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Differential Association of Drinking Motives with Alcohol Use on Weekdays and Weekends

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Abstract

Drinking motives (DM) reflect the reasons why individuals drink alcohol. Weekdays are mainly dedicated to work, whereas weekends are generally associated with spending time with friends during special events or leisure activities; using alcohol on weekdays and weekends may also be related to different DM. This study examined whether DM were differentially associated with drinking volume (DV) on weekdays and weekends. A representative sample of 5,391 young Swiss men completed a questionnaire assessing weekday and weekend DV, as well as their DM, namely enhancement, social, coping, and conformity motives. Associations of DM with weekday and weekend DV were examined using structural equation models (SEM). Each DM was tested individually in a separate model; all associations were positive and generally stronger (except conformity) for weekend rather than for weekday DV. Further specific patterns of association were found when DM were entered into a single model simultaneously. Associations with weekday and with weekend DV were positive for enhancement and coping motives. However, associations were stronger with weekend rather than weekday DV for enhancement, and stronger with weekday than weekend DV for coping motives. Associations of social motives were not significant with weekend DV and negative with weekday DV. Conformity motives were negatively associated with weekend DV and positively related to weekday DV. These results suggest that interventions targeting enhancement motives should be particularly effective to decrease weekend drinking, whereas interventions on coping motives would be particularly effective to reduce alcohol use on weekdays.

Keywords: alcohol use, weekends, weekdays, drinking motives, young adults.

Introduction

Alcohol use is particularly prevalent in early adulthood and has been associated with a wide range of detrimental consequences when used in large quantities (Gmel, Rehm, & Kuntsche, 2003; Schulenberg & Maggs, 2002). Among the factors associated with alcohol use, drinking motives (DM) are generally considered as being the most proximal factors underlying drinking behaviours through which the influence of more distal factors, such as personality traits, are mediated (Cooper, 1994; Kuntsche, Knibbe, Engels, & Gmel, 2007). DM refer to the reasons for drinking alcohol and consist of two distinct dimensions (Cox & Klinger, 2004), namely valence (i.e., enhancement of a positive affect or reduction of a negative affect) and source (i.e., drinking to obtain an internal or an external reward). Crossing these two dimensions yields four distinct motives (Cooper, 1994): social DM (positive, external, e.g., drinking to make social gatherings more fun); conformity DM (negative, external, e.g., drinking to not feel left out); enhancement DM (positive, internal, e.g., drinking to get high); and coping DM (negative, internal, e.g., drinking to forget worries).

Commonly, in simple regressions (or correlations), all DM are positively interrelated and positively associated with alcohol use outcomes. Individuals also generally endorse social and enhancement motives more often than conformity and coping motives (Cooper, 1994; Kuntsche & Kuntsche, 2009). When all DM are entered into a model simultaneously (i.e., as in multiple regression), however, associations of social and conformity DM with alcohol use are generally reduced or even become negative (e.g., Grant, Stewart, O'Connor, Blackwell, & Conrod, 2007; Kuntsche, Wiers, Janssen, & Gmel, 2010; Neighbors, Lee, Lewis, Fossos, & Larimer, 2007). When tested simultaneously, motives are also differentially associated with drinking in specific locations, with specific people, and with unique beverage preferences, which suggests that each

DM serves different needs (Cooper, 1994; Cooper, Russell, Skinner, & Windle, 1992; Kuntsche, Knibbe, Gmel, & Engels, 2006a).

