

CHARACTERISTICS OF THE PSYCHOEMOTIONAL SPHERE AMONG EVENK CHILDREN

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ABSTRACT

Background: In Russia, there is an active ongoing process of national revival of the indigenous small-numbered peoples of the North Siberia, such as the Evenks. Revival of the younger generation, in particular, remains a priority. The state helps to solve the problems of education and adaptation of Evenk children to modern life. This is necessary because parents, hunters, and reindeer herders have a nomadic lifestyle. The educational feature of Evenk children is to study and live in a boarding school after elementary school graduation. Success of adaptation largely depends on the ability to account for the ethnopsychological specificity of Evenk children.

Aim of the study: To study characteristics of the psychoemotional sphere and identify ethnospecific indicators for the adaptation of Evenk children to a boarding school.

Material and methods: Pupils (N = 409) aged 10–16 from the village boarding school of Evenkia, Krasnoyarsk Territory, Russia were examined. Pupils consisted of 132 Evenk children and 277 Russian children. The emotional sphere was evaluated according to Eysenck Personality Inventory (EPI) and lateral phenotype was evaluated according to Bragina & Dobrokhotova.

Results: We found that Evenk children show a predominant pattern of left laterality ($p = 0.024$). In addition, relative to Russian children, Evenk children are more likely to show the introverted personality type ($p = 0.035$). Relative to Russian children, Evenk children are more restrained in their emotional manifestations, have greater difficulty in communicating with strangers, answer with monosyllables, and show a less vivid emotional reaction to praise. Further, relative to Russian children, Evenk children are more likely to show a high level of emotional stability (i.e., 9–10 points; $p = 0.001$).

Conclusions: The present study examined the psychoemotional characteristics of Evenk children. We identified ethnospecific indicators, including an introversion personality type combined with emotional stability and left laterality. Identification of these characteristics allowed us to form a risk group of children in adaptation. Ethnospecific indicators of the psycho-emotional sphere should be considered for effective management of the adaptation of children in a boarding school.

KEYWORDS: introversion, psychological, extraversion, personality development, child

BACKGROUND

In modern Russia, the ability to preserve and strengthen the health of the younger generation is closely related to the ability to adapt to real life conditions. These conditions can include nature-climatic, socio-hygienic, and stress-related factors [1]. These con-

ditions are particularly important to consider within regions that are characterized by unusually harsh environmental conditions. One example region is Evenkia, which is located in the North-East part of Russia, within the Siberia, Krasnoyarsk territory. A small number of indigenous people of the North – the ‘Evenks’ – live

in Evenkia, along with families of migrants from the central and southern regions of Russia [2]. Evenks are the most ancient people in Russia, and originally lived in the North-East part of Russia. The traditional economic activity of Evenks include hunting and reindeer breeding, which initially led to a nomadic lifestyle [3].

In the days of the Soviet Union, the way of life of the northern people began to change. Northern residents received the benefits of civilization, and the opportunity to study and choose a profession. These factors had a significant positive effect on northern residents. On the other hand, however, these changes deprived the Evenks of their usual way of life, including part of the traditional cultural values and knowledge of the nomadic way of life.

Currently, there is an ongoing national movement to revive the indigenous small-numbered peoples of northern Russia, including the Evenks. New forms of management are being created; for example, tribal communities are being created in locations of traditional ancestral habitat. With these new conditions, problems related to education and adaptation to modern life have become salient. The success of solving these problems will largely depend upon the use of physiologically adequate methods, including in school education [4]. These methods must consider the ethnopsychological specificity of the younger generation of Evenks. To this end, we propose methods for assessing the psychoemotional sphere by laterality and Eysenck Personality Inventory (EPI), which are widely used indicators of left-right laterality, personality type, and emotional stability or neuroticism. Laterality, lateralization, or left-right laterality is defined as a fundamental principle of nervous system [5]. Left-right laterality an important feature of not only human brain organization, but brain organization of all vertebrates [6]. Brain laterality is consistent with the well-known presence of asymmetry in the hands, legs, eyes, and ears [6,7]. Left-right laterality is currently being actively studied in the case of normal and pathological conditions [8–13].

Personality type refers to the psychological classification of different types of individuals. Personality types are sometimes distinguished from personality traits, with the latter embodying a smaller grouping of behavioral tendencies. Personality types are sometimes said to involve qualitative differences between people, whereas personality traits may be construed as quantitative differences.

