

Intergenerational Relations for Drinking Motives: Invariant for Same- and Opposite-Sex Parent–Child Dyads?

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ABSTRACT. Objective: The purpose of this study was to investigate the similarity or dissimilarity of same-sex (e.g., mother–daughter) and opposite-sex (e.g., mother–son) associations for drinking motives across four pairings of parent–young adult child dyads. **Method:** Three waves of data spanning approximately 10 years in early to late young adulthood were used in conjunction with mother and father data to examine same- and cross-sex associations for drinking motives. Multiple group structural equation modeling was used to statistically model and evaluate these parent–young adult associations. **Results:** Findings indicated strong same-sex intergenerational transmission patterns for mother–daughter dyads relative to father–daughter dyads. The strength of relationships for father–son dyads was also stronger and significantly different than those for father–daughter dyads. There were no statistically significant differences between sex-specific intergenerational patterns for mother–

son and father–son dyads or for mother–daughter and mother–son dyads. Although there was some generality and some specificity in the sex-specific intergenerational transmission patterns of drinking motives, when statistically significant, the transmission pattern generalized across all three drinking motives (coping, social, and enhancement). **Conclusions:** Intergenerational factors contributing to alcohol phenotypes may not be limited to the modeling of alcohol use or the occurrence of alcohol disorders but may also include cognitive–motivational systems of affective regulation related to the use of alcohol. Future research would benefit by focusing on how biogenetic and socialization factors contribute to same- and opposite-sex intergenerational patterns and how to use this information to strengthen intervention programs. (*J. Stud. Alcohol Drugs*, 73, 63–70, 2012)

STUDIES OF INTERGENERATIONAL RELATIONS and familial aggregation have been conducted frequently in alcohol studies with regard to the transmission of alcohol disorders, spawning an extensive literature on children of alcoholics (COAs; Sher, 1991; Windle and Tubman, 1999) and serving as an impetus for behavioral and molecular genetic studies of alcohol phenotypes. The COA literature suggests that COAs are about four times more likely to develop an alcohol disorder than non-COAs (Russell, 1990). Parent-to-child intergenerational transmission of alcohol use, in addition to disorders, has also been supported via positive associations between parental and offspring alcohol use (Yu, 2003; Zhang et al., 1999), with a stronger association among parents who drink at heavier levels (Schmidt and Tauchmann, 2011). In addition to alcohol use phenotypes, a number of risk factors (genes, temperament, neuropsychological deficits, drinking motives, alcohol expectancies) and developmental pathways (e.g., externalizing pathway) have been identified to suggest important etiological linkages

that contribute to intergenerational risk (Porjesz et al., 2005; Tarter et al., 2003; Zucker, 2006).

Nevertheless, motives for drinking, which have been reported as significant predictors of alcohol use, alcohol problems, and alcohol disorders (Carey and Correia, 1997; Kuntsche et al., 2005), have not been investigated within an intergenerational framework. This is the case even though such drinking motives may be influenced across generations by genetic and environmental factors (e.g., parental modeling and parent–child socialization) and may serve as potentially valuable targets for alcohol and other substance use interventions, as well as depression interventions (Windle and Windle, 1996).

Theoretical models regarding drinking motives suggest that individuals use alcohol to achieve desired outcomes and to regulate positive and negative emotions (Cooper et al., 1995; Cox and Klinger, 1988). For example, it has been proposed that there are both positively reinforcing motivations for drinking (e.g., social drinking to facilitate camaraderie, enhancement drinking to get high) and negatively reinforcing motivations for drinking (e.g., to cope with stress or self-medicate) (Cooper et al., 1995). These motivations for drinking have also been represented in models of the etiology of alcohol use and alcohol disorders through broader positive and negative affect regulatory processes (Cooper et al., 1995; Sher et al., 2005). A review of motives for drinking by Kuntsche et al. (2005) indicated that social motives are most highly associated with moderate alcohol

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use, enhancement motives with heavy drinking, and coping motives with alcohol-related problems. In a separate article, Kuntsche et al. (2006) reported that motives for drinking were relatively undifferentiated for males and females in childhood and early adolescence but became more sex specific in adolescence and beyond, as females tended to steer more toward the use of alcohol for coping motives and males toward enhancement motives.

