

ALCOHOL USE IN ASSOCIATION WITH UNORGANIZED SOCIAL ACTIVITIES IN FREE TIME AND ACCESSIBILITY OF ALCOHOL AMONG EARLY ADOLESCENTS

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Abstract

Objectives: This study aimed to explore the role of unorganized social activities in free time and the accessibility of alcohol in explaining alcohol use in the past 30 days among early adolescents.

Methods: A representative sample of 653 (52.9% girls) early adolescents (mean age =11.72 at T1; mean age = 13.09 at T5) was collected within a five-wave longitudinal design with a baseline (T1), 3-month follow up (T2), 6-month follow-up (T3), 12-month follow-up (T4) and 15-month follow-up (T5) measurement. Alcohol use in the past 30 days and accessibility of alcohol was measured by the questionnaire of the international study ESPAD. Student's free time activities questionnaire was also used from ESPAD to represent unorganized social activities. Respondent's alcohol use (dichotomized: 0-not used, 1-used) served as the outcome variable and accessibility of alcohol and unorganized social activities served as the independent variables. Binary logistic regressions were used to analyse the data at every measurement period. The role of gender as a potential moderator of alcohol use was further addressed. Alcohol use at T1 was used as a control variable.

Findings: In each of the 5 measurement points, both accessibility of alcohol and participation in unorganized social activities increased the probability of alcohol use while controlling for alcohol use at T1. Gender differences in alcohol use were found at T1 with boys reporting higher alcohol use than girls. Moreover, a moderation effect of gender and accessibility of alcohol on alcohol use was confirmed at T1 showing that the probability of alcohol use was the highest for the girls with a high accessibility to alcohol.

Conclusions: This study contributes to the current knowledge regarding predictors of alcohol use among early adolescents.

Keywords: *Alcohol drinking, unorganized social activities, alcohol accessibility.*

1. Introduction

It has been widely claimed that organized leisure activities such as art, hobbies or youth organizations contribute to the healthy development of adolescents and reduce the risk of delinquency (Munger, 2015). On the other hand, peer oriented unorganized activities such as hanging out with friends and partying tend to provide opportunities for alcohol abuse and anti-social behaviour (Persson et al., 2007). Environmental approaches which prevent drinking among young people have mainly focused on modifying the context in which drinking occurs. Yet, despite great efforts, alcohol remains available to young people who access it from a variety of retail and social sources (Flewling et al, 2013). The accessibility of alcohol is perceived as prominent among the factors associated with a higher level of alcohol consumption (Popova, 2009). However, few studies have addressed the potential of unorganized social activities and accessibility of alcohol in the developmental period of early adolescents where peer-oriented activities play a key role in adolescent's life (Brauer et al., 2015) and alcohol is more available for them (Flewling et al, 2013). Thus, we aimed to explore these variables over a longer time period.

2. Design

A longitudinal design was used.

3. Objectives

The objective of this study was to examine the role of unorganized social activities in free time and accessibility of alcohol in explaining alcohol use in the past 30 days among early adolescents.

4. Methods

4.1. Sample and procedure

The data were collected in five waves of the longitudinal study with a baseline in September 2013 (T1), a 3 month follow up (T2), 6 month follow up (T3), 12 month follow up (T4) and 15 month follow up (T5) in 31 randomly selected Slovak primary schools. The sample consisted of 653 (52.9% girls) early adolescents (mean age =11.72 at T1; mean age = 13.09 at T5).

4.2. Measures

The early adolescents were asked to fill in a paper version of the questionnaire regarding their alcohol use in the past 30 days, accessibility of alcohol and participation in unorganized social activities in free time. Participation in the study was anonymous.

- Alcohol use in the past 30 days was explored by the question: “On how many occasions (if any) have you had any alcoholic beverage to drink during the last 30 days?” The possible answers were: 0, 1-2, 3-5, 6-9, 10-19, 20-39, 40 or more. We dichotomized the variable into “not used alcohol=0” versus “used alcohol=1”.
- The accessibility of alcohol was identified by the following question: „If you wanted, would it be difficult or easy for you to obtain alcohol?”, with response options: impossible (1) to very easy (5)
- Participation in unorganized social activities were assessed by a single item measuring how often you go out in the evening (to a disco, cafe, party, etc.) with possible answers from never (1) to almost every day (5)

4.3. Statistical analyses

Five separate binary logistic regression models were used for every measurement period to assess the association between alcohol use in the past 30 days and accessibility of alcohol and participation in unorganized social activities. Alcohol use in the past 30 days served as the dependent variable while accessibility of alcohol and participation in unorganized social activities served as independent variables. A T-test was performed to assess the gender differences in all independent variables. In order to assess the potentially different effects in gender, all interactions with gender were tested. Alcohol use at T1 was used as a control variable.

4.4. Results

The results showed that about 9.3% of early adolescents (12.7% boys, 6.4% girls) in T1 had had experience with alcohol use in the past 30 days while in T5 the number of early adolescents with experience of alcohol use in the past 30 days had risen to 21.3% (25.1% boys, 18.3% girls). Gender differences in alcohol use were found at T1 with boys reporting higher alcohol use than girls.

The descriptive analysis and gender differences in all explored variables in every measurement period are presented in Table 1. Generally, participation in unorganized social activities rises among boys and girls within 18 months with significant gender differences in T2. The rising tendencies of scores within 18 months were also identified in accessibility of alcohol in both boys and girls with significant gender differences in T3.

Table 1. The descriptive characteristics in the measured variables according to gender.

	Girls		Boys		t	Sig.
	Mean	SD	Mean	SD		
T1 Unorganized social activities	1.67	1.19	1.63	1.06	-0.47	0.63
T2 Unorganized social activities	1.56	1.05	1.78	1.18	2.18	<.05
T3 Unorganized social activities	1.70	1.09	1.86	1.19	1.15	0.12
T4 Unorganized social activities	1.95	1.23	2.01	1.28	0.47	0.63
T5 Unorganized social activities	2.02	1.33	2.00	1.30	0.13	0.89
T1 Accessibility of alcohol	1.75	1.20	1.81	1.29	0.55	0.57
T2 Accessibility of alcohol	1.95	1.32	2.14	1.42	1.40	0.16
T3 Accessibility of alcohol	2.14	1.42	2.50	1.58	2.39	<.05
T4 Accessibility of alcohol	2.53	1.51	2.72	1.61	1.11	0.26
T5 Accessibility of alcohol	2.76	1.54	2.97	1.60	1.19	0.23

Accessibility of alcohol and participation in unorganized social activities were significantly associated with the experience of alcohol use in the past 30 days in all 5 measurement periods. Early adolescents with higher levels of accessibility of alcohol and higher participation in unorganized social activities tend to drink more.

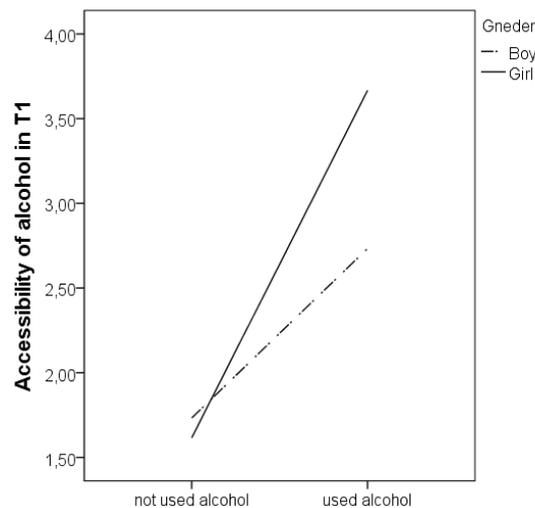
Table 2. Regression models for alcohol use in five measurement periods among early adolescents.

Model T1 (R² = 0,12)						
Predictors	B	S.E	Exp(B)	95% C. I for Exp(B)		Sig
				Lower	Upper	
Gender*	-2.40	0.77	0.90	0.02	0.41	<.05
Unorganized social activities	0.36	0.12	1.43	1.12	1.83	<.001
Accessibility of alcohol	0.39	0.13	1.47	1.13	1.92	<.001
Interaction Gender X Accessibility of alcohol	0.62	0.22	1.88	1.20	2.95	<.001
Model T2 (R² = 0,11)						
Alcohol use in T1	0.53	0.50	1.70	0.62	4.60	0.29
Gender*	0.44	0.36	1.56	0.76	3.18	0.22
Unorganized social activities	0.54	0.12	1.71	1.35	2.17	<.001
Accessibility of alcohol	0.39	0.12	1.48	1.16	1.89	<.001
Model T3 (R² = 0,16)						
Alcohol use in T1	0.93	0.44	2.54	1.07	6.03	<.05
Gender*	0.03	0.31	1.03	0.56	1.92	0.90
Unorganized social activities	0.32	0.12	1.37	1.07	1.75	<.05
Accessibility of alcohol	0.60	0.11	1.81	1.46	2.25	<.001
Model T4 (R² = 0,26)						
Alcohol use in T1	-0.10	0.52	0.90	0.32	2.53	0.84
Gender*	-0.20	0.36	0.81	0.40	1.65	0.56
Unorganized social activities	0.59	0.13	1.80	1.37	2.36	<.001
Accessibility of alcohol	0.92	0.15	2.52	1.86	3.44	<.001
Model T5 (R² = 0,20)						
Alcohol use in T1	0.40	0.45	1.49	0.61	3.60	0.37
Gender*	-0.32	0.31	0.72	0.39	1.33	0.30
Unorganized social activities	0.25	0.11	1.29	1.03	1.60	<.05
Accessibility of alcohol	0.72	0.12	2.07	1.62	2.65	<.001

Note: * boys as a reference group

Regarding the moderation effect, the relationship between alcohol use and accessibility of alcohol varies depending on gender in T1. Girls with a high accessibility of alcohol show a higher probability of alcohol use compared to boys with a high accessibility of alcohol. Thus, it seems that gender moderates the relationship between accessibility of alcohol and alcohol use in the past 30 days. The visualisation can be seen in Figure 1. The moderation effects in other measurement periods were tested but insignificant and are thus not displayed.

Figure 1. Interaction effect of gender and accessibility of alcohol on alcohol use in T1.



5. Discussion and conclusion

The findings of this study show that accessibility of alcohol and participation in unorganized social activities play an important role in alcohol use over a longer time period in early adolescence. Moreover, a significant and unique moderator effect of gender on the relationship between accessibility of alcohol and alcohol use was also found.

In our study, the participation in unorganized social activities was directly associated with alcohol use. We observed that with rising age, there is an increase in participation in unorganized social activities for boys and girls. This can be associated with the developmental period characterized by the higher need for the presence of peers, a lack of structure and the absence of adult supervision making risk behaviour both easier and more rewarding (Osgood et al., 2005). These situations are most prevalent in public locations e.g. bars or discos (Forsyth & Barnard, 2000). With regard to drinking location and leisure time activities, it has been shown that drinking alcohol at home is associated with lower alcohol consumption than drinking outside the home (Clapp et al., 2006) and the likelihood of alcohol use increased in the presence of peers (Grune et al., 2017).

In our study, it was found that a higher level of accessibility of alcohol was associated with a higher level of alcohol use. Despite centralised controls of alcohol availability (taxes), promotion regulation, controlled opening hours and age restriction (Hay et al., 2009), early adolescent can access alcohol either in the home environment (Komro et al., 2007) or during unorganized social activities with peers. Furthermore, girls with higher accessibility of alcohol are more likely to use alcohol when compared to boys. Thus, it seems that girls are more prone to consume alcohol when it is accessible for them.

Moreover, the results show that with the increasing age, there is an increase of explained variance in every regression model suggesting that unorganized social activities and accessibility of alcohol play a larger role in explaining alcohol use with increasing age. Thus the general importance of any activity, class or youth groups (scouts or youth clubs), sports, dance activities (yoga, aerobics, dance class) to provide an organized and safe way of spending free time for early adolescents must be stressed.

The current results contribute to the previous findings mainly with respect to the moderating role of gender and might be beneficial in preventing alcohol use among boys and girl in early adolescents.

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