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Longitudinal Relationship Between Drinking with Peers, Descriptive Norms, and Adolescent Alcohol Use

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Abstract

Descriptive norms are consistently found to predict adolescent alcohol use but less is known about the factors that predict descriptive norms. The objective of this study is to test if drinking with peers predicts later alcohol consumption and if this relationship is mediated by a change in the descriptive norms of peer alcohol use. Data are from a nationally representative cohort of high school students surveyed in the 10th and 11th grade ($N=2,162$). Structural equation modeling was used to test a mediation model of the relationship between drinking with peers (T1) on later alcohol use (T2) and mediation of the relationship by descriptive norms (T2). Descriptive norms significantly mediated the relationship between drinking with peers and alcohol use for both males and females with a somewhat larger effect for males compared to females. These results support a continued focus on the development and evaluation of interventions to alter descriptive norms of alcohol use.

Keywords

Adolescent alcohol use; Peerinfluence; Mediation

Alcohol use is widespread among teenagers. In the most recent Youth Risk Behavior Survey, 41.8 % of high school students reported having at least one drink in the past 30 days and 24.2 % reported having five drinks or more on one occasion during the last 30 days (Centers for Disease Control and Prevention 2011). In the 2011 Monitoring the Future survey, 27 % of 10th grade students reported drinking alcohol in the past 30 days and 13.4 % reported they have been drunk in the past 30 days (Johnston et al. 2012). Alcohol use in high school has been associated with numerous adverse effects, including high school dropout (Townsend et al. 2007), sexual risk taking (Sen 2002), delinquency (French and Maclean 2006), fighting, and drunk driving (Hingson et al. 2009), and is predictive of problem alcohol use in college (Harford et al. 2002; Yu and Shacket 2001).

Perceptions of peer alcohol use, also known as descriptive norms, are consistently among the strongest and most proximal predictors of an adolescent's drinking behavior (for a review, see Borsari and Carey 2001). Studies have shown that descriptive norms favorable to alcohol use precede alcohol use behaviors (Clapp and McDonnell 2000; Cullum et al. 2010; Larimer et al. 2004; Sher et al. 2001; Wood et al. 2001). The strongest evidence for

this temporal ordering comes from intervention studies that seek to reduce drinking by lowering the social normative acceptance of drinking. Several intervention studies have reported reductions in alcohol use when normative feedback was provided (Agostinelli et al. 1995; Collins et al. 2002; Walters 2000; Walters and Neighbors 2005). Furthermore, the relationship between the intervention condition and reductions in alcohol consumption was mediated by a reduction in the perceived norms of drinking (Borsari and Carey 2001; Mattern and Neighbors 2004; Neighbors et al. 2006).

In their theory of normative social behavior, Rimal and Real (2003, 2005) propose that descriptive norms influence behavior and the effect is magnified when there is social approval for the behavior (injunctive norms), a shared group identity, and a belief that there will be social benefits from the behavior (outcome expectancy). Drinking with friends represents a situation when all of these social forces are at work. First, adolescents perceive alcohol use to be acceptable and socially normative (Borsari and Carey 2001). In fact, adolescents frequently overestimate the amount of alcohol consumed by their peers when asked about their close friends or when asked about a typical student (Carter and Kahnweiler 2000; Thombs 2000; Thombs et al. 1997). Secondly, adolescents share a group identity with their friends (Sussman et al. 2007). Finally, a recent systematic review found that the most frequent motivation for adolescents drinking is social (Kuntsche et al. 2005).

Drinking with peers may have an important influence on descriptive norms because peers model drinking behaviors and increase the positive expectancies of alcohol use (beliefs about the positive consequences of using alcohol). During adolescence, alcohol experimentation and use occurs in a social context. High school students most often report drinking with friends, either at a friend's home or at a party (Beck et al. 1991; Stewart and Power 2002). Drinking in a social setting is consistent with adolescents' motivations for drinking (Kuntsche et al. 2005). For example, Stewart and Power performed a cluster analysis to identify eight patterns of alcohol motivation. Across all of the clusters, the most endorsed reason for drinking was "to party" (e.g., "To have fun with my friends") (Stewart and Power 2002). Drinking with peers provides social modeling of drinking behaviors (Graham et al. 1991; Wood et al. 2001). Numerous experimental studies, reviewed in a meta-analysis by Quigley and Collins (1999), have demonstrated that the peer modeling of drinking behavior increases personal alcohol consumption. Finally, drinking with peers likely increases the positive expectancies associated with alcohol use. Cumsille et al. (2000) found that drinking with peers was associated with an increase in positive alcohol expectancies, particularly during early adolescence.

Because high school boys drink alcohol more frequently and more heavily than girls (Centers for Disease Control and Prevention 2011), one would expect boys to drink with peers more often and have higher descriptive norms for peer alcohol use. However, it does not necessarily follow that gender differences in alcohol use would translate into differential effects for drinking with peers on later alcohol use. The few studies that have examined gender differences in peer influences for alcohol use have found that adolescent girls are more sensitive to peer norms (Callas et al. 2004; Yeh et al. 2006), peer pressure (Simons-Morton et al. 2001), peer approval/disapproval (Pope et al. 1994; Yeh et al. 2006), peer relationships, and peer drinking behaviors (Dick et al. 2007; Yeh et al. 2006). Additionally,

girls have been found to place more importance on social evaluation than boys (Rudolph and Conley 2005). These studies suggest that the relationship between drinking with peers, descriptive norms, and alcohol use may be stronger for girls than boys. Therefore, in addition to testing for mediation between drinking with peers and later alcohol consumption via descriptive norms, it would also be useful to test for gender differences in the mediation relationship.

In summary, the theoretical and empirical literature suggests a path whereby drinking with peers may lead to an increase in adolescents' alcohol use via an increase in the descriptive norms for peer alcohol. The first goal of this study is to test if drinking with peers predicts changes to descriptive norms, which in turn, predicts alcohol consumption. The second goal is to test for gender differences in those relationships.

Methods

Sample

Data were from the first (2010) and second (2011) wave of an ongoing longitudinal study (NEXT Generation study) with a nationally representative cohort of high school students, initially recruited in 10th grade. The overall goal of the NEXT Generation study is to examine trajectories of health behaviors and their determinants from adolescence into early adulthood. Students were sampled using a three-stage stratified clustered sample strategy, with school districts as the primary sampling unit. African American students were oversampled to improve the population estimate. Students completed questionnaires annually in the spring of 10th and 11th grade. Questionnaires were administered in school as paper based in the 10th grade. Based on internet access, participants could complete either an online version or paper version of the questionnaire in the 11th grade. A total of 2,524 students participated at wave 1 (drinking with peers, T1) and 2,179 of those teens participated at wave 2 (alcohol use, T2) representing 86.3 % of the original sample. Participants were further excluded if they were missing the demographic control variables or all other measures ($n=17$). Thus, the analysis sample was $N=2,162$. The IRB at NICHD approved the study.

Measures

Alcohol Use—Teens were asked to report the number of times they drank alcohol and the number of times they had been drunk in the last 30 days. Response options ranged from never to 40 times or more. Due to low frequencies of frequent drinking and getting drunk, responses for both variables were collapsed into three categories: (0) none, (1) once or twice, and (2) three to five times or more (Farhat et al. 2010). One question assessed binge drinking. Teens were asked how many time they had five (for boys) or four (for girls) or more drinks in a row within 2 h. Response options ranged from “none” to “10 times or more.” Due to low frequencies of frequent binge drinking, responses were collapsed into three categories of binge drinking: (0) zero times, (1) one time, and (2) two times or more. The categorical alcohol variables (frequency of drinking alcohol, been drunk, and binge drinking) were used as indicators of the latent construct “alcohol use.”

Drinking with Peers—At T1, participants were asked to list their three closest male friends and three closest female friends. For each friend, the teen was asked whether or not the teen drank alcohol with that friend in the last 30 days and whether or not the teen had gotten drunk with the friend in the last 30 days. A friend was scored as “1” if the teen indicated that they either drank or got drunk with that friend and “0” if they did neither drink nor got drunk with that friend. Thus, there were six dichotomous variables, three for male friends and three for female friends. These six variables were used as indicators of the latent construct “drinking with peers”.

Descriptive Norms—Descriptive norms of friend alcohol use were assessed at T2 with three categorical items. Teens were asked to think of their closest male friend, closest female friend, and five closest friends. For each of these, the teen reported the frequency that friend(s) drink(s) alcohol and gets drunk. Response options ranged from “never” to “almost always.” Due to skewed distributions, responses were collapsed into three categories: (0) “never”, (1) “almost never” or “sometimes”, and (2) “often” or “almost always.” These three categorical variables were used as categorical indicators for the latent construct “descriptive norms.”

Demographic Correlates—Demographic variables included the following: gender; race (White, African American, Latino, other); family structure, (1) for both biological parents and (0) for all other family structures; and the Family Affluence Scale, a scale of affluence comprised of items assessing household car ownership, household computer ownership, frequency of family vacations, and if the child has his own bedroom (Currie et al. 2008). All demographic variables were assessed at T1.

Analysis

The analysis proceeded in four steps. First descriptive statistics for the variables of interest were examined. Second, a confirmatory factor analysis was used to estimate measurement models for each of the latent constructs: drinking with peers at T1, descriptive norms of peer alcohol use at T1 and T2, and personal alcohol use at T1 and T2 (Fig. 1). For each latent factor, the first indicator factor loading was set to 1.0. The measurement model indicated a close fit between the data and the specified model (comparative fit index (CFI)=0.996, Tucker–Lewis index (TLI)=0.995, root mean square error approximation (RMSEA)=0.015). The latent factors all had a significant covariance ranging from 0.52 for the relationship between alcohol use at T1 and descriptive norms at T2 to 0.75 for drinking with peers at T1 and drinking at T1. Third, structural equation models (SEM) were conducted to test the structural relationships between T1 to T2 and mediation of the relationship by descriptive norms (T2). The baseline level of the outcome and the mediator were included as control variables as recommended by Cole and Maxwell (2003) for testing mediation using “half-longitudinal” designs.

Finally, two group SEM models were estimated to test for gender differences in the mediation effect. In the first model, all structural parameters were free. In the second model, the path from drinking with peers to alcohol consumption via descriptive norms was held equal across groups. A significant decrement in model fit indicates that the mediated effect

is different for males compared to females. For both models the intercepts, thresholds, and factor loadings were set invariant across groups. Demographic correlates were included in all SEM models.

All structural equation models were estimated with Mplus version 6.12 (Muthén and Muthén 2011) using a robust-weighted least squares estimator. All models incorporated the complex survey design by incorporating cluster, stratification, and weighting variables that adjusted for sample attrition over the two waves. Model fit was evaluated by chi-square test, the TLI (Tucker and Lewis 1973), the CFI (Bentler 1990), and the RMSEA. Models with a TLI and CFI of at least 0.95 and a RMSEA value of 0.05 or less are considered to be good fitting models (Browne and Cudek 1993; Hu and Bentler 1999). Differences in nested models were tested using a corrected chi-square difference test when using a robust-weighted least squares estimator.

Results

Descriptive Statistics

A description of the sample characteristics is presented in Table 1. More than half the sample was female (55.3 %, weighted) and the race/ethnic distribution is as follows: 59 % white, 18 % African American, 19 % Hispanic, and 4 % other. Descriptive statistics for the main variables of interest are presented in Table 2. At T2, 33.9 % of teens reported drinking alcohol at least once or twice in the past 30 days and 19.5 % of teens reported having five (for boys) or four (for girls) or more drinks in a row within two hours at least once in the last 30 days. Detailed prevalence rates of alcohol use for this nationally representative sample at T1 have been reported elsewhere (Conway et al. 2013). At T1, 19.0 % of 10th grade students reported either drinking or getting drunk with at least one of their three closest male friends in the past 30 days. Similarly, 16.5 % reported drinking or getting drunk with at least one of their three closest female friends in the past 30 days. More males reported drinking with male friends (34.3 %) than the proportion of females who reported drinking with male friends (27.2 %). At T2 (11th grade), 33.8 % of teens reported their closest male friend drinks alcohol or gets drunk at least “sometimes”, “often”, or “almost always”; 28.9 % reported the same for their female friend, and 38.7 % reported their five closest friends drink or get drunk at least “sometimes,” “often,” or “almost always.”

Structural Equation Model

The next step in analysis was a test of the relationship between drinking with peers at T1 on alcohol use at T2 (direct effect) and the mediation of that relationship by the descriptive norms of peer alcohol use. The model for the direct effect of drinking with peers on alcohol use fit the data well (Table 3). Drinking with peers at T1 was significantly related to alcohol use at T2 ($b=0.44$, $SE=0.12$, $p<0.001$; Table 4) after controlling for alcohol use at T1 and demographic covariates. Next, descriptive norms of peer alcohol use was added to the model as a mediator. As with the previous model, the mediation model fit the data very well (Table 3). There was a significant indirect effect between drinking with peers and later alcohol use via descriptive norms of peer alcohol use ($b=0.23$, $p<0.001$; Table 4). We also examined a mediation model with an additional path from T1 alcohol use to T2 descriptive norms, to

control for the effect of alcohol use on descriptive norms. This additional path was not significant and did not change the significance of the indirect effect between drinking with peers and later alcohol use via descriptive norms of peer alcohol use.

There were significant demographic covariates in the model. African Americans ($b = -0.57$, $p < 0.001$) and Hispanics ($b = -0.31$, $p < 0.05$) were significantly less likely to use alcohol at T2 compared to Whites (data not shown). There were no differences for those with a race/ethnicity other than White, African American, or Hispanic and no significant gender differences in alcohol use at T2. Higher family affluence was associated with increased alcohol use at T2 ($b = 0.04$, $p < 0.05$) and teens with two biological parents were less likely to drink at T2 compared to any other family structure ($b = -0.17$, $p < 0.05$; data not shown).

An alternative model was specified in which the relationship between drinking with peers and descriptive norms were reversed. In this alternative model, descriptive norms at T1 was not significantly related to drinking with peers at T2. Thus, the relationship between drinking with peers and descriptive norms appeared to operate in one direction. A second alternative model was tested, as recommended by Cole and Maxwell (2003) for estimating indirect effects when only two time points are available. In this model, shown in Fig. 2, drinking with peers at T1 predicts descriptive norms at T2 and descriptive norms at T1 predicts alcohol use at T2. The estimate of the indirect effect (0.16, $p < 0.001$) was significant using the Sobel test (Sobel 1982) but slightly smaller than the indirect effect reported for the model reported in Table 4 (0.23, $p < 0.001$). This indicates the mediation model is robust to alternative model specifications.

Multiple Groups

After determining significant mediation for the full sample, we proceeded to test for gender differences. In the first multiple group model, all structural parameters were allowed to vary across gender. This model fit the data well (Table 3, model 4; Fig. 3). Except for the total effect, the standardized parameters were similar for males and females and the pattern of significant parameters was the same for males and females (Table 4). Descriptive norms significantly mediated the relationship between drinking with peers and alcohol use for both males and females with a somewhat larger effect for males ($SD B = 0.26$) than females ($SD B = 0.19$).

In the second model (Table 3, model 5), the path from drinking with peers to alcohol consumption via descriptive norms was held equal for males and females. The parameters for this model were similar, but slightly different from the mediation model pictured in Fig. 3, due to differences related to the modeling of multiple groups. The unstandardized effect of drinking with peers on descriptive norms was 0.55, compared to 0.47 in Table 3 and the effect of descriptive norms on alcohol use was 0.52, compared to 0.49 in Table 3. The chi-square difference test between the unconstrained and constrained models was significant ($\chi^2 = 11.39$, $df(2)$, $p = 0.003$) indicating that a significant decrement in model fit occurred when constraining the mediated path to be equal for males and females. Thus, the models were significantly different across gender.

We attempted to test for ethnic/racial differences in the mediation model, but due to lower levels of alcohol use among non-White teens (particularly African American teens), several indicators presented a challenge to model convergence. Additionally, it may be ill advised to test for ethnic/racial differences of the mediation model using this sample given the differences in group size which can affect standard errors and inflate parameter estimates.

Discussion

This research sought to better understand how peer drinking influences adolescent drinking behavior. Teen alcohol use predominately occurs in a social context and thus it is important to understand how drinking with peers affects later alcohol use. The key finding was that drinking with peers was related to increased descriptive norms for alcohol use which, in turn, was related to increased alcohol consumption. Significant mediation of the relationship was found for both males and females, although the indirect effect was larger among males.

The theory of normative social behavior, which was developed in the context of young adult alcohol use, proposes that descriptive norms have a direct influence on drinking behavior (Rimal and Real 2005). The results of this study support that assertion. The theory also proposes moderators of the relationship between descriptive norms and behavior (injunctive norms, group identity, and outcome expectancy), which could not be tested in the current study. However, the measures of drinking with peers and descriptive norms specifically refer to the behaviors of close friends. Thus, it is likely that participants of the current study had relatively high levels of shared group identity with the peers in question and that the injunctive norms and outcome expectancies for alcohol use would be closely related to the descriptive norms of friends' drinking.

Drinking with peers has rarely been examined as a predictor of descriptive norms, yet there are two mechanisms that might explain the relationship. First, drinking with peers provides an opportunity for observational learning of drinking behavior. Second, previous research has found that drinking with peers is related to an increase in the perceived positive social consequences of drinking (Cumsille et al. 2000). This effect is even more likely to be true when the exposure is specifically to friend drinking, as was the case in this study. Future research could further elucidate how drinking with peers alters descriptive norms.

We expected that girls would be more influenced by drinking with peers than boys, but our results were somewhat inconsistent with respect to that hypothesis. The direct effect of drinking with peers on later alcohol use was stronger for girls than boys, but the indirect effect through descriptive norms was slightly larger for boys than girls. Given that the pattern of mediation was similarly significant across gender and the indirect effect for boys was only somewhat larger than that for girls, we do not interpret the gender difference to be of substantive significance. However, future research could consider if gender differences are moderated by the gender of the friends. Previous research has found inconsistent evidence for this moderation. For example, research by Wang et al. (1995) found that a same-gender best friend was predictive of smoking for both boys and girls and Gaughan (2006) found that same-gender best friends influence each other while boys in mixed-gender best friendships influence their female friends but not the reverse. Also, Dick et al. (2007)

found that opposite-gender friends increase the risk of alcohol use in boys and girls. These studies suggest the gender differences in peer influence may be a complex interplay between the gender composition of the peer group and the gender of adolescent. Future research with access to social network information could explore these relationships.

Strengths and Limitations

Future studies would benefit from more extensive measures of exposure to peer drinking. For example, this study did not ask about outcome expectancies related to alcohol use, which would be another possible mechanism whereby drinking with peers could influence later use (Wood et al. 2001). More extensive measurement of descriptive norms and additional measures of active forms of peer influence (peer pressure) would benefit future research. Previous research has indicated that active peer influence is related to alcohol consumption, though some studies indicate this pathway is not as strong as passive influence (Simons-Morton et al. 2001; Wood et al. 2001).

One limitation of the current analysis is that the mediator and outcome were assessed at the same time point. Three waves of data are typically required to establish temporality in a mediation analysis. To address this limitation, we tested an alternative formulation of the same mediation model and a theoretically plausible alternative model and found the results to be consistent with the a priori model tested. A strength of the current study is that it utilized a large, nationally representative sample of high school-aged adolescents.

Study Implications

This study offers two possible objectives for prevention: reducing teen drinking (especially with peers) and altering descriptive norms of peer alcohol use. Parents may be able to reduce or prevent their teen's exposure to peer drinking, but for teachers, physicians, or public health professionals, there is only limited potential to affect teen exposure to peer drinking. However, there may be substantial opportunity to alter social norms for alcohol use. Several intervention studies have reported significant reductions in alcohol use after altering norms for use among college students (Borsari and Carey 2001; Lewis and Neighbors 2006). Little is known about the effects of interventions like these with high school students and more information is needed about the maintenance of intervention effects. In an intervention with college students, Neighbors et al. (2006) found a significant effect of descriptive norms on alcohol use over a 2-month study period. In contrast, this study had a 1-year gap between assessments, indicating that descriptive norms can have relatively long lasting effects. Future intervention research could assess the persistence of intervention effects at greater time intervals.

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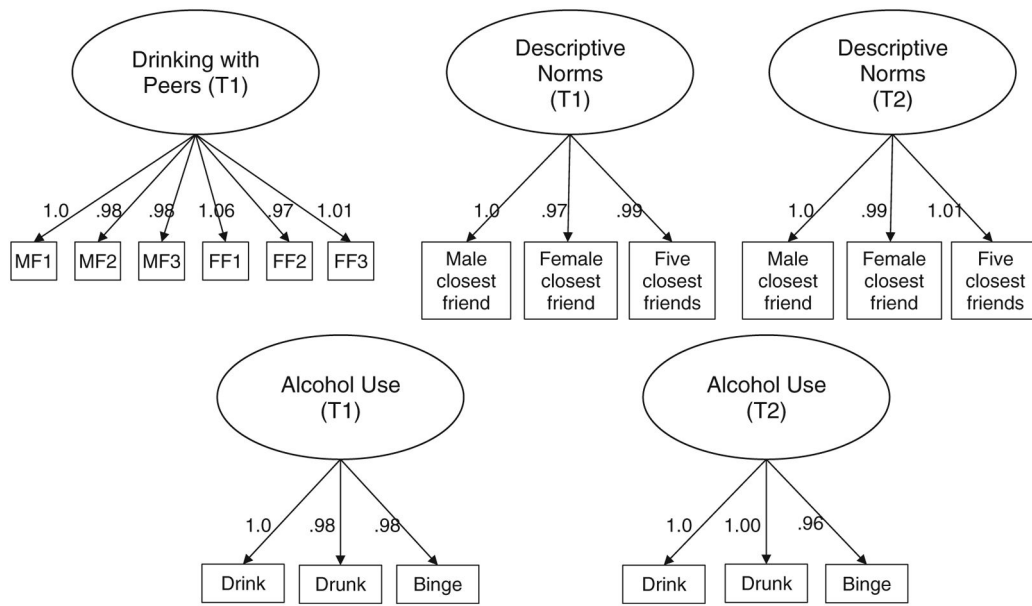


Fig. 1. Measurement model of drinking with peers, descriptive norms, and alcohol use. *MF* male friend, *FF* female friend

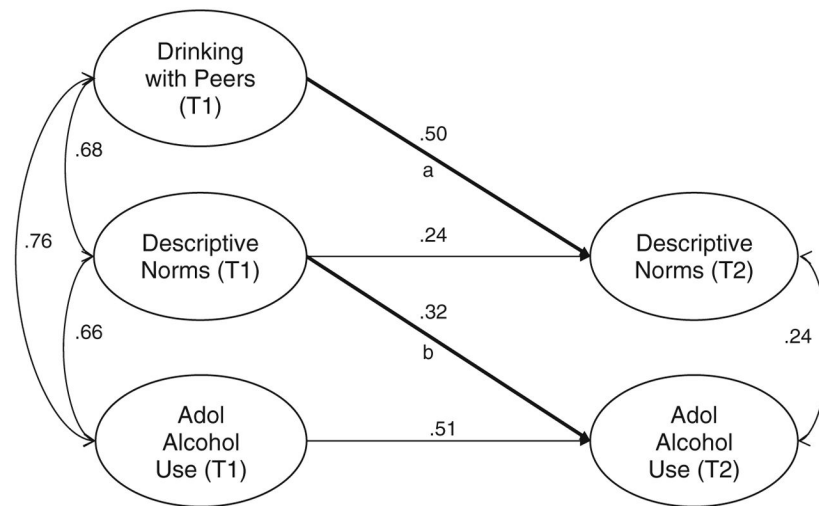


Fig. 2.

Alternative mediation model. “Path *a*” is the path from drinking with peers at T1 to descriptive norms at T2. ‘Path *b*’ is the path from descriptive norms at T1 to alcohol use at T2. The indirect effect is “path *a*” multiplied by “path *b*.” *Adol* adolescent

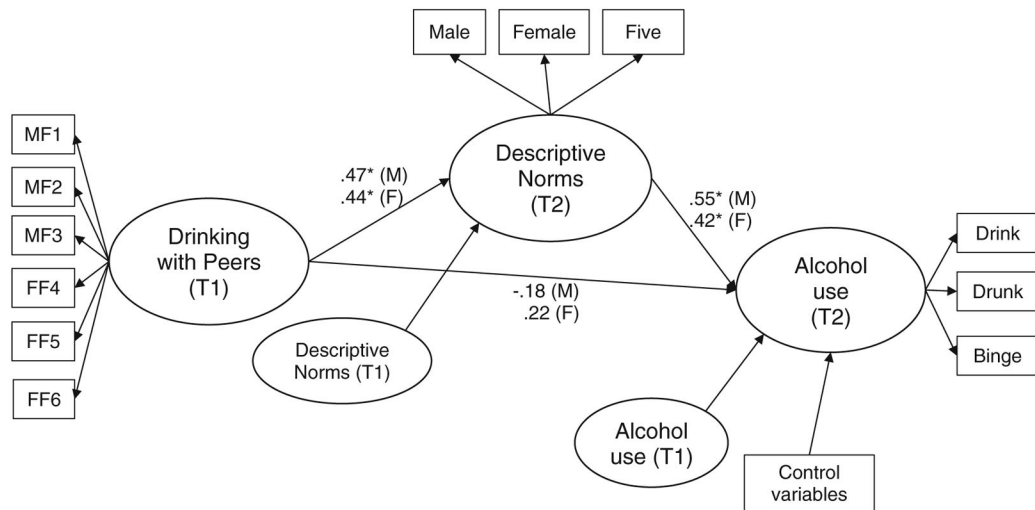


Fig. 3. Descriptive norms mediating the relationship between drinking with peers and alcohol use. Covariances among factors at the same time point are not pictured for model simplicity. *M* male, *F* female, *MF* male friend, *FF* female friend, $*=p<0.05$

Table 1

Sample characteristics

<i>N</i>=2,162	Total % (<i>n</i>)	Male % (<i>n</i>)	Female % (<i>n</i>)
Total		44.7 (950)	55.3 (1,212)
Race/ethnicity			
White	59.1 (970)	62.3 (447)	56.4 (523)
African American	17.6 (407)	12.8 (142)	21.6 (265)
Hispanic	19.1 (675)	19.7 (314)	18.7 (361)
Other	4.2 (110)	5.2 (47)	3.3 (63)
Family structure			
Both biological	53.9 (1,164)	56.9 (540)	51.6 (624)
Other than both biological	46.1 (998)	43.1 (410)	48.4 (588)
Family affluence			
Low	21.8 (652)	20.9 (278)	22.5 (374)
Moderate	50.4 (1032)	53.7 (459)	47.8 (573)
High	27.8 (478)	25.4 (213)	29.7 (265)

Weighted (%) and unweighted (*n*)

Table 2

Proportion reporting alcohol consumption, drinking with peers, and descriptive norms by gender and race/ethnicity

	Alcohol consumption (T2)			Drinking with peers (T1)			Descriptive norms (T2)		
	Drank alcohol (past 30 days)	Got drunk (past 30 days)	Binge drinking (within 2 h; past 30 days)	Drank/got drunk with male friend(s)	Drank/got drunk with female friend(s)	Male closest friend	Female closest friend	Five closest friends	
Total	33.9	22.3	19.5	19.0	16.5	33.8	28.9	38.7	
Gender									
Male	35.0	24.9	19.8	21.1	15.0	34.3	27.2	37.7	
Female	33.0	20.1	19.3	17.2	17.6	33.3	30.3	39.4	
Race/ethnicity									
White	37.5	28.6	23.5	23.0	19.7	39.6	34.3	46.5	
Afr. Am.	25.1	10.2	7.8	12.1	12.8	23.8	18.1	23.5	
Hispanic	29.1	12.9	17.7	13.8	11.0	24.5	22.2	29.4	
Other	41.3	27.3	20.1	13.2	11.3	34.9	28.3	33.3	

T1 time 1, T2 Time 2, Afr. Am. African American

Descriptive norms are proportion of friends who drink or get drunk more than "never"

Frequencies are weighted

Table 3

Fit indices for latent variable and structural equation models

	$\chi^2(df)$	CFI	TLI	RMSEA (95 % CI)
Measurement model	182.49 (125)	0.996	0.995	0.015 (0.010–0.019)
Model 1: direct effects	159.81 (117)	0.998	0.998	0.013 (0.007–0.018)
Model 2: mediation model	330.89 (229)	0.995	0.994	0.014 (0.011–0.018)
Model 3: multiple groups, direct effects	321.56 (235)	0.996	0.996	0.018 (0.013–0.023)
Model 4: multiple groups (unconstrained)	593.07 (461)	0.994	0.994	0.016 (0.012–0.020)
Model 5: multiple groups (constrained)	604.46 (463)	0.994	0.993	0.017 (0.013–0.020)

df degrees of freedom, *CFI* Comparative Fit Index, *TLI* Tucker–Lewis Index, *RMSEA* root–mean–square root error of approximation

Table 4

Mediation models of relationship between drinking with peers (T1) and adolescent alcohol use (T2) for the full sample and by gender

	Model 2			Model 4		
	<i>b</i> (SD B)	SE	<i>p</i>	<i>b</i> (SD B)	SE	<i>p</i>
Drinking with peers (T1) on adol alcohol use (T2)	0.44 (0.38)	0.12	<0.001			
Females	0.64 (0.51)	0.22	0.003			
Males	1.85 (0.13)	1.65	0.26			
Drinking with peers (T1) on descriptive norms (T2)	0.47 (0.45)	0.11	<0.001			
Females	0.51 (0.44)	0.14	<0.001			
Males	3.16 (0.47)	0.91	<0.001			
Descriptive norms (T2) on adol alcohol use (T2)	0.49 (0.45)	0.04	<0.001			
Females	0.46 (0.42)	0.05	<0.001			
Males	0.66 (0.55)	0.09	<0.001			
Direct effect: drinking with peers (T1) on adol alcohol use (T2)	0.15 (0.14)	0.12	0.18			
Females	0.27 (0.22)	0.19	0.15			
Males	-1.47 (-0.18)	1.07	0.17			
Indirect effect: drinking with peers (T1) on adol alcohol use (T2)	0.23 (0.20)	0.05	<0.001			
Females	0.23 (0.19)	0.07	0.001			
Males	2.09 (0.26)	0.67	0.002			

SD standardized, *Adol* adolescent

Analyses controlled for gender, race, family structure, and family affluence