Given the emerging prominence of motives for drinking as a potentially significant cognitive-motivational etiologic component of alcohol use and alcohol disorders and the possibility of sex differences in manifestations of drinking motives (Kuntsche et al., 2006; Sher et al., 2005), the primary objective of this study was to investigate the intergenerational relations of drinking motives for parents and their young adult offspring. Specifically, a cross-sex intergenerational approach was adopted in this study to investigate whether the transmission of motives is the same (invariant) or different across parent-child dyads based on same- versus opposite-sex pairings (e.g., mother-to-daughter vs. mother-to-son). In this study, we investigated if, and with what strength, the three most commonly identified motives for drinking—coping, social, and enhancement—are associated across generations and used structural equation modeling (SEM) to provide statistical tests of hypothesized same- and cross-sex associations (e.g., mother-daughter, mother-son, father-daughter, father-son). Because the study of intergenerational relations for drinking motives has not been conducted, there are limited prior empirical data to guide directional hypotheses.

Nevertheless, based on studies in the alcohol use literature suggesting sex specificity in parent-child intergenerational patterns of alcohol use (Harburg et al., 1982; Yu and Perrine, 1997) and the sex-role socialization literature on alcohol use (Barnes et al., 1997; Huselid and Cooper, 1992), we proposed two hypotheses. First, we hypothesized that the mother-to-daughter association would be stronger for coping drinking motives than the association for other dyads (i.e., mother-to-son, father-to-daughter, and father-to-son). Second, because social drinking motives are considered more normative behaviors (Cooper et al., 1992), we hypothesized no statistically significant differences among dyads for the transmission of these social drinking motives.

Method

Participants

The data used in this study were collected at Waves 5, 6, and 7 as components of a large, multiwave panel design focused on risk factors and adolescent and young adult substance use and mental health. We refer to the study by the acronym LAT, which stands for Lives Across Time: A Prospective Study of Adolescent and Adult Development. The

initial principal objective of LAT was to assess the onset, escalation, maintenance, and continuation (or termination) of alcohol and other substance use among 1,205 teens during the high school years (with four waves of assessment at 6-month intervals) in relation to a range of risk factors (e.g., temperament, peer substance use, family history of alcoholism). Data were collected within the adolescents' high school setting, and the overall student participation rate was 76%. The sample consisted of high school sophomores (53%) and juniors (47%) recruited from two homogeneous suburban public high school districts (a total of three high schools) in western New York; the average age of the respondents at the first occasion of measurement was 15.54 years ($SD = 0.66$), and 98% were White. Sample retention across the first four waves of measurement was uniformly high, in excess of 90%. This longitudinal study was reviewed and approved by the Institutional Review Board of the University at Buffalo.

There was approximately a 6-year gap between the Wave 4 assessment in adolescence and the Wave 5 data collection that occurred when the average age of the young adults was 23.5 years. The Wave 5 assessment was modified from Waves 1 to 4 in that data collection changed from a large-group, in-school survey format to separate, individual interviews of the young adults and their mothers and fathers in their homes. Greater detail on the Wave 5 assessment is provided elsewhere (Windle et al., 2005). Briefly, at least one of three possible participants from 940 households participated at Wave 5, including 827 young adults.

Attrition analyses on crucial predictors and outcomes indicated very few differences on Wave 1-Wave 4 variables between those young adults who participated at Wave 5 and those who either refused or could not be located at Wave 5. Similar interview procedures were used at Wave 6 (on average, young adult age was 28.5 years) and Wave 7 (on average, young adult age was 33.5 years). A total of 779 young adults participated at Wave 6 and 801 at Wave 7. Attrition analyses conducted at Waves 6 and 7 were similar to those at Wave 5 in that there was no evidence of selective dropout. In this study, data were used from Waves 5 to 7 because it was only at these occasions of measurement that the same drinking motives measure was administered to parents and their young adult offspring. The sample included 391 mother-daughter pairs, 358 mother-son pairs, 287 father-daughter pairs, and 245 father-son pairs. Pairs, or dyads, were used rather than family trios because the use of trios would have resulted in a decrease of between 32% and 37% of the sample.

