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## Attributes that Differentiate Children Who Sip Alcohol from Abstinent Peers

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### Abstract

Sipping alcohol during childhood may be a marker of differentiation as regards children's future risk of underage drinking; yet very little is known about alcohol use when it occurs among elementary school-aged children. The purpose of the present study is to examine alcohol sipping behavior in a sample of third-grade school children to learn whether sipping is associated with attributes that could increase children's likelihood of further underage drinking. We collected telephone interview data from 1050 mothers and their third grade children (mean age 9.2 years; 48.2% male) residing in the Southeastern United States. The majority of mothers were White non-Hispanic (69.02%) or Black non-Hispanic (21.3%); most (85%) lived in households shared with fathers or other adult caretakers. We hypothesized that children who sip alcohol would score lower than abstinent peers on indicators of competence and score higher on indicators of exposure to alcohol-specific socialization by parents and peers. A multivariate model controlling for frequency of parent alcohol use and demographic covariates showed that children who had sipped alcohol were significantly less likely than abstinent peers to affirm indicators of competence and significantly more likely to affirm indicators of exposure to alcohol specific socialization by parents and by same age peers. These preliminary findings suggest that developmental attributes associated with risk of underage drinking begin to differentiate at least as young as middle childhood. Research is needed to test prospectively for continuity between alcohol risk attributes present in middle childhood and future alcohol use.

### Introduction

The younger the age of first alcohol use, the greater the odds of alcohol misuse and alcohol-related problems during adolescence (DeWit et al., 2000; Ellickson et al., 2003; Hawkins et al., 1997). Early use also signals increased likelihood of multiple, serious health risk behaviors during adolescence, including: driving-related injury and death (Begg et al., 1999; Escobedo et al., 1995; Gruber et al., 1996; Shope et al., 2003); use of tobacco, marijuana, and other substances (Ellickson et al., 2003; Gruber et al., 1996; Yu and Williford, 1992);

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physical violence perpetration and victimization (Gruber et al., 1996; Tschann et al., 2005), and sexual risk outcomes (Cooper et al., 1994; Ellickson et al., 2003; Guo et al., 2002; Keller et al., 1991; Stueve and O'Donnell, 2005). Despite clear evidence that early alcohol use is a significant public health problem, relatively little is known about alcohol use when it occurs among elementary school-aged children. The purpose of the present study is to examine alcohol sipping behavior in a sample of third-grade school children to learn whether sipping is associated with attributes that increase children's likelihood of further underage drinking.

Current knowledge of alcohol use by school-aged children is limited by a general lack of assessment of the specific use behaviors—sipping or tasting—that are most characteristic of such children. Leading national surveillance studies focus on adolescents and therefore shed little light on alcohol use among children (Johnston et al., 2011; NIAAA, 2007; SAMHSA, 2004). Although some studies of adolescents collect retrospective reports of age at first use of alcohol, this retrospective approach is known to under-estimate early onset of use (Johnston et al., 2011). In addition, because it is common to define alcohol use by a higher threshold of use than sips (i.e., having had a drink of alcohol or having had more than a few sips of alcohol), with a few exceptions, extant studies overlook children who have only ever sipped drinks with alcohol.

Studies that have measured alcohol use of any amount among elementary school-aged children indicate that relatively few children—around 10% of 8 to 10-year-olds—have ever consumed more than a few sips of alcohol (Donovan, 2007; Donovan and Molina, 2008; Partnership for a Drug-free America, 1999). Substantially more children, however—around 20% to over 50% of 8- to 10-year-olds—have ever sipped alcohol (Andrews et al., 2003; Bush and Iannotti, 1992; Donovan, 2007). In relatively recent studies of child sipping, Donovan and Molina (2008) found a 43% lifetime sipping rate in a sample of 8- and 10-year old children and Jackson et al. (in press) reported a 33% lifetime sipping rate among 9-year-old children.

Studies of alcohol use by elementary school-aged children also report that early use occurs mainly in a family context with the awareness or permission of parents (Donovan and Molina, 2008; Jackson, 1997; Jackson et al., in press; Warner and White, 2003). Over two-thirds of school-aged children who have ever consumed alcohol obtain sips while with their parents (Jackson, 1997), generally at family dinners or celebrations (Donovan and Molina, 2008). Moreover, the mean age at initiation occurring at family gatherings is younger by several years than the mean age at initiation if it occurs outside of family gatherings (e.g., 8.6 vs. 14.2 years, respectively; Warner and White, 2003).

