Alcohol-Specific Parenting as a Mechanism of Parental Drinking and Alcohol Use Disorder Risk on Adolescent Alcohol Use Onset

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ABSTRACT. Objective: The primary aim of the current study was to examine three dimensions of alcohol-specific parenting (anti-alcohol parenting strategies, parental legitimacy in regulating adolescent drinking, and parental disclosure of negative alcohol experiences) as mechanisms in the prospective relations between parental drinking and alcohol use disorder (recovered, current, and never diagnosed) and adolescent alcohol use initiation. **Method:** Participants were from an ongoing longitudinal study of the intergenerational transmission of alcoholism. Structural equation modeling was used to test a maternal model ($n = 268$ adolescents and their mothers) and a paternal model ($n = 204$ adolescents and their fathers) of alcohol-specific parenting. **Results:** Results indicated that higher levels of drinking among mothers and current alcohol use disorder among fathers were related to more frequent parental disclosure of personal negative experiences with alcohol. Maternal disclosure of

negative alcohol experiences mediated the effect of maternal drinking on adolescent onset of alcohol use such that more disclosure predicted a greater likelihood of adolescent drinking initiation at follow-up over and above general parenting. In addition, currently alcoholic mothers were perceived as having less legitimate authority to regulate adolescent drinking, and low levels of legitimacy among fathers was predictive of drinking onset among adolescents. **Conclusions:** Alcohol-specific parenting is a distinct and influential predictor of adolescent alcohol use initiation that is partially shaped by parents' own drinking experiences. Moreover, parental conversations about their own personal experiences with alcohol may not represent a form of parent-child communication about drinking that deters adolescent drinking. (*J. Stud. Alcohol Drugs*, 74, 684–693, 2013)

ADOLESCENCE IS A DEVELOPMENTAL PERIOD marked by risk taking, sensation seeking, and alcohol use initiation and escalation (Brown et al., 2008; Spear, 2000). According to recent Monitoring the Future data, 33.1% of eighth graders reported ever drinking alcohol, and 14.8% reported ever being drunk (Johnston et al., 2012). Early initiation into drinking is a public health concern given its association with adult alcohol use disorder (AUD) and other negative consequences including unintentional injuries, risky sexual behavior, and drinking and driving (Dawson et al., 2008; Grant et al., 2001; Hingson et al., 2000; Stueve and O'Donnell, 2005; Zakrajsek and Shope, 2006). Moreover, for each year that drinking initiation is delayed, the odds of subsequent development of alcohol dependence are decreased by 5%–9% (Grant et al., 2001). Therefore, delaying adolescent drinking onset is an important preventive intervention goal.

Although adolescence is characterized by increased time spent with peers and decreased time spent with fam-

ily (Spear, 2000), parents continue to be instrumental in adolescent development in general (Galambos et al., 2003) and alcohol use specifically (Wood et al., 2004). Moreover, it has been posited that parental socialization occurs not only through general parenting behaviors (i.e., support and control) but also as a result of more specific attempts by parents to influence particular behaviors (Darling and Steinberg, 1993; Grusec, 2002; Grusec and Goodnow, 1994). For instance, in addition to general parenting practices, parents may also engage in alcohol-specific parenting, or specific behaviors to deter adolescent drinking. These may include a variety of parenting behaviors, such as discussions about the dangers of alcohol and setting and enforcing rules about their children's drinking.

Not only does research support longitudinal associations between alcohol-specific parenting and adolescent drinking (e.g., Van der Vorst et al., 2007; Van der Zwaluw et al., 2008), but there is also evidence that anti-alcohol socialization uniquely predicts adolescent alcohol use, over and above general parenting practices (Reimuller et al., 2011; Van der Zwaluw et al., 2008). These results indicate that alcohol-specific parenting is not a mere marker of general parenting but a distinct and influential predictor. Therefore, because of its documented links with adolescent alcohol use (e.g., Jackson et al., 1999) and its demonstrated malleability (Ennett et al., 2001; Koning et al., 2011), alcohol-specific parenting research has implications for prevention and intervention designs.