Procedure

During the adolescent phase (i.e., Waves 1-4), subsequent to receiving informed consent from both a parent and the target adolescent, a trained survey research team administered the survey to adolescents in large groups (e.g., 40-50 stu-

dents) in their high school setting at each wave. The survey took about 45–50 minutes to complete, and subjects received \$10.00 for their participation. Confidentiality was assured with a U.S. Department of Health and Human Services Certificate of Confidentiality. The young adulthood interviews at Waves 5, 6, and 7 were conducted via one-on-one interviews either in the subjects' homes or at the host institute of the investigators. Subjects were paid \$40 to complete an interview that lasted approximately 2 hours. Computer-assisted personal interviews were used to collect data. Because some (about 7%) of the young adults resided out of state (e.g., because of military service, college attendance, or jobs), a reduced-protocol telephone interview was used to collect data from these young adults.

Measures

Parental sociodemographic variables. In their individual interviews and/or completion of mail surveys, parents were asked about their age, number of years of education completed, family income, and other status indicators (e.g., marital and occupational status).

Motives for drinking. Coping motives, social motives, and enhancement motives for drinking were assessed using the 15-item self-report measure developed by Cooper et al. (1992). Only those who reported drinking alcohol completed this measure. Confirmatory factor analyses supported the three-dimensional structure across racial and gender groups, internal consistency estimates ranged from .77 to .85, and