The relatively high rate of child sipping behavior (Andrews et al., 2003; Bush and Iannotti, 1992; Donovan, 2007) and the strong association between parental involvement and child sipping (Donovan and Molina, 2008; Jackson, 1997; Jackson et al., in press; Warner and White, 2003) raise the question—is sipping alcohol during childhood merely opportunistic and therefore unlikely to be predictive of later alcohol use? Or, is early sipping a marker of differentiation between children in terms of their future likelihood of underage drinking? One way to address this question is to examine whether school-aged children who have sipped alcohol differ from abstinent peers, specifically in ways that portend greater likelihood of future drinking.

Such an approach was used by Donovan and Molina (2008), who tested whether known indicators of problem-behavior proneness in adolescence, including general deviant behavior, were correlates of sipping behavior in a sample of 452 8- and 10-year old children. Child sipping status did not covary with the assessed problem-behavior proneness variables,

but was associated significantly with parent drinking and with child attitude toward sipping. The authors concluded that sipping is an indicator of increased opportunities to try alcohol in the home, but is not an indicator of problem-behavior proneness (Donovan and Molina, 2008). Nevertheless, follow-up data obtained when children in their study were age 14 showed that those children who had sipped alcohol by age 10 were nearly twice as likely as peers who had not sipped to have had a drink of alcohol by age 14 (OR = 1.9;  $p < .05$ ) (Donovan and Molina, 2011). In sum, although sipping was not associated with indicators of problem behavior at age 10, it was a significant predictor of drinking at age 14. These findings suggest that children who sip may in fact be different from abstinent peers in ways that predispose them to future use, and that further investigation of this issue is needed.

The present study compares the attributes of elementary school-aged children who have and have not sipped drinks with alcohol. One set of attributes includes indicators of competence development in middle childhood. Competencies enable children to establish warm and supportive relationships with significant others, to act autonomously, to respond to challenges in their environment, and to achieve at school and elsewhere (Baumrind, 1989; Maccoby and Martin, 1983). Children with poorly developing competencies are significantly more likely to develop conduct problems and engage in risk taking behaviors (Blechman et al., 1985). The centrality of competency development to life satisfaction, purposive behavior, impulse control and desistance are purported explanatory mechanisms of the association between weak competence development and the likelihood of alcohol problems (Zucker et al., 2008). An indicator of academic competence was examined by Donovan and Molina (2008), who found a significant inverse association between expectations for academic achievement and alcohol sipping status among the 8-year old but not among the 10-year old children in their study. In the present study, we test for associations between indicators of child competence and early sipping behavior; the indicator variables, derived from the work of Harter (1982), include indicators of child self-regulation (e.g., arguing with other children), child self-esteem (e.g., self-liking) and child academic orientation (e.g., finding school work difficult).

The second and third types of attributes we examine pertain to children's alcohol-specific socialization, including parent factors (e.g., perceived parental attitude toward child sipping) and peer factors (e.g., perceived prevalence of alcohol use by same-age peers). These socialization variables serve as indicators of the degree to which children experience or perceive social acceptance of early alcohol use within their primary social groups, family and peers. Such family and peer socialization factors are established correlates of adolescent alcohol use (Sieving et al., 2000); the present study will test whether they are also correlates of early sipping behavior.

Because the parent socialization factors examined could simply reflect exposure to parental drinking, which has been found to be associated with child sipping (Donovan and Molina, 2008), we include parent alcohol use among the variables examined. In addition, child sipping might vary by demographic characteristics as has been demonstrated with adolescents. African-American adolescents, for example, consistently report lower alcohol use than white adolescents (Johnston et al., 2011). Demographic factors, as well as parent alcohol use, could confound relationships between child sipping and indicators of child competencies and alcohol-specific socialization. We adjust for these variables in our analysis.

## The Current Study

This study tests the hypothesis that children who sip alcohol will differ from their abstinent peers in ways that portend greater risk for future underage alcohol use. We expect that

children who sip alcohol will score lower than abstinent peers on general indicators of competence (e.g., liking myself just the way I am, liking school) and higher on indicators of exposure to pro-use socialization (e.g., having no parent rule against drinking, having friends who talk about drinking). Although the baseline results reported by Donovan and Molina (2008) support the null hypothesis for these tests, their longitudinal results (2011) suggest that children who sip by age 10 may in fact be different from abstinent peers.