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Parental alcohol use disorder and alcohol-specific parenting

According to Belsky's social-contextual model (Belsky, 1984; Belsky and Jaffee, 2006), parenting is multidetermined, resulting from individual, historical, and social factors, as well as child characteristics. Research on general parenting among individuals with an AUD demonstrates that alcoholic parents engage in suboptimal parenting (see Zahn-Waxler et al., 2002, for a review). In addition, maladaptive general parenting represents a mechanism of the intergenerational transmission of AUD (e.g., Chassin et al., 1993). Although not as widely studied, there is also evidence that parents' drinking may affect alcohol-specific parenting. Parental drinking has been associated with more alcohol-related communication and less strict rules about offspring drinking (Mares et al., 2011; Van Zundert et al., 2006). To our knowledge, no previous studies have examined alcohol-specific parenting among a sample of high-risk parents with a clinically diagnosed AUD. Understanding how alcoholic parents socialize their children about alcohol may reveal another mechanism of familial alcoholism risk and illuminate a potential point of preventive intervention. Furthermore, the role of recovery from AUD in parental anti-alcohol socialization is unknown. Chassin and colleagues (2002) demonstrated that parents who were ex-smokers perceived themselves as engaging in higher levels of antismoking parenting compared with smoking parents, thus suggesting that recovered alcoholic parents may engage in strict alcohol-specific parenting.

In addition to direct effects of parental AUD on alcohol-specific parenting, parents' AUD may also moderate the effectiveness of anti-alcohol socialization practices on adolescent drinking. According to socialization theory, clear, redundant, and consistent parental messages are more readily internalized than are inconsistent or unclear messages (Grusec and Goodnow, 1994). Therefore, parental alcoholism may send a conflicting message to alcohol-specific parenting strategies, making these strategies less effective. Consistent with this notion is research showing that smoking-specific parenting is less effective when the parent is a smoker (Chassin et al., 2005). However, other studies have failed to find the amount of parental drinking to be a significant moderator of the relation between alcohol-specific parenting and adolescent drinking (Koning et al., 2010; Van der Vorst et al., 2005). Whether having an alcoholic parent diminishes the effectiveness of anti-alcohol parenting has yet to be explored.

Alcohol-specific parenting and adolescent drinking

Numerous studies have documented the prospective relations between dimensions of alcohol-specific parenting and adolescent drinking (e.g., Ennett et al., 2001; Mares et al., 2011; Van Zundert et al., 2006). Although strict antidrink-

ing rules have been repeatedly linked with less adolescent drinking (e.g., Koning et al., 2010; Mares et al., 2012; Van der Vorst et al., 2005), results regarding the protective effect of parent-child communication about drinking are mixed (e.g., Ennett et al., 2001; Mares et al., 2011; Reimuller et al., 2011; Van der Vorst et al., 2010). Specifically, Ennett and colleagues (2001) found that parent-child communication about substance use rules predicted an increase in adolescent use over time. Conversely, Mares and colleagues (2011) showed that more frequent alcohol-specific communication was prospectively predictive of less problematic adolescent drinking. Clearly, more work is needed to understand the aspects of alcohol-specific communication that may be effective or ineffective at deterring offspring drinking. Among alcoholic parents, sharing personal experiences with alcohol may be a relevant topic of alcohol-specific communication. However, the effectiveness of parental disclosure about negative alcohol experiences has yet to be examined.

The primary aim of the current study was to determine whether alcohol-specific parenting is part of a mediational process whereby parental AUD and current drinking transmit risk for adolescent drinking initiation. Moreover, we also investigated effects of parental current and recovered AUD on anti-alcohol socialization practices as well as the prospective associations between these antidrinking parenting practices (including parental disclosure of negative alcohol experiences) and adolescent onset of drinking. Last, we tested whether parental AUD moderates the effects of alcohol-specific parenting on adolescent drinking initiation.

Method

Participants

Participants were drawn from a larger, ongoing longitudinal study of familial alcoholism across three generations (Chassin et al., 1991). At Wave 1 (1988), the total sample consisted of 454 adolescents (generation 2; "G2s") and their parents (generation 1; "G1s"). A total of 246 of these adolescents had at least one biological alcoholic parent who was also a custodial parent, and the remaining 208 adolescents were demographically matched controls without an alcoholic parent (matched on adolescent age, family composition, ethnicity, and socioeconomic status). Beginning at Wave 4 (18–25 years of age), G2 biological siblings within the same age range of the original G2s were also interviewed. At Wave 6, interviews were conducted with the children of the G2s (i.e., generation 3; "G3s") and the spouses/partners of the G2s (i.e., the G3s' "other parents"). G3s reported on their alcohol use approximately 4 years after Wave 6 in a brief telephone interview.