In late adolescence and young adulthood, alcohol use fluctuates across days of the week. Higher consumption commonly occurs on weekends than on weekdays (Heeb, Gmel, Rehm, & Mohler-Kuo, 2008; Room et al., 2012). Weekend days are associated with free time spent going out and with friends. Most special events and leisure activities are scheduled for the weekends (Lewis & Weigert, 1981) and partying on the weekends constitutes the apex of positive emotions in the weekly cycle (Larson & Richards, 1998). Thus, young adults may drink large quantities of alcohol on weekends because they seek excitement and fun (Kuntsche & Cooper, 2010). In contrast, weekdays are dedicated to work and vocational training, and individuals typically experience more stress on weekdays than on weekends, as a result of work overload and worry (Schlotz, Hellhammer, Schulz, & Stone, 2004). Therefore, drinking on weekdays may be sustained by DM such as coping, whereas drinking on weekends may be sustained by DM focusing on social gathering and enhancement. To our knowledge, only one study to date has examined whether the association of DM with alcohol use differs between weekdays and weekends. In a sample of Spanish adults, Mezquita et al. (2011) showed that low levels of conformity, and high levels of social and anxiety coping DM were significantly associated with more alcohol use on both weekdays and weekends, and high enhancement DM were associated with more alcohol use on weekends only.

The present study examined and compared the associations of the four DM with drinking volume (DV) on weekdays and on weekends in a representative sample of 20-year-old Swiss men. Patterns of associations of the four DM were tested separately and simultaneously in different models. When tested separately, we expected positive associations between all DM and

both weekday and weekend drinking, however, when testing all DM simultaneously in a single

model, we expected more specific associations with alcohol use on weekend and weekdays

because we tested the association of one DM while holding the others constant. Particularly, we

hypothesized stronger positive associations of enhancement and social DM with weekend rather

than with weekday drinking, due to more time spent with friends, on leisure activities, and

positive emotions. Conversely, we hypothesized stronger positive association of coping DM with

weekday rather than with weekend drinking, due to more work stress and worries.

Methods

Enrolment Procedure

The data used in the present study are part of the baseline phase of an ongoing project:

the Cohort Study on Substance Use Risk Factors (C-SURF) (see Baggio, Studer, Daeppen, &

Gmel, 2013; Baggio, Studer, Mohler-Kuo, Daeppen, & Gmel, 2013; Dermota et al., in press;

Fischer, Clair, Studer, Cornuz, & Gmel, in press; Mialon, Berchtold, Michaud, Gmel, & Suris,

2012; Studer et al., 2013; Studer et al., in press). The protocol (No. 15/07) was approved by

Lausanne University Medical School's Ethics Committee for Clinical Research. In Switzerland,

army recruitment is mandatory for young males, virtually all 20-year-old males must report to

one of six recruitment centres to determine their eligibility for military or civil service. Thus,

contrary to the majority of existing studies on substance use among young adults whose samples

consist essentially of college students, C-SURF had the unique advantage of enrolling highly

representative sample of the general population of young men. As a side effect, women were not

eligible for inclusion in C-SURF, because army recruitment is not mandatory for females and the

small number of females who decided to enrol in the army was consequently not representative

of the general population of women in this age group. Study enrolment took place in three of six

centres, serving 21 of the 26 Swiss cantons. More details on enrolment procedures have been described elsewhere (Studer et al., 2013; Studer et al., in press).

Participants

Of the 13,245 conscripts invited to enrol in the study, 7,563 individuals gave written consent to participate. Of these, 5,990 (79.2%) completed the baseline questionnaire between 30 September 2010 and 5 March 2012. Almost all conscripts (94%) also filled in a short, 5-minute questionnaire on substance use (including usual weekly drinking volume) at the recruitment centres, allowing for a comparison between participants and non-participants in the study. Non-participants used more alcohol ($M = 7.72$ drinks/week, $SD = 11.70$) than participants ($M = 6.62$ drinks/week, $SD = 8.59$), resulting in a relative non-response bias of about 8.3% (see Studer et al., 2013, for more detail). Drinking motives were assessed only on those who had drunk in the past year, thus 469 (7.8%) were excluded because of twelve month's abstinence. A further 45 individuals (0.7%) were excluded due to missing answers to demographic or alcohol use questions. Moreover, participants who failed to answer three or more questions on their DM ($n = 85$, 1.4%) were also excluded. These men did not differ significantly from the final participants, either in drinks on weekends ($M = 7.35$, $SD = 8.48$ vs. $M = 7.69$, $SD = 8.31$), $t(5474) = 0.37$, $p = .714$, $d = 0.04$, or drinks during the week ($M = 1.33$, $SD = 2.91$ vs. $M = 1.39$, $SD = 3.78$), $t(5474) = 0.12$, $p = .903$, $d = 0.02$. The final sample consisted of 5,391 participants. For the 57 (1.1%) participants who skipped one or two DM questions, their missing values were replaced by nearest neighbour, hot-deck imputation using random, recursive partitioning (RRP) dissimilarity matrices. This method was implemented using the RRP package (Iacus & Porro, 2007) within version 2.15 of the R statistical environment (R Development Core Team, 2012).