The Swiss psychiatrist, Carl Jung's first achievement was to differentiate two classes of people, according to attitude types: (1) extraverted (i.e., outward-looking) and (2) introverted (i.e., inward-looking). Later, Jung differentiated four functions of the mind: (1) thinking, (2) feeling, (3) sensation, and (4) intuition. One or more of functions of the mind can predominate in a given individual. Results of this study were embodied in *Psychologische Typen* (1921; 1923). Jung's wide scholarship was well manifested in that publication, as well as, in *The Psychology of the Unconscious*.

According to theories of personality types, introverts and extraverts are two fundamentally different categories of people. According to theories of personality traits, in contrast, introversion and extraversion are on a continuum, with many individuals in the middle.

The wise personality is associated with integrative, noncognitive, and transpersonal personality types. The wise personality is often characterized by openness to experiences, agreeableness, conscientiousness, extraversion, emotional stability (i.e., low neuroticism), and a greater sense of psychological and subjective well-being [14].

The indicator of the emotional sphere is an introspective self-report questionnaire that differs among various psychological preferences for how people perceive the world and make decisions. Type Indicator is based on the conceptual theory proposed by Carl Jung [15].

In this study, we used the EPI to analyze indicators of children's' emotional sphere, introversion vs. extraversion, and neuroticism vs. emotional stability [16].

AIM OF THE STUDY

The present study aimed to examine characteristics of the psychoemotional sphere and identify ethnospecific indicators for adaptation of Evenk children to a boarding school.

MATERIAL AND METHODS

Study design

The study sample consisted of 409 children, ages 10–16 years. This sample was 98% of all pupils from the boarding school of interest. Of the 409 children, 132 were Evenk children, who came from camps to the village boarding school in which they now live and study. The remaining 277 were Russian children who were living with their family in the village. The boarding school is now located in the Evenks village of Krasnoyarsk Territory, Russia.

Study inclusion criteria consisted of the following: permanent residence in Evenkia from the date of birth, and pupils from the Evenks village boarding school. The Evenk participants (i.e., the study sample; $n = 132$) consisted of 59 (45%) boys and 73 (55%) girls. The Russian participants (i.e., the comparison group; $n = 277$) consisted of 113 (41%) boys and 164 (59%) girls. The studies were conducted after informed consent was obtained. Eight students did not agree to participate in the survey and were thus excluded. Evenk participants ranged in age from 11–14 ($M = 12$ yrs), and Russian participants ranged in age from 11–1 ($M = 12$ yrs). There were no age differences in gender distribution.

Data collection

The study was conducted at the beginning of the school year. This was a retrospective analysis conducted

in October–November 2019. Before starting the study, pupils were informed about the purpose and methodology, as well as, the opportunity for removal from the study at any time. Survey respondents were informed that survey response would be anonymous and participant was voluntary.

Measures

Eysenck's Personality Inventory (EPI) (Extroversion/Introversion)

The EPI was used to evaluate the emotional sphere [16]. The EPI was accessed via the Internet (<https://apsiholog.ru/psychological-tests/>). The EPI measures two pervasive, independent dimensions of personality: Extraversion-Introversion and Neuroticism-Stability. These two dimensions account for the majority of the variance in the personality domain. Each form contains 57 unique "Yes-No" items. A falsification scale was included to detect the presence of response distortion. Three scores are derived from the EPI. The first, sociability or 'lie score' (out of 9), measures how socially desirable the respondent is trying to be in responding. Those who score 5 or more on this scale are likely trying to respond in a desirable way and are not likely being honest in their responses. Second, the 'E score' (out of 24), measures how much of an extrovert is the respondent. Third, the 'N score' (out of 24), measures how neurotic the respondent is [16,17]. The EPI measures extraversion as a reasonable mix of impulsivity and sociability [17,18]. Cronbach's α based on the results of the described project: 0.804.

Laterality

Left-right laterality was measured using experiments proposed by Bragina and Dobrokhotova (1998) [19]. The degree of manual asymmetry was determined from all participants. Four trials were conducted on the hand, and three trials each were conducted on the feet, eyes, and ears. The asymmetry of the arms, feet, eyes, and ears was determined by the prevalence of left and right values in each case. Symmetry was defined when the sum of the left indicator was equal to the sum of the

right indicator. Mixed profiles were recorded at various combinations of left and right indicators.

Bioethics committee approval

The study was approved by the Scientific Research Institute of the North Medical Problems, Siberian Branch of the Russian Academy of Sciences, Krasnoyarsk, Russia (03.12.2019, N3).

Statistical methods

Statistical analyses were carried out using the STATISTICA software package ver. 6.0. Qualitative characteristic differences were assessed using the χ^2 test. For relatively small samples, a two-sided Fisher exact test was applied. The differences at $p < 0.05$ were considered to be statistically significant [20].