The current study used data collected at Wave 6 from the original G2 participants who had G3 children between ages

TABLE 1. Descriptive statistics

Variable	Mother % or <i>M</i> (<i>SD</i>)	Father % or <i>M</i> (<i>SD</i>)	Adolescent % or <i>M</i> (<i>SD</i>)
Parental ethnicity			
White	70.30%	73.10%	
Hispanic/other	29.70%	26.90%	
Parental education			
Less than HS degree	4.50%	6.90%	
HS graduate	25.50%	19.00%	
Some college	49.00%	47.30%	
At least college degree	20.90%	26.80%	
Adolescent gender			
Female			49.50%
Male			50.50%
Age	35.4 (4.7)	36.9 (4.5)	12.6 (1.7)
Parental AUD			
Current	4.50%	17.10%	
Recovered	18.40%	21.00%	
Never	77.20%	62.00%	
Parental current drinking	0.49 (0.50)	0.72 (0.64)	
Parental alcohol-related disclosure			M: 2.4 (1.3), F: 2.3 (1.3)
Parental social support			M: 4.0 (0.8), F: 3.7 (0.9)
Parental consistency			M: 4.2 (0.6), F: 4.2 (0.7)
Adolescent drinking at follow-up			
Nondrinker			79.80%
Drinker			20.20%

Notes: All parenting items are coded such that high scores indicate more of the construct. Adolescent reports of parenting variables are separated by parent such that M: indicates adolescent report of mother and F: indicates adolescent report of father. HS = high school; AUD = alcohol use disorder.

11 and 17 years, the G3s' "other" parents, and the G3s, as well as G3s' data collected at the 4-year follow-up. Only G3s without drinking experience at Wave 6 were included in the current study ($N = 460$ of a possible 522) so that temporal precedence could be established between alcohol-specific parenting (measured at Wave 6) and adolescent drinking onset (measured at the 4-year follow-up) and stronger conclusions could be made regarding directionality of effects. Moreover, G3s were included in either the mother or father model, or both, if they completed the 4-year follow-up, had complete data concerning the parent's AUD and drinking at Wave 6, and lived at least part time with the parent. This resulted in a final sample of 268 adolescents for the mother model and 204 adolescents for the father model. Adolescents were, on average, 12.6 years of age at Wave 6 (78.3% were between ages 11 and 13 years), and approximately half were male. See Table 1 for descriptive information.

Included and excluded adolescents were compared on all study variables using t tests and chi-square comparisons. Consistent with including only adolescents without drinking experience at Wave 6, included adolescents were significantly younger, $t(520) = 4.76, p < .001$, reported that their parents had more legitimate authority to regulate adolescent drinking, $t_{\text{mother}}(516) = -4.01, t_{\text{father}}(476) = -3.84, ps < .001$, and were more consistent with discipline in general, $t_{\text{mother}}(516) = -3.76, t_{\text{father}}(478) = -2.78, ps < .01$, compared with excluded adolescents. Moreover, included adolescents reported that their parents provided more social support than did excluded adolescents, $t_{\text{mother}}(516) = -2.94, t_{\text{father}}(478) =$

$-2.46, ps < .05$. Last, included adolescents had more highly educated parents, $t_{\text{mother}}(474) = -3.55, t_{\text{father}}(394) = -3.41, ps < .001$, and mothers who drank less, $t(411) = 3.79, p < .001$. Included and excluded adolescents did not differ in gender, parental AUD, father drinking, parental alcohol-specific parenting strategies or alcohol disclosure.

Recruitment

Complete details on the sample recruited for the larger study are described elsewhere (Chassin et al., 1992). Original "G1" alcoholic parents and their children were recruited using court records, health maintenance organization wellness questionnaires, community telephone screening, and hospital referral. To qualify, parents had to live in Arizona, be of non-Hispanic White or Hispanic ethnicity, be born between 1926 and 1960, and have children between ages 10.5 and 15.5 years. Direct interview was used to confirm that a biological and custodial parent met *Diagnostic and Statistical Manual of Mental Disorders, Third Edition* (DSM-III; American Psychiatric Association, 1980), criteria (Robins et al., 1981) or family history research diagnostic criteria (FH-RDC; Endicott et al., 1975) for lifetime alcohol abuse or dependence. Matched nonalcoholic families (matched on child's age, family composition, ethnicity, and socioeconomic status) were recruited using directories to find families living in the same neighborhoods as the children of alcoholic families. Interview data confirmed that neither biological nor custodial parents in these families met DSM-III criteria (or

FH-RDC; Endicott et al., 1975) for lifetime alcohol abuse or dependence.

