

Gender-Related Profiles of the Character Accentuations in Adolescents Tending to Use Alcohol

Bartosh TP[†] and Bartosh OP

ABSTRACT

Background: The paper considers gender-related differences in the character accentuations of the adolescents living in the North-East of Russia who are addicted to alcohol. Also, separately between girls and boys, the differences in character types were studied for those prone to drinking alcohol and who are not inclined to.

Aim: The study was to determine the gender-related profiles of character accentuations in adolescents prone to alcohol consumption. The object of the study involves two tasks: 1. To study the character types among those addicted and not addicted to alcohol; 2. To specify gender-related features of the character accentuations among adolescents tending to use alcohol and those not inclined to.

Material and methods: The study involved 204 adolescents aged 14-17 from three schools in the city of Magadan. Among them, 105 girls (group I) and 99 boys (group II). The questionnaire by G. Schmishek - K. Leonhard was used to determine the types of the character accentuations. Statistical processing of the data was carried out using the licensed software packages of Excel-97 and Statistica-10. The examinees were divided into two groups of those addicted and not addicted to alcohol based on the Michigan Screening Test for Adolescents, "Are There Problems with Drugs and Alcohol?"

Results: The examined girls prone to drinking alcohol differed from their age mates who were not prone to using psychologically active substances, by reliably ($p < 0.05$) more pronounced features of the excitable type, and less emotive and demonstrative types. The examined boys who tended to have alcohol, unlike their peers who were not inclined to drink alcohol, had significant differences ($p < 0.05$) in five types of accentuations: more pronounced traits of hyperthymic, emotive, cyclothymic, excitable and exalted types of character. We observed a higher profile of accentuations in the girls compared with the peer boys and referred it to the gender-related features of accentuations in adolescence, regardless of the tendency to use PAS. The emotive, alarming, cyclothymic, excitable and exalted types of accentuations proved to equally prevail in all the girls ($p < 0.05$). Of note that, the girls not prone to drinking alcohol demonstrated hyperthymic and demonstrative types of characters which predominated in comparison with the boys who do not drink alcohol ($p < 0.05$).

Conclusion: The prevailing personality traits in adolescents both boys and girls who tend to drink alcohol can serve as unfavorable prognostic signs of addiction to psychoactive substances as compared to their age mates not addicted to PAS.

Keywords: Adolescents; Gender; Addiction to alcohol; Character accentuation; North of Russia

Introduction

Adolescence is a risk group for the consumption of psychoactive substances. The increased excitability inherent in adolescence, aggressiveness, a tendency to risk, emotional immaturity, and intolerance all typical for

adolescents, can develop the addiction to PAS. Juveniles are least resistant to the formation of addictions the pace of which exceeds those in adults [1,2]. Statistics show a high level of recorded PAS consumption among children and adolescents [3,4]. Alcohol abuse among adolescents is an international problem [1]. The

¹ Scientific Research Center «Arktika», Far Eastern Branch of the Russian Academy of Sciences, Russia; Candidate of Biological Sciences, Associate Professor, Leading Researcher, Russia

² Scientific Research Center «Arktika», Far Eastern Branch of the Russian Academy of Sciences, Russia; Candidate of Biological Sciences, Senior Researcher, Russia

[†] Author for correspondences: Scientific Research Center «Arktika», Far Eastern Branch of the Russian Academy of Sciences, Russia; Candidate of Biological Sciences, Associate Professor, Leading Researcher, Russia, Tel: +79148673553; E-mail: olga_bartosh@inbox.ru

problem is especially urgent in the North where adolescents differ in their emotional and personal characteristics in comparison with those living in more favorable climatic and economic conditions [5,6]. Adolescent drinking is common in many European countries and the United States. The study conducted in the USA reported of 10% of 8th year students, 22% of 10th year students, and 26% of 12th year students having five or more drinks during the previous 2 weeks [7]. In fact, every year 320,000 young people at the age of 15-29 are killed for alcohol-related reasons [8]. According to the recent studies, girls' alcoholism is more commonly observed than among boys, which undoubtedly threatens the demography in Russia [9]. Girls are characterized by a faster increase in symptoms. It was found that it is girls who often tend to drink alcohol in anxiety and emotional discomfort to cope with negative emotions [10,11]. Of note that, adult women drink less than men, however, they have more problems associated with alcohol compared with men [12,13].