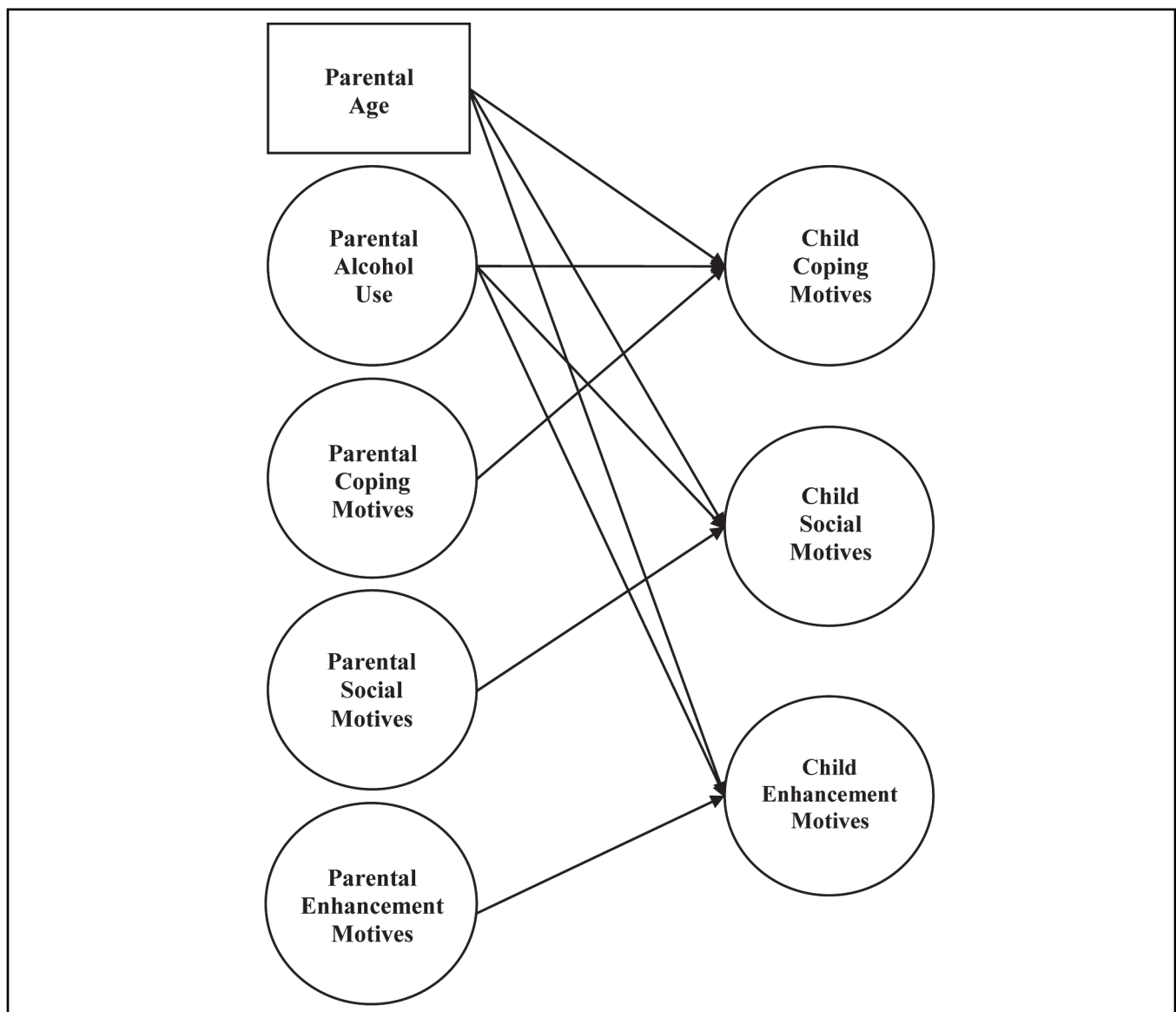


FIGURE 1. Schematic of structural equation model of parent-child intergenerational model of drinking motives

each drinking motive was associated with common and unique features of substance use behaviors.

Parental alcohol use. Alcohol use was measured with a standard quantity–frequency index that assessed beer, wine, and distilled spirits consumption in the past 6 months (Armor and Polich, 1982). Respondents were asked how often they usually had each beverage in the last 6 months (1 = *never* to 7 = *every day*) and, when they had the beverage, on average how much they usually drank (10-point scale from 1 = *none* to 10 = *more than 8 cans, bottles, or glasses, depending on the beverage*). A quantity–frequency index of 0.5 is equal to one drink.

Analyses

Multiple-group SEM using Mplus Version 3.0 (Muthén and Muthén, 1998–2004) was used to test hypotheses about the invariance of parent–child drinking motives across four different dyad pairings (mother–daughter and father–daughter; mother–son and father–son; mother–daughter and mother–son; father–daughter and father–son). Three waves of longitudinal data were used for these analyses, with data collected separately from young adults, mothers, and fathers at each wave. Figure 1 provides a schematic of the basic substantive specification of the SEM for each of the parent–child dyads. There are seven latent variables (shown in circles) specified in Figure 1, along with the exogenous predictor of parental age (shown in a rectangle). Each of the seven latent variables was measured with three manifest variables, one from each of the three waves of assessment (e.g., parental alcohol use at Waves 5, 6, and 7). The model was specified such that, controlling for parental age and parental alcohol use, what was the strength of association between parent and child coping motives, social motives, and enhancement motives? Consistent with the correlated trait–correlated uniqueness model, correlated errors were specified to account for across-time relationships among nine manifest indicators that were not captured via the latent variables (for more details on correlated trait–correlated uniqueness models, see Marsh and Grayson, 1995; Windle and Dumenci, 1999). The specification of these correlated errors improved the overall statistical fit of the models but did not influence the magnitude or statistical significance of the substantively important parameters relating parental motives to young adult motives for drinking.

For the simultaneous group modeling to test invariance relations for parent–child drinking motives across the four dyad pairings, two models for each pairing were specified, and the chi-square difference test was used to evaluate the null hypothesis of no group differences. The baseline model included an invariant specification for the measurement model (i.e., that the relationships between manifest indicators and the latent variables did not differ across dyad pairs). Then, equality constraints (constrained model) were imposed

on the three parameters corresponding to the structural coefficients of parent–child coping motives, social motives, and enhancement motives, respectively. Hence, the chi-square difference test had three degrees of freedom, and if there was not a statistically significant difference between the baseline and constrained models, this indicated that there was similarity (i.e., a lack of statistically significant differences) across the dyad pairings. However, if there was a statistically significant difference, this indicated that the hypothesis of invariant relations needed to be rejected. Maximum likelihood estimates that were robust to nonnormality and nonindependence of observations were used in the simultaneous group analyses.

We used the root mean square error of approximation (RMSEA; Browne and Cudeck, 1992) as our primary index of model fit because some (Loehlin, 1998) have suggested that it is currently the best model fit index, and it also may be advantageous with the robust maximum likelihood estimator used in this study. Close fit for the RMSEA index is indicated for values less than .05, fair or adequate fit for values ranging from .05 to .08, and poor fit for values greater than .10. A secondary fit index, the comparative fit index, also was reported, with values greater than or equal to .95 considered good fit and those between .90 and .95 considered reasonable fit (Brown, 2006; Marsh et al., 2004). Hu and Bentler (1999) proposed a criterion of .95 for the comparative fit index to indicate good fit; however, as noted by others (Marsh et al., 2004), this value may be too stringent for more complex models and may result in the rejection of well-fitting models as well as impose limitations on replication.