Procedure

Wave 6 interviews were conducted either at the family's residence or at the Arizona State University Tempe campus. Trained project personnel used laptop computers to enter data. Interviewers read items aloud, and participants had the option either to enter responses themselves or to respond verbally to questions. In most cases, family members were interviewed simultaneously but in different rooms to avoid threats of contamination and to increase privacy. To encourage honesty, we reinforced confidentiality with a Department of Health and Human Services Certificate of Confidentiality. Interviews lasted approximately 1–2 hours, and families were paid up to \$65 for their participation. A brief 4-year follow-up assessment was conducted over the phone, and adolescents were paid \$15 for participation.

Measures

Alcohol-specific parenting. Adolescents reported on three dimensions of alcohol-specific parenting (based on previous measurement modeling) using 12 items adapted from The Indiana Smoking Study (Chassin et al., 2002). For all items, response options ranged from 1 (*almost never/never*) to 5 (*almost always/always*). Six items assessing parental strategies to prevent adolescent alcohol use were used as indicators of the "strategies" latent variable. Items included "take action to stop me from drinking" and "talk to me about dangers of drinking." Reliabilities (α) ranged from .87 to .90. Four items assessing parents' legitimacy to regulate their child's alcohol use were used as indicators of the "legitimacy" latent variable. Items included "My mother drank alcohol as a teenager so she has no right to tell me not to drink" and "Experimenting with alcohol is harmless so there is no need for my mother to intervene." Reliabilities (α) ranged from .79 to .83. Parental disclosure of negative alcohol experiences was assessed with two items concerning parents' frequency of sharing personal negative experiences with alcohol and those of friends or family. The two items were averaged to create a mean score. Reliabilities (α) ranged from .76 to .91. High scores indicated higher levels of the construct (i.e., more frequent use of strategies, more legitimacy, more frequent disclosure).

General parenting practices. Adolescents reported on the level of social support the parent provided to the child using seven items adapted from the Network of Relations Inventory (Furman and Buhrmester, 1985). Items were averaged, and high scores indicated greater support. Reliabilities (α) ranged from .85 to .89.

Adolescents reported on parents' consistency of discipline using 10 items from the Children's Report of Parental Be-

havior Inventory (Schaefer, 1965). Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Items were averaged, and high scores indicated more consistency. Reliabilities (α) ranged from .85 to .88. Previous confirmatory factor analyses confirmed the distinction between support and consistency of discipline.

Parental alcohol use disorder. Parents' lifetime and past-year DSM-IV (American Psychiatric Association, 1994) diagnoses of AUD (abuse or dependence) were obtained with a computerized version of the Diagnostic Interview Schedule, Version IV (Robins et al., 2000). A total of 38.1% of fathers and 22.9% of mothers met DSM-IV criteria for lifetime AUD (abuse or dependence). Seventeen percent of fathers and 4.5% of mothers met criteria for past-year AUD (current alcoholism). As expected in a study that oversamples individuals at high risk, these prevalence rates are higher than national data (Grant et al., 2004).

Contrast codes were created to examine differences among currently alcoholic parents (AUD in the past year), recovered alcoholic parents (lifetime AUD but no diagnosis in the past year), and never-diagnosed parents. The first contrast code compared currently alcoholic parents with others (recovered and never diagnosed) and was coded as follows: current AUD (-2), recovered AUD (1), never diagnosed (1). The second contrast code compared recovered alcoholic parents with never-diagnosed parents and was coded as follows: current AUD (0), recovered AUD (-1), never diagnosed (1).

Parental alcohol use. Parents reported their frequency of past-year consumption of beer/wine and distilled spirits (two items) with responses ranging from 0 (*never*) to 7 (*every day*). Quantity of typical past-year alcohol consumption (two items) ranged from one to nine or more drinks per occasion. For beer/wine and for distilled spirits, we computed Quantity $\times$ Frequency cross-products and summed them to index consumption. Because modeling techniques are sensitive to nonnormality, a log transformation was used to reduce skewness and kurtosis and then multiplied by 10 to facilitate interpretation. See Table 1 for descriptive statistics.

Demographics. Parents reported their educational attainment with response options ranging from less than eighth grade to completing graduate/professional school. Parents reported their ethnicity as White (70.3% of mothers, 73.1% of fathers), Hispanic (22.5% of mothers, 22.3% of fathers), American Indian (1.2% of mothers, 0% of fathers), African American (1.8% of mothers, 1.5% of fathers), and "other" (4.2% of mothers and 3.1% of fathers). Ethnicity was dichotomized such that non-Hispanic White was coded 0 and other ethnicities were coded 1. See Table 1 for frequencies.

