Parent–Child Divergence in the Development of Alcohol Use Norms from Middle Childhood into Middle Adolescence*

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ABSTRACT. Objective: Despite the importance of alcohol use norms as predictors of adolescent and college drinking, there has been little research on their development from childhood into adolescence. This study used parental and child beliefs regarding the acceptability of sipping, drinking, and drunkenness for children ages 8–16 years to establish age norms for these alcohol use behaviors and examined differences in the growth of these norms between parents and children. **Method:** Data were collected as part of an ongoing cohort-sequential longitudinal study of 452 families with children initially 8 or 10 years old followed over 10 waves covering the age span from age 8 to age 16 years. Children completed interviews every 6 months. Parents completed interviews annually. Latent growth modeling was performed on the mother, father,

and child data. **Results:** Unconditional latent growth curve modeling showed that parental acceptance of child sipping increased with child age but that there was no increase in their acceptance of child drinking or drunkenness through age 16 years. In contrast, there was significant growth in children's acceptance of sipping, drinking, and drunkenness. Piecewise growth models with a transition at 11.5 or 12 years of age best described the development of child and adolescent alcohol use norms. **Conclusions:** From middle childhood into middle adolescence, there is increasing divergence between parents' acceptance of alcohol use by children and child/adolescent acceptance of alcohol use by people their age. (*J. Stud. Alcohol Drugs*, 72, 438–443, 2011)

RISK FACTORS FOR ADOLESCENT DRINKING can be divided into two main categories: alcohol-specific risk factors and general risk factors (Zucker et al., 2008). To date, there have only been a few studies of the development of alcohol-specific risk factors from childhood into adolescence (Andrews and Peterson, 2006; Andrews et al., 2003; Donovan et al., 2009).

The present report focuses on the development of children's beliefs regarding the acceptability of alcohol use for people their own age. Such beliefs have been referred to in the literature as "own norms" (Biddle et al., 1980) or "personal norms" (Kam et al., 2009) and are significant predictors of adolescent drinking (Brody et al., 2000; Krohn et al., 1982). In contrast to injunctive norms, which assess perceptions of the approval for a behavior within a social group (Borsari and Carey, 2003), personal norms convey one's own approval or acceptance of a behavior and thus are similar to the affective or evaluative component of an attitude. Given that alcohol use is legally proscribed in many countries for individuals younger than a certain age, alcohol use norms

are likely to vary as a function of age. Previous research, however, has not described how children's personal norms change as they move into adolescence.

Pooling personal norms across individuals results in the description of what Larimer and colleagues (1997; Lee et al., 2007) call the "true" or actual injunctive norm (in contrast to the perceived injunctive norm). Given that we asked the children at each testing occasion "how wrong" alcohol use was for "someone your age" and the parents how wrong alcohol use was for "someone your child's age," the pooled data reflect age-graded norms for each class of drinking behaviors (sipping, drinking, and drunkenness). Their trajectories over the age span describe both the level of acceptability of drinking at each age and age-related change in the acceptability of drinking.

Description of these child and parental norms, and particularly their comparison, is important for understanding the social context within which alcohol use is initiated. Although parental norms predict child norms for alcohol use (Brody et al., 1998, 1999), adolescents may perceive much greater levels of parental approval for adolescent drinking than actually exist. It is thus important for prevention purposes to assess parental norms directly and to communicate these actual injunctive norms to children and adolescents. Moreover, documenting the typical developmental trajectories of injunctive norms provides a basis against which precocious acceptance of alcohol use can be identified and steps taken to derail movement into problematic drinking.

The aims of the present study are the following: to describe the extent to which children become more accept-

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ing of alcohol use (sipping, drinking, and drunkenness) by people their own age as they move into adolescence, to examine the alcohol use norms of parents as their children move from childhood into adolescence, and to compare the trajectories of growth in parental and child norms for child and adolescent alcohol use.

