Early Alcohol Use with Parental Permission: Psychosocial Characteristics and Drinking in Late Adolescence

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Abstract

The earliest experiences with alcohol for many children occurs in the family context with parental supervision. The current study examined individual and sociocultural characteristics associated with early (prior to age 13 years) sipping and tasting alcohol with parental permission in two longitudinal community samples. Early sipping/tasting was also tested as a predictor of frequency and quantity of alcohol use, and alcohol-related problems seven years later in late adolescence. Early sipping/tasting with parental permission was associated with a sociocultural context supportive of alcohol use (e.g., parental alcohol use, permissive rules about alcohol use in the home, parental attitudes about underage drinking, perceived peer norms), adolescent sensation seeking and disinhibition (e.g., surgency, externalizing behavior) and appraisals of alcohol (negative outcome expectancies and negative implicit alcohol associations). Early sipping/tasting predicted increased frequency and quantity of alcohol consumption, and increased alcohol-related problems in late adolescence, even after controlling sociocultural and individual difference variables. Findings suggest that early sipping/tasting with parental permission is not benign and is a viable target for preventive interventions.

The first direct experience with alcohol for many children occurs when sipping and tasting alcoholic beverages with parental supervision (Andrews, Tildesley, Hops, Duncan, & Severson, 2003; Donovan & Molina, 2008). Although common, with between 30%-50% of youth sipping/tasting alcohol prior to 10 years of age (Bush & Iannoti, 1992; Donovan & Molina, 2008; Jackson, Ennett, Dickinson, & Bowling, 2012), limited research has examined the impact of these early experiences on later alcohol involvement. Early sipping/tasting appears mild and benign, and some parents view such early experiences as a means of promoting later responsible drinking (Jackson et al., 2012). However, it is also plausible that early sipping/tasting with parental permission increases risk for hazardous drinking by conveying tacit approval of underage drinking or giving rise to the perception that parents won't punish underage drinking. It may also be a marker for other risk factors such as personality risk or positive alcohol expectancies (Jackson et al., 2012).

Some evidence suggests that early sipping/tasting with parental permission operates as a risk factor. Drinking with parental permission in the 5th grade increased the likelihood of consuming a full drink by 7th grade (Jackson, Henriksen, Dickinson, & Levine, 1997). Donovan and Molina (2011) found that sipping/tasting before age 10 increased risk for consuming a full drink by age 14. These studies only examined alcohol use in early and middle adolescence. It is possible that early sipping/tasting leads to a modest increase in alcohol use in middle adolescence because it is associated with early initiation, but later mitigates risk in late adolescence and young adulthood when heavy drinking becomes more common by promoting responsible drinking. In the current study we address this limitation using two longitudinal community samples to examine the association between early sipping and tasting with frequency and quantity of alcohol use, and alcohol-related problems in late adolescence.

Early sipping/tasting with parental permission is likely nested within a web of risk and protective factors for drinking, and it is important to consider early alcohol experiences in the context of these other factors. Prior research has found that early sipping/tasting is associated with positive parental attitudes about alcohol, high levels of parental alcohol use, permissive rules about alcohol in the home, and the perception that peers drink alcohol (Donovan & Molina, 2008, 2013; Jackson, Ennett, Dickinson, & Bowling, 2013). Findings are mixed regarding whether early alcohol use with parental permission is associated with poor adjustment (Donovan & Molina, 2013; Jackson et al., 2013). The current study extends this prior work by examining a broader array of individual and social contextual characteristics than has been considered before. Moreover, we statistically control for psychosocial confounding factors when examining the impact of sipping/tasting alcohol with parental permission on later alcohol involvement.

We grounded our examination of individual and contextual factors in developmental ecological theory, which emphasizes the influence of multiple, interdependent environmental systems on child development (Bronfenbrenner & Morris, 1998). Evidence suggests that characteristics of adolescents (individual level) and the social environment (peers, family) are important in the etiology of adolescent substance use (Chassin, Hussong, & Beltran, 2009). Accordingly, we consider individual characteristics (behavior problems, personality/temperament, outcome expectancies, and implicit alcohol attitudes), family context (parental attitudes and drinking, and alcohol-specific and general parenting), and peer context (perceived drinking norms).

1. Method

1.1. Participants

Participants were from two longitudinal investigations of adolescent substance use. Both samples were recruited from Erie County NY using random digit dial methods. Sample 1 included 387 families with youth between 10-11 years old at recruitment. Children (55% female) were on average 12 years old at Wave 1. The majority were Caucasian (83%), with 9% Black/African-American, 2% Hispanic, 1% Asian/Pacific Islander, and 5% reporting another race/ethnicity. Sample 2 included 378 families, and youth were between 11-12 years old at recruitment. Characteristics of Sample 2 were similar to those of Sample 1. Children (52% female) were on average 11.58 years old at the Wave 1. The majority were Caucasian (75%), with 15% Black/African-American, 3% Hispanic, 2% Asian/Pacific Islander, and 5% reporting another race/ethnicity.

1.2. Procedure

Both samples were assessed annually for seven years. For the current study, we focused on early alcohol use with parental permission and individual and social contextual characteristics at Wave 1 (W1) when adolescents were on average 11.8 years old and alcohol outcomes at Wave 7 (W7) when adolescents were on average 18.7 years old.

Procedures were similar for both samples. Rolling recruitment was used, spanning two-years. Assessments were completed in a laboratory setting. After consent (caregiver) and assent (adolescent), the adolescent and caregiver were taken to separate rooms to complete the assessments. Families were compensated $75 for the W1 assessment. At W7 caregivers were compensated $40 and adolescents were compensated $125. More information on sample recruitment and description can be found in our prior work (Scalco, Trucco, Coffman, & Colder, 2015; Colder et al., 2011).

W7 retention was good in both studies, 354 (91%) for Sample 1 and 315 (83%) in Sample 2. Few differences are associated with attrition, and those differences that do emerge are small (Colder, Frndak, et al., in press; Colder et al., 2014), suggesting that missing data had a limited impact on our findings.

There were 22 participants who were 13 years of age at W1 because they had a birthday between recruitment and first assessment, and this group was excluded so that we could examine early sipping/tasting with parental permission prior to age 13. Three participants did not respond to the drinking with parental permission question and were excluded from analysis. Our final analysis sample size was 740.

2. Measures

Several measures were the same across samples. Others were administered in only one sample as indicated below. Basic demographics collected for both adolescents and caregivers included child age, child gender, and parent education.

2.1. Individual

2.1.1 Alcohol use with and without Parental Permission (W1, both samples). The following questions were used to assess alcohol use with and without a parental permission: "Have you ever used alcoholic beverages *with* your parents' permission (even just a few sips)?" and "Have you ever used alcoholic beverages *without* your parents' permission (even just a few sips)?" Responses were coded 0=no and 1=yes.

2.1.2. Quantity and Frequency of Alcohol Use (W1 and W7, both samples). Adolescent alcohol use at W1 was measured using two fill-in-the-blank items (past year frequency and typical number of drinks consumed on drinking occasions). A drink was defined as 12 ounces of beer, 1 wine cooler (12 oz.), 1 glass of wine (4 oz.), 1 shot of liquor (1 ¼ oz.), or 1 mixed drink.

An 8-point response scale (1=not at all to 8=everyday) for past year frequency of alcohol use at W7 was converted to days/year (e.g., not all = 0 days, once a month = 12 days, everyday = 365 days). Drinks per drinking day at W7 was computed from a 90-day daily drinking calendar (Collins, Parks, & Marlatt, 1985).

2.1.3. Young Adult Alcohol Consequences (W7, both samples). The Young Adult Alcohol Consequences Questionnaire (YAACQ; Read, Kahler, Strong, & Colder, 2006) was administered to participants who drank in the past year. Responses (no/yes) were summed across the 48 items. Internal consistency in the current sample was very good (α =.94).

2.1.4. Temperament (W1, both samples). Parent report on the Early Adolescent Temperament Questionnaire (EAT-Q; Ellis & Rothbart, 2001) was used to assess surgency (which includes positive anticipation, impulsivity, and a desire for sensation seeking, α = .75), effortful control (α = .79), and negative affect (α = .72).

2.1.5. Problem Behavior (W1, Sample 1 only). Caregiver reports of adolescent internalizing (α =.88) and externalizing (α =.90) behaviors were assessed using the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001). Adolescent self-reports of internalizing (α =.83) and externalizing (α=.85) were assessed using the Youth Self Report (YSR; Achenbach & Rescorla, 2001).

2.1.6. Alcohol Expectancies (W1, sample 2 only). Alcohol expectancies were assessed using a measure developed by O'Connor et al. (2007) for youth with limited drinking experience. Adolescents reported perceived likelihood of positive (e.g., "I'll feel more happy" and "I'll be more respected by other kids") and negative outcomes (e.g. "I'll get sick" and "I'll get into trouble with the law") using an 11-point response scale (1 = 0% no chance to 11 = 100% for sure). Adolescents also provided subjective evaluations of each item using a 5-point response

scale (1 = very bad to 5 = very good). Items were averaged to form scale scores of positive and negative expectancies, subjective evaluations of positive and negative expectancies (α=.87 to .89).

2.1.7. Implicit Alcohol Attitudes (W1, sample 2 only). Adolescents completed a Single Category Implicit Association Test (SC-IAT; Karpinski & Steinman, 2006) for alcohol use. This task measures the strength of implicit associations between images of alcohol and positive and negative words. Quad model analyses were used to compute an implicit association score reflecting the strength of implicit negative associations with alcohol, such that high scores suggest a strong negative association with alcohol in memory (O'Connor, Lopez-Vergara & Colder, 2012).

2.2. Family

2.2.1. Parental Alcohol Use & Consequences (W1, both samples). Past year quantity and frequency of alcohol use was assessed for both the interviewed parent and significant other/spouse if one lived in the home (Cahalan, Cisin & Crossley, 1969). The interviewed parents reported on their own drinking and the drinking of their significant other. A drink was defined as described above. Response options for quantity of use ranged from 0="None" to 10="Nine or more drinks", and for frequency of alcohol use ranged from 0="Not at all" to 8="Everyday".

The interviewed parent reported on past six months and lifetime negative consequences of their own alcohol use (Miller, Tonigan & Longabaugh, 1995), and also reported on past year and lifetime alcohol consequences of their significant other/spouse (Sobell & Sobell, 1995). Items were summed to create scale scores for the parent and significant other/spouse.

2.2.2. General Parenting (W1, Sample 1 only). Parents self-reported parental monitoring (α=.74) and control (α=.64) (Kerr & Stattin, 2000).

2.2.3. Alcohol Specific Parenting (W1, both samples). Parents self-reported alcohol-specific parenting practices using 22 items used to create three scales (Zehe & Colder, 2014): punishment for alcohol use (5 items, i.e., "Take away privileges, like watching TV, driving etc.", α=.80), negative emotional response to adolescent drinking (7 items, i.e., "Be angry with him/her", α=.81) and talk about alcohol use (3 items, "Talk with him/her about why he/she did drink", α=.77). The talk about alcohol use variable was skewed and was dichotomized for analyses: low (7% of the sample) and high (93% of the sample). Adolescents also reported the frequency of their parents discussing 8 health risks of alcohol use (Zehe & Colder, 2014). Items were averaged to form a scale score (α=.90).

2.2.4. Alcohol in the Home (W1, both samples). Parents reported rules and expectations regarding alcohol use in the home using three items: (1) Ease of access to alcohol in the home, "How easy would it be for a child to get alcohol in your home?" Responses were dichotomized into "Impossible or Difficult" (54%) and "Easy" (46%) categories; (2) Rules about drinking in the home, "Is drinking alcohol allowed inside your house?" Responses were dichotomized into "No alcohol use allowed or only guests can drink" (21%) vs. "Any adult can drink" (79%); (3) The age at which caregiver considered to be acceptable for alcohol use (1=10 years old to 6=never).

2.3. Peers

2.3.1. Perceived Drinking Norms (W1, both samples). Adolescent reported perceived peer injunctive and descriptive norms about occasional, regular, and binge drinking. Items were averaged to form two scale scores (αs=.86). The scale scores were skewed and so we

dichotomized these measures to indicate disapproval (23%) vs approval (77%) and no use (18%) vs use (82%).

3. Analysis & Results

3.1. Analyses

We first present descriptive statistics on drinking with parental permission at W1 and alcohol use and problems at W7. Next, sipping/tasting with parental permission was regressed on each individual or social factor from W1 in separate logistic regressions. Samples were combined for variables that were common across samples (e.g., parental alcohol use and problems; rules about alcohol use in the home, parent attitudes about underage drinking, alcohol specific parenting, adolescent temperament, perceived peer norms). Other variables were present in one sample (Sample 1 only: general parenting, problem behavior; Sample 2 only: alcohol expectancies, implicit alcohol attitudes). Finally, we examined whether sipping/tasting with permission was associated with W7 alcohol variables. Past year alcohol use at W7 (a dichotomous variable) was regressed on sipping/tasting with parental permission using logistic regression. For those who drank at W7, quantity and frequency of use at W7 and the number of alcohol-related problems at W7 were regressed on sipping/tasting alcohol with parental permission at W1 using poisson regressions. In all logistic and poisson regressions, age, gender, drinking without parental permission, and sample (when samples were combined) were included as statistical control variables. Individual and social factors available in both samples and that were associated with sipping/tasting with parental permission at W1 were included in the regressions predicting W7 alcohol outcomes. Continuous predictors were standardized to facilitate interpretation of odds ratios and risk ratios.

3.2. Results

3.2.1. Descriptive analysis: Table 1 presents descriptive information on W1 drinking. Lifetime alcohol use with parental permission at W1 was fairly common (N=254 or 34%). Among those who drank with, but not without parental permission in their lifetime, alcohol use in the past year was on average infrequent (< 3 times) and involved consuming less than a drink on drinking occasions. Hence, drinking for this group represents occasional sipping/tasting alcohol.

Drinking was common by W7 (N=530 or 72%). W7 drinkers drank on average 46 times in the past year (M = 46.34, SD = 61.57), which equates to 3-4 times per month, and they typically consumed more than 3 drinks/drinking day (M= 3.61, SD = 2.68). The average number of alcohol-related problems was 6 (SD = 7.30) among W7 drinkers. Furthermore, among the W7 drinkers, 17% experienced no alcohol-related problems, and 24% could be characterized as moderate to high risk hazardous drinkers based on the YAACQ (Read, Haas, Radomski, Wickham, and Borish, 2016).

3.2.2. Sociocultural factors associated with drinking with parental permission. Figure 1 shows odds ratios with 95% confidence intervals (CIs) from logistic regressions predicting sipping/tasting with parental permission at W1. CIs that do not include 1 are statistically significant ($p<.05$). Odds ratios of 1.22, 1.86, and 3.00 correspond to small, medium, and large effects, respectively (Olivier & Bell, 2013). Several variables distinguished sipping/tasting with parental permission, but with small to moderate effects. Family influences, including higher parental education, greater frequency and quantity of parental alcohol use, weak negative emotional reactions to child drinking, low inclination to punish underage drinking, lower acceptable age for alcohol use, less discussion of risks of alcohol use, and less restrictive rules about and access to alcohol in the home, were associated with sipping/tasting. General parenting and parental alcohol-related problems were not associated with sipping/tasting with parental

permission. Peer context, including high perceived peer drinking and peer approval of drinking, was also associated with sipping/tasting. Few child characteristics were associated with sipping/tasting. Exceptions were high levels of surgency and high levels externalizing behavior. The latter was true for adolescent, but not parent reports. Some aspects of adolescent appraisals of alcohol use also distinguished sipping/tasting. Low perceived likelihood of negative outcomes and more positive evaluation of positive outcomes were associated with sipping/tasting. Sippers/tasters also maintained weaker negative implicit alcohol associations compared to youth who did not sip/taste with parental permission.

3.2.3. Association of drinking with permission at W1 with W7 alcohol outcomes. Drinking with parental permission at W1 was not associated with likelihood of past year alcohol use at W7, above and beyond the other variables in the model (OR = .93, 95% confidence intervention = .50 to 1.66). Among W7 drinkers, however, those who sipped/tasted alcohol with parental permission at W1 drank more frequently, consumed more drinks per drinking day, and experienced more alcohol-related problems at W7 after adjusting for age and gender (see Table 2). Relative risk ratios suggested that sipping/tasting was associated with a 49% increase in number of drinking days, a 19% increase in drinks per drinking day, and 45% increase in number of alcohol-related problems. Among the sipping/tasting group, model predicted values demonstrated an absolute increase of 16 drinking days per year, 1 more drink per drinking day and 3 additional problems. When adjusting for other risk and protective factors, these effects were attenuated, but sipping and tasting remained a statistically significant predictor of frequency and quantity of drinking, and alcohol problems (see Table 3).

4. Discussion

Our findings suggested that alcohol use with parental permission prior to age 13 was common (34%), though infrequent and involved small quantities (< 1 drink). Hence, drinking with parental permission in our study is best characterized as occasional sipping/tasting. These findings align with prior studies suggesting that the prevalence of early sipping/tasting alcohol ranges between 20% and 50% (Bush & Iannoti, 1992; Donovan & Molina, 2008; Jackson et al., 2012).