Adolescent drinking onset. At Wave 6 and the 4-year follow-up, adolescents reported whether they had ever had a drink of alcohol. Only those with no lifetime drinking experience at Wave 6 were included in this study. Of these, 20.2% reported initiating drinking at follow-up.

Results

Correlations among study variables are presented in Table 2. As expected, parents' lifetime AUD and current drinking were associated with more adolescent drinking onset. Also, fathers' AUD and parents' current drinking were associated with more alcohol disclosure, and more frequent alcohol disclosure was related to more adolescent alcohol initiation. Last, lower levels of parental legitimacy and social support were associated with more adolescent drinking onset.

Model specification

We tested whether the three dimensions of alcohol-specific parenting (strategies, legitimacy, and disclosure) mediated the effects of parental AUD and parental current drinking on adolescent onset of drinking. Separate models were tested for mothers and fathers to maximize sample size in each model. Parental AUD (two contrast-coded variables), parental drinking, parental education, parental ethnicity, adolescent gender, and adolescent age were entered as correlated exogenous variables. Three alcohol-specific parenting variables (strategies-latent variable, legitimacy-latent variable, and disclosure-observed variable) and two observed general parenting variables (social support and consistency of discipline) were entered as mediators. Residual covariances among mediators were modeled. All exogenous variables and mediators were modeled to predict adolescent drinking onset at follow-up. Nonsignificant paths from covariates to mediators and the outcome were trimmed in the final models. Parental ethnicity was trimmed from the final mother and father models because it did not uniquely predict mediators or the outcome. Adolescent gender was trimmed from the final father model because it did not uniquely predict mediators or the outcome.

Structural equation models were tested using MPlus Version 6.0 (Muthén and Muthén, 1998–2011). Because the

endogenous variable was binary (onset of drinking yes/no), the weighted least squares estimator with mean and variance adjustments (WLSMV) was used, which computes probit parameter estimates for categorical outcomes. Missing data were handled using full information maximum likelihood. Because adolescents were nested within families, standard errors were adjusted for nonindependence of observations using the complex function in Mplus. Model fit was estimated with the robust WLSMV chi-square statistic, comparative fit index (CFI), root mean square error of approximation (RMSEA), and the weighted root-mean-square residual (WRMR). The robust WLSMV chi-square statistic has been shown to have good statistical properties in testing model fit with categorical outcomes (Nussbeck et al., 2006). CFI values greater than .95, RMSEA values less than .06, WRMR values less than .90, and a nonsignificant chi-square statistic were considered to indicate good model fit (Hu and Bentler, 1999; Yu and Muthén, 2002).

Mother model

The final mother model (Figure 1) showed good fit to the data, $\chi^2(117) = 142.44$, $p = .06$ (CFI = .96, RMSEA = .03, WRMR = .66). As expected, older adolescents showed more drinking onset. Moreover, older adolescents reported more frequent maternal alcohol disclosure and less consistent maternal discipline. Male adolescents reported more maternal alcohol strategies, more alcohol disclosure, and less maternal legitimacy to regulate adolescent drinking than did female adolescents. More highly educated mothers were perceived as disclosing fewer alcohol experiences and using more consistent discipline. Currently alcoholic mothers were perceived as having less legitimacy to regulate alcohol use and as providing less social support to adolescents, compared with other mothers. Adolescents with recovered alcoholic mothers were more likely to begin drinking by follow-up compared with adolescents of never-diagnosed

TABLE 2. Zero-order correlations among study variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Parental AUD	—	.35***	-.27***	.01	-.01	-.02	.08	.16*	.01	-.02	.13*
2. Parental drinking	.20**	—	-.24**	.07	.04	.04	-.17*	.23**	-.11	-.11	.33***
3. Parental education	.02	-.05	—	-.12	-.11	-.10	.13*	-.24***	.04	.08	-.14*
4. Adolescent gender	-.02	-.10	.04	—	-.07	.13*	-.04	.04	.03	-.10	.01
5. Adolescent age	.05	.04	-.05	-.13*	—	-.08	.01	.15*	-.01	-.11	.21**
6. Alcohol strategies	.02	-.01	-.09	.13*	-.07	—	.10	.40***	.36***	.19**	.01
7. Alcohol legitimacy	-.11*	-.10	.11	-.11	-.01	.06	—	-.09	.34***	.35***	-.21**
8. Alcohol disclosure	.11	.21***	-.24***	.06	.10	.29***	-.14*	—	.13*	-.12	.15*
9. Parental support	-.04	-.15*	.01	-.10	.01	.25***	.25***	.08	—	.42***	-.15*
10. Parental consistency	-.05	-.16**	.13*	-.01	-.15*	.20***	.43***	-.16**	.40***	—	-.12
11. Adolescent-onset drinking	.21***	.22***	-.12*	-.02	.32***	-.05	-.12*	.26***	-.23***	-.20***	—

