

**SPORT FACTORS AND ALCOHOL CONSUMPTION AMONG ADOLESCENTS ON ISLAND BRAČ****Mia Perić, Hrvoje Plazibat and Ivana Dabo***Faculty of Kinesiology, Split, Croatia**Original scientific paper***Abstract**

*The aim of this study was to explore correlation of alcohol consumption with sport factors in high school adolescents on island Brač. The participants were all high school students, 267 (114 Female, 153 Male), from all schools on island Brač (Supetar, Bol and Pučišća), aged 16.25±1.48 years. For the purpose of this study, we used an extensive, previously validated, self-administered AUDIT questionnaire which also included socio-demographic factors. Collected data was processed in Statistica by descriptive statistics, frequency tables and logistic regression for some of the variables examined. The results show that 29.21% of students reported harmful alcohol drinking, while 70.78% belong to the category of non-harmful alcohol consumption. "Sport result" (54%) increases possibility of harmful alcohol drinking, while other sport factors are not preventive ones. Preventive and education programme, as well as future studies are needed to prevent potential health and social risk of adolescents living and studying on island.*

**Key words:** *alcohol drinking, island, high school students, sport result.*

**Introduction**

Prevalence of alcohol drinking is more common type of substance use and misuse (SUM) among adolescents (McXarty, 2004). ESPAD (European School Survey Project on Alcohol and Other Drugs) study shows that Republic of Croatia, in the late 90s, was below the European average when harmful drinking among adolescent was observed. But the results from 2007 show that alcohol consumption among Croatian adolescents is above the average of EASPAD countries.

Brač is an island, around 10km far from Split (second largest town in Croatia). After the war in 1990 the island notes a decrease of population caused by social-economic reasons, which resulted in emigration of younger population. Post war related stress often influences on substance use and misuse and therefore, the incidence of alcohol drinking as well (Eytan & Gex-Fabry, 2012).

Although the island itself, with the reduced number of adolescents living on it, is geographically isolated from the land, alcohol consumption is not so different from the residents on land. In general, Sakoman, Kuzman & Raboteg (1999), consider that young people start with alcohol consumption even before high school, but there is a lack of studies about that problem. There is not even one study about alcohol consumption among adolescents on island Brač. Considering the deficiency of studies, there is no such thing as preventive strategy against substance use and misuse.

The aim of this study was to explore how sport factors correlates alcohol consumption in high school adolescents on island Brač. Considering previous studies (Moore & Werch, 2005; Bezinović & Malatestinić, 2009;) that showed differences in behaviour among male and female adolescents, extra aim of this study was to determine gender differences when observing alcohol consumption.

According to Šajber, Tahiraj, Zenic, Perić & Sekulić (2016), sport factors were not preventive ones in alcohol consumption and that alcohol drinking has potential in addictive behaviour, it is very important who consumes it, how and how often, so that negative consequences on individuals or next generation could be reduced or eliminated.

**Methods**

The participants were all students from all high schools on island Brač. That included first and second grade students from Supetar (gymnasium, mechanical, hairdressing, merchant and chef's direction), Bol (gymnasium, tourism and hospitality direction) and Pučišća (stonemason direction). There were 153 boys and 114 girls aged 16.25±1.48 years. For the purpose of this study, we used an extensive self-administered questionnaire, which was previously applied and found to be valid in a similar sample of subjects in surrounding countries (Modrić, Zenić & Sekulić, 2011; Sekulić, Ostojić, M., Ostojić, Z., & Hajdarević, 2012; Zenić, Terzić, Rodek, Spasić & Sekulić, 2015). The survey was administered on a single day, meaning that all high school students who were at school on that day were invited to participate. The response rate was over 99%.

No identifying data were collected (e.g., date of birth, city of birth, or specific club or sport participation). Multiple-choice answers were offered when possible. Each participant was told that the testing was strictly anonymous, that he/she could refuse to participate and that he/she could leave some questions and/or the entire questionnaire unanswered. Approval for applying questionnaire was given by parents, school board and principal. The study fulfilled all ethical guidelines and received the approval of the Ethical Boards from corresponding author's institution.

The independent variables observed were socio-demographic, academic achievement, sports and familial factors. The dependent variables consisted of alcohol consumption measured by the AUDIT questionnaire. World Health Organization (WHO) made AUDIT test (Alcohol Use Disorders Identification Test) which was used for measuring alcohol consumption. Applying AUDIT scale (comprising 10 items with the scores for each item ranging from 0 to 4). The questionnaire defines a hypothetical range of 0–40), overall scores of answers were divided in two categories: 'harmful drinking' (scores of 11 and above) and 'non-

harmful drinking' (scores below 11) for a meaningful comparison with previous studies from the territory (Sajber et al., 2016). Apart from calculation of frequencies and percentages for observed variables the relationships between sport factors and harmful drinking were examined using simple logistic regression calculations adjusted for gender. The categorical criterion of harmful drinking ("0" for scores below 11- NHD and "1" for scores of 11 and above - HD) was observed. The 95% level of statistical significance was applied. Statistica version 12 (Statsfot, Tulsa, Ok, USA) was used for all analyses.

**Results**

Table 1 Prevalence of alcohol consumption, percentage of reported frequency for genders.

	Prevalence of alcohol consumption, percentage of reported frequency for boys and girls		Prevalence of alcohol consumption, percentage of reported frequency for girls		Prevalence of alcohol consumption, percentage of reported frequency for boys	
	Harmful Alcohol Consumption *NO	Harmful Alcohol Consumption *YES	Harmful Alcohol Consumption *NO	Harmful Alcohol Consumption *YES	Harmful Alcohol Consumption *NO	Harmful Alcohol Consumption *YES
<b>Number of Students</b>	189	78	87	27	102	51
<b>Cumulative Number of Study Participants</b>	189	267	87	114	102	153
<b>Percentage %</b>	70.78	29.21	76.31	23.68	66.66	33.33
<b>Cumulative Percentage</b>	70.78	100	23.68	100	66.66	100

Table 2 Sport factors as correlates of harmful alcohol drinking (HAD).

VARIABLES	OR	95% CI	AOR	95% CI
<b>INDIV. SPORT</b>	0.79	0.55-1.15	0.82	0.56-1.19
<b>TEAM SPORT</b>	0.92	0.62-1.37	0.97	0.64-1.45
<b>SPORT EXP</b>	1.25	0.94-1.65	1.21	0.90-1.63
<b>SPORT RES</b>	1.54*	1.10-2.16	1.52*	1.07-2.15
<b>HARD TRAIN</b>	1.39	0.89-2.18	1.38	0.87-2.17
<b>TRAINpWEEK</b>	0.76	0.48-1.19	0.73	0.45-1.17

Legend: OR-odd ratio, 95% CI-confidence interval, AOR-odd ratio adjusted for gender, INDIV.SPORT-individual sport, TEAM SPORT-team sport, SPORT EXP-experience in sport, SPORT RES-sport result, HARD TRAIN-hard training, TRAINpWEEK-training per week.

The results in Table 1 show that 189 from 267 students (70.78%) consume alcohol in non-harmful level, while 78 students (29.21%) reported harmful alcohol consumption. Also indicates that 87 from 144 female students (76.31%) reported non-harmful alcohol consumption, while 27 of them (23.68%) reported harmful alcohol drinking. Observing same table, 102 from 153 male students (66.66%) and (76.31%) girls reported non-harmful alcohol consumption. In table 2, results show that from all sport factor variables, Sport result has 54% possibility that the student will consume alcohol in harmful amounts if he/she has a better result in sport.