RESULTS

The distribution of laterality among children living in Evenkia is shown in Tab. 1.

The distribution of the laterality differs across groups (i.e., Evenk, Russian, $p = 0.036$). The combined laterality has no statistical differences in the studied groups of children. Right laterality was shown to prevail among Russian children ($p = 0.043$). A relatively small group of children were ambidextrous or showed left laterality. Importantly, left laterality was prevalent among Evenk children ($p = 0.024$). Thus, left laterality characterizes the emotional sphere inherent by in Evenk children.

In the next stage, we analyzed the indicators of the children emotional sphere, according to the EPI "intro-extroversion" and "neuroticism-emotional stability" dimensions. The results of these analyses are shown in Tab. 2.

The distribution of the EPI (intro-extroversion) was shown to vary based on group (i.e., Russian, Evenk; $p = 0.046$).

The extroverted personality type prevailed among Russian children ($p = 0.036$). According to the EPI, the level of extroversion across both examined groups of children was in the range of moderate extroversion

Table 1. Distribution of laterality among children living in Evenkia.

Laterality (left or right laterality)	Evenk children n=132 [1]		Russian children n=277 [2]		Statistical significance	
	Abs.	% 95 Confidence interval	Abs.	% 95 Confidence interval	χ^2	P
Right laterality	47	35.6 27.94–44.09	128	46.2 40.42–52.10	4.11	$p_{1-2} = 0.043$
Combined laterality	56	42.4 34.30–50.96	115	41.5 35.86–47.40	0.3	$p_{1-2} = 0.862$
Ambidextral	15	11.4 7.00–17.92	21	7.6 5.02–11.31	1.59	$p_{1-2} = 0.207$
Left laterality	14	10.6 6.45–17.03	13	4.7% 2.78–7.86	5.07	$p_{1-2} = 0.024$
Chi-squared test for contingency table (4 × 2) of Laterality by Children group					8.55	df = 3 $p = 0.036$

Table 2. Emotional sphere indicators of Evenk children according to the Eysenck Personality Inventory (EPI).

Analyzed indicators	Evenk children n=132 [1]		Russian children n=277 [2]		Statistical significance	
	Abs.	% 95 Confidence interval	Abs.	% 95 Confidence interval	χ^2	P
Introversion	61	46.2 37.92–54.71	98	35.4 29.98–41.18	4.42	$p_{1-2}=0.035$
Extroversion	71	53.8 45.28–62.10	179	64.6 58.81–70.01	4.40	$p_{1-2} = 0.036$
Chi-squared test for contingency table (2 × 2) of EPI (intro-extroversion) by Children group					3.97	df = 1 p = 0.046
Neuroticism	28	21.2 15.11–28.96	95	34.3 28.95–40.07	12.40	$p_{1-2} < 0.001$
Emotional Stability	104	78.8 71.03–84.88	182	65.7 59.92–71.05	11.59	$p_{1-2} = 0.001$
Chi-squared test for contingency table (2 × 2) of EPI (neuroticism-emotional stability) by Children group					6.67	df = 1 p = 0.010

(i.e., 14–15 points). Moderate extroverts are characterized by personality characteristics including vitality, optimism, activity, contact, and individuality.

In contrast to Russian children, the introverted personality was prevalent among Evenk children ($p = 0.035$) across both groups, children were in the range of moderate introversion (9–10 points).

The distribution of the EPI neuroticism-emotional stability dimension was shown to vary based on group (i.e., Russian, Evenk; $p = 0.010$).

The index of emotional stability, determined using the EPI “neuroticism-emotional stability” continuum, was more prevalent than neuroticism among Evenk children ($p = 0.001$). The majority of Evenk children (over 65%) showed levels of emotional stability in the range of average emotional stability (11–12 points) and approaching high emotional stability (9–10 points).

Neuroticism was more common than emotional stability among Russian children ($p < 0.001$). The level of neuroticism was shown to reach a moderate degree (16–17 points) across both groups. Neuroticism in schoolchildren is manifested by a sense of uncertainty, fluctuation of mood, and a tendency to delay emotions.