Notes: Mother model correlations are presented below the diagonal and father model correlations are presented above the diagonal. The mean of the six alcohol-strategies items was used to include alcohol strategies in this table, and the mean of the four alcohol-legitimacy items was used to include alcohol legitimacy in this table. The six strategies items were modeled as indicators of the strategies latent variable in the final model and the four legitimacy items were modeled as indicators of the legitimacy latent variable in the final model. Parental AUD indicates parental lifetime alcohol use disorder (0 = no diagnosis, 1 = diagnosis). Gender is coded 0 = female, 1 = male, and adolescent-onset drinking is coded 0 = abstainer, 1 = initiated drinking. AUD = alcohol use disorder.

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

FIGURE 1. Mothers' alcohol-specific parenting. *Notes:* For ease of presentation, only significant unstandardized path coefficients are presented ($p < .05$). Although not depicted, all correlations among exogenous variables were modeled, as were residual covariances among mediators. Adolescent gender was coded 0 = female, 1 = male. Adolescent drinking onset was coded 0 = nondrinker, 1 = initiated drinking. All continuous variables are coded such that high scores indicate more of the construct.

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

mothers. Higher levels of maternal drinking predicted more frequent maternal alcohol disclosure, less consistency of discipline, and greater likelihood of adolescent alcohol onset at follow-up. Last, more frequent maternal alcohol disclosure predicted adolescent drinking onset at follow-up.

To test the indirect effect of maternal current AUD and maternal drinking on adolescent drinking onset at follow-up via parenting (i.e., maternal alcohol disclosure and social support), 95% asymmetric confidence limits were used (Tofighi and MacKinnon, 2011). Confidence intervals (CIs) that do not include the value zero indicate significant mediation. Results indicated that more maternal disclosure of negative experiences with alcohol significantly mediated the effect of maternal drinking on adolescent drinking onset (95% CI [.01, .21]). Also, lower levels of maternal social support significantly mediated the effect of maternal current AUD on adolescent drinking onset at follow-up (95% CI [-.17, -.04]).

Odds ratios were computed as measures of effect size. This was done by standardizing predictors, testing the above model in Mplus (Muthén and Muthén, 1998–2011) with MLR estimator, and calculating odds ratios from the logit regression coefficients. The odds of adolescent-onset drinking increased 1.47 for 1-SD increase in frequency of maternal disclosure. The odds of adolescent drinking onset at follow-

up decreased .53 for every 1-SD increase in maternal social support.

Father model

The final father model (Figure 2) showed good model fit, $\chi^2(107) = 123.95$, $p = .13$ (CFI = .96, RMSEA = .03, WRMR = .60). Consistent with the mother model, older adolescents reported more paternal alcohol disclosure and a greater likelihood of initiating drinking. Less highly educated fathers and those with a current AUD were viewed as engaging in more frequent alcohol disclosure. Also consistent with results of the mother model, more paternal drinking predicted adolescent drinking onset at follow-up. Last, lower levels of paternal legitimacy in regulating adolescent drinking predicted greater likelihood of adolescent alcohol initiation at follow-up. Regarding effect size, the odds of adolescent drinking onset at follow-up decreased .52 for every 1-SD increase in paternal legitimacy.

Both mother and father models were tested with parental lifetime AUD (abuse or dependence) as a binary yes/no variable in place of the two contrast-coded variables used in the above models. The pattern of results was largely the same. For mothers, lifetime AUD predicted less legitimacy

FIGURE 2. Fathers' alcohol-specific parenting. *Notes:* For ease of presentation, only significant unstandardized path coefficients are presented ($p < .05$). Although not depicted, all correlations among exogenous variables were modeled, as were residual covariances among mediators. Adolescent gender was coded 0 = female, 1 = male. Adolescent drinking onset was coded 0 = nondrinker, 1 = initiated drinking. All continuous variables are coded such that high scores indicate more of the construct.

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

and a greater likelihood of adolescent alcohol initiation. For fathers, lifetime AUD did not uniquely predict parenting or adolescent alcohol initiation. In this model, father drinking predicted more alcohol disclosure and adolescent alcohol initiation.

Moderation by parental alcohol use disorder

We also tested separate mother and father models to determine whether parental lifetime AUD moderated the effects of the three dimensions of alcohol-specific parenting (strategies, legitimacy, and disclosure) on adolescent drinking onset. For both mother and father models, there was no significant improvement in model fit when paths from the three alcohol-specific parenting variables to adolescent drinking onset were allowed to vary across parental AUD compared with models that were fully constrained across parental AUD, $\Delta\chi^2_{\text{Mother}}(3) = 1.60$, $p = \text{n.s.}$; $\Delta\chi^2_{\text{Father}}(3) = 1.37$, $p = \text{n.s.}$ Therefore, we did not find evidence of moderation of alcohol-specific parenting by parental AUD.

Discussion

The current study asked whether alcohol-specific parenting practices represent a mechanism whereby parental

AUD and current drinking transmit risk for drinking onset among high-risk adolescent offspring. Results indicated that maternal disclosure of negative alcohol experiences partially mediated the relation between mothers' drinking and adolescent drinking onset. Specifically, the more mothers drank, the more they disclosed personal experiences with alcohol, which in turn prospectively predicted a greater likelihood of alcohol initiation among adolescents. Although this same unique effect was not found for fathers, zero-order correlations for both mothers and fathers support this association. The finding is particularly striking because the effect of maternal disclosure was statistically significant over and above effects of maternal AUD and current drinking, general parenting practices, and adolescent age. This indicates that the negative effect of maternal disclosure was not merely a marker of maternal alcoholism risk, or of mothers sharing more with older children, but rather that maternal disclosure about negative alcohol experiences was distinct from general parenting practices and also influential to the onset of adolescent drinking.

Although somewhat counterintuitive, it is possible that rather than perceiving mothers' disclosure as a warning against alcohol use, adolescents find these drinking stories to be somewhat enticing or normalizing of alcohol use, therefore enhancing adolescents' positive views of drinking and

subsequent likelihood of initiating use. In addition, it is also plausible that mothers may disclose these negative events in a positive way. For instance, a mother laughs while sharing a story of becoming physically ill following a drinking episode.

To our knowledge, this is the first study to examine the impact of parental disclosure about personal drinking experiences on adolescent drinking. However, prior studies have examined general parent-child communication about substances, and although some found protective effects of parent-child discussions (e.g., Chassin et al., 1998), others showed that frequent alcohol-specific communication may escalate substance use among adolescents who already drink or smoke (Ennett et al., 2001; Van den Eijnden et al. 2011; Van der Vorst et al., 2010). It is likely that a number of factors affect the effectiveness of these conversations (e.g., the content, quality, and frequency of communication).

In addition to mothers' disclosure of personal negative experiences with alcohol as a mechanism of mothers' drinking risk, our results indicated that mothers' social support was also a mediator of mothers' alcohol behavior risk. Specifically, currently alcoholic mothers provided less social support to their adolescents, which in turn prospectively predicted onset of adolescent drinking. These findings are consistent with prior studies showing maladaptive general parenting practices among parents with an AUD (see Zahn-Waxler et al., 2002, for a review) and theories of the intergenerational transmission of AUD, which often include impaired parenting practices as a mechanism by which alcoholism risk is conferred (see Sher, 1991, for a review).

That both mothers' alcohol-specific parenting and general parenting influenced adolescent drinking initiation is consistent with socialization theories suggesting that socialization occurs as a result of both types of parenting behaviors (Darling et al., 1993; Grusec, 2002; Grusec and Goodnow, 1994). Our results indicate that a 1-SD increase in maternal alcohol disclosure increased the odds of adolescent drinking onset nearly 1.5 times. On the other hand, every 1-SD increase in maternal social support reduced the odds of adolescent alcohol initiation by half. Therefore, preventive intervention designs focused on both forms of parenting are warranted.

With regard to perceptions of parental legitimacy to regulate adolescent drinking, currently alcoholic mothers were viewed as having less legitimacy compared with other mothers. These results are consistent with Chassin and colleagues (2002), who showed that adolescents whose parents are either ex-smokers or currently smoking perceived their parents as having less legitimacy to deter adolescent smoking. Moreover, our results indicated that lower paternal legitimacy in regulating adolescent drinking predicted a greater likelihood of adolescent drinking. Compromised parental legitimacy may be problematic given its theorized importance to children's internalizing of parents' rules and values (Grusec and Goodnow, 1994).

