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Why My Classmates Drink

Drinking Motives of Classroom Peers as Predictors of Individual Drinking Motives and Alcohol Use in Adolescence—a Mediation Model

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Abstract

A structural equation model was estimated based on a Swiss national sample of 5649 12- to 18-year-olds to test whether individual drinking motives mediate the link between classmates' motives and individual alcohol use. Results showed that the social, enhancement, coping and conformity motives of individual students are associated with the corresponding motive dimension of other students in the class. No direct effect of the four classmates' motives on individual drinking, but an indirect effect via individual motives was observed. It appears that drinking motives within the adolescent social environment exert their influence on drinking by way of shaping individual motives.

Keywords

- *adolescents*
- *alcohol use*
- *classmates*
- *drinking motives*
- *mediation*

Introduction

ALCOHOL use is known to be determined by a large variety of factors both within the individual (e.g. genetic disposition, personality characteristics, cognitions) and within his or her environment (e.g. factors at the level of the society, neighbourhood, family, peer groups and drinking situations: for reviews see Ham & Hope, 2003; Hawkins, Catalano, & Miller, 1992; Kuntsche, Rehm, & Gmel, 2004). From both the conceptual point of view, and in terms of prevention, the factors most proximal to drinking are of greatest strategic importance. These factors are not only thought to be more easily accessible targets for prevention efforts than most of the more distal factors, but they also tend to reflect distal factors such as culture, situation or personality (Cox & Klinger, 1988, 2004).

According to the Motivational Model of Alcohol Use (Cox & Klinger, 1988), drinking motives are the most proximal factor for engaging in drinking. Consequently, empirical studies have demonstrated that drinking motives are the gateway through which more distal factors such as personality factors or alcohol expectancies are mediated (Catazaro & Laurent, 2004; Cooper, Frone, Russell, & Mudar, 1995; Kuntsche, Knibbe, Engels, & Gmel, 2007; Kuntsche, von Fischer, & Gmel, 2008b; Stewart, Loughlin, & Rhyno, 2001). Unfortunately, not much is known about the degree to which this mediation also holds true for the drinking motives of other individuals in the drinkers' social environment such as peers in the school classroom. For most of the year, European students typically spend more than two-thirds of their waking hours each week at school or engaged in school-related activities (Alsaker & Flammer, 1999). Thus, school largely determines their peer group (Steinberg, 2000). Therefore, it is important to focus on the behaviours, cognitions and motivations of classmates as one of the major social environments and influences in adolescence. The present study's first aim is to determine to what degree individual students' drinking motives are consistent with those of all other students in the class. Second, this study investigates to what degree the alcohol use of individual students is directly associated with their classmates' drinking motives and indirectly through the shaping of their own drinking motives.

Drinking motives represent a subjectively derived decisional framework for alcohol use that is based on personal experience, situation and expectancies

(Cooper, 1994; Cox & Klinger, 1988). The decision to drink is based on the rewards that the person expects to achieve by drinking compared with not drinking. These expected rewards can involve either positive reinforcement (to enhance positive outcomes) or negative reinforcement (to avoid or attenuate negative outcomes). The source of the expected rewards can further be either internal (i.e. changes in personal affective states) or external (i.e. changes in the individual's social environment). Accordingly, there are four categories of drinking motives (Cooper, 1994): drinking to enhance positive mood or well-being (enhancement: positive, internal), to obtain social rewards (social: positive, external), to attenuate negative emotions (coping: negative, internal) and to avoid social rejection (conformity: negative, external). By adopting a specific motive for drinking, the decision to engage in alcohol consumption (vs not to drink) is made. For example, an adolescent may decide to drink because it gives him or her a pleasant feeling or because it helps him/her when depressed or nervous.