DISCUSSION

Key results

The results reveal the formation of neurotic personality traits in this group of schoolchildren, which may complicate adaptation. The present study demonstrates the ethnopsychologic specificity of the younger generation of Evenk children. In particular, there was a predominance of left laterality among Evenk children in contrast to Russian children. The ratio of extroverts to introverts was 50:50. The introverted personality type was in the range of moderate introversion (9–10 points) and the index of emotional stability was in the range of average emotional stability (11–12 points), approaching the level of high emotional stability (9–10 points). According to Eysenck’s theory, introverts are individuals with naturally high levels of arousal. Given

the tendency to experience high arousal levels, introverts tend to seek activities and environments where they can escape from overstimulation. The naturally high arousal levels also make introverts more alert and primed to take in more information from the environment. Escaping somewhere to have time alone to recharge gives introverts the opportunity to process and reflect on what they have learned.

Interpretation

The ethnopsychologic specificity of the younger generation of the Evenk indicate how children perceive the world and make decisions

Emotional sphere indicators of Evenk children according to the Eysenck Personality Inventory

The study of personality type according to the EPI among Evenk children revealed a high frequency of the introverted personality type in combination with emotional stability.

Children with an introverted personality type are characterized by restraint, a tendency for self-analysis, and internal experiences [21]. As compared to non-indigenous children, indigenous children from Evenkia are (1) more restrained in their emotional manifestations, (2) find it difficult to communicate with unfamiliar adults, (3) answer questions monosyllabically, and (4) prefer to choose their words carefully rather than using time or energy on needless chit-chat. According to Dyakonova [22], because introverts tend to be inward turning, they also spend more time examining their own internal experiences. Introverts tend to enjoy simply thinking about and examining things in their own minds. Self-awareness and self-understanding is important to introverts, so they often devote a great deal of time to learning more about themselves. This might involve exploring hobbies they enjoy, thinking about their lives.

Evenk children like to watch their parents do their usual work, often repeatedly, until they feel that they can replicate the actions on their own. Thus, Evenk children learn from personal experiences and prefer to prac-

tice somewhere private where they can build their skills and abilities. Evenk children constantly need praise and support, but praise or comment has no intense emotional reaction. The identified features of emotional status and behavior in Evenk children are consistent with results reported in the literature [23–25].

Distribution of laterality among Evenk children

Our research shows a distinctive feature of laterality distribution among Evenk indigenous children. In particular, a greater proportion of Evenk children show left laterality. This observation points to a right-brain-asymmetry among Evenk children, which may explain their emotional characteristics and behavior. According to various researchers, children with right hemisphere dominance are characterized by non-verbal intelligence, which is manifested by difficulties in learning, difficulties in grammar, and word selection in oral speech [26]. According to Sirotnyuk, right-brain-asymmetry of thinking of northern children is characterized by an orientation to high appreciation and praise, and a prestigious position in the collective [27].

At the same time, 50% of Evenk pupils with right laterality and left-brain-asymmetry may have a verbal nature of thinking. Evenk and Russian children who are characterized by right laterality may be the most adaptable to approved educational programs.

Generalizability

The present study examined the characteristics of the psychoemotional sphere of Evenk children. We found ethnospecific indicators that can be used to help children adapt to a boarding school. Particular attention was drawn to Evenk children, who received ethnically specific indicators such as the personality type of introversion in combination with emotional stability and left laterality. Evenk children with this combination may be most likely to have difficulty adapting. According to Eysenck's theory, introverts are individuals with naturally high levels of arousal and emotional stability. This high arousal and emotional stability can easily

transition to a high degree of neuroticism. In that context, 50% of Evenk pupils may be in this at-risk group. At-risk Evenk pupils may require health-saving technology or a tutor for adaptation (for example, a senior student). It is necessary to transmit this information to the school leaders for effective management of the adaptation of children in a boarding school.

Limitations of the study

The study was limited to a relatively small sample of Evenk children, ages 15–16 years. Given the relatively restricted sample size, we were underpowered to examine gender and age differences. Future studies should examine a larger sample size and include parents of the children. For example, Evenk children in this age often accompany their parents to the taiga for fishing. This is traditional life style of Evenk people.

CONCLUSIONS

1. This study examined characteristics of the Evenk children's' psychoemotional sphere and revealed ethnospecific indicators. In particular, Evenk children were likely to demonstrate an introverted personality type combined with emotional stability and left laterality. Isolating these indicators should allow for the identification of an at-risk group of children in adaptation.
2. This study also examined ethnospecific indicators of the psychoemotional sphere of Evenk children. In contrast to Russian children, Evenk children showed an increase in left laterality and decrease in right laterality. Relative to Russian children, Evenk children demonstrated a relatively equal distribution of introversion vs. extraversion, but a predominance of emotional stability.
3. Ethnospecific indicators of the psychoemotional sphere should be considered for effective management of the adaptation of children in a boarding school.

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