In addition to examining parents' current AUD effects on alcohol-specific parenting, we also tested the effects of parents' recovery from alcoholism. Although we found that recovered alcoholic mothers were more likely to have adolescents who initiated drinking at follow-up, as compared with never-diagnosed mothers, we did not find unique effects of parental AUD recovery on dimensions of anti-alcohol socialization. Our use of adolescent-reported alcohol-specific parenting provides one possible explanation for our lack of findings. Specifically, parents with a history of AUD may view any anti-alcohol parenting practice they engage in as particularly salient given their personal experiences with alcohol, but these behaviors may not have heightened salience for their offspring. Therefore, effects of recovery from AUD on alcohol-specific parenting may be stronger with parental self-reports of behavior. The only other study to examine parental legitimacy in regulating adolescent substance use found that ex-smoking parents viewed themselves as using strict smoking-specific parenting strategies compared with smoking parents (Chassin et al., 2002). However, this parental-report effect did not extend to adolescent report, and the lack of adolescent-report effect is consistent with the current findings. Differences in findings for parental and adolescent report are common in parenting research, and previous data show stronger associations between parenting and adolescent drinking in adolescent-reported parenting than in parental self-reported parenting (e.g., Latendresse et al., 2009). This suggests that parents' attempts to socialize their adolescents about substance use may not be effective unless adolescents actually perceive these behaviors.

Contrary to expectations, we did not find evidence that alcohol-specific parenting effects on adolescent drinking initiation were moderated by parental AUD. Although surprising, our results are consistent with studies that have failed to show that alcohol-specific parenting effects diminish when the parent is a heavy drinker (Koning et al., 2010; Van der Vorst et al., 2005). However, our lack of findings may be a result of limited statistical power to detect complex interaction effects within our structural equation models. Further research in this area with larger sample sizes is warranted.

Regarding parental gender, we found that mothers' current AUD and drinking affected a number of dimensions of mothers' alcohol-specific parenting and general parenting. However, among fathers, alcohol disclosure was the only parenting dimension affected by fathers' drinking or AUD. That fathers' parenting may be less affected by drinking than mothers' is consistent with previous research showing that mothers' parenting is more affected by depression than is fathers' parenting (Belsky and Jaffee, 2006). Moreover, we found that mothers' alcohol disclosure and social support predicted adolescent alcohol onset, whereas fathers' alcohol disclosure and social support did not. This may be because mothers typically spend more time with children than do fathers (Grusec and Goodnow, 1994) and because mothers

may have a greater socialization impact than do fathers (see Grusec, 2002, for review).

Although not a focus of the present study, interesting differences between boys' and girls' perceptions of their mothers' alcohol-specific parenting were also found. In particular, boys reported more alcohol-specific strategies and more frequent disclosure about negative experiences than did girls. Also, boys found their mothers to have less legitimate authority to regulate drinking than did girls. Our findings are consistent with research showing more frequent parent-child communication about drinking between parents and sons compared with parents and daughters (Van der Vorst et al., 2010). Parents may use more alcohol-specific parenting practices with sons because they are responding to the higher levels of externalizing symptoms or behavioral undercontrol found among boys as compared with girls (Iacono et al., 2008). Thus, parents may perceive their sons as more at risk for drinking than their daughters.

The present study contributes to the literature by testing alcohol-specific parenting as a mediator of parental AUD and drinking effects on adolescent alcohol initiation, exploring unique effects of parental recovery from AUD on alcohol-specific parenting, and investigating the effectiveness of parental disclosure about personal negative experiences with alcohol. However, limitations should be noted. First, we relied on adolescent report of parenting because parenting that is not perceived may not be effective. However, shared method variance may inflate the magnitude of the association between alcohol-specific parenting and adolescent outcomes. Second, the relatively low base rate of currently alcoholic mothers may have reduced statistical power. Furthermore, we lacked statistical power to detect complex interactions between mothers' and fathers' alcohol-specific parenting. Future research examining interactive effects between mothers' and fathers' parenting is important. Moreover, we tested parental current drinking and current AUD as proxies for adolescent exposure to parental drinking but lacked direct measures of this exposure. Last, although adolescent drinking onset is an important outcome, our results may not generalize to drinking persistence or escalation or alcohol-related problems.

Taken together, these results have important implications for family-based adolescent substance use prevention programs. Given its demonstrated distinctness from general parenting practices, its prediction of adolescent alcohol use initiation, and its potential malleability (Ennett et al., 2001; Jackson and Dickinson, 2003), alcohol-specific parenting may be an important complement to prevention programs targeting general parenting. Prevention programs may benefit from discouraging parents from disclosing their own negative alcohol experiences. In addition, alcoholic parents in treatment may also benefit from education on the potential iatrogenic effect of sharing their own negative alcohol-related experiences with their children.

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