Measures

Alcohol use. A quantity-frequency measure, one of the most widely used alcohol measurements (Gmel & Rehm, 2004), was used to estimate weekend and weekday DV by asking the usual frequency of drinking occasions and the usual quantity per occasion in the past 12 months, separately for weekends and weekdays. A recall period of 12 months was chosen because the use of shorter periods, such as 7 days, may underestimate the number of rare drinkers (e.g., those drinking on a monthly basis) and overestimate abstainers, that is alcohol users who did not drink in the past week (Gmel & Rehm, 2004). Moreover, although 12 months and shorter recall periods yield approximately similar results when the aim is to characterize drinking in the population as a whole, it has been suggested that using a 12-month period may lead to a more accurate evaluation of drinking amounts and patterns at the level of individuals (Dawson & Room, 2000; Skog, 1981). As our aim was to link individual differences in DM with individual differences in DV, the use of a 12-month recall period was relevant in the present study.

Weekday and weekend DV were obtained by multiplying their respective frequency and quantity, yielding the usual DV for the four weekdays and the three weekend days, respectively. Weekend drinking frequency was assessed with an item asking for the average number of weekend days (i.e., Friday, Saturday, Sunday) on which alcohol was consumed. Weekend choices were: 3 days, 2 days, one day each weekend, 2–3 weekend days per month, one weekend day per month, less than one weekend day per month, and never. The same was done for weekdays (i.e., Monday, Tuesday, Wednesday, Thursday) with the highest frequency category of 4 days per week. Usual weekend drinking quantity was assessed with an item asking for the number of drinks consumed on a usual weekend drinking day. The same was done to evaluate usual weekday drinking quantity. Illustrations of standard drinks containing approximately 10–

12 g of pure alcohol were provided. Response choices were: 12 drinks or more, 9–11 drinks, 7–8

drinks, 5–6 drinks, 3–4 drinks, and 1–2 drinks. Quantity was coded as the midpoints of these

categories (except for 12 drinks or more, coded 13).

Drinking motives. The Drinking Motives Questionnaire Revised Short Form (DMQ-R

SF; Kuntsche & Kuntsche, 2009) was used to assess social, enhancement, coping, and

conformity DM. The DMQ-R SF is a twelve-item questionnaire (3 items for each DM),

originally developed and validated in French and German (Kuntsche & Kuntsche, 2009).

Participants were asked to consider all the occasions on which they drank in the past 12 months

and to indicate, on average, how often they drank for each specific motive, using a Likert scale

ranging from 1 (never) to 5 (always). The DMQ-R SF was administered in French or German.