Concerning characteristics of the personal social environment, association with drinking peer groups has been found to be among the strongest predictors of substance use in adolescence (see Kuntsche et al., 2004, for a review). Adolescents tend not only to select their peers in accordance with their own substance-use habits (Dishion & Owen, 2002; Kandel, 1985) but also to initiate or increase their substance use when associated with substance-using peers. Being together with peers, adolescents tend to accept alcohol offers, to feel pressured to drink or to submit to the peer-drinking norm or to social modelling (Borsari & Carey, 2001; Dishion & Owen, 2002; Jones-Webb et al., 1997; Kandel, 1985). It is plausible to assert that affiliations with peers who have particular drinking motives might shape an individual adolescent's own drinking motives. Application of social learning theory (Maisto, Carey, & Bradizza, 1999) to the acquisition of drinking motives would suggest that adolescents would observe the drinking motives of their peers, observe the rewarding consequences obtained by their peers and then model the motives displayed by their peers. For example, those who go out with friends who drink for social motives might also learn to drink for the same motives themselves due to observation and imitation of these peer motives. In addition to this vicarious conditioning, learning of motives could also occur via verbal transmission of information between peers (Rachman, 1977). For

example, those adolescents who have peers who drink for enhancement motives might learn through verbal exchanges with peers about alcohol being a good way to enhance internal positive states, and then may subsequently adopt enhancement motives for their own drinking behaviour.

The present study tests the following three hypotheses. First, concerning the way in which individual drinking motives are linked with those of other students in the school class, we expect a congruency between the individual and classmate motive dimensions. That means that the strongest relationship should occur when the dimensions are matched (e.g. individual social–classmate social, individual enhancement–classmate enhancement, etc.). Either the modelling or the verbal transmission route to adolescents' motive acquisition from peers would predict such specificity. For example, an adolescent observing a peer drinking in response to peer pressure and observing a peer's social acceptance by drinking should subsequently model conformity drinking. As another example, an adolescent hearing frequently from his or her peers that drinking alcohol is a good way to relieve tensions or alleviate worries should be specifically prone to coping motivated drinking him- or herself.

Second, the individual drinking motive dimensions are closely related to individual alcohol use (measured by the number of drinks consumed in the past 12 months and the frequency of having five or more drinks on single occasions in the last 30 days). Previous research has demonstrated that enhancement, social and coping motives are positively related to adolescent alcohol use whereas conformity motives are negatively related (Cooper, 1994; Kuntsche, Stewart, & Cooper, 2008a; Stewart et al., in press). Enhancement and coping motives are additionally associated with heavy drinking (Kuntsche, Knibbe, Gmel, & Engels, 2005).

Third, according to the assumption that individual drinking motives shape the final decision towards individual alcohol use (Cox & Klinger, 1988; Cooper, 1994), we hypothesize that environmental factors (in our case the drinking motives of other students in the class) exert their influences exclusively through individual drinking motives. Thus, we expect that the link between classmates' drinking motives and individual drinking is indirect—mediated through the individual's drinking motives. Such mediation occurs when the indirect link (classmates' motives–individual's motive–individual's alcohol use), but not the direct

one (classmates' motives–individual's alcohol use), is significant (Baron & Kenny, 1986).

Method

Participants

The present study used data from the 2003 Swiss contribution to the 'European School Survey Project on Alcohol and Drugs' (Hibell et al., 2000), which is described in detail elsewhere (Kuntsche, Knibbe, Gmel, & Engels, 2006b, 2006c; Kuntsche et al., 2007). Once permission to conduct the survey was obtained from the relevant educational authorities in the different federal states in Switzerland (called 'cantons'), principals of the schools to be sampled were informed. Self-completion questionnaires were administered in school classes between April and June 2003. The time frame for filling out the questionnaires was one school lesson (about 45 minutes). Consistent with the APA Ethical Principles (American Psychological Association, 2002), the students could freely choose to participate and confidentiality was ensured at all stages of the study.

Based on a list of all classes of public schools in Switzerland from eighth to 10th grade, random cluster sampling was used, where the classes served as the primary sampling unit. Although the Swiss school system varies slightly from canton to canton, students are usually assigned to classes based on regional and not on individual characteristics, and they usually remain in class with the same peers for the entirety of the school day. An overall response rate of 83.1 per cent was reached. The sample can be considered as representative for all eighth, ninth and 10th graders in the German-, French- and Italian-speaking regions of Switzerland.

