

**Секция 12
АРКТИКА И ЕЕ ОСВОЕНИЕ
(доклады на английском и немецком языках)**

**THE ARCTIC POPULATION MENTAL HEALTH INDICATORS
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Nowadays there are data on changes in working capacity and the state of attention of the people who work in the Arctic regions collected. Nevertheless, the problem has not yet been explored with regard to the youth. Also there are relatively few researches devoted to the study of the young people fatigability phenomenon and its connection to the depression, which some of the scientists consider to be especially high in the northern regions [2,3].

There were 63 persons (22 men and 41 women) of an average age of 22,94 in total participating in our research. All of them have been residing in the Arctic region for 12.32 years on average. The study was carried out as a part of the scientific expedition to the village Nyda, located in the territory of the Yamal-Nenets autonomous region. The young men and women surveyed belong to the Slavic group and came or were born by persons who had come to the sites of new oil and gas fields developing from the central part of Russian Federation.

The purpose of the work is to study the dynamics of young people mental health in the Arctic region. We used the digital proof test (V. N. Amatuni, 1969; L. I. Vasserman, M. V. Katysheva, 1997) [1]. This technique also provides an opportunity to assess the functional asymmetry of attention (AA) among the respondents. During the examination of depression as a factor which influences the working capacity dynamics, we used the scale of Self Rating Depression — SDS, adapted at the St.Petersburg Psychoneurological Research Institute (T.I. Balashova, 1988; W.W.K. Zung, N.S. Durham, 1965).

While analyzing mental health indicators, we took into account the individual parts of the digital proof test execution time. In addition, we examined the asymmetry of attention by assessing the execution quality (presence/absence of errors) of the right and left parts of the table. According to the data received, young people spend more time to pass the second part of the digital proof test sample in comparison with the first one. Significant differences between these indicators were received from both men and women. This fact indicates the decline in the youth's efficiency and the emergence of fatigability they demonstrate by the end of the test passing. It also reveals the adverse influence of Arctic factors on the human body, because either improvement or maintaining of the work (or passing) pace is considered to be normal.

According to the analysis, the negative downward tendency of the work capacity is more pronounced among men than among women. The first group has demonstrated the mental activity index to be higher than the second one (0.98 and 0.91 points) has. Moreover, this fact shows a clear reduction in the men's volitional attention, and its dynamic features in particular, as compared to the female respondents. This is also marked by the increase in the time spent to pass both 1st and 2nd parts of the digital proof test. The performance indicators of the 1st part of the digital proof test are 99.23 s for men and

89.12 s for women. Furthermore, we have noted the significant difference between the second part of the test execution time performed by the young men and by the young women. It has revealed that men evince relatively fast-growing exhaustibility, even when the loads are comparatively low (104.64 and 92.37 s) ($p = 0.015$).

On the contrary, the depression indicators showed that women have lower mood than men do, and this is confirmed by the significant differences in these groups (37.32 and 31.64 points respectively) ($p = 0.012$). We should note that the AA index has turned out to be 2 times higher among women than among men (1.32 and 0.60 points, $p = 0.020$) after processing the results of the asymmetry of attention analysis. This fact indicates that women have the growing attention asymmetry. The more pronounced right type is also more common for the female respondents as compared to the male ones.

In correlation analysis of the youth, we have received significant correlation between the length of residence in the Arctic region on the one hand and the attention asymmetry as well as the test execution time and accuracy on the other. There were also significant correlations between depression and fatigability, attention, execution speed detected.

In particular, we have defined backward correlations between fatigability and depression ($r = -0.479$) ($p = 0.023$) among men. We have also detected the direct connection between the depression and the second part of the proof test execution time in this group ($r = 0.274$). In addition, we have defined a direct link between the length of Arctic experience and the first and second parts of the proof test execution time while analysing the male respondents' results ($r = 0.218$ and $r = 0.232$). In turn, the research revealed the inverse relationship between depression and the asymmetry of attention among women ($r = -0.367$; $r = 0.018$). In addition, young men demonstrate an inverse relationship between the length of residence in the Arctic region and the errors in the right part of the proof test ($r = -0.284$). Women's length of residence in the Arctic region is directly linked to the asymmetry of attention ($r = 0.224$).

Conclusion

1. Our research, which was carried out among the young residents of the Arctic region, has revealed the significant variations in the pace of work and the relevant increase of the second part of the proof test execution time.
2. Both young men and women have evinced the significant correlation between the length of residence in the Arctic region and the asymmetry of attention as well as the test execution time and accuracy of passing.
3. The analysis has also detected the significant differences between men's and women's depression indicators, with a strong connection between depression and mental health among men and depression and attention among women.

References

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