



Self-regulation, normative beliefs and alcohol consequences: study among university freshman from four European countries

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Background

High alcohol consumption is undoubtedly one of the most serious health and public issues across Europe. In addition to other licit and illicit drugs, it causes more than 4% of all deaths in the EU for those aged between 25 and 39. High self-regulation (SR) has been frequently found as a factor which may decrease levels of risky drinking. On the other hand, overestimated descriptive normative beliefs (NB) may serve as a powerful source of social influence on personal alcohol use. Both SR and NB may be especially important during the period when young adults leave their families and may feel less external control and more freedom to use alcohol what may lead to serious health consequences. Therefore this study explores the associations among SR and NB in relations to alcohol use and negative alcohol consequences.

Materials and methods

Measures

Data among 2671 first-year college students were collected in 2011. Students from the Czech Republic (n=357), Hungary (n=783), Lithuania (n=928) and Slovakia (603) who filled in the AUDIT test, Self-Regulation Questionnaire and questions regarding NB. Regression models (separately for each country) were computed to test whether different level of SR influences the relationship between NB and alcohol use and between alcohol use and negative consequences.

Statistical analyses

Firstly, a means comparison of the output and independent variables by country using a one-way ANOVA was performed. The effect size was calculated using partial eta squared estimating of effect size (Partial η^2). Following this, the study looked at whether SR moderates the relationship between normative beliefs and alcohol use and whether SR moderates the impact of alcohol use on negative consequences (dependence symptoms and harmful alcohol use). In order to do this, hierarchical regressions (IBM SPSS 21.0) were performed and three models were created for outcome variables: (1) alcohol use; (2) dependence symptoms and (3) harmful alcohol use. All three models were run separately for each country and were controlled for gender.

Results

Overestimated NB were positively associated with risky drinking in all countries and similarly alcohol use increased the level of negative consequences. Moreover, in predicting risk drinking and alcohol consequences, a moderation effect of SR was confirmed as associations among NB and alcohol use and among alcohol use and negative consequences were stronger among those students with lower SR (Table 1 and Table 2).

Main messages

- Students from all explored countries highly overestimated the actual alcohol use what was significantly associated with their higher alcohol consumption.
- Those students who overestimated the actual alcohol consumption but had higher levels of self-regulation were less likely to drink or report negative alcohol consequences than their peers.

Conclusion

The protective effect of SR on risky alcohol and consequences together with social norms approach may potentially improve the intervention accuracy and make it a promising target for intervention among young adults.

Table 1 Regression models predicting dependence symptoms

Variables	Czech Republic n=317		Hungary n=426		Lithuania n=373		Slovak Republic n=505	
	Model 1 β / t	Model 2 B / t	Model 1 β / t	Model 2 B / t	Model 1 β / t	Model 2 B / t	Model 1 β / t	Model 2 B / t
Gender	0.036	0.039	0.053	-0.050	-0.045	-0.047	-0.067	-0.187
Audit	0.547***	0.515***	0.318***	0.360***	0.413***	0.407***	0.419***	0.285***
SR	-0.105*	-0.092*	-0.164***	-0.162***	-0.108*	-0.118*	0.108**	-0.127
Audit x SR		-0.19***		-0.148**		-0.094*		-0.021
R2	0.318	0.353	0.165	0.185	0.204	0.213	0.205	0.205
R2 change		0.035		0.020		0.009		0.001
F change		16.751		10.558		4.124		0.263
Sig. F Change		0.000		0.001		0.043		ns.

Table 2 Regression models predicting harmful symptoms

Variables	Czech Republic n=317		Hungary n=426		Lithuania n=373		Slovak Republic n=505	
	Model 1 β / t	Model 2 B / t	Model 1 β / t	Model 2 β / t	Model 1 β / t	Model 2 β / t	Model 1 β / t	Model 2 β / t
Gender	-0.094	-0.093	-0.049	-0.044	-0.124*	-0.125*	-0.011	-0.016
Audit	0.507***	0.498***	0.305***	0.349***	0.361***	0.355***	0.479***	0.459***
SR	-0.036	-0.032	-0.110*	-0.107*	-0.158***	-0.166***	0.107**	-0.097*
Audit x SR		-0.050		-0.156***		-0.087*		-0.086*
R2	0.297	0.300	0.130	0.153	0.207	0.214	0.239	0.246
R2 change		0.002		0.023		0.007		0.007
F change		1.077		11.329		3.027		4.556
Sig. F Change		0.300		0.001		0.049		0.033