Adolescence is the age when the character develops, and most characterological types are formed. Typological variants of the norm - character accentuation - act as an important factor in the formation of social desadaptation and deviant behavior in adolescents; in some cases they are combined with the formation of addictions. For each type of accentuation, there are "weaknesses" typical of it, distinct from other types [14]. Character features in accentuations may not appear constantly, but in some situations that place high demands on the so-called "locus of the least resistance" [14].

In connection with disorders in adaptation, and due to socio-psychological problems, the formation of dependent behavior is of a high risk [14,15]. At the same time, some adolescents are more inclined to using PAS while others are less. In this regard, the process of alcohol consumption is significantly influenced by the personality characteristics of adolescents. [15-17].

A study of alcohol consumption and accentuated personality traits among young people in Romania showed that demonstrativeness, hyperthymia, cyclothymia, rigidity, and exaltation are risk factors for alcohol consumption [18].

Living in extreme climatic and geographical conditions, impaired neuropsychological adaptation, difficult life situations, etc. affect the development and sharpening of accentuated

character traits [6,19,20]. On the other hand, socio-economic difficulties [21], low resistance to emotional stress, increased anxiety, impulsiveness contribute to the development of alcoholism [2,19]. We have previously shown [6] that the level of neuropsychic adaptation affects the development of character accentuations in adolescents. Boys with disorders in the field of neuropsychological adaptation, compared to age mates with satisfactory adaptation, are characterized by more pointed features of stuck and pedantic, while girls - by cyclothymic type of accentuation.

Even episodic alcohol consumption by adolescents is a predictor of mental adaptation disorders, and as a result, they deform personality formation. Over time, alcohol becomes a necessary element in coping with a stressful situation [19-22].

Thus, the psychological problems of the puberty are often accompanied by a violation of the emotional state, the development of frustrating states and character accentuations. This is one of the reasons for the use of alcohol and drugs.

The aim of the study was to determine the gender-related profiles of character accentuations in adolescents prone to alcohol consumption.

The study tasks: 1. To study the character types among those addicted and not addicted to alcohol; 2. To specify gender-related features of the character accentuations among adolescents tending to use alcohol and those not inclined to.

Subjects and Methods

A total of 204 subjects aged 14-17 from three schools of the city of Magadan (Magadan is located at 59 ° 34 'north latitude) underwent the examination. The climate is subarctic with marine features. Winters are long and cold, and summers are short and cool. The examinees were Caucasians, mainly Slavs born in the North in 1-2 generations (average age 14.6 ± 0.11 years); of them 105 girls (group I) and 99 boys (group II).

All the students were divided into two cohorts of those addicted and not addicted to alcohol on the basis of the Michigan screening test for teens "Is there a problem with drugs and alcohol" which consisted of 5 questions: 1. Have you ever been in a car driven by someone (or by you) who was under the influence of alcohol or drugs? 2. Do you use alcohol or drugs to relax, to feel better? 3. Do you use alcohol or drugs alone? 4. Have your family or friends ever told you that you should