## Method

### Human Subjects Review

All protocols for collecting data in telephone interviews with pairs of third grade children and their mothers or mother surrogates were reviewed and approved by the Institutional Review Boards at the institutions of the investigators. Mothers provided written consent for their own and their children's study participation. In addition, mothers provided verbal consent at the beginning of the telephone interviews and children provided verbal assent.

### Participants

The sample comprises 1050 pairs of mothers (including step-mothers, foster mothers, and other female legal guardians; mean age = 37.8 years, SD = 7.1) and their third grade children (mean age = 9.2 years, SD = .4) who were age appropriate for a 4-year randomized trial of an alcohol use prevention program. Data for the current cross-sectional study are from baseline interviews with the mothers and children. Families were recruited from 72 school districts located in North Carolina (N = 68), South Carolina (N = 3), and Tennessee (N = 1); the districts provided permission for recruitment materials to be distributed to families but were not otherwise involved in the research.

A total of 2557 parents submitted a consent form and intake screener; 1193 families did not meet initial inclusion criteria (child age, parent gender, no teen sibling, and parent alcohol use, each relevant to participation in the intervention trial), leaving 1364 potentially eligible families. The 1193 ineligible families were those who had a sibling age 13 or older (n = 677), had no adults in the household who had consumed alcohol during the prior three years (n = 414), had language barriers to survey completion (n = 36), had a child not in 3<sup>rd</sup> grade (n = 25) or not living with a mother/female guardian (n = 24), or did not have complete eligibility data (n = 17). Of the 1364 eligible families, 1050 (77%) mother and child pairs were interviewed. Of the remaining 314 families, 160 were never available by phone, 76 provided only a child interview (49 of these 76 were determined post-baseline to be ineligible for the intervention study because the child reported having more than a few sips of alcohol), and 78 were refusals.

Most mothers lived in households shared with fathers or other adult caretakers (85%). The majority of the mothers were either White non-Hispanic (69.02%) or Black non-Hispanic (21.3%); the remaining 10% were approximately equally divided between those who were Hispanic or were non-Hispanic and of other race/ethnicity. The sample distribution by race/ethnicity is very similar to the population distribution in North Carolina (where 95% of cases resided) (U.S. Census Bureau, 2012). The highest education obtained was a bachelor's degree or higher for approximately half of the mothers (49.2%), with the remainder reporting some college or vocational training (35.7%) or high school graduate or lower (15.1%). In comparison to population estimates for the state, the study sample over-represents by about 22% the proportion of adults with higher educational attainment (U.S. Census Bureau, 2012). Most mothers worked for pay full-time (41.1%) or part-time (29.9%); 29% of mothers did not work for pay. The sample was almost equally divided between female (51.8%) and male (48.2%) third-grade children.

## Procedures

Telephone interview data were obtained from mothers or mother surrogates and children using IRB-approved protocols. The 25-minute parent interview followed a standard adult telephone interview protocol. Mothers were interviewed at a time that they indicated was convenient; interviews were rescheduled if background noise indicated that the parent was distracted. Each child's interview, also 25 minutes, began by asking parents to provide verbal consent before interviewers spoke with children; this verbal consent was supplemental to the signed parental consent already obtained. To establish rapport with the child, after receiving verbal assent, interviewers initiated a semi-structured chat session, where topics unrelated to the interview were discussed (e.g., sports, hobbies). Once the interview began, interviewers maintained strict adherence to the script.

## Measures

**Child Sipping Status**—Children were asked, separately for each beverage type, if they had ever had even one taste or sip of beer, wine (excluding wine as part of a religious service), or any other kind of alcohol. Children also reported whether they had ever sipped beer, wine, or other alcohol at family celebrations, such as weddings, parties, etc. and whether their mother or other adult from home had ever given them a sip or taste of alcohol. Children who responded positively to any item were classified as sippers; those who responded negatively to all items were classified as abstainers.