Method

Data were collected during the first 10 waves of an ongoing longitudinal study of the risk factors for early-onset drinking (the Tween to Teen Project). Families containing an 8- or 10-year-old child ($n = 209$ and 243 , respectively) and the child's biological mother were selected using targeted-age directory and random digit dialing sampling of Allegheny County, PA (Donovan and Molina, 2008). Parental consent and personal assent were obtained. Human subject procedures were approved by the University of Pittsburgh Institutional Review Board. A Certificate of Confidentiality was received from the National Institute on Alcohol Abuse and Alcoholism.

Children completed computer-assisted interviews every 6 months (with a 1.5-year hiatus between Waves 7 and 8). Parents (452 mothers and 320 fathers/partners) completed interviews annually (at Waves 1, 3, 5, 7, 8, and 10). Single-mother households comprised 23% ($n = 106$) of the sample. Participants did not differ from nonparticipants on the screening variables of mother's education, race, or age cohort of the target child (Donovan and Molina, 2008).

Participants at Wave 10 comprised 86.3% ($n = 390$) of the target children, 85.4% of the mothers ($n = 386$), and 89.7% (287/320) of the fathers. There were no gender or cohort differences in attrition. However, African American families were significantly less likely to continue in the study (24% at baseline vs. 22% at Wave 10). Discontinuers and continuers differed on 3 of 13 baseline measures summarizing psychosocial proneness for deviance, accounting for little of the variance in attrition (3%).

Measurement of alcohol use norms

Children's own alcohol use norms were assessed by 10 items asking them to rate the acceptability of someone their age taking a sip, having a drink, or getting drunk in family, peer, or solitary settings (1 = *not wrong at all*, 2 = *a little wrong*, 3 = *wrong*, and 4 = *very wrong*). Example items are the following: "How wrong is it for someone your age to take a sip of a parent's beer or wine if it is offered?" "To drink a whole can of beer at a friend's house?" "To get drunk while with friends?" "To get drunk when drinking alone?" Cronbach's α reliability across 10 waves averaged .78 for sipping (four items), .83 for drinking (three items), and .87 for drunkenness (three items). Mothers and fathers rated how wrong it was for "someone your child's age" to engage in the

same behaviors. Cronbach's α reliabilities averaged .70 for sipping, .84 for drinking, and .89 for drunkenness for parents across six annual waves.

Analytic procedures

Children were assessed every 6 months at mean ages 8.5 through 14.0 years in the younger cohort and at mean ages 10.5 through 16.0 years in the older cohort. Response options were reverse scored (so higher scores indicate greater acceptability) and averaged across items within each scale. Latent growth modeling was carried out using Mplus 6.1 (Muthén and Muthén, 2010). Missing data were handled using full-information maximum-likelihood procedures. For the children, the 10 waves of norm variables were reorganized by age, resulting in 15 measures from age 8.5 to age 16.0 years (in half-year increments) and, for the parents, from six waves to 10 child ages (Bollen and Curran, 2006).

Latent growth models represent growth over time through the estimation of two latent constructs, the intercept (baseline level) and the slope (rate of change), from manifest variables assessed at each age. First, unconditional models were examined to determine the shape of the across-time trajectories. Because each cohort provided only 10 of the 15 ages represented (given the accelerated longitudinal design), the usual measures of model fit (e.g., comparative fit index, root mean square error of approximation) could not be calculated; instead, Bayesian Information Criterion indices were used to identify the best-fitting model (linear vs. linear and quadratic vs. piecewise). Piecewise models test whether different slopes are needed to fit the data for younger versus older ages. Based on examination of the observed means, two alternative cut points (age 11.5 vs. age 12.0 years) were examined in the piecewise models. Second, conditional models were examined to determine if sex or ethnic/racial background predict variation about the typical across-time trajectories.

Results

Table 1 presents estimates of the means and variances of the intercepts and slopes for child, mother, and father acceptance of children's sipping, drinking, and drunkenness at child ages 8.5 through 16.0 years. Figure 1 presents the estimated growth curves (where 0 = *very wrong*, 1 = *wrong*, and 2 = *a little wrong*). As may be seen, there is increasing divergence between the average child and parental ratings of the acceptability of all three alcohol use behaviors as a function of child age.