The structural invariance of the four-dimensional DM model across French- and German-

speaking participants was tested with a multi-group confirmatory factor analysis (CFA); this

constrained equality of factor loadings, variances, and correlations in the two groups against an

unconstrained model. Constrained and unconstrained model fit indices were basically the same

(results not reported) and also similar to those reported by Kuntsche and Kuntsche (2009) in the

validation article, suggesting equivalent psychometric properties across languages. For

descriptive purposes, mean raw scores were computed by averaging the three respective items of

each DM. Each DM showed good internal consistency ($\alpha_{Social} = .84$, $\alpha_{Enhancement} = .82$, α_{Coping}

$= .84$, and $\alpha_{Conformity} = .84$). Secondly, participants were also grouped as a function of the DM

they primarily endorsed. This yielded four distinct groups of individuals drinking predominantly

for a single DM: enhancement ($n = 1,225$), social ($n = 2,414$), coping ($n = 209$), conformity ($n =$

64) drinkers. An additional group of drinkers with no predominant DM ($n = 1,479$) – that is those

who reported more than one predominant motive – was also created.

Socio-demographic variables. Socio-demographic variables included were age, linguistic region (German- or French-speaking), and highest completed level of education: primary (9 years of schooling); secondary (12 years); and tertiary (13 years or more).

Statistical Analyses

Descriptive statistics were calculated to characterize the sample in terms of weekday and weekend DV, endorsement of DM, as well as socio-demographic variables. Structural equation models (SEM) were run using Mplus 7 (Muthén & Muthén, 1998-2012) in order to assess associations of DM with weekday and weekend DV and their difference. A latent variable was created for each DM by constraining their three corresponding DMQ-R SF items to load on their respective latent variables. The effect of each DM was tested separately (Figure 1, panel A) and simultaneously (Figure 1, panel B). Differences of slopes between weekends and weekdays were tested by comparing unrestricted models with those where equality constraints were set on the two slopes. As the constrained model has one parameter fewer, and models are nested, differences between the two models can be tested with $\chi^2(1)$ goodness-of-fit (Judd, McClelland, & Smith, 1996). Bootstrapping with 1,000 draws was run in order to avoid potentially spurious effects due to the non-normal distributions of both the weekday and the weekend volumes. Model fit was examined using the comparative fit index (CFI), the Tucker-Lewis index (TLI), the root mean square error of approximation (RMSEA), and the standardized root mean squared residual (SRMR). CFI and TLI higher than .95, RMSEA lower than .06, and SRMR lower than .08 are indicative of good fit (Hu & Bentler, 1999). All models were estimated with and without adjustment for age, education, and linguistic region. Standardized coefficients are presented because they permit direct comparisons of the path coefficient of each DM. Additionally, univariate analyses of variance (ANOVAs) were conducted on weekday and

weekend DV as well as on the difference between weekend and weekday DV. Groups of

individuals drinking predominantly for a single DM (enhancement, social, coping, conformity

drinkers) was entered as a between-subject factor. As these analyses were conducted to further

characterize the drinking patterns of participants drinking predominantly for single DM, the

group of drinkers with no predominant DM was omitted.

Results

Descriptive statistics are presented in Table 1. DV was significantly higher on weekends

than on weekdays, $t(5390) = 108.99$, $p < .001$, $d = 2.97$. Alcohol use on weekdays and weekends

was positively correlated ($r = .49$, $p < .001$). Participants endorsed social DM more strongly than

enhancement, $t(5390) = 23.32$, $p < .001$, $d = 0.63$, coping, $t(5390) = 81.16$, $p < .001$, $d = 2.21$ and

conformity DM, $t(5390) = 102.60$, $p < .001$, $d = 2.79$. Participants also endorsed enhancement

DM more often than coping, $t(5390) = 62.71$, $p < .001$, $d = 1.71$, and conformity DM, $t(5390) =$

81.48, $p < .001$, $d = 2.22$, and endorsed coping DM more often than conformity DM, $t(5390) =$

33.92, $p < .001$, $d = 0.92$. All DM were positively interrelated: the highest association was

between enhancement and social DM ($r = .86$, $p < .001$); followed by enhancement and coping (r

$= .49$, $p < .001$); conformity and coping ($r = .48$, $p < .001$); social and coping ($r = .46$, $p < .001$);

social and conformity ($r = .30$, $p < .001$); and enhancement and conformity ($r = .25$, $p < .001$).