**Discussion and conclusion**

In this study, both, boys and girls adolescents consume alcohol. Comparing to other studies, the percentages are not so large (as in Denmark) but still are worrying. Percentage of reported frequency for prevalence of alcohol consumption is a bit below of national percentage level from 2014 (Pejnović, 2017). Our results showed higher prevalence of harmful alcohol drinking in boys. Possible reason for less harmful drinking in girls is a consequence of some society behaviour where is more acceptable for boys to drink unlike girls. Second reason is «firming own status in society» by drinking alcohol, which is frequently among boys. Also is important to mention the occasions boys are related to more often than girls like watching sports events in cafe bars or social group gatherings. Specific thing about the island is that there is a lack of places for alcohol consumption especially during «non-touristic season». Number of working cafe bars is significantly reduced, operating hours of the ones working is shortened so they have less opportunity to drink unlike their peers on land. Achieved sport results (sport success) are evidenced as a risk factor for harmful alcohol drinking. It is not the fact that justifies the act of drinking, but celebrating good result in sports usually ends with alcohol, no matter who celebrates it, boys or girls. Comparing to other studies the results shouldn't be neglected.

McCarty et al., (2004) show how alcohol-drinking problem in adolescents is connected with alcohol consumption in adults. It is well known that the alcohol consumption problem is culturally specific issue (Šajber, 2016). According to ESPAD (2007), the highest percentage of „binge drinkers“ in EU is in Denmark. They stand out how regularly 49% of 16-year-old students (51% male and 47% female) were drunk in last 30 days. Important thing to notice is the fact that the participants in this study were younger high-school students (first and second grade). At that age, there is a possibility that they still haven't got chance or reason to drink or still haven't entered the adolescent period where they «firm own status in society». Engagement in sport does not show up as a preventive factor in

harmful alcohol drinking. Preventive and education programme is necessary to reduce alcohol consumption and potential addictive behaviour among adolescents. Considering that the participants were adolescents living on the island, which puts them in isolated surroundings and society, also considering lack of specific studies, we can't tell if the results were expected. However, the reasons why they more or less consume alcohol are rather specific. It is hard to compare results to some other island population because there are no any kinds of studies among them. So it would be of great importance to do studies about problematic behaviour of adolescents living and studying on island, all with aim of preventing potential health and social risk.

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## **SPORTSKI FAKTORI I KONZUMACIJA ALKOHOLA KOD ADOLESCENATA NA OTOKU BRAČU**

### **Sažetak**

*Cilj ovog istraživanja bio je ispitati povezanost konzumaciju alkohola sa sportskim faktorima kod srednjoškolaca na otoku Braču. Istraživanje je obuhvatilo 267 ispitanika (114 ženskih, 153 muških), prosječne dobi 16,25±1,48 godina. Sudjelovali su svi učenici svih srednjih škola na otoku Braču (iz Supetra, Bola i Pučišća). U provedbi istraživanja korišten je prethodno validiran AUDIT upitnik koji je bio proširen sociodemografskim te sportskim faktorima. Prikupljeni podaci obrađeni su u programu Statistika te su deskriptivnom statistikom, frekvencijskim tablicama i regresijskom analizom obrađene neke od prikupljenih varijabli. Rezultati ukazuju kako je 29,21% učenika prijavilo da konzumira alkohol u količinama opasnim po zdravlje dok je 70,78% onih učenika koji konzumiraju alkohol u količinama koje nisu opasne za zdravlje. S boljim „sportskim rezultatom“ (54%) povećava se mogućnost konzumacije alkohola u količinama opasnim po zdravlje, dok se ostali sportski faktori nisu pokazali kao preventivni za isti problem. Potrebno je provesti preventivne mjere i edukacijski program kako bi se spriječili potencijalni zdravstveni te socijalni problemi kod otočkih adolescenata. Daljnja istraživanja također bi pomogla smanjenju i rješavanju navedenog problema.*

**Ključne riječi:** konzumacija alkohola, otok, učenici, sportski rezultat.

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