

Depressive symptoms and alcohol use among adolescents

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INTRODUCTION

Adolescence is an important period to understand the development of depressive symptomatology and alcohol use. Few studies have assessed the relationship between depressive symptoms and early onset of alcohol use in adolescents. Due to the consequences of early consumption of alcoholic beverages, it becomes essential to prevent major consequences later in life.

OBJECTIVE

To evaluate the association between depressive symptoms and alcohol use among 13-year-old adolescents.

METHODS

We assembled a population-based cohort of urban adolescents, born in 1990, enrolled in public and private schools of Porto (EPITeen)¹, and 2160 agreed to participate. In the final analysis we considered those with complete information on the Beck Depressive Inventory II (BDI) and data on alcohol use (1016 girls and 919 boys).

Information was collected by self-completed questionnaires. Depressive symptoms were evaluated using Beck Depressive Inventory II (BDI)². Parents history of depression was self-reported and assessed for each parent.

The Mann-Whitney test was used to compare BDI scores. Odds ratio (OR) and multiple linear regression (β) were performed to estimate the magnitude of associations with 95% confidence intervals (95% CI).

References

¹ Ramos and Barros (2007) Family and school determinants of overweight in 13-year-old Portuguese adolescents. *Acta Paediatr*, 96, 281-6.

² Beck et al. (1996) *Manual for the Beck Depression Inventory II.*, San Antonio, TX, Psychological Corporation.

RESULTS

Overall, 50.5% girls and 44.9% boys have experimented alcohol and 4.6% girls and 6.7% boys have drunk one drink at least once time per month at 13 years old.

For both genders, after adjustment, being experimenter or drinker was significantly associated with have friends who drink and tobacco use. We also found a significant association between being experimenter and parents' education (table 1).

Table 1 - Association between social and behavioural characteristics and alcohol use, by gender.

	Girls		Boys		
	OR Crude (95%CI)	OR Adjusted* (95%CI)	OR Crude (95%CI)	OR Adjusted* (95%CI)	
Experimenter	Parents' education (years)				
	≤6	1	1	1	1
	7-9	1.43 (0.97-2.10)	1.28 (0.79-2.09)	1.43 (0.90-2.27)	1.25 (0.70-2.25)
	10-12	2.56 (1.76-3.72)	1.86 (1.19-2.93)	1.21 (0.80-1.83)	0.94 (0.56-1.57)
	>12	2.44 (1.67-3.56)	1.76 (1.11-2.78)	2.14 (1.41-3.26)	1.92 (1.14-3.25)
	Smoking				
	Never	1	1	1	1
	Ever	2.92 (2.13-3.99)	2.44 (1.62-3.66)	2.21 (1.54-3.17)	2.46 (1.43-4.23)
	People who drink at home				
	No	1	1	1	1
Yes	1.74 (1.29-2.34)	1.33 (0.91-1.94)	1.62 (1.18-2.22)	1.79 (1.16-2.77)	
Friends who drink					
No	1	1	1	1	
Yes	2.88 (2.11-3.92)	2.50 (1.77-3.53)	3.45 (2.50-4.76)	3.18 (2.15-4.66)	
Drinker	Parents' education (years)				
	≤6	1	1	1	1
	7-9	1.77 (0.62-5.06)	1.39 (0.45-4.30)	1.73 (0.77-3.87)	2.10 (0.79-5.62)
	10-12	2.80 (1.04-7.50)	1.33 (0.44-4.05)	0.80 (0.35-1.83)	0.47 (0.17-1.33)
	>12	2.87 (1.07-7.69)	1.57 (0.53-4.62)	1.45 (0.65-3.23)	1.35 (0.52-3.53)
	Smoking				
	Never	1	1	1	1
	Ever	7.95 (4.24-14.91)	6.86 (3.09-15.20)	4.32 (2.40-7.80)	5.89 (2.67-13.01)
	People who drink at home				
	No	1	1	1	1
Yes	1.56 (0.78-3.09)	1.15 (0.47-2.81)	6.41 (2.27-18.07)	5.06 (1.45-17.62)	
Friends who drink					
No	1	1	1	1	
Yes	7.70 (3.72-15.94)	6.42 (2.70-15.22)	8.34 (4.37-15.89)	7.32 (3.48-15.43)	

* Adjusted for parental education, having friends who drink, cohabit with people who drink and tobacco use.

Adolescents who have drunk presented a significant higher score in BDI than those that have never drunk. In girls the median (25th percentile -75th percentile) was 6.01 (2.00-10.00) among those who have drunk, and 6.38 (3.00-11.99) among never drinkers, $p=0.002$. In boys the scores were 3.00 (1.01-6.01) and 3.99 (1.01-6.99), respectively, $p=0.039$. However, after adjustment, the association between alcohol use and depressive symptoms was not statistically significant (table 2).

Table 2 - Association between scores on the Beck Depression Inventory-II (BDI) and alcohol use.

Alcohol use	Girls		Boys	
	β^*	95% CI	β^*	95% CI
Never				
Ever**	0.583	-0.483; 1.648	0.623	-0.170; 1.417

*Adjusted for parental education and parental history of depression, having friends who drink and tobacco use;

**Ever drink includes adolescents who reported that only experienced or who drink at least one alcoholic drink per month.

DISCUSSION

Our results are consistent with the literature regarding the association between alcohol use and the peer pressure, cohabit with people who drink and the clustering of behaviours. Regarding depressive symptoms, the lack of significant association with drinking behaviour might be explained by the fact that our adolescents classified as ever drunk were mostly not regular consumers but just have experimented.

CONCLUSIONS

Among those 13-year-old adolescents, parents' education, smoking and have friends who drink were associated with drinking behaviour. After adjustment, depressive symptoms did not show a significant association with alcohol use.