With regard to associations of DM with weekday and weekend DV, only the results of

adjusted models are reported because adjusted and unadjusted models yielded similar results. Fit

indices suggested that all models (except TLI) fitted the data well, suggesting an acceptable to

good fit (see Table 2). Path coefficients are reported in Table 3. For enhancement, associations

with weekend and weekday DV were basically the same when DM were tested separately or

simultaneously: associations were all positive and significant, with a larger coefficient for

weekend than for weekday DV. With regard to coping DM, associations with DV were also

positive and significant for weekends and weekdays. However, when tested apart, association

with DV was significantly stronger for weekends than for weekdays, whereas the reverse was

true when coping was tested simultaneously with the other motives. For social and conformity

motives, separate and simultaneous analyses yielded different results. In separate analyses,

associations were all significant and positive, but were stronger with weekend DV than with

weekday DV for social DM, and were stronger (although not significant) with weekdays DV

than with weekend DV for conformity DM. In contrast, when all DM were entered

simultaneously, the association of social motives was significant and negative with weekday DV,

whereas it was negative, but not significant, with weekend DV. For conformity DM, association

was significant and positive with weekday DV, whereas it was significant and negative with

weekend DV.

　　　　With regard to differences between groups predominantly drinking for different motive,

ANOVAs showed a significant effect of the type of predominant DM for both weekday, $F(3,$

$3908) = 12.47$, $p < .001$, $\eta^2_p = .01$, and weekend DV, $F(3, 3908) = 23.80$, $p < .001$, $\eta^2_p = .02$.

Means and standard deviations of weekday and weekend DV as a function of predominant DM

endorsed, as well as significant differences between groups, are reported in Table 4.

Enhancement drinkers reported significantly higher DV during weekends than social, coping and

conformity drinkers. With regard to weekdays, enhancement drinkers reported significantly more

DV than social drinkers, and less DV than conformity drinkers. Enhancement drinkers also

tended to report less drinking than coping drinkers. Social drinkers reported lower DV than

coping and conformity drinkers. The other comparisons did not reach significant levels. ANOVA

on differences between weekend and weekday DV also yielded a significant effect of type of

predominant DM, $F(3, 3908) = 23.26$, $p < .001$, $\eta^2_p = .02$. The largest difference was found for enhancement ($M = 7.82$, $SD = 7.73$), followed by social ($M = 6.00$, $SD = 6.95$), coping ($M = 5.54$, $SD = 8.03$) and conformity drinkers ($M = 3.11$, $SD = 6.13$), respectively. The difference was significantly larger for enhancement drinkers than for individuals drinking predominantly for other motives: enhancement versus social, $t(3637) = 7.19$, $p < .001$, $d = 0.25$, enhancement versus coping, $t(1432) = 3.92$, $p < .001$, $d = 0.29$, and enhancement versus conformity, $t(1287) = 4.79$, $p < .001$, $d = 0.61$. The difference was also significantly larger in social than in conformity drinkers, $t(2476) = 3.29$, $p = .001$, $d = 0.42$, and significantly larger in coping than in conformity drinkers, $t(271) = 2.23$, $p = .027$, $d = 0.32$.

Discussion

The present study's goal was to determine whether drinking motives (DM) among young adults were differentially associated with weekday and weekend alcohol use. Associations of DM with drinking during the week and over the weekend were compared in separate models for each DM, and in a model testing all DM simultaneously.

As has been shown before (Kuntsche et al., 2007; Kuntsche et al., 2010; Merrill & Read, 2010; Neighbors et al., 2007), when each DM was tested separately, all associations were consistently significant and positive. The present study showed that this would even be true, when drinking is divided into weekdays and weekends. However these analyses did not properly reflect the unique contribution of each DM over and above that of others. Although some motives had a stronger effect than others, in general, the more often one endorses a motive, the more one drinks (both on weekdays and on weekends).