The family environments of sippers/tasters were characterized by parental alcohol use, less restrictive rules about alcohol use in the home, and lax parental attitudes about under-age drinking. There was no evidence that sipping/tasting was associated with deficits in general parenting, suggesting that sipping/tasting is not broadly associated with poor family functioning, but limited to alcohol-specific socialization. With respect to the peer environment, sipping/tasting was associated with affiliating with alcohol using peers who approved of alcohol use. These findings are consistent with peer influence and family socialization models of adolescent alcohol use (Barnes, Farrell, & Cairns, 1986; Ennett et al., 2008), and suggest that sipping/tasting is embedded in social contexts associated with increased risk for later drinking.

There was evidence that youth who engaged in early sipping/tasting alcohol with parental permission compared to those who did not, were higher on behavior disinhibition (e.g., surgency and youth self-report externalizing behavior). However, early sipping/tasting was not broadly associated with maladjustment as it was not associated emotional distress or parent reports of externalizing behavior. Perhaps sensation seekers and disinhibited youth show more interest in alcohol and more frequently ask parents to try alcohol. Parents may allow sipping/tasting to reduce curiosity and interest in alcohol (Jackson et al., 2012).

Early sipping/tasting was also associated with weak negative alcohol expectancies and weak negative implicit alcohol associations. Negative expectancies decline in early adolescence and this decline is associated with initiation of the early stages of alcohol use such as drinking without parental permission (Colder et al., 2014, 2015). Early sipping/tasting may weaken restraints important for regulating alcohol use (Colder et al., 2015; O'Connor & Colder, 2015). We also found that early sipping/tasting alcohol was associated with positive subjective evaluations of positive expectancies. Taken together, these findings suggest that early sipping/tasting is part of an ecology that shapes cognitive appraisals of alcohol, paving the way for increased alcohol involvement.

Although sipping/tasting did not predict whether or not youth drank six years later, it was associated with more frequent drinking, an additional drink per drinking day, and more alcohol-related problems above and beyond a variety of well-established correlates of alcohol use. Drinking is common in late adolescence and most people in United States maintain a positive view of alcohol use (Heath, 1995). In a pro-alcohol cultural context it is perhaps not surprising that sipping/tasting with parental permission prior to age 13 did not predict probability of alcohol use, but rather degree of alcohol involvement. This is consistent with prior work suggesting a risk effect of drinking with parental permission in early and middle adolescence (e.g., Donavan & Molina, 2011). Our study extends this work to late adolescence, and runs contrary to commonly held parental beliefs that early sipping/tasting is protective (Jackson et al., 2012).

It is important to note limitations of our study. First, the context of sipping/tasting was not assessed, and may be important. For example, sipping alcohol at religious services may have different implications than sipping alcohol at family celebrations. Second, we examined cross-sectional associations with psychosocial variables. Some may be antecedents of sipping/tasting

(e.g., temperament) and others may be consequences (e.g., perceived norms). Our study was not well suited to address temporal precedence because we did not assess age of initiation of sipping/tasting. Third, sipping/tasting may be riskier for some youth, and it may be useful to consider potential moderators (e.g., genetic risk).

In conclusion, sipping/tasting alcohol with parental permission prior to age 13 is common, increases risk for alcohol use and problems in late adolescence, and is associated with a myriad of family, peer, and individual level risk and protective factors. Developmental models of alcohol use integrate risk and protective factors from multiple levels into complex moderational and mediation pathways (e.g., Zucker, Hicks, & Heitzig, 2016), and it will be important for future research to incorporate early sipping/tasting into these models. Furthermore, early sipping/tasting is a viable target for preventive interventions. Ennett and colleagues (2016) have designed an education intervention to reduce early sipping/tasting, and our findings support continued to development of such interventions.

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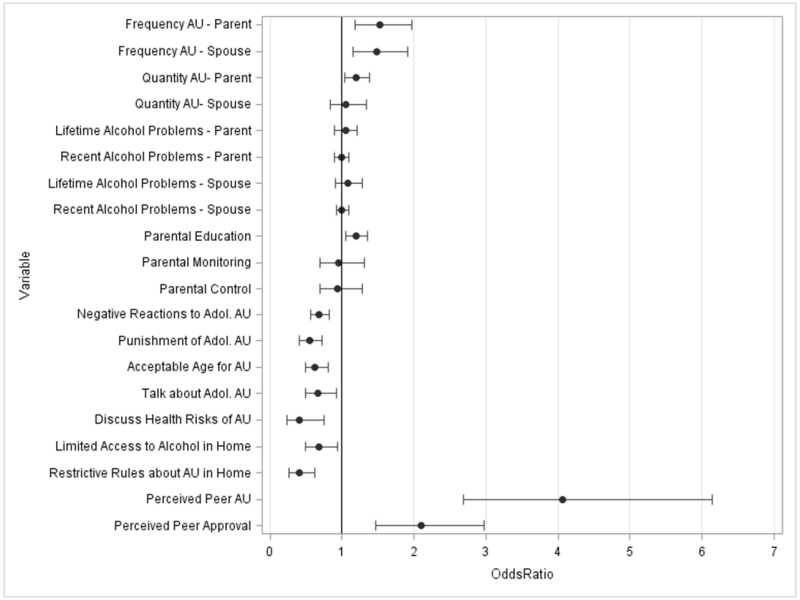
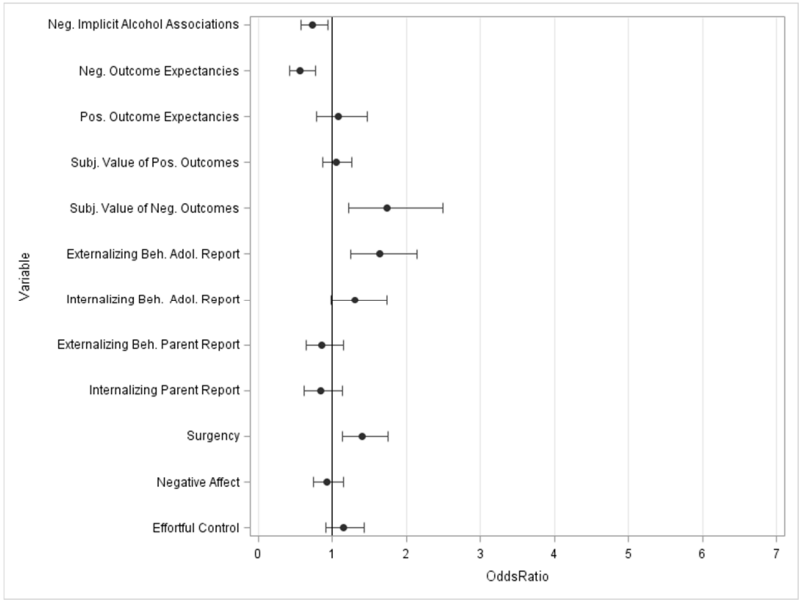


Panel A



Panel B

Figure 1. Odds ratios and 95% confidence intervals for family and peer variables (Panel A) and alcohol appraisal, behavior problems, and temperament variables (Panel B) from logistic models predicting alcohol use with parental permission. Confidence intervals that do not include 1.0 are statistically significant ($p<.05$). Note. AU = alcohol use. Adol. = adolescent Neg = negative. Pos = positive. Subj = subjective. Beh = behavior.

Table 1 – Descriptive Statistics for Alcohol Use at Wave 1

Sample 1 (N = 372)

Lifetime Alcohol Use			Past Year Alcohol Use	
With Parent Permission	Without Parent Permission	N (%)	Frequency Mean (Range)	Drinks/Occasion Mean (Range)
Yes	No	93 (25%)	1.49 (0-45)	0.22 (0-1)
Yes	Yes	7 (2%)	2.14 (0-4)	0.39 (0.25-0.50)
No	Yes	7 (2%)	0.43 (0-1)	0.30 (0.01-0.50)
No	No	265 (71%)	0 (0)	0 (0)

Sample 2 (N = 368)

Lifetime Alcohol Use			Past Year Alcohol Use	
With Parent Permission	Without Parent Permission	N (%)	Frequency Mean (Range)	Drinks/Occasion Mean (Range)
Yes	No	138 (38%)	2.87 (0-175)	0.21 (0-1)
Yes	Yes	16 (4%)	1.75 (0-5)	0.22 (0-0.50)
No	Yes	10 (3%)	1.80 (0-10)	0.18 (0-0.50)
No	No	204 (55%)	0 (0)	0 (0)