Results

Attrition and noninclusion analyses were conducted for mothers, fathers, and young adults included in this study. For young adults, comparisons among participants and nonparticipants on Wave 4 data (when adolescents were juniors and seniors in high school) indicated no statistically significant differences for alcohol use, heavy episodic drinking, cigarette use, marijuana use, delinquency, stressful life events, depressive symptoms, percentage of friends using alcohol, or family cohesion. Comparisons among parents participating and nonparticipating in the current study also indicated no statistically significant differences on family income, years of parental education completed, alcohol use, heavy episodic drinking, cigarette use, depressive symptoms, stressful life events, occupational stress, or family cohesion. Further comparisons among participating mothers and fathers, respectively, and those parents who were excluded because they did not drink alcohol indicated no statistically significant differences on sociodemographic variables (e.g., family income, years of education completed), depressive symptoms, negative affect, or marital satisfaction.

TABLE 1. Goodness-of-fit statistics for simultaneous group parent-child intergenerational models

Parent-child dyad	χ^2	<i>df</i>	RMSEA	CFI
Mother-daughter and father-daughter				
Baseline model ^a	1,182.45	397	.08 [.07, .08]	.92
Constrained model ^b	1,170.87	394	.08 [.07, .08]	.92
χ^2 difference model	11.58**	3	—	—
Mother-son and father-son				
Baseline model	901.28	397	.06 [.06, .07]	.95
Constrained model	898.06	394	.06 [.06, .07]	.95
χ^2 difference model	3.22 (n.s.)	3	—	—
Mother-daughter and mother-son				
Baseline model	1,164.86	397	.07 [.06, .08]	.93
Constrained model	1,161.68	394	.07 [.06, .08]	.93
χ^2 difference model	3.18 (n.s.)	3	—	—
Father-daughter and father-son				
Baseline model	957.75	397	.07 [.06, .08]	.93
Constrained model	947.13	394	.07 [.07, .08]	.93
χ^2 difference model	10.62*	3	—	—

Notes: RMSEA = root mean square error of approximation (with confidence intervals in brackets); CFI = comparative fit index; n.s. = not significant. ^aBaseline model included cross-group equality constraints for measurement model of latent variables; ^bconstrained model included cross-group equality constraints for measurement model of latent variables and structural coefficients for the three parent-child drinking motives.

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

Across the three waves of measurement, missing data ranged from 15.5% for mothers to 20.2% for fathers. Before the SEM analyses, missing values were estimated via maximum likelihood methods. Little's missing completely at random (MCAR) test (Little, 1995) was used as a conservative test of MCAR. The MCAR test for fathers yielded a χ^2 statistic of 30.81 (27 *df*, $p = .311$), thereby suggesting that the hypothesis that data were missing at random could not be rejected. Similarly, the MCAR test for young adults yielded a χ^2 statistic of 27.26 (29 *df*, $p = .558$), thereby suggesting that the hypothesis that data were missing at random could not be rejected. The MCAR test for mothers yielded a χ^2 statistic of 82.87 (51 *df*, $p = .003$), thereby suggesting a minor deviation from MCAR assumptions, although given the sensitivity of the MCAR test and the need to satisfy only conditions of data missing at random (i.e., able to be reasonably estimated from extant observed data), the estimated data were used in subsequent data analyses.

Four SEMs for different dyad pairings were specified for the parent-young adult child intergenerational models. Two of the pairings (mother-daughter and father-daughter; mother-son and father-son) were used to evaluate if both parents' drinking motives were invariant in their associations with drinking motives for daughters and sons, respectively. The other two pairings (mother-daughter and mother-son; father-daughter and father-son) were used to evaluate if each parent's drinking motives were invariant in their associations with drinking motives for daughters and sons, respectively. As described previously, baseline and constrained models were specified for each of the four dyad pairings.