When all motives were tested simultaneously, more specific patterns of association were found for different DM on both weekend and weekday DV, as discussed below. Testing all DM

simultaneously better reflects the unique contribution of each DM to DV because the path

coefficient of a motive represents the association of that motive with DV, holding the other DM

constant.

For the enhancement DM, associations with DV on both weekdays and weekends were

significant and positive, but were stronger on weekends. Enhancement also yielded a larger

effect size than other DM on weekend DV, as indicated by squared semi-partial correlations (see

Table 3). It should be noted that this effect size is considered as small ($.01 \leq R^2 < .06$) but not

trivial, according to Cohen (1988). Moreover, those drinking predominantly for enhancement

reported larger DV during weekends than those drinking predominantly for other motives.

Consistent with previous studies (Billingham, Parrillo, & Gross, 1993; Cooper, 1994; Feldman,

Harvey, Holowaty, & Shortt, 1999; Kuntsche, Knibbe, Gmel, & Engels, 2005), these findings

suggest that endorsing enhancement motives is one of the most important reasons why young

adults and adolescents use alcohol.

Regarding the coping DM, associations were both positive, but stronger for weekdays

than for weekends. The unique contribution of coping DM to weekday DV was the highest as

indicated by the largest squared semi partial correlations. Effect size was small but not trivial (R^2

$= .023$). Coping also yielded the second highest standardized coefficient with drinking during

weekdays, after enhancement. Those individuals drinking predominantly for coping DM also

reported higher DV during the week than social drinkers and tended to report higher DV than

enhancement drinkers. Coping represents drinking to regulate, escape, or reduce negative

emotions (Cooper, 1994). Since weekdays are supposed to be dedicated mainly to paid work or

vocational training, this result may indicate that individuals with personal problems have less

time available to find support from friends or to relax in leisure time activities, than at weekends.

This result is also in line with literature on stress, indicating that as a result of work overload and worry, individuals typically demonstrate higher stress on weekdays than on weekend days (Schlotz et al., 2004). Thus, this could explain why associations of coping motives with alcohol use were stronger on weekdays than on weekends when these negative emotions are lowered.

Positive association between social motives and drinking on weekends was expected, because social drinkers are generally assumed to drink to heighten their enjoyment at social gatherings (Kuntsche & Kuntsche, 2009). Weekends are also associated with more time spent with friends, partying, and positive emotions (Larson & Richards, 1998). However, results did not support to this expectation. Those drinking predominantly for social reasons reported lower DV during the weekend than enhancement drinkers, but did not differ significantly from coping and conformity drinkers. Moreover, the association of social motives with DV on weekends did not reach significant levels. This lack of significance was probably due to a confounding effect of enhancement motives. Indeed, as social and enhancement motives were highly positively correlated, the significant effect of enhancement on weekend DV may overshadow that of social motives. Nevertheless, social motives and weekday DV were negatively related, and those drinking predominantly for social motives reported the lowest DV during the week. This suggests that during the week, social drinkers consume less alcohol than those drinking for other motives. The significance of this result should be kept in proportion because effect size was particularly small ($R^2 < .010$) and even trivial, according to Cohen (1988).

Associations of conformity with DV ran in opposite directions for weekday and weekend drinking. In line with previous studies, a negative association was found between conformity and alcohol use on weekends, when most heavy drinking occurs (Mezquita et al., 2011). Conformity drinkers are generally prone to consume less alcohol than those drinking for other motives

(Kuntsche, Knibbe, Gmel, & Engels, 2006b; Kuntsche & Kuntsche, 2009). In contrast, on weekdays, conformity was positively related to DV. Switzerland is generally seen as a "wet" country (Gmel, Rehm, & Ghazinouri, 1998), where alcohol is used regularly in moderate amounts (principally with meals), and conformity DM are positively related with moderate alcohol use (Graziano, Bina, Giannotta, & Ciairano, 2012). Our results suggest that among young males, conformity DM reflect regular intake of small amounts of alcohol. The result indicating that the difference between weekend and weekday DV was lower in conformity drinkers than in individuals drinking for other motives tends to support this interpretation. As for association with social DM, effect sizes of conformity DM were extremely small ($R^2 < .010$) and not too much emphasis should be put on this result.