Description of the latent growth curves for norms for child sipping

Children's norms. For children's acceptance of sipping, a piecewise growth model had a lower Bayesian Informa-

FIGURE 1. Estimated latent growth curves for children, mothers, and fathers, by child age, for norms regarding: (A) child sipping, (B) child drinking, and (C) child drunkenness. For all three scales, plots report the estimated means of respondents' average rating across items within a scale, where 0 = *very wrong*, 1 = *wrong*, 2 = *a little wrong*, and 3 = *not wrong at all*.

TABLE 1. Estimated means and variances on the latent variables of the intercept and slope(s) of the latent growth models for child, mother, and father norms for child sipping, drinking, and drunkenness^a

Variable	Intercept		Slope 1		Slope 2	
	<i>M</i>	Variance	<i>M</i>	Variance	<i>M</i>	Variance
Sipping norms						
Child	.411***	.158***	.113***	.037***	.202***	.036***
Mother	.534***	.220***	.029***	.005***	—	—
Father	.640***	.264***	.020***	.003***	—	—
Drinking norms						
Child	.048***	.016***	.013*	.007***	.173***	.038***
Mother	.049***	.027***	.002	.001***	—	—
Father	.066***	.012†	.005	.001*	—	—
Drunkenness norms						
Child	.022†	.018***	.009	.007***	.156***	.025***
Mother	.042***	.021***	.000	.000*	—	—
Father	.041***	.000	.001	.000	—	—

Notes: For sipping, the cut point between Slope 1 and Slope 2 was age 11.5 years. For drinking and drunkenness, the cut point was age 12.0 years. ^aMeans for intercepts at age 8.5 are based on individuals' average responses across items within a scale, where 0 = *very wrong*, 1 = *wrong*, 2 = *a little wrong*, and 3 = *not wrong at all*.

†*p* < .10; **p* < .05; ****p* < .001.

tion Criterion score (fit better) than the other models. In Table 1, all three latent-variable means (Intercept, Slope 1, and Slope 2) were significantly different from zero, as were the variances. Significant mean slopes indicate significant change with child age. The mean for Slope 2 (age ≥11.5 years) was nearly twice as large as for Slope 1 (ages 8.5–11 years). The table also shows that the variances about the intercepts were larger for sipping than for drinking or drunkenness.

Parental norms. For parental acceptance of child sipping, a linear growth model fit best for both mothers and fathers. The mean intercepts and slopes and their variances were significantly different from zero (Table 1), indicating significant growth in their acceptance of child sipping as well as significant variation about the typical growth curve.

Description of the latent growth curves for norms for child drinking

Children's norms. For children's acceptance of drinking, a piecewise growth model again fit best but with a transition at age 12.0 years. Both the means and variances on the latent growth variables were statistically significant (Table 1). Comparison of the two piecewise mean slopes (.013 vs. .173) shows that there was little growth before age 12 years but substantial growth from age 12 through age 16 years.

Parental norms. Growth in parental acceptance of child drinking fits a linear model for both mothers and fathers. However, their nonsignificant mean slopes indicate little growth in their acceptance of child drinking. There was significant but small variation about the typical growth curve for both parents.

Description of the latent growth curves for norms for child drunkenness

Children's norms. A piecewise model with a transition at age 12 years best described growth in children's acceptance of drunkenness. Although there was no growth in their acceptance of children getting drunk between ages 8.5 and 11.5 years, there was significant growth from age 12 through age 16 years (see slopes in Table 1).

Parental norms. For both mothers' and fathers' acceptance of child/adolescent drunkenness, a linear growth model fit best. For both parents, however, the mean slopes indicate no significant change in their level of (un)acceptance of child drunkenness between ages 8.5 and 16.

Covariates of growth in alcohol use norms

Conditional analyses found that girls and boys displayed the same growth curves over time: Child sex did not relate to the growth parameters for children's acceptance of sipping, drinking, or drunkenness. Race did not relate to any of the intercepts but was positively associated with the slopes for the younger ages, indicating greater growth in White than African American children's acceptance of all three alcohol use behaviors from age 8.5 through age 11 or 11.5 years.