Goodness-of-model-fit statistics for these models are provided in Table 1 and suggest adequate or fair model fit (Marsh et al., 2004). The fit of the baseline model suggests

that the specification of an invariant measurement model provided adequate statistical fit and facilitated a straightforward test of the invariance hypotheses for drinking motives (i.e., unconfounded by possible differences in the measurement model for latent variables). Standardized parameter estimates of the "factor loadings" for the seven latent variables were statistically significant ($p < .001$) and of high magnitude (ranging from .75 to .94). The global fit statistics of the constrained models also provided adequate fit, and the chi-square difference tests indicated significant differences for two of the dyad pairings (mother-daughter and father-daughter; father-daughter and father-son) and nonsignificant differences for the other two pairings (mother-son and father-son; mother-daughter and mother-son).

Table 2 provides the crucial substantive (unstandardized) parameter estimates for the associations between the four parent-young adult child dyads for each of the drinking motives. The findings indicated that mother-daughter and father-daughter intergenerational associations were not invariant, and the structural coefficients in Table 2 show statistically significant estimates ranging from .18 to .22 for mother-daughter dyads and nonsignificant estimates ranging from -.03 to .04 for father-daughter dyads. Likewise, father-son associations showed statistically significant estimates ranging from .15 to .20 and nonsignificant estimates ranging from -.04 to .04 for father-daughter dyads. By contrast, mother-son and father-son structural coefficients were invariant and statistically significant and ranged in value from .14 to .18. Also, mother-daughter and mother-son structural coefficients were invariant and statistically significant and ranged in value from .15 to .18. With regard to the covariate of parental age, the only statistically significant association was a negative one with a value of -.05 ($p < .05$) for coping

TABLE 2. Parent-child intergenerational latent variable unstandardized structural coefficients for motives for drinking

Parent-child dyad	Coping motives	Social motives	Enhancement motives
Model 1 ^a			
Mother-daughter	.19***	.18***	.22***
Father-daughter	.04	-.01	-.03
Model 2 ^b			
Mother-son	.16***	.14***	.18***
Father-son	.16***	.14***	.18***
Model 3 ^c			
Mother-daughter	.15***	.16***	.18***
Mother-son	.15***	.16***	.18***
Model 4 ^d			
Father-daughter	.04	-.01	-.04
Father-son	.20***	.15**	.20***

^aMother-daughter and father-daughter constrained model; ^bmother-son and father-son constrained model; ^cmother-daughter and mother-son constrained model; ^dfather-daughter and father-son constrained model. ** $p < .01$; *** $p < .001$.

motives for the mother-son dyad. For the covariate of parental alcohol use, maternal alcohol use significantly predicted higher coping motives in sons and higher social motives in daughters, whereas paternal alcohol use significantly predicted higher enhancement motives in daughters and higher social motives in sons.

Discussion

This investigation of intergenerational relationships for drinking motives among parent-young adult child dyads provided novel information in several ways about the same- and opposite-sex transmission. First, the drinking motives of mothers were equally strong in their transmission to sons and daughters and generalized to all three motives for drinking. Second, the drinking motives of mothers and fathers were equally strong in their transmission to sons and generalized to all three motives for drinking. Third, the drinking motives of fathers were significant only in relation to the transmission to sons but not to daughters (i.e., they were sex specific). Fourth, the drinking motives of mothers were stronger than the drinking motives of fathers in their transmission to daughters such that statistical significance was achieved for three motives for the mother-daughter pairs but none for the father-daughter pairs.

Hence, two of the findings suggested sex specificity in the transmission pattern, and two suggested more general effects across parents for influences on sons' drinking motives and across sons and daughters for mothers' transmission. With regard to the first of the two stated hypotheses, the coping drinking motives of mothers transmitted to daughters were not stronger for daughters than for sons, and therefore this hypothesis was rejected. The second hypothesis was that there would be no significant sex differences in the transmission of social drinking motives, and this hypothesis was also rejected because father-son transmission was statistically

significant for social motives, but father-daughter transmission was not statistically significant.

The rejection of the study hypotheses, although not anticipated, is not surprising given the lack of prior empirical studies or theorizing on intergenerational relations for motives for drinking. We used the intergenerational literature on alcohol use (Harburg et al., 1982; Yu and Perrine, 1997) as a general guide for expectations regarding sex specificity (father-son and mother-daughter) of drinking motives, but mechanisms for alcohol use and for drinking motives need not be the same.