Since drinking motives were exclusively assessed among drinkers, those who did not indicate at least one drinking occasion in the last 12 months ($n = 1415$, 19.7%) were excluded. Those who had more than two missing values on drinking motives ($n = 71$; 1.2%), or who did not answer questions about alcohol use ($n = 58$; 1.1%) were likewise excluded. Remaining missing values ($n = 363$; 6.3%) were imputed by means of Markov Chain Monte Carlo estimates (Gilks, Richardson, & Spiegelhalter, 1996). The advantage of such an imputation method is that the information on observed values for an individual is taken into account, that is, imputation is conditional on individuals that have the same

reponse pattern on all but the missing items. The final sample consisted of 5649 12- to 18-year-old alcohol-using students (age mean (M) = 15.1 years, standard deviation (SD) = 0.95; 49% girls). The students came from 408 classes in 328 schools (average number of alcohol-using students per class = 13.8, SD = 3.9) in the German- (70.9%), French- (22.3%) and Italian-speaking (6.8%) regions of Switzerland.

Measures

An interdisciplinary research group from the participating countries developed the core ESPAD questionnaire (Hibell et al., 2004) and the adolescent version of the Drinking Motive Questionnaire (DMQ-R; Cooper, 1994) was added for the Swiss survey. Subsequently, the resulting questionnaire was translated into the three languages most frequently spoken in Switzerland: German, French and Italian. Translations from one national language to the other as well as translations back into English were conducted to guarantee the accuracy of the three national language versions.

Drinking motives were assessed with the DMQ-R (Cooper, 1994), which is a 20-item self-report measure that includes four conceptually and empirically distinct dimensions. Each dimension consisting of five items was rated on a six-point relative frequency scale with anchors ranging from 'Never' to 'Almost always'. Because of high internal consistencies (internal consistencies: $\alpha_{\text{enhancement}} = .85$, $\alpha_{\text{social}} = .82$, $\alpha_{\text{conformity}} = .86$, $\alpha_{\text{coping}} = .88$) in the present study, the items for each motive dimension were added up to form summary scale scores as suggested by Cooper (1994). To obtain a score for the motives of all other students in the class, we used the following formula:

$$\text{Classmate motive score}_i = ((\text{class mean motive score}_j * \text{number of classmates}_i) - \text{individual motive score}_i) / (\text{number of classmates}_i - 1)$$

where i indicates a particular individual student in a particular class j . This formula was applied for the four drinking motive dimensions separately.

Based on the epidemiological literature, there are two main dimensions of alcohol consumption which are differently related to a variety of health-related outcomes (Rehm et al., 2004): average volume of alcohol consumption was found to be related to more long-term negative consequences such as disease whereas pattern of drinking (often measured by having five drinks or more in a row,

Gmel, Rehm, & Kuntsche, 2003) was found to be linked to acute negative consequences such as accidents and injuries (Gmel et al., 2003; Rehm et al., 2004). To cover these two dimensions of alcohol consumption, drinking volume and 5+ drinking were chosen as outcome variables. To measure the number of drinks consumed in the last 30 days ('Volume'), the 30-day frequency (from 0 to 40 or more) was multiplied by the total number of standard drinks of any alcoholic beverage consumed on a typical occasion (from 0 to 5 or more). Additionally, the 30-day frequency of having five or more drinks in a row ('5+ drinking'; from 0 to 10 or more times) was included. Both alcohol use variables were log-transformed to approximate a normal distribution and to reduce the impact of extreme values which can be possibly due to outlier effects (Tabachnick & Fidell, 2001). All descriptive statistics of the alcohol use variables provided in the manuscript are calculated prior to log-transformation.

Data analysis

Figure 1 provides a graphical representation of the regression model, which was estimated using the Mplus 5.1 software (Muthén & Muthén, 2007).

Since individual drinking motives and alcohol use in adolescents tend to differ according to gender and age groups (Cooper, 1994; Kuntsche, Gmel, Wicki, Rehm, & Grichting, 2006a; Kuntsche, Knibbe, Gmel, & Engels, 2006d), the mediators and the outcome variables were adjusted for the effects of gender and age. Since the links between drinking motives of other students in the class and students' alcohol use might additionally depend on characteristics of the school class, the outcome variables were additionally adjusted for effects of class size and the proportion of drinkers in the class. Mediated effects, that is, the product of the coefficient of the path between classmates' and individual motives and the path between individual motives and alcohol use (Baron & Kenny, 1986), are directly provided in Mplus. Standard errors and significance levels of mediated effects were obtained by means of the delta method (Muthén & Muthén, 2007). The robust estimation of standard errors in Mplus has the additional advantages of accounting for non-normal distribution of outcomes and non-independence of observations due to cluster sampling (Muthén & Muthén, 2007). Reported effect sizes are standardized regression coefficients (Betas) and explained variance (R^2).