**Child Competency**—Indicators of child self-regulation (e.g., arguing with other children), self-esteem (e.g., self-liking) and academic orientation (e.g., finding school work difficult) were assessed using nine items. Each item was scored dichotomously; all child responses that affirmed a competency (e.g., responding “really true about me” to the statement “I like myself the way I am.” or “not true about me” to the statement “I argue a lot with other kids.” were scored 1; otherwise, 0). Because a comprehensive assessment of child competence would require substantially more items than could be administered in the present survey, these items serve as only indicators of child competence, not as full competence profiles of participating children.

**Parent and Peer Alcohol-specific Socialization**—Children provided dichotomous indicators of six parent-related variables: fetching or pouring (measured separately) beer, wine, or other alcohol for a parent or other adult in the home; believing that their mother would be upset if they consumed alcohol at home or with friends (measured separately); having a family rule against child alcohol consumption; perceiving relatively easy access to alcohol in the home. Children also provided dichotomous indicators of four peer-related variables: holding the belief that at least one friend has sipped beer, wine or other drinks with alcohol; ever talking with a friend about drinking beer, wine or other drinks with alcohol; perceiving that friends think it is okay for kids their age to drink alcohol; perceiving a relatively high prevalence of alcohol use among same-grade peers.

**Parental Alcohol Use**—This covariate indicates the average frequency of drinking in the past month by the parents/guardians in the household. Mothers answered for themselves and for fathers or other adult caregivers in the home. Values ranged on a six-point scale from “none at all” to “almost every day”. On average, parents reported drinking between one and a few days a month (mean = 2.50, SD = 1.22).

**Demographic covariates**—We assessed child sex, mother's race/ethnicity, educational attainment, and employment status. Race/ethnicity was defined as non-Hispanic White, non-Hispanic Black, Hispanic, or other race/ethnicity. Mother's education included three categories: high school graduate or less, some college or vocational training, or bachelor's

degree or higher. Mother's employment status was defined as full-time (40 or more hours weekly of paid employment) part-time (less than 40 hours per week), or no paid employment. All demographic measures were based on mother reports.

### Statistical Analysis

We report percentages of sippers and abstainers who affirmed each indicator of child competence, parent alcohol-specific socialization, and peer alcohol-specific socialization and used univariate logistic regression analyses to provide odds ratios (OR) and test for significant associations between child sipping status and each indicator. All competency indicators were scored so that an OR value less than 1 would indicate that each indicator of child competency had an inverse association with child sipping. All parent and peer socialization variables were scored so that an OR value greater than 1 would indicate that fetching drinks for a parent, having peers who sip, etc. had a positive association with child sipping.

To examine multivariable relationships, we first assessed three separate logistic regressions models to reduce the large number of indicators. These models tested the associations between child sipping status and all indicators of (1) child competency, (2) parent socialization, and (3) peer socialization, after controlling for parental alcohol use frequency and demographic covariates. Indicators from each of these models that were significantly associated with child sipping were then included in a final logistic regression analysis. The final model also controlled for parental alcohol use and demographic covariates. We report the Hosmer-Lemeshow goodness of test statistic; a non-significant test would indicate that the expected number of sippers is not significantly different from those predicted by the model and that the overall model fit is good (Bewick, Cheek, & Ball, 2005).

### Results

Among all children in the study sample, 32.8% had ever sipped beer, wine or another drink with alcohol, excluding any religious use; sipping status did not vary by child gender. Examining child sipping status by parent-reported demographic factors, we found that although sippers were more likely than abstainers to have parents who were white non-Hispanic (72% vs. 68%, respectively), had a college education (53% vs. 47%), and worked full time (44% vs. 40%), none of these differences was significant. Past month alcohol use, however, was significantly more frequent among parents of sippers vs. abstainers,  $t(2, 1048) = 3.68, p = .000$ .

Percentages of sippers and abstainers who endorsed each indicator of child competency and parent and peer alcohol-specific socialization are presented in Table 1, along with odds ratios. As hypothesized, competency indicators were associated inversely with child sipping status: The odds of being a sipper were reduced by about half among children who endorsed indicators of self-esteem. For example, children who answered "really true about me" in response to the statement, "I like myself just the way I am," had significantly lower odds of having sipped alcohol than those who did not affirm this attribute. Similarly, the odds of being a sipper were significantly lower among children who endorsed indicators of behavioral self-regulation. For example, children who answered "not true about me" in response to the statement, "I argue a lot with other kids," were less likely to have sipped alcohol. Only one of the three indicators of academic orientation was associated with child sipping status. The odds of sipping were significantly lower among children who reported that liking school was "really true about me."

We found significant, positive associations between indicators of parent alcohol-specific socialization and child sipping status. As shown in Table 1, the odds of having sipped

alcohol were two to four times greater among children who reported having been asked by adults in the home to fetch or pour beer, wine or other drinks with alcohol, and similarly, among children who believed that parents would be tolerant if the child had alcohol at home or while with friends. Children who reported no parent rule against child alcohol consumption were twice as likely to have sipped as peers who reported having such a parent rule. Children's perceived access to alcohol in the home was not associated with child sipping, suggesting that mere exposure to alcohol in the home is not sufficient to raise the odds of an early introduction to alcohol.

The final set of results in Table 1 show that perceptions of pro-alcohol use socialization by peers were associated with greater odds of child sipping. Children had over twice the odds of being a sipper if they reported having at least one best friend who had sipped or tasted alcohol and if they reported talking with at least one friend about drinking. The odds of having sipped were also greater if children perceived that friends held a positive attitude about drinking during childhood and if they perceived relatively greater prevalence of alcohol use among same grade peers.

In the two preliminary multivariable models that assessed the child competency or peer socialization variables, parent alcohol use had a significant association with child sipping status. Across these two models, each unit increase in the frequency of parent alcohol use in the past month children were 16% ( $p < .05$ ) and 13% ( $p < .05$ ), respectively, more likely to report sipping. None of the demographic variables (child sex, parent race/ethnicity, education, or employment status) was associated significantly with child sipping status in any of the three preliminary models. The final multivariable model tested for associations between child sipping status and the multiple indicators of child competency and parent and peer alcohol-specific socialization that were significant in the preliminary models (see Table 2). After forcing all demographic factors and parental alcohol use into final model, the results indicate that relative to abstinent peers, children who had sipped alcohol were more likely to report breaking rules at school but less likely to affirm being happy with who they are. As regards parental socialization, children who had sipped were more likely to report not having a parental rule against alcohol use, to be involved in fetching or pouring drinks for adults, and to perceive parental tolerance of child alcohol use at home. As regards alcohol-specific socialization by peers, children who had sipped were significantly more likely to have talked with friends about drinking alcohol, believe that friends think it is okay for kids their age to have alcohol, and report relatively greater perceived prevalence of alcohol use among same grade peers. The Hosmer-Lemeshow test for the final model was not statistically significant ( $\chi^2$  (8 df) = 12.93,  $p = .114$ ), indicating acceptable model fit.

## Discussion

Little is known about children who experience an early introduction to alcohol use by sipping beer, wine or other kinds of drinks with alcohol. This low level of consumption essentially has been ignored by a field that has utilized ever having more than a few sips as the cut point for indicating initiation of alcohol use. Because sipping alcohol during childhood has been associated with an increased likelihood of alcohol use in early adolescence (Donovan and Molina, 2011), this study aimed to discover more about early sippers. Specifically, we wanted to learn whether there is any evidence that children who sip alcohol differ from peers who do not in ways that shed light on why early sipping has been found to be a marker for increased risk of underage drinking. Indicators from each set of correlates we examined – child competency and child exposure to pro-alcohol use socialization by parents and peers – were associated significantly and as expected with child sipping status. We consider each set in turn, beginning with child competency.

We chose to study competency indicators because middle childhood is a key period for development and differentiation of child self-regulation, self-esteem and academic orientation and because studies of older youth show strong inverse associations between competency development and risk-taking behaviors (Lamborn et al., 1991; Steinberg et al., 1994; Wills et al., 1992). We found that two types of childhood competency indicators were associated consistently with lower odds of child sipping. In univariate analyses, each indicator of child self-esteem and each indicator of child self-regulation had a significant inverse (protective) association with sipping. With one exception, the indicators of academic orientation were unrelated to child sipping status. The final multivariate model showed that child competency indicators in the self-esteem and self-regulation domains were associated with child sipping status after controlling for parent alcohol use and demographic factors and after accounting for children's exposure to pro-alcohol use socialization by parents and peers. These findings are quite consistent with those from studies of adolescents, again suggesting that developmental attributes associated with risk of underage drinking begin to differentiate at least as young as middle childhood.