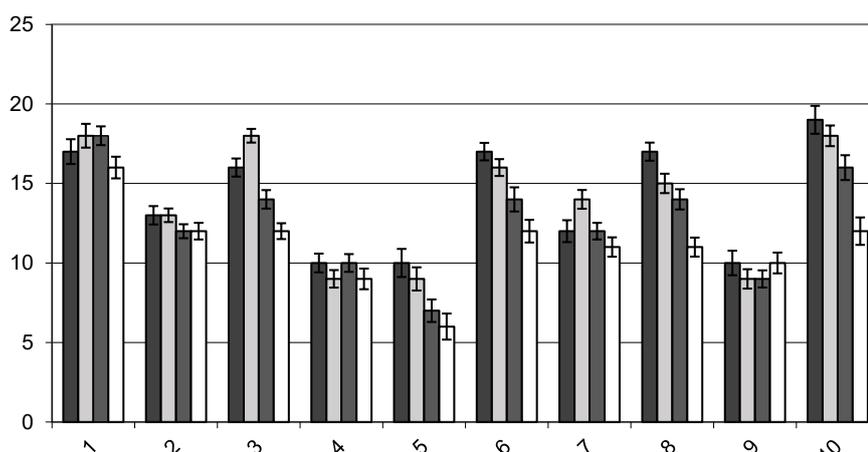


Figure 1: The character accentuations observed in adolescent girls and boys accounting for their addiction to alcohol ($M \pm m$). Note: 1 – the black is for the girls inclined to alcohol consumption; 2 – light grey is for the girls not inclined to alcohol; 3 – dark grey is for the boys addicted to alcohol intake; 4 – the white is for boys not inclined to alcohol consumption. Note: 2 - hyperthymic, 2 - stuck, 3 - emotive, 4 - pedantic, 5 - alarming, 6 - cyclothymic, 7 - demonstrative, 8 - excitable, 9 - distracting, 10 – exalted

Table 1: Distribution of character accentuations in adolescent girls and boys taking into account addiction to alcohol.

Indicator	Group I, Girls		Group II, Boys	
	Addicted to alcohol (n=43)	Not addicted to alcohol (n=62)	Addicted to alcohol (n=50)	Not addicted to alcohol (n=49)
Hyperthymic	23 ppl (53%)	42 ppl (68%)	36 ppl (72%)	24 ppl (49%)
Stuck	6 ppl (14%)	4 ppl (6%)	7 ppl (14%)	6 ppl (12%)
Emotive	23 ppl (53%)	45 ppl (73%)	17 ppl (34%)	5 ppl (10%)
Pedantic	2 ppl (5%)	4 ppl (6%)	1 ppl (2%)	3 ppl. (6%)
Alarming	5 ppl (12%)	7 ppl (11%)	1 prs (2%)	2 ppl (4%)
Cyclothymic	26 ppl (60%)	31 ppl (50%)	18 prs (36%)	8 ppl (16%)
Demonstrative	5 ppl (12%)	19 ppl (31%)	4 чел. (8%)	4 ppl (8%)
Excitable	28 ppl (65%)	22 ppl (35%)	14 ppl. (28%)	1 prs (2%)
Distracting	7 ppl (16%)	5 ppl (8%)	1 prs (2%)	5 ppl (10%)
Exalted	34 ppl (79%)	43 ppl (69%)	26 ppl (52%)	13 ppl. (27%)

reduce alcohol or drugs consumption? 5. Have you ever had troubles with alcohol or drugs? Two positive answers to the questions were suggested to be enough for identifying problems associated with psychoactive substances (The method is adapted in the Psychoneurological Institute named after V.M. Bekhterev, St. Petersburg).

To determine the types of the character accentuations, the characterological questionnaire by G. Schmishek - K. Leonhard was used which contains 88 questions [23]. If 18 or more points are scored, the character trait was considered accentuated. Statistical processing of the data was carried out using the licensed software packages of Excel-97 and Statistica-10. For each parameter studied, the arithmetic mean (M) and the error of representativeness of the mean (m) were calculated. The dependence of the parameters was obtained using the Spearman correlation coefficient. For comparison of the sample mean values, the t-test by Student was used at the confidence level of $p < 0.05$.

Results and Discussion

The research results are presented in the **Figure 1** and in the **Table 1**.

■ The structure of the character accentuations in adolescent girls taking into account the tendency to use PAS

The girls prone to drinking alcohol differed from their age mates not addicted to PAS intake by reliably ($p < 0.05$) more pronounced features of the excitable type, and less emotive and demonstrative types (**Figure 1**). They are more characteristic of impulsiveness, irritability, temper, less sensitivity, kindness, compassion, contact, self-confidence, and boastfulness.

In the structure of character accentuations in girls prone to drinking alcohol, the following types of accentuations are presented in the following sequence: exalted, excitable, hyperthymic, cyclothymic, emotive, stuck (**Figure 1**). Less pronounced are demonstrative, distracting,

pedantic and alarming types of character.

The girls who are not addicted to drinking alcohol oftener featured the following types of the character accentuations: emotive, exalted, hyperthymic, cyclothymic, and alarming. The demonstrative, anxious, pedantic, stuck, and dysthymic types are less represented. The prevalence of exalted reactions, impressibility, and emotional sensitivity in the examined girls was a gender-related feature [24]. Girls are characterized by psychic lability, emotionality, sensitivity; their emotional experiences differ in depth and last longer.

■ The structure of the character accentuations in adolescent boys taking into account the tendency to use PAS

Boys addicted to alcohol intake, unlike their peers not prone to drinking alcohol, had significant differences ($p < 0.05$) in five types of accentuations: more pronounced traits of a hyperthymic, emotive, cyclothymic, alarming, and exalted character. According to the methodology [14], these boys were characterized by a better mood combined with a thirst for activity, sociability, talkativeness, frivolity, impressibility; they showed frequent mood changes, their hyperthymic states turned to distracting ones, the dependence on external events proved to be expressed; impulsiveness, weakening of control, tendency to conflict occurred.

The structure of the character accentuations observed in the boys prone to drinking alcohol featured the hyperthymic and exalted types as most expressed (52-72% of the subjects, **Table 1**). Less expressed were emotive, cyclothymic, excitable, demonstrative, and stuck types. Weakly expressed were pedantic, distracting and alarming types of the characters.

The boys not addicted to alcohol were as high in the hyperthymic type as their age mates who were inclined to alcohol intake (**Figure 1**). Equally expressed were exalted, emotive, stuck, cyclothymic, demonstrative, and excitable. Less pronounced were pedantic, distracting, and alarming types of the characters.

That testifies that both girls and boys addicted to having alcohol have higher profiles of accentuations than those for the adolescents free of such addiction.

■ Gender-related features of the structure of character accentuations

When considering gender differences in character types, we noted that girls, compared with peer boys, were higher in their profiles of accentuations, regardless of their propensity to drink alcohol (**Figure 1**). However, the girls prone to alcohol intake compared to the boys with the addiction had more pronounced ($p < 0.05$) traits in 5 types of the character accentuations: emotive, alarming, cyclothymic, excitable, and exalted types of accentuations ($p < 0.05$).

They are more characteristic of the psychic lability, emotionality, sensitivity, anxiety, responsibility, talkativeness, fearfulness, frequent mood swings. Of note, the girls not prone to drinking alcohol differed from the boys who were also free of the addiction in as many as 7 more pronounced types of the character ($p < 0.05$): hyperthymic, emotive, alarming, cyclothymic, demonstrative, excitable and exalted types of the accentuations. At the same time, the similar medium expressed indicators in both groups were found for stuck, pedantic, and distracting types of the character (**Figure 1**). It is interesting to note that the girls prone to using PAS were lower in the female typical features of an emotive type of the character while the boys using PAS, on the contrary, proved to be higher in those features ($p < 0.05$) (**Figure 1**). Correlation analysis in the group of boys showed a positive relationship between the tendency to use PAS and the emotive type of accentuation ($r = 0.35$; $p < 0.01$).

The table presents the results of the study on frequency of accentuated character traits (persons with 18 or more points) among the examined groups.

As seen from the table, the proportion of those with accentuated features among alcohol-prone adolescents, both boys and girls, mainly exceeded that of the appropriate group (by 20-30% on average).

Among girls, the distribution of the pointed features of the character accentuations had its own characteristics. Girls prone to use PAS were 20% less often to have high rates of the emotive type. The pointed features of the excitable type were demonstrated by 65% of the girls inclined to alcohol, which was 30% higher than by those free of the addiction. According to Leonhard, people with a pronounced excitable type tend to develop chronic alcoholism; they often use alcohol as an energizer [14]. Moreover, such a characteristic feature of the excitable type as impulsiveness is considered by many authors as a key factor in the use of psychoactive substances,

and is positively associated with smoking, the use of alcohol and drugs [15]. A correlation analysis of the data showed a positive relationship between the tendency to use PAS and the excitable type of character ($r=0.29$; $p<0.05$) and a negative relationship with the emotive type ($r=-0.43$; $p<0.01$).

Pointed features of the demonstrative type were shown by 31% of the girls not addicted to drinking alcohol (Table 1). The correlation analysis showed a reliable positive relationship of this type of the character with the tendency to use PAS ($r=0.37$; $p<0.01$), as well as with the age ($r=0.26$; $p<0.05$). Perhaps, as they grow older with an increase in demonstrative traits, adolescents may develop alcohol abuse, which may be demonstrative. This is confirmed by the data of researchers [18] that demonstrativeness supports the negative, destructive, antisocial tendencies of adolescents and youth.

The girls of both subgroups showed accentuations according to the cyclothymic type in 50-60% of the examined subjects. Distracting type features were 2 times more often observed in those prone to the use of PAS, compared with the other peers (Table 1).

As for the boys, we can see from the table that the proportion of the subjects with character accentuations who are not inclined to use PAS in the group as a whole occurred on average by 20-25% more rarely than the rest of the peers examined. The most common were accentuations of hyperthymic, exalted, and cyclothymic types observed. Those examinees tended to be more movable, sociable, restless, and undisciplined; their emotions were assessed as predominantly positive. At the same time, they were moody with violent reactions to external stimuli. Manifestations of these qualities, in general, are characteristic of the psyche of adolescence. With age, accentuated character traits usually smooth out. Among the boys prone to drinking alcohol, persons with an emotive type were found almost 2 times oftener while almost no those with pedantic, alarming, or distracting types of character were observed (Table 1).

Conclusion

Girls prone to drinking alcohol differed from

their peers who were not addicted to PAS, in reliably ($p<0.05$) more pronounced features of the excitable type, and less in emotive and demonstrative types. In boys inclined to alcohol, the proportion of those with accentuated traits exceeded that of the not addicted age mates, on average, by 20-25%. Boys prone to drinking alcohol, unlike their not prone peers, had significant differences ($p<0.05$) in five types of accentuations: more pronounced traits of a hyperthymic, emotive, cyclothymic, excitable, and exalted nature. The prevalence of these personality traits in adolescents (both boys and girls) can be considered unfavorable prognostic signs of a tendency to use psychoactive substances, and the addiction to PAS can contribute to sharpening these character accentuations.

The gender-related features of accentuations in adolescence include, in general, a higher profile of accentuations in girls, regardless of the tendency to use PAS, as compared to peer boys. Emotive, alarming, cyclothymic, excitable, and exalted types of accentuations have been found to equally prevail in female examinees ($p<0.05$). In addition, girls not addicted to drinking alcohol, showed more pronounced hyperthymic and demonstrative types of characters in comparison with boys who do not tend to use alcohol ($p<0.05$).

We believe that the use of PAS reduces the manifestation of female traits of the emotive type of character in girls ($p<0.05$), and in boys, on the contrary, these traits can be sharpened ($p<0.05$).

Studying gender-related profiles of the character accentuations in adolescence can be one of the prerequisites for developing preventive measures for the cohort's addictions. The revealing of risk groups for the use of alcohol and deviant behavior in adolescents with psychological methods continues to be one of the important preventive and prognostic measures.

■ Declarations

Funding: This research received no external funding.

Conflicts of interest: The authors declare no conflict of interest.

References

- Carvajal F, Ierma-cabrera JM. Alcohol Consumption among Adolescents-Implications for Public Health (2015).
- Kirina YU YU, Lopatin AA, Seledtsov AM. Factors contributing to formation of deviant behavior in minors with substance-related disorders. *Siberian. Gerald. of Psychiatry. and Addiction. Psychiatry* 2 (87), 43-47 (2015).
- Koshkina EA, kirzhanova VV. current state of drug situation in russia according to state statistics. *Narcology* 8(1), 41-46 (2009).
- Govorin NV, Bodagova EA, Arsalanova SS. Social-psychological and clinical-psychopathological analysis of aggressiveness in adolescents. *Siberian Gerald of Psychiatry and Addiction Psychiatry* 4 (89), 40-46 (2015).
- Bartosh TP, Bartosh OP, Mychko MV. Character accentuations observed in alcohol susceptible adolescent girls of different ethnic origin residing in magadan region. *Narcology* 2(1), 24-28 (2015).
- Bartosh TP, Bartosh OP, Mychko MV. The degree of disposition accentuations depending on the level of nervous-psychic adaptation in adolescents living in magadan. *Pediatric and Adolescent Reproductive Health* 6(1), 39-44 (2013).
- Monitoring the future. National results on adolescent drug use: overview of key findings, (2009).
- World health organization. Global information system on alcohol and health. Geneva: who; 2011.
- Scvortsova ES, Abramov AU. Modern school students, teenagers and alcohol (overview of the monitoring data, 2010-2011). *Narcology* 2 (146), 38-41 (2014).
- Johnston Id. Monitoring the future, national results on adolescent drug use: overview of key findings, 2002 (nih publication no. 03-5374).
- King CA, Ghaziuddin N, MCGovern I, et al. Predictors of comorbid alcohol and substance abuse in depressed adolescents. *J. Am. acad. Child. Psy* 35 (6), 743-751 (1996).
- Chun-te lee, Chiu-yueh hsiao, Yi-chyan chen, et al. Incidence and risk of alcohol use disorders by age, gender and poverty status: a population-based-10 year follow-up study. *Neuropsychiatry* 7 (6), 892-896 (2017).
- Maria R Khan, Charles M Cleland, Joy D Scheidell, et al. Gender and racial/ethnic differences in patterns of adolescent alcohol use and associations with adolescent and adult illicit drug use. *Am J Drug and Alcohol Abuse* 40 (3), 213-224 (2014).
- Leongard K. Accentuated personality. Rostov-on-don, Phoenix 544 (1997).
- Lichko AE. Types of character accentuations and psychopathy in adolescents (1999).
- Lazarus SA, Beardslee J Pedersen SL, et al. A within-person analysis of the association between borderline personality disorder and alcohol use in adolescents. *J. Abnorm. Child. Psychol* 45(1), 1157-1167 (2017).
- Verdejo-garcía A, Lawrence AJ, Clark L. Impulsivity as a vulnerability marker for substance-use disorders: review of findings from high-risk research, problem gamblers and genetic association studies. *Neuroscience And Biobehavioral. Reviews* 32 (4), 777-810 (2008).
- Rada C, Ispas AT. Alcohol consumption and accentuated.
- Personality traits among young adults in romania: a crosssectional study. Substance abuse treatment, prevention, and policy 11(1), 36 (2016).
- Alexin AN, Lokteva AV. Adolescent personality formation with donozologal forms of alcoholization. *Uchenye Zapiski Universiteta Imeni P.F. Lesgafta* 1(95), 7-11 (2013).
- Bartosh TP, Bartosh OP. Character accentuations observed in alcohol susceptible adolescent boys of different ethnic origin residing in magadan region. *Narcology* 4 (172), 49-53 (2016).
- Collins SE. Associations between socioeconomic factors and alcohol outcomes. *Alcohol. Res* 38(1), 83 (2016).
- Hosier SG, Cox WM. Personality and motivational correlates of alcohol consumption and alcohol-related problems among excessive drinking university students. *Addicted. Behavior* 36(1-2), 87-94 (2011).
- Practical psychodiagnostics. Techniques and tests: education guidance/dya raigorodskiy. Samara Bahrah-m, 672 (2011).
- Badiiev IV. The typology of character accentuations at teenagers. Messenger of Buryat State University. 5(1), 60-65 (2015).