). In 5.6% children we found combination of hyperkinetic (F90), behavior (F91) and anxiety-depressive disorders.

Even in early school ages there were signs of school adaptation disturbances in children with neural psychic disorders. 18 subjects out of 54 (33.3%) regularly faked off school. 25 children (46.3%) were in disfavor of other children and were rejected by them. We marked lie in 32 children (59.3%) and predisposition to theft in 8 subjects (14.8%). School performance in children with psychic disorders was lower than in the others. 15 children (27.8%) had grades higher than 3. At the same time 36 children (66.7%) showed poor performance, 3 children (5.6%) didn't cope with school program.

Group of adolescents with neural psychic disorders amounted to 109 subjects (21.4%). In 74 out of them (67.9%) one disease was diagnosed, in 35 subjects (32.1%) the combination of two or three diseases was diagnosed. Among comorbid disorders the combinations of hyperkinetic and behavior disorders were more frequent (in 26.6% children). Combinations of depressive and behavior disorders were marked in 3 children (2.8%).

In adolescents with psychic disorders school adaptation disturbances were marked more frequently than in children in early school ages. 67 subjects out of 109 (61.5%) regularly faked off school. We marked lie in 80 children (73.4%). 46 children (42.2%) were in disfavor of other children and were rejected by them. School performance in the said group of children was low as well: 8 adolescents (7.3%) had grades higher than 3; 91 adolescents (83.5%) showed poor performance; 10 adolescents (9.2%) didn't cope with school program.

Conclusion.

So, the prevalence of emotional and behavior disorders in children, living in the north of SR(Y) in early school ages approached 14.2%, in adolescence 21.4%. In boys psychic disorders were marked 2.8 – 3.6 times more frequent than in girls.

In terms of frequency behavior disorders (F91) ranked first, hyperkinetic (F90) ranked second and anxiety (F93.8) ranked third among psychic disorders.

Children with emotional and behavior disorders in early school ages showed adaptation disturbances to children organized group, which were reflected in poor school performance, regular absence from school, no respect from classmates. While growing into adolescents, signs of social disadaptation in children are growing.

As preventive measures against the complex of disadaptive states and difficulties in further socialization in adults it is necessary to timely diagnosis neural psychic disorders and provide medical psychological assistance to the said kind of schoolchildren.

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Table 1

Prevalence of ED and BD in children, living in northern SR(Y).

Age	Schoolchildren of early ages (n=379)		Adolescents (n=509)	
Disturbances	Abs.	% (CI)	Abc.	% (CI)
Total:	54	14.2 (11.1-18.1)	109	21.4 (18.1-25.2)
ED	6	16.3 (0.7-3.4)	16	3.1 (1.9-5.0)
BD	45	11.9 (09.0-15.5)	84	16.5 (13.5-19.9)
Combined disorders:	3	0.7 (0.2-2.2)	9	1.8 (0.9-3.3)

Table 2

ED and BD in children of different gender.

Age	Schoolchildren of early ages (n=379)				Adolescents (n=509)				p_{1-2} p_{3-4}
Gender	1. Boys (n=207)		2. Girls (n=172)		3. Boys (n=272)		4. Girls (n=237)		
Disturbances	Abc.	%	Abc.	%	Abc.	%	Abc.	%	
Total:	44	21.2	10	5.8	83	30.5	26	10.9	<0.001
ED	3	1.4	3	1.7	10	3.7	6	2.5	>0.05
BD	39	18.8	6	3.5	69	25.4	15	6.4	<0.001
Combined	2	0.9	1	0.6	4	1.5	5	2.1	>0.05

Table 3

Prevalence of psychic disorders in children, living in northern SR(Y).

Disorders	Schoolchildren of early ages (n=379)		Adolescents (n=509)	
	Abs.	% (95% CI)	Абс.	% (95% CI)

F90 (hyperkynetic)	25	6.6 (4.5-9.5)	32	6.3 (4.5-8.7)
F91 (behavior)	45	11.9 (0.9-15.5)	84	16.5 (13.5-19.9)
F93.8 (anxiety)	15	3.9 (2.4-6.4)	25	4.9 (3.3-7.1)
F32 (depression)	9	2.4 (0.1-4.4)	15	2.9 (0.2-4.8)
F95 (tics/spasms)	6	1.6 (0.7-3.4)	18	3.5 (0.2-5.5)
F98.5 (logospasms)	12	3.2 (0.2-5.4)	13	2.6 (0.2-4.3)
F98.8 (others, further detailed)	8	2.1 (0.1-4.1)	14	2.7 (0.2-4.6)
Totally disorders *	54	14.2 (11.1-18.1)	109	21.4 (18.1-25.2)
* - the figure is smaller than the total of all different diagnosis because of comorbidity				

AUTHORS' DETAILS.

Mrs. SEMENOVA Nadezhda Borisovna – Leading Scientific Worker in the Department for somatic and psychic health in children. SSRI of Northern Problems of SD RAMS. Professor
Home address: Russia, 660095, Krasnoyarsk, ul.Kommunalnaya, d.18, kv. 62.
Mobile phone: 7-913-53-98-602,
Office phone: 7 (391) 228–06–83,
E-mail: org@impn.ru

Mrs. MARTYNOVA Tatiana Fedotovna – Deputy Director for Teaching and Methodical Work, SEE «RC of psychological medical social care» ME SR (Y)
Home address: Russia, 677013, Yakutsk, ul. Kalandarishvili d.21/2, kv. 64
Mobile phone: 7-914-107-0847,
Office phone: 7 (4112) 42-28-92,
E-mail: rubicon_2002@impn.ru