Two related explanations for the presence of associations between competency indicators and sipping in younger children are suggested by the literature on parenting and child socialization. One explanation is that the association between child competency and child sipping is confounded by parenting style. For example, permissive or unengaged parenting styles are known to be associated with lower child competency development and with more anti-social behavior in children (Steinberg et al., 1994). Applied to the present finding, it is possible that attributes of parenting style could explain both weaker child competency development and less parental monitoring and control of child behaviors like sipping drinks with alcohol. A complementary explanation is that third grade children with lower competency development, particularly lower self-regulation, are relatively more likely to press boundaries and challenge parental authority than peers with higher competency development. Such children might, therefore, be more successful in evoking parental compliance with requests to sip drinks with alcohol. Future research could test whether parenting style is predictive of both child competency development and early sipping behavior, and, whether children with varied competency profiles interact differently with parents as regards seeking opportunities to sip drinks with alcohol.

Parent rules and family norms specific to offspring's alcohol use have been examined extensively as correlates of adolescent alcohol use but rarely as correlates of children's early experience sipping drinks with alcohol. Our results found a strong association between these alcohol-specific parenting factors and child sipping status. The children in our study were approximately twice as likely to sip alcohol if parents involved them in adult alcohol use (fetching or pouring drinks for adults), if parents did not make a rule against child use, and if children perceived a tolerant parental attitude about child alcohol use at home. This doubling of risk was observed after accounting for frequency of parent alcohol use. Indeed, the observed association between parent alcohol use and child sipping was fully attenuated by the addition of parent alcohol-specific socialization factors to the multivariate model. This finding suggests that any influence of parent alcohol use on child sipping may be mediated by parenting practices that more directly and explicitly convey alcohol-related norms to children.

Remarkably, even in middle childhood, peer alcohol-related influence factors are associated with odds of sipping in a manner consistent with the known associations of similar factors with odds of adolescent drinking. Among adolescents and, as our study shows, among children, perceiving that friends hold a positive attitude about early alcohol use and perceiving a relatively high prevalence of alcohol use among same grade peers are each associated with significantly higher odds of use. A possible explanation for this observed



association is that normal social selection processes increase the likelihood that children establish friendships with peers who are most like them; such similarities could include, for example, opportunities to sip alcohol. Such shared alcohol-related norms due to social selection are consistently observed among adolescents (Collins et al., 2000). A complementary explanation is that parents propel their children toward certain peers whose family norms are similar to their own, thereby contributing to the similarity in alcohol use experience and expectancies between their children and their children's friends (Collins et al., 2000). Whatever the underlying causes, the observed differences between sippers versus abstainers in alcohol-specific peer influence factors are striking, given the young age of our study sample. These findings contribute to the argument that children who sip alcohol differ from peers who do not in ways that could increase their long-term likelihood of underage drinking.

### Limitations

Our cross-sectional data and use of a non-probability sample are limitations of this study. Having a sample from the Southeastern region of the United States and one that over-represents college-educated mothers limits generalizability. In addition, the sample is biased by excluding families in which no adults in the household consumed alcohol even once in the prior three years (as necessary for the intervention trial from which these data come). National estimates show, however, that less than 10% of adults in the age range of parent participants have never consumed alcohol (U.S. Department of Health and Human Services, 2009). Our sample did include families in which parental alcohol use was very infrequent. In addition, more detailed assessments of child competency and alcohol socialization variables and provision of psychometric data for these constructs would have improved the quality of the present study, but was precluded by the limited number of items available for these constructs. Our study is also limited by the lack of data on parenting style and other broad socialization factors that could help us explain the observed association between child competency indicators and child sipping behavior.

### Conclusion

In a unique study of the consequences of childhood sipping, Donovan and Molina (2011) found that children who had sipped alcohol by age 10 were twice as likely as abstinent children to initiate drinking by age 14. Their finding suggests that sipping alcohol is a marker of differentiation as regards child socialization factors with the potential to increase future risk of underage drinking. We conducted this study to test for such early differentiation associated with sipping in a large sample of third grade children. Complementing their findings, our findings provide a preliminary indication that children who sip differ from peers who do not in ways that could increase their odds of progression to underage drinking. These findings, in tandem with those of Donovan and Molina (2011), provide evidence that sipping behavior is not benign. Indeed, taken together, the results of these two studies suggest that child sipping behavior and its antecedents merit increased attention in longitudinal research aiming to identify factors that predispose children to become adolescents who drink.