Inconsistent with these prior sex-specific studies of intergenerational alcohol use was the consistency of the significant findings for the transmission of drinking motives from mothers to daughters and sons. These findings suggest the possibility of a more long-term influence of mother-child relations on alcohol-related beliefs and motivations among children in young adulthood. It is possible that earlier developmental processes that occur in the home and (largely) under the supervision of mothers related to alcohol beliefs and affect-regulation mechanisms may set the stage for developmental cascades across time that contribute to more entrenched motives for drinking. There is modest literature on how beliefs and expectancies about alcohol use occur in childhood before the actual consumption of alcohol (Campbell and Oei, 2010; Ouellette et al., 1999; Zucker et al., 1995), and it is possible that part of this early formation includes cognitive-motivational schemas or scripts on why one drinks. To the extent that these beliefs are carried forward and consolidated in adolescence and young adulthood, earlier maternal influences may play a prominent role in determining motives for drinking.

Not limiting the discussion of the potential intergenerational influence of mothers, it is also important that the drinking motives of fathers were significantly related to the drinking motives of sons, although not daughters. These findings are consistent with the sex-specific transmission literature for alcohol use (Harburg et al., 1982; Yu and Perrine, 1997) and suggest that there may be some specific influences for men with regard to the intergenerational transmission of motives for drinking that do not generalize to women.

Findings for the sex specificity of parent-child intergenerational relations are not uncommon in the broader field of psychopathology. For example, Kim et al. (2009) reported on sex specificity of transmission from parent to child for internalizing and externalizing problems. Proposed explanations for such differences in the sex specificity of these intergenerational patterns have included both dispositional variables (e.g., sex differences in biological factors) and socialization factors (same-sex role modeling and social learning of sex-appropriate cognitive scripts). With regard to drinking motives, at this time we do not know why there is sex specificity for the father-son relationship and not the father-daughter relationship, especially because the mother-son relationship

is equally as strong as the father–son relationship. These findings merit further inquiry.

Handley and Chassin (2009) investigated the intergenerational transmission of alcohol expectancies in a high-risk (COA) sample and reported that there was no support for transmission of positive alcohol expectancies. However, there was support for a sex-specific pathway in which fathers' alcoholism influenced their sons' alcohol expectancies, interpreted to suggest that sons' alcohol expectancies were more influenced by their fathers' (alcohol use) behavior than by their fathers' beliefs.

In some preliminary analyses (not reported), we explored the role of family history of alcoholism but did not replicate the findings of Handley and Chassin for motives for drinking. Although alcohol expectancies and motives for drinking share some similarities with regard to being more proximal, cognitive–motivational influences on alcohol phenotypes, they differ in that alcohol expectancies refer to the “what” aspect of alcohol use (e.g., “I anticipate that alcohol will be pleasurable”) versus the “why” aspect of alcohol use (e.g., “I use alcohol to relieve stress”). Both alcohol expectancies and motives for drinking are important cognitive components in the etiology of alcohol use, but the pathways of their expression may not be the same. Furthermore, sample differences between the one used in this study (community-based) versus the sample of Handley and Chassin (high risk) may have affected differences in the findings such that family history of alcoholism had a more prominent role in the offspring alcohol outcomes in samples overrepresented by alcoholic fathers.

The findings of this study are important in that they suggest that intergenerational influences regarding alcohol-related factors may not be limited to just the modeling of alcohol use by parents on their offspring. The conditions, or motivations, under which children adopt alcohol use as a viable means of coping with stress, engaging in social situations, or enhancing the impact of other substances may also be transmitted across generations.

With a community sample of adult women, Domenico and Windle (1993) reported that adult COAs did not differ from adults who are not the offspring of alcoholics on alcohol use but did differ significantly on coping drinking motives as well as several other indicators of poor marital and family functioning. Therefore, although intergenerational studies tend to focus on the transmission of a given characteristic (e.g., alcohol use) or disorder (alcohol disorder), a broad range of other interrelated cognitive, affective, and behavioral factors also may be transmitted that may create developmental cascades that undermine healthy development and functioning. In essence, the intergenerational transmission may not be restricted to a single trait but also to adaptive and maladaptive ways of perceiving, processing, and responding to situations and events. Future research would benefit from a focus on the broader context of the intergen-

erational transmission of drinking motives to facilitate the identification of co-related factors and how biogenetic and socialization variables may contribute to same- and opposite-sex relationships of drinking motives for parent–child dyads. Such sex-specific and sex-general information may be incorporated into prevention and treatment programs to meet the prevention and treatment needs of men and women.

This study has limