MANIFESTATIONS OF SELF-HARM IN RELATION WITH BINGE DRINKING TO STUDENTS FROM TIMIȘ COUNTY, ROMÂNIA

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MANIFESTATIONS OF SELF-HARM IN RELATION WITH BINGE DRINKING TO STUDENTS FROM TIMIȘ COUNTY, ROMÂNIA (ABSTRACT): Aim: The research investigated the feeling of sadness, suicidal thoughts and plans associated with binge drinking among students in Timis County, Romania. Material and methods: We applied a transversal population study to the representative sample of 2076 students, 62.49% girls and 37.51% boys with a mean age of 21.09 years with SD 1.48. Results: The boys practice binge drinking significantly more often than girls, the difference is small to medium: prevalence of 22.1% for boys and 8.7% girls, 1-2 times in the last month. Conclusions: Only girls who practice this behavior, increased frequency of engaging in binge drinking is associated with feelings of sadness, suicidal thoughts and suicide plans in a small measure, but significant. Keywords: STUDENTS, BINGE DRINKING, SELF-HARM.

Binge drinking, the consumption of increased amounts of alcohol on one occasion, typically at age teenager and young adult, has exclusively negative effects on health depending on the amount and frequency of practicing this behavior (1) and it is the cause of various social problems (2. 3). There is a demonstrated association between the problems of excessive alcohol use and depression symptoms. Results of a longitudinal study (4) which followed a group of 20.728 from teenagers to young adulthood, indicated that excessive alcohol use and depressive symptoms showed a positive association during the period of adolescence to young adulthood. Elevated levels of depressive symptoms were associated with increased baseline levels of alcohol consumption, especially in women, but with faster growth in alcohol consumption in men.

In a review (5) on the same subject, meaning the relationship between symptoms of major depression and inappropriate consumption of alcohol, Boden stated that the presence of either conditions will double your risk of other problems. The two disorders can not be fully explained by common factors that influence them, but it appears to be causally related disorders. Other evidence suggests that causal association between alcohol and depression is one in which alcohol consumption increases the risk of depression, rather than vice versa. Potential mechanisms underlying causal links include neurophysiological and metabolic changes resulting from exposure to alcohol.
Other authors (6) found that alcohol abuse, depression and suicidal behavior in young people presenting biochemical and genetic correlation. Alcohol consumption is shown to be a distal and proximal cause of the attempted suicide among young people. People with alcoholism and depression that have attempted suicide, often had significantly higher levels of aggression and impulsivity. These factors may have been caused or influenced by the underdeveloped coping skills, and comorbid psychiatric disorders. Such behaviours could be a consequence of childhood abuse, social pressure, low self-esteem and / or delinquency. Some studies suggest that the depression encourage the use of alcohol in the form of self-medication, which then leads to suicide, while others require that the starting alcohol consumption is responsible for increasing the symptoms of depression and suicide thoughts among adolescents.

We proposed a study on some manifestations of self-harm (feelings of sadness, suicidal thoughts and plans) associated with binge drinking among students in Timiș County, România.

**MATERIAL AND METHODS**

The representative sample of students in the study totaled 2076 students from higher education institutions from Timiș county, 62.49% (1296) girls and 37.51% (778) boys. The average age was 21.09 years with SD 1.48, ages ranging from 18-25 years old.

The method used was the transversal population study based on the use of CORT Questionnaire 2004 on health risk behaviors in adolescents and young people. The questionnaire was validated by the Ethics Committee of the University of Medicine and Pharmacy "Victor Babeș" Timișoara.

The study was conducted with the written approval of the higher education establishments from Timiș. Inclusion of young people in the study carried out only after their expressed consent of each participant in the study, with respect for all the individual rights.

The processing and interpretation of data was done by using modern statistical methods and advanced medical PASW 18 software (SPSS 18) 2010. The value of statistical significance was set at p <0.05, except in cases where the Bonferroni correction was applied, the acceptable threshold level was stated in the text. For ordinal data comparisons we used Mann Whitney and Kruskal test-Wallis. Chi-square test was used for ordinal data / nominal.

**RESULTS**

1. **Binge drinking.** By practicing binge-drinking, or increased consumption of more than 5 servings of alcohol on one occasion, we have found: for boys group 11.6% (89) have practiced binge drinking more than 3 times in the last month, 22.1% (170) have practiced 1-2 times, and 66.3% (510) did not practice binge drinking in the last month; 2.5% for the group of girls (32) have practiced binge drinking more than 3 times in the last month, 8.7% (112) have practiced 1-2 times, and 88.8% (1145) have not practiced binge drinking in the last month. The frequency of practicing binge drinking is significantly higher in boys than girls, U = 381 799, z = -12.63, p <0.001, r = 0.27, the size difference is considered small to medium based on the Cohen's criteria (fig. 1).

2. **Feelings of sadness.** A percentage of 16.6% (127) of boys and 25.1% (323) of girls had experienced feelings of sadness for a longer period of 2 weeks during the last year. Girls had these feelings significantly more often than boys, U = 450454.5,
z = -4.49, p <0.001, r = 0.09, the size difference is small.

In the group of boys, 33.6% (32) of those who experienced feelings of sadness practiced binge drinking, and of those who have not experienced these feelings 34.0% (226) have practiced binge drinking. Among boys, we found no significant differences between the frequency of binge drinking and experiencing feelings of sadness or hopeless situations more than two weeks in the past year, p = 0.932 (fig. 2).

In the group of girls, 17.2% (55) of those who have experienced feelings of sadness practiced binge drinking, and of girls who have not experienced these feelings 9.3% (89) have practiced binge drinking. We found a significantly higher frequency of binge drinking among the girls who have experienced the feeling of sadness, compared to the group that did not experience this feeling U = 141897.5, z = -3.95, p <0.001, r = 0.11, the difference is small in size (fig. 3).

Fig. 1. Percentage distribution of students according to frequency of binge drinking practice last month, by gender

Fig. 2. Percentage distribution of students according to the experience of feelings of sadness or hopeless situations more than two weeks in the past year and frequency of binge drinking practicing during the past month among boys
3. Suicide thoughts. A percentage of 7.2% (55) of the boys and 8.9% (114) of the girls had suicidal thoughts during the last year. Among the girls and the boys we did not find significant differences regarding suicidal thoughts, $p = 0.171$.

![Fig. 3. Distribution of students according to the experience of feelings of sadness or hopeless situations more than two weeks in the past year and frequency of binge drinking practicing during the last month among girls](image)

In the boys group, 34.5% (19) of those who had thoughts of suicide practiced binge drinking, and of those who did not have these thoughts 33.8% (239) have practiced binge drinking. We found no significant differences between the frequency of binge drinking and the existence of suicidal thoughts in the past year, $p = 0.873$ (fig. 4).

In the group of girls, 19.5% (22) of those who had thoughts of suicide practiced binge drinking, and of those who did not have these thoughts 10.5% (122) have practiced binge drinking. We found a significantly higher frequency of binge drinking in the group who had suicidal thoughts, compared to the group who did not had suicidal thoughts in the past year $U = 60154$, $z = -2.78$, $p = 0.005$, $r = 0.08$, the difference is small in size (fig. 5).

![Fig. 4. Percentage distribution of students according to the presence of suicidal thoughts during the past year and frequency of binge drinking practicing in the past month among boys](image)
4. Suicide plan. A percentage of 3.0% (23) of the boys and 2.8% (36) of girls had suicidal plan last year. We did not found significant differences in the presence of suicide plans between girls and boys, p = 0.800.

In the group of boys, 43.4% (10) of those who had suicide plan practiced binge drinking, and of those who did not plan, 33.5% (248) have practiced binge drinking. In boys, we found no significant differences between the frequency of binge drinking and the existence of a suicide plan in the past year, p = 0.343 (fig. 6).

In the group of girls 27.8% (10) of those who had suicide plan practiced binge drinking, and of girls who had no plan, 10.8% (134) have practiced binge drinking. We found a significantly higher frequency of binge drinking in group who had suicidal thoughts, compared with the group who had no suicidal thoughts in the past year U = 60 154, z = -2.78, p = 0.005, r = 0.08, the difference is small difference is small in size (fig. 7).
DISCUSSIONS

Alcohol consumption was associated with depression, but the studies made by Spear (7) failed to determine whether adolescents and young people consume alcohol because of depression or depression occurs due to the toxic effects of alcohol. Research carried out on people who abuse alcohol, found a smaller number of neurons in the locus coeruleus from the stem cells of the brain, compared to people who did not use alcohol, suggesting that alcohol could alter brain structure and trigger such a behavior response (8).

Other authors (9) have shown that chronic alcohol consumption in adolescents may increase feelings of depression, due to lower levels of serotonin. The young people involved in the inappropriate consumption of substances, 60% were diagnosed with psychiatric pathologies, according to a study by Armstrong and colleagues (10).

Galaif et al. (11) reported a 100% increase in rates of suicide between 1980 and 1999 in children of 10-14 years and an increase of 14% in those aged between 15-19 years old. They argued that the diagnosis of major depression was the most common reported comorbidity in suicide and alcohol abuse, and there is a mutual synergistic relationship between depression and alcohol abuse. They could not prove a causal relationship between the two diseases.

Groves’s study (9) estimates that alcohol would increase the likelihood of suicide 17 times for boys and 3 times in girls. It is possible that adolescents who abuse alcohol have a greater risk of suicidal behavior because each of those two factors, depression and alcohol increase the risk of suicide independently, and together their action is likely to be synergistic.

CONCLUSIONS

In our study, the prevalence of practicing binge drinking 1-2 times in the last month is 22.1% for boys and 8.7% girls and more than 3 times in the last month is 11.6% for boys and 2.5% girls. The boys practice binge drinking significantly more often than girls, the difference size is small to medium.

A percentage of 16.6% of boys and 25.1% of girls had experienced feelings of sadness for a period longer than 2 weeks during the last year. Girls had these feel-
ings significantly more often than boys, the size difference is small. In boys, we found no association between the frequency of binge drinking and experiencing feelings of sadness or hopeless situations more than two weeks in the past year. In girls, the increased frequency of engaging in binge drinking is associated with feelings of sadness, a far small but significant percentage.

A percentage of 7.2% of boys and 8.9% of girls have had suicidal thoughts in the last year, no significant differences between genders. 34.5% boys respectively 19.5% of the girls who practiced binge drinking had thoughts of suicide. In boys, we found no association between the frequency of binge drinking and suicidal thoughts in the past year, but in girls, increased frequency of engaging in binge drinking is associated with suicidal thoughts in a small measure, but significant.

With no differences between sexes, 3.0 percentage of boys and 2.8 of girls have had suicidal plan last year. 43.4% boys respectively 27.8% of the girls who practiced binge drinking had suicidal plan. In boys, we found no association between the frequency of binge drinking and suicide plans in the past year, but in girls, increased frequency of engaging in binge drinking is associated with suicide plans, in a small measure, but significant.

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