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## Biographies

Christine Jackson is a Senior Scientist at RTI International, with a Ph.D. in Social Ecology from the University of California at Irvine. Dr. Jackson's primary research interest is applying social science theory and intervention methods to understanding and preventing initiation of alcohol and tobacco use during childhood and early adolescence.

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**Table 1**  
Odds of child sipping alcohol by indicators of child competency and by alcohol-specific socialization factors

	Abstainers (n = 706) %	Sippers (n = 344) %	OR <sup>a</sup>	CI <sup>b</sup>	p
<b>Child competency</b>					
I like myself just the way I am (% really true)	85.4	75.7	.53	.39;.74	.000
I am happy to be me (% really true)	90.2	80.2	.44	.31;.63	.000
My mom likes me just way I am (% really true)	96.0	90.6	.40	.24;.68	.001
I argue a lot with other kids (% not true)	64.9	50.9	.56	.43;.73	.000
I like doing things that might get me in trouble (% not true)	91.9	85.6	.52	.35;.79	.002
I break rules at school (% not true)	88.2	77.6	.46	.33;.65	.000
I like school (% really true)	57.1	46.8	.66	.50;.85	.002
I have trouble doing schoolwork (% not true)	47.5	45.5	.92	.71;1.19	.537
I am as smart as other kids (% really true)	54.9	53.2	.93	.72;1.21	.611
<b>Alcohol-specific parenting</b>					
Adults ask child to fetch alcohol (% yes)	22.2	46.6	3.06	2.32;4.04	.000
Adults ask child to open or pour alcohol (% yes)	2.7	10.2	4.07	2.29;7.24	.000
Mother upset if child had alcohol at home (% no or a little)	9.7	25.1	3.10	2.18;4.40	.000
Mother upset if child had alcohol with friends (% no or a little)	5.3	10.9	2.19	1.36;3.52	.000
Mother has made a rule against child alcohol use (% no)	46.1	62.6	1.95	1.49;2.55	.000
Perceived access to alcohol at home (% not hard to get)	22.0	25.4	.89	.68;1.17	.481
<b>Alcohol-specific peer</b>					
Believes best friend has sipped drinks with alcohol (% yes)	9.9	21.9	2.53	1.77;3.63	.000
Talks with friends about drinking alcohol (% yes)	10.3	22.4	2.51	1.77;3.58	.000
Believes friends think kids having alcohol is okay (% yes)	5.6	15.9	3.17	2.03;4.94	.000
Perceived prevalence of peer drinking (% some, a lot)	7.1	21.6	3.61	2.44;5.35	.000

<sup>a</sup>OR: odds of being a sipper, each variable was analyzed independently

<sup>b</sup>CI: 95% confidence interval

**Table 2**

Child sipping status regressed on indicators of child competence and alcohol socialization, adjusted for parent alcohol use and demographic variables

Indicators <sup>a</sup>	OR	CI	<i>p</i>
I am happy to be me (really true = 1)	.48	.31;.77	.002
My mom likes me just way I am (really true = 1)	.59	.29;1.22	.159
I argue a lot with other kids (not true = 1)	.82	.58;1.15	.246
I break rules at school (not true = 1)	.53	.34;.83	.005
Adults ask child to fetch alcohol (yes = 1)	1.97	1.39;2.81	.000
Adults ask child to open or pour alcohol (yes = 1)	2.20	1.08;4.48	.029
Mother upset if child had alcohol at home (no or a little = 1)	2.21	1.43;3.41	.000
Mother has made a rule against child alcohol use (no = 1)	1.62	1.17;2.26	.003
Believes best friend has sipped drinks with alcohol (yes = 1)	1.45	.90;2.33	.121
Talks with friends about drinking alcohol (yes = 1)	1.58	1.01;2.49	.045
Believes friends think kids having alcohol is okay (yes = 1)	1.87	1.07;3.26	.027
Perceived prevalence of peer drinking (some, a lot = 1)	2.79	1.70;4.59	.000

<sup>a</sup>Indicators that were significantly associated with child sipping status in preliminary models are the only indicators included in this model.

Note. Neither parent alcohol use frequency nor any of the demographic variables entered into this model were associated significantly with child sipping status.