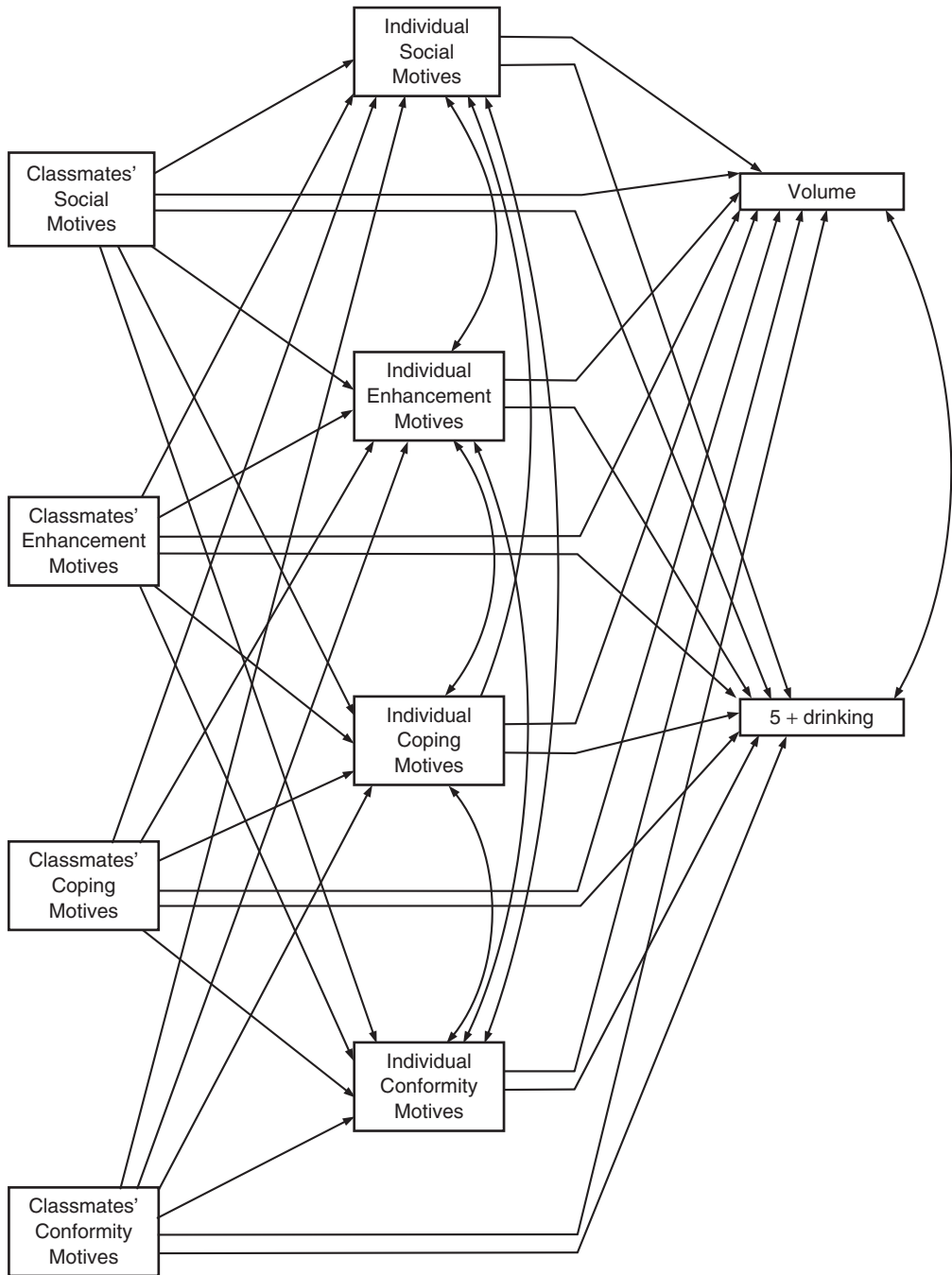


Figure 1. Graphical representation of the estimated regression model.

Note: Outcome effects have been adjusted for the effects of gender, age, class size and the proportion of drinkers in the class

To evaluate the overall model fit, we used the comparative fit index (CFI), the Tucker-Lewis index (TLI), the root mean square error of approximation (RMSEA) and the standardized root mean square residual (SRMR). The CFI and TLI relate to the total variance accounted for by the model, where values close to 1 (i.e. higher than .90), were sought (Kline, 2005). The RMSEA and SRMR relate to the residual variance, where values close to 0 (i.e. lower than .10), were sought (Kline, 2005).

Results

Descriptive analyses revealed that, on average, there were 18.4 students per class ($SD = 3.6$, range = 6 to 30, kurtosis = -0.6 , skewness = -1.0) and, on average, 85.8 per cent of students in each class were drinkers ($SD = 0.1$, range = 35.0 to 100 per cent, kurtosis = 1.1, skewness = -1.1). The students scored highest on social motives ($M = 2.8$, $SD = 1.2$, kurtosis = -0.7 , skewness = 0.4) followed by enhancement ($M = 2.7$, $SD = 1.3$, kurtosis = -0.6 , skewness = 0.5), coping ($M = 1.9$, $SD = 1.1$, kurtosis = 1.7, skewness = 1.4) and conformity ($M = 1.4$, $SD = 0.7$, kurtosis = 11.7, skewness = 3.1) motives, in that order, similar to findings from previous studies on adolescent drinking motives (Kuntsche et al., 2008a). On average, the participants had five drinking occasions ($M = 5.0$, $SD = 7.5$, kurtosis = 12.0, skewness = 3.2) and consumed 17 drinks in the last 30 days ($M = 16.6$, $SD = 35.5$, kurtosis = 20.3, skewness = 4.1), and had about two drinks at a typical occasion ($M = 2.2$, $SD = 1.8$, kurtosis = -0.7 , skewness = 0.5). The participants had about one occasion in the last 30 days on which they consumed five or more drinks in a single sitting ($M = 1.3$, $SD = 2.3$, kurtosis = 7.1, skewness = 2.6).

Zero-order correlations of all variables used in the structural equation model are provided in Table 1. As can be seen, there were significant ($p < .001$), positive bivariate correlations between all classmates' drinking motives variables and the individual drinking variables (volume and 5+ drinking) in all cases but one (i.e. between classmates' conformity motives and individual drinking volume). Relations between classmates' motives and individual students' motives, and between individual students' motives and individual students' drinking behaviour, are described in more detail below.

Results from the structural equation model showed high congruency between individually indicated

motives and those indicated by the other students in the class (Table 2). Individual social motives were related to the social motives, but not to any other motives, indicated by the classmates. The same was the case for enhancement motives. Also for coping and conformity motives, the relation was strongest when there was congruency between the classmates' and the individual motives (coping-coping, conformity-conformity). However, particularly for individual conformity motives, social, enhancement and coping motives of the other students in the class, also showed a significant association.

Concerning alcohol use, particularly the individual social and enhancement motives were positively related to typical drinking volume. Individual enhancement and coping drinking were positively related to 5+ drinking (Table 3). There was also a significant negative link between individual conformity motives and both alcohol use variables. Concerning the motives of all other students in the class, no significant relation to individual alcohol use was found. However, the corresponding indirect effects of classmates' motives through individual motives on individual alcohol use were significant. This was the case for all four motive dimensions and both alcohol use variables.

Discussion

The aims of the present study were to investigate: (1) to what degree social, enhancement, coping and conformity motives of individual students are associated with the corresponding motive dimensions of all other students in the class; and (2) to what degree the alcohol use of individual students is directly associated with their classmates' drinking motives and indirectly through the shaping of their own drinking motives.

The results demonstrated that particular motive dimensions of individual students are related to the corresponding motive dimension indicated by their classmates (i.e. social-social, enhancement-enhancement, etc.). This is consistent with predictions of social learning theory (Maisto et al., 1999) that individual drinking motives are shaped in accordance with the drinking motives of others in a particular social environment (in our case the school class) through mechanisms such as modelling or verbal transmission (Rachman, 1977). Alternatively or in addition, it might be that adolescents select peers who are not only similar in terms of drinking

Table 1. Zero-order correlations among the variables used in the study

	1	2	3	4	5	6	7	8	9	10	11	12	13
2. Age	.00												
3. Class size	-.04	-.08											
4. Proportion of drinkers in the class	-.01	.33	-.05										
5. Classmates' social motives	.01	.12	-.07	.20									
6. Classmates' enhancement motives	.00	.14	-.04	.22	.81								
7. Classmates' coping motives	.01	-.01	-.11	.06	.59	.53							
8. Classmates' conformity motives	.02	-.12	-.05	-.05	.41	.23	.53						
9. Individual social motives	.14	.06	-.02	.07	.17	.14	.11	.07					
10. Individual enhancement motives	.11	.06	-.01	.08	.14	.16	.08	.03	.80				
11. Individual coping motives	-.04	.01	-.04	.02	.11	.08	.15	.10	.51	.51			
12. Individual conformity motives	.09	-.05	-.02	-.02	.07	.02	.10	.13	.36	.25	.42		
13. Volume	.14	.17	-.06	.15	.14	.14	.09	.01	.51	.55	.34	.06	
14. 5+ drinking	.16	.09	-.09	.07	.13	.11	.11	.05	.46	.50	.36	.11	.66

Note: 1 = Gender (girls coded as 0, boys as 1); for $r > .04$; $p < .001$

Table 2. Drinking motives of other students in the class as predictors of individual students' drinking motives in the structural equation model presented in Fig. 1 (standardized regression coefficients, *t*-ratios in brackets and explained variance)

Classmates' drinking motives	Individual drinking motives			
	Social	Enhancement	Coping	Conformity
Social	.14*** (6.0)	.01 (0.6)	.05* (2.5)	.06** (2.8)
Enhancement	.00 (0.1)	.15*** (7.3)	-.03 (-1.6)	-.06*** (3.3)
Coping	.03 (1.6)	.01 (0.4)	.12*** (6.5)	-.05** (3.2)
Conformity	.00 (0.1)	-.01 (-1.1)	.03* (2.0)	.08*** (4.1)
Explained variance (<i>R</i> ²)	5.0%	4.1%	2.6%	2.8%

Note: All regression coefficient are adjusted for the effects of gender and age; model fit: CFI = .999, TLI = .993, RMSEA = .017, SRMR = .005

p* < .05; *p* < .01; ****p* < .001

Table 3. Drinking motives as predictors of alcohol use in the structural equation model presented in Fig. 1 (standardized regression coefficients, *t*-ratios in brackets and explained variance)

	Volume	5+ drinking
<i>Individual motive scores</i>		
Social	.22*** (10.8)	.13*** (6.0)
Enhancement	.32*** (15.7)	.32*** (14.6)
Coping	.12*** (7.9)	.16*** (9.6)
Conformity	-.15*** (-10.4)	-.09*** (-6.4)
<i>Classmates' motive scores</i>		
Social	.05 (1.9)	.05 (1.8)
Enhancement	-.03 (-1.3)	-.03 (-1.4)
Coping	.03 (1.8)	.03 (1.8)
Conformity	-.02 (-1.4)	-.00 (-0.5)
<i>Mediated effect (classmates' motives though individual motives)</i>		
Social	.03*** (5.2)	.02*** (4.2)
Enhancement	.05*** (6.7)	.05*** (6.5)
Coping	.01*** (4.7)	.02*** (5.2)
Conformity	-.01*** (-3.8)	-.01*** (-3.3)
Explained variance (<i>R</i> ²)	36.4%	29.9%

Note. All regression coefficient are adjusted for the effects of gender, age, class size, and the proportion of drinkers in the class; *** *p* < .001

habits (Borsari & Carey, 2001; Dishion & Owen, 2002; Jones-Webb et al., 1997; Kandel, 1985), but also similar in terms of drinking motives. For example, adolescents who drink to enjoy parties and celebrations better may select to affiliate with peers who drink for the same motives at social events. Future longitudinal research is necessary to disentangle the direction of causality in the relation

between individual and peer drinking motives (i.e. social causation or social selection).

Although in general there appears to be a high congruency of drinking motives among the different students in the classroom, there was one exception from this general pattern. Although the classmates' conformity motives were still the strongest predictor for individual conformity motives, unlike the other motive dimensions, social, enhancement and coping motives of other students in the class were also related to individual conformity motives. This might be related to the fact that conformity motives are usually reported by adolescents who rarely drink, that is, only on special occasions such as family celebrations, weddings or New Year's Eve, to fit in with a group and not to feel left out (Kuntsche, 2007). Thus an adolescent, who may be just considering whether or not to drink, might be more likely to drink to fit in with peers when in a social environment where other students are drinking for various reasons. Hence, unlike the other motives, individual conformity motives may be shaped by a variety of different drinking motives in the peer group.

Also for coping motives, a significant relation to social and conformity motives of other students in the class was found. However, unlike conformity motives, the effect size was rather small and only significant at the 5 per cent-error level. This might be simply due to the high sample size in the present study of more than 5600 adolescents. Taken together, the motives of other students in the class explained between 3 and 5 per cent of the variance of individual drinking motives. That means that there are a variety of other variables responsible for the individual drinking motivation besides the motives of classmates. Other possible routes of

acquisition of individual drinking motives include social learning (modelling and verbal transmission) from family members or from the mass media. Also, personal experience with specific rewarding consequences of alcohol consumption (e.g. anxiolytic or stimulant effects) may be at play in the shaping of adolescents' drinking motives.

The results also showed that, despite the high sample size, there was no direct effect of all four classmates' drinking motive dimensions on individual alcohol use and heavy drinking. However, for all four dimensions, there was an indirect effect via individual drinking motives that was significant, even at the 0.1 per cent error level. Thus, the results provide empirical support for the assumption that, adjusted for class size and the proportion of drinking students in the class, individual drinking motives function as mediators in the link between the motives of others in the same social environment (the school class) and individual alcohol use. While previous studies demonstrated such a mediation by drinking motives for either alcohol expectancies (Catanzaro & Laurent, 2004; Cooper et al., 1995; Kuntsche et al., 2007) or personality factors (Cooper et al., 1995; Kuntsche et al., 2008b; Stewart et al., 2001) and young people's alcohol use, this is, to our knowledge, the first study demonstrating that such mediation of drinking motives is also the case for environmental factors and individual alcohol use. In this way, the present study provides further support for the main assumption of the motivational Model of Alcohol Use (Cox & Klinger, 1988), namely, that drinking motives are the gateway through which the influence of other more distal factors is mediated.

A strength of the study is the use of an internationally validated and theory-based instrument to assess drinking motives (i.e. the DMQ-R; Cooper, 1994; Kuntsche et al., 2008a) and the large number of students and classes included in this nationally representative classroom-based survey (Kuntsche et al., 2006b, 2006c, 2007). For most of the year, European students typically spend more than two-thirds of their waking hours each week at school or engaged in school-related activities (Alsaker & Flammer, 1999) and, thus, school largely determines their peer group (Steinberg, 2000). Unfortunately, it was not possible in the present study to include the motives of friends outside the school class. In future, by means of a bar lab design (Bot, Engels, & Knibbe, 2005), for example, it would be possible to investigate the impact of close friends' drinking

motives on individual drinking motive patterns. Future research should also investigate to what extent the mediation reported in this article holds true for particular subgroups (e.g. gender and age).

Taken together, the results of the present study point to the possibility that the drinking motives of others in a particular social environment exert their influence on individual drinking by way of shaping individual drinking motives. Unfortunately, due to the cross-sectional nature of the presented data, this causal chain could not be investigated. Using longitudinal designs in future research, it would be possible to test to what degree motives of others causally influence individual motives which in turn causally influence individual drinking patterns over time.

The presented results have nevertheless some important implications for prevention. Authors argue that, to be effective, programmes should be targeted at homogenous groups of adolescents who share a particular constellation of needs and problems rather than be applied universally (Conrod, Stewart, Comeau, & Maclean, 2006; Masterman & Kelly, 2003). Concerning alcohol use, such needs and problems might be expressed in the adolescents' particular drinking motives (Cooper et al., 1995). Given the present findings of influences of both the peer group's motives (indirect) and the individual's motives (direct) on the individual adolescent's drinking behaviour, programmes that take into account both the individual's drinking motivations and those of other individuals in the same social environment might be particularly effective in reducing heavy drinking among young people.

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