Discussion

Pooling the individual personal norms permitted a description of growth curves for the actual injunctive norms of parents and their children, enabling a more textured understanding of age-graded norms for children's alcohol use. The age-graded norms differed between raters (parents vs. children) and as a function of the behavioral referent

(level of alcohol use). Parental norms for child drinking and drunkenness did not change between ages 8.5 and 16 years, but their acceptance of sipping did increase somewhat once the children became teenagers.

In contrast, children's acceptance of all three alcohol use behaviors increased significantly as they moved into middle adolescence. For sipping, initial average ratings of "very wrong" moderated to "a little wrong" by age 16 years. For drinking and drunkenness, initial ratings of "very wrong" moderated to "wrong." There was still substantial variation in the magnitude of individual slopes from age 11.5 or 12 years on (see variances for Slope 2 in Table 1), indicating that some adolescents became substantially more accepting of drinking and drunkenness over this age range (e.g., 10% rated drinking as "a little wrong" or "not wrong at all" at age 16 years).

Comparison of the growth curves (in Figure 1) shows that at the younger ages, children fully endorsed their parents' lack of acceptance of child sipping, drinking, and drunkenness. Most of the growth in children's acceptance of alcohol use came after age 11.5 or 12 years, about the time that children transition from elementary school into middle school and are exposed to older, possibly drinking, adolescents. Given the low levels of parental acceptance of child alcohol use, it is likely that friends, older siblings, and the mass media contribute more strongly to the growth in child norms seen here in adolescence.

These growth curves for children's acceptance of people their age using alcohol are fully consistent with the development of sipping, drinking, and drunkenness behavior in this sample. The prevalence rate for sipping increased from 33% at age 8.5 years to 68% at age 12 years to 83% at age 16 years. In contrast, the prevalence of drinking increased from 0.5% at age 8.5 years to 6% at age 12 years but 43% at age 16 years. Lastly, the prevalence of drunkenness was essentially 0% through age 13 years, increasing to 16% at age 16 years.

The following limitations of the present research should be noted. The first limitation is our reliance on families from a single county in the northeastern United States. Compared with the United States as a whole, Allegheny County includes somewhat more Whites (83% vs. 80%) and the same percentage of African Americans (13%) but fewer Asian Americans or Hispanic Americans (4% vs. 20.4%); the county population is also more stable (fewer moved) and somewhat better educated, and per capita income is \$904 per year greater than average. It is possible that there is greater or less divergence between parental and child alcohol use norms in other locales. A second limitation is the absence of information on the norms of the target children's close friends. Such data would have permitted a more complete description of the growth in age-graded norms for child and adolescent drinking. A third limitation is that the use of "not wrong at all" as the most accepting response option may

have dampened children's acceptance, resulting in reduced parent-child divergence. A fourth limitation is the inability of the latent growth analyses to take into account the within-family clustering of the personal norms. This is, however, less critical where the goal is description (as here) rather than prediction.

As our ongoing longitudinal study continues, it will be possible to extend the examination of the growth of actual injunctive norms through age 21 years, at which age there should be minimal difference between parental and young adult drinking norms (although their drunkenness norms may still differ). Of particular interest for future research is determination of the psychosocial factors influencing growth in children's personal norms as they transition through adolescence. Further research is also needed to clarify the relative roles of personal norms and other risk factors for the initiation of early-onset drinking and for the escalation of alcohol involvement throughout adolescence.

Description of the actual injunctive norms of parents and children may be relevant for prevention. These actual (pooled) norms could be used in a social marketing approach to prevent children's initiation, similar to those used to reduce heavy episodic drinking among college students (Perkins, 2002). The increased acceptability of drinking observed here between ages 12 and 16 years suggests that this may be a good period in which to add booster sessions to augment earlier (elementary school) prevention efforts. Given that the most successful prevention programs include parents as well as children (Spath et al., 2006; Stigler et al., 2006), sessions could encourage parents to talk more with their children about their disapproval of child drinking and to continue such discussions through both childhood and adolescence.

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