Table 2

Poisson Regression Risk Ratios with SWPP Predicting W7 Alcohol Quantity, Frequency and Problems for W7 Drinkers, Controlling for Age and Gender

Variable	Frequency of AU Risk Ratio (95% CI)	Drinks per Drinking Day Risk Ratio (95% CI)	Alcohol Problems Risk Ratio (95% CI)
Gender (Female = 0)	1.18 (1.14, 1.21)***	1.33 (1.19, 1.49)***	0.94 (0.87, 1.02)
Age	1.24 (1.22, 1.26)***	1.00 (0.95, 1.06)	1.11 (1.07, 1.15)***
Use With Permission W1 (No Permission = 0)	1.49 (1.45, 1.54)***	1.19 (1.06, 1.33)**	1.45 (1.34, 1.56)***
Predicted Values [a]			
Use With Permission	50	4	8
No Permission	34	3	5

Note. AU=Alcohol use; CI = Confidence Interval; * p<0.05, ** p < 0.01, *** p<.001;

[a] Dichotomous predictors were centered to obtain predicted values.

Table 3

Poisson Regression Risk Ratios with W1 Variables Predicting W7 Alcohol Quantity, Frequency and Problems for W7 Drinkers

Variable	Frequency of AU Risk Ratio (95% CI)	Drinks per Drinking Day Risk Ratio (95% CI)	Alcohol Problems Risk Ratio (95% CI)
Gender (female = 0)	1.17 (1.13, 1.21)***	1.33 (1.18, 1.50)***	1.01 (0.93, 1.09)
Age	1.31 (1.29, 1.33)***	0.97 (0.92, 1.04)	1.17 (1.13, 1.22)***
Sample (sample 1 = 0)	1.39 (1.34, 1.43)***	0.88 (0.77, 1.00)	1.48 (1.36, 1.62)***
Frequency AU – Parent	1.15 (1.13, 1.17)***	1.01 (0.94, 1.08)	1.03 (0.98, 1.08)
Frequency AU – Spouse	1.03 (1.01, 1.05)**	1 (0.93, 1.08)	0.99 (0.94, 1.03)
Quantity AU – Parent	1.02 (1.00, 1.04)*	1.04 (0.97, 1.11)	0.99 (0.94, 1.03)
Access to Alcohol in Home (difficult access = 0)	1.04 (1.01, 1.08)*	0.87 (0.75, 0.99)*	1.08 (0.99, 1.18)
Rules about AU in Home (only guests drink = 0)	0.82 (0.77, 0.86)***	0.82 (0.67, 1.01)	1.09 (0.95, 1.25)
Acceptable age for AU	0.98 (0.96, 1.00)*	0.98 (0.92, 1.05)	1.03 (0.99, 1.08)
Negative Reactions To Adolescent AU	0.96 (0.94, 0.98)***	0.97 (0.89, 1.06)	1.04 (0.98, 1.10)
Discuss Health Risks (high frequency = 0)	1.05 (0.99, 1.12)	1.09 (0.87, 1.35)	1.21 (1.05, 1.40)**
Punishment of Adolescent AU	1.02 (1.00, 1.04)	1.08 (0.99, 1.18)	0.99 (0.94, 1.05)
Parental Education	1.04 (1.02, 1.06)***	1.09 (1.02, 1.17)*	1.12 (1.07, 1.17)***
Surgency	1.16 (1.14, 1.17)***	0.99 (0.93, 1.05)	1.17 (1.13, 1.22)***
Perceived Peer AU (no peer use = 0)	1.13 (1.08, 1.18)***	1.16 (0.98, 1.36)	1.42 (1.28, 1.57)***
Perceived Peer Approval (disapproval = 0)	1.03 (0.99, 1.07)	0.96 (0.82, 1.12)	0.96 (0.87, 1.06)
Lifetime AU Without Permission (no use = 0)	1.12 (1.05, 1.20)***	0.83 (0.62, 1.12)	1.14 (0.97, 1.34)
Use With Permission W1 (no permission = 0)	1.24 (1.19, 1.28)***	1.2 (1.06, 1.37)**	1.14 (1.05, 1.24)**
Predicted Values [a]			
Use With Permission	42	4	7
No Permission	35	3	6

Note. AU=Alcohol use; CI = Confidence Interval; * p<0.05, ** p < 0.01, *** p<.001;

[a] Dichotomous predictors were centered to obtain predicted values;