This study does have several limitations. The major limitation is that DM were assessed generically rather than separately for weekdays and weekends. Consequently, it was not possible to examine whether DM for alcohol used during the week and on the weekend differed within individuals. Further studies are needed to examine this question. The sample was also limited to young adult males. As males generally endorse enhancement, social and coping motives more strongly than females (Cooper, 1994; Gire, 2002; Wild, Hinson, Cunningham, & Bacchiochi, 2001), our results cannot be generalized to females. Moreover, as non-participants used more alcohol than participants, results may not generalize to heavy drinkers. Regarding the unique contribution of each motive to weekend and weekday DV, the effect sizes were small, or even trivial, for certain motives (i.e., social and coping). More research is needed to find variables that contribute more strongly to an explanation of drinking differences during the week and on weekends. Finally, the cross-sectional design precluded drawing any causal conclusions.

In conclusion, the present study showed – when examined simultaneously – drinking motive-specific associations with weekend and weekday alcohol use. As several promising prevention approaches focus on drinking motive changes to prevent heavy drinking (Conrod, Stewart, Comeau, & Maclean, 2006; Stewart et al., 2005), our results may also help to identify the specific motives which intervention programmes should target to reduce weekday or weekend drinking amounts. Specifically, interventions should primarily target a reduction of enhancement and coping motives to decrease alcohol use on both weekends and weekdays. Nevertheless, interventions targeting enhancement motives should be particularly effective to decrease weekend drinking, whereas intervention on coping motives would be particularly effective to reduce alcohol use on weekdays. Moreover, interventions targeting social motives may be effective to reduce alcohol use on weekdays, but ineffective to change use on weekends.

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Tables

Table 1. *Descriptive characteristics of alcohol use during weekdays and weekends and drinking motives*

	Mean / %	SD
Alcohol use		
Weekend drinking volume[a]	7.69	8.31
Weekday drinking volume[a]	1.39	3.78
Drinking motives		
Enhancement	2.50	1.09
Coping	1.60	0.78
Social	2.75	1.07
Conformity	1.25	0.56
Age	19.97	1.22
Education (%)		
Primary (9 years)	48.9%	
Secondary (12 years)	25.6%	
Tertiary (13 years and more)	25.5%	
Linguistic region (%)		
French-speaking	54.2%	
German-speaking	45.8%	

Note. SD = standard deviation.

Table 2. *Fit indices for the adjusted models tested*

	RMSEA	CFI	TLI	SRMR
Separate models				
Enhancement	.056	.968	.940	.028
Social	.034	.989	.979	.029
Coping	.058	.967	.938	.028
Conformity	.026	.993	.987	.016
Simultaneous model				
All drinking motives	.051	.957	.944	.033

Note. CFI = comparative fit index. TLI = Tucker-Lewis index. RMSEA = root mean square error of approximation. SRMR = standardized root mean squared residual. CFI and TLI higher than .95, RMSEA lower than .06, and SRMR lower than .08 are indicative of good fit (Hu & Bentler, 1999)

Table 3. *Associations of drinking motives with alcohol use on weekends and weekdays and difference of associations between weekends and weekdays*

	Weekends				Weekdays				Test for equality of adjusted slopes[a]	
	β	SE	*p*	R^2	β	SE	*p*	R^2	$\chi^2(1)$	*p*
Separate										
Enhancement	0.52	0.01	<.001	.283	0.23	0.02	<.001	.064	1019.71	<.001
Coping	0.34	0.02	<.001	.125	0.29	0.02	<.001	.091	252.60	<.001
Social	0.45	0.01	<.001	.212	0.18	0.02	<.001	.040	808.68	<.001
Conformity	0.11	0.02	< .001	.023	0.21	0.03	<.001	.051	2.27	.131
Simultaneous				.300				.116		
Enhancement	0.47	0.04	<.001	.057[b]	0.25	0.05	<.001	.015[b]	107.10	<.001
Coping	0.15	0.02	<.001	.014[b]	0.20	0.02	<.001	.023[b]	14.79	<.001
Social	-0.01	0.04	.880	.002[b]	-0.16	0.04	<.001	.006[b]	3.61	.057
Conformity	-0.08	0.02	<.001	.005[b]	0.10	0.04	.009	.007[b]	34.70	<.001

Note. β = standardized slopes adjusted for age, education, and linguistic region. SE = Standard error of β. R^2 = R squared. [a]Likelihood ratio test of unconstrained versus constrained (equality of slopes) models. [b]Squared semi-partial correlation, i.e. ΔR-squared when drinking motive is removed.

Table 4. *Means and standard deviations of weekday and weekend alcohol use as a function of motives predominantly endorsed*

	Enhancement		Social		Coping		Conformity	
	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*
Weekday DV	**1.62**$_a$	3.33	1.12$_b$	3.06	**2.12**$_{a, c}$	5.49	2.71$_c$	9.13
Weekend DV	9.44$_a$	8.71	7.12$_b$	7.57	7.66$_b$	9.46	5.82$_b$	9.01

Note. Means in bold differ at $p = .056$. Means with different subscript within the same row are significantly different at $p < .05$. $SD =$ standard deviation. DV = drinking volume.
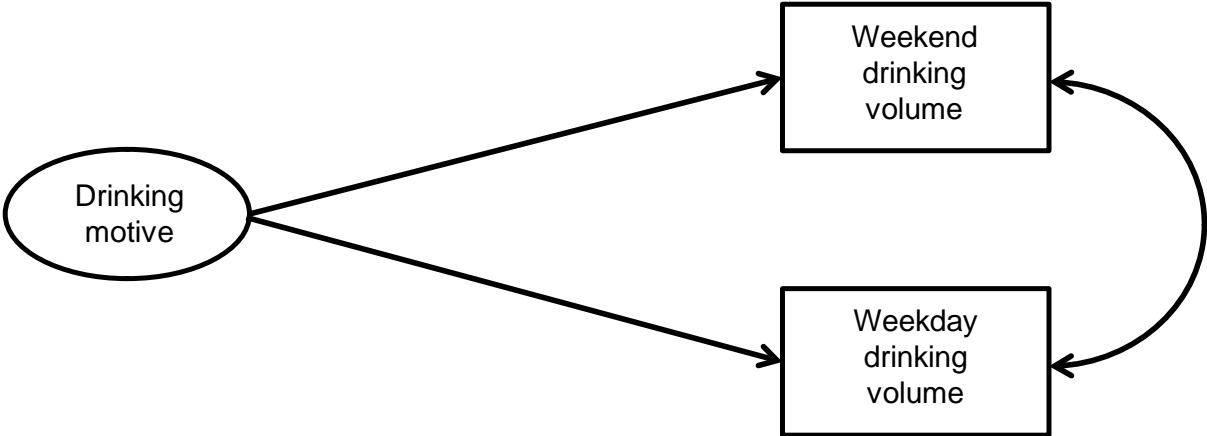
Figure Captions

Figure 1. Schematic representation of the unadjusted structural equation model (SEM) of drinking motives predicting drinking volumes on weekends and weekdays. Panel A. Drinking motives tested in separate models. Panel B. Drinking motives tested simultaneously in a single model.

Figures

Figure 1