

Relationship of Affective Disorders and Affective Temperaments on TEMPS-A in Medical Students

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Personality traits, including temperament, can be considered as predictors of the development of affective disorders. There is a relationship of types of affective temperament and variants of emotional and anxiety disorders. It is a common pathology among medical students which is detected in different countries. Ethnic and cultural characteristics of the region should be taken into account when conducting psychometric studies. Hyperthymic temperament can be considered as a predisposing factor to the development of bipolar disorder. In Bulgaria, where the language is similar in linguistic structure to the Russian, hyperthymic temperament was more common in healthy people. The frequency of detection of hypomania by The Hypomania Checklist (HCL-32) exceeded 50%, in Russia, when medical students were screened in last years. Frequent comorbidity of anxiety disorders was found in medical students with hypomania. This may indicate a high risk of mixed affective states as sign of bipolar spectrum disorders. Our data in 2015-2019 years showed that bipolar spectrum disorders predominate among all emotional disorders in medical students. It can be latent for several years, masked as personal or neurotic stress induced experiences.

We studied some of affective disorders by psychometric techniques: hypomania by HCL-32, depression by Patient Health Questionnaire-9 (PHQ-9) and The Center for Epidemiologic Studies Depression Scale (CES-D), anxiety by General Anxiety Disorder-7 (GAD-7) in 122 students at the Rostov State Medical University, Russia.

7 persons (5.73%) of all respondents were aware of the presence of emotional pathology only. Figures of more than 14 points on HCL-32 were found in 65 people, which was 53.27% of the sample. 28.68% of respondents found signs of depression on PHQ-9. The frequency of depression by PHQ-9 was comparable in the groups with high and low points by HCL-32 (29.23% and 29.82%). Depression by CES-D was detected in 26.28% of students. The incidence of depression by CES-D was insignificantly lower in the group with indicators of hypomania (24.61% vs. 28.07%). The frequency of anxiety was 12.29% among all respondents. It was higher on statistically significant level ($p < 0.05$) in students with indicators of hypomania (16.92% vs. 7.02%). We studied the relationship of affective temperaments by The Temperament evaluation Memphis Pisa, Paris and San Diego Autoquestionnaire (TEMPS-A) 50-item Clinical Russian Version and the spectrum of affective disorders. Russian-language version of TEMPS-A is under adaptation on clinical and non-clinical samples. We implement TEMPS-A to trace correlations between points of affective temperaments and indicators of affective disorders. Results are presented in Table 1.

	TEMPS-A affective temperament types			
Psychometric scales	hyperthymic	cyclothymic	irritable	dysthymic
GAD-7	-0,07	0,33*	0,36*	0,38
PHQ-9	0,04	0,34	0,26	0,37*
CES-D	-0,07	0,13	0,19	0,38*
HCL-32	0,23	0,44*	0,33	-0,35

Table 1: Correlation analysis in the study of affective temperaments in a group with emotional disorders.

Pearson correlation coefficients, * $p < 0.05$

Our study showed that medical students have a fairly high level of affective disturbances. It is higher than the population indicators of the corresponding disorders for the region. This pathology occurs in the majority of respondents and can be detected by specialized screening tests, but respondents did not realize they had affective disorder. Students with dysthymic temperament on TEMPS-A showed high indices in PHQ-9 and CES-D. Cyclothymic temperament correlates in our research with HCL-32 and GAD-7. In respondents with irritable temperament we observe high GAD-7 results. These results demonstrate statistically significant correlation between TEMPS-A affective temperaments and affective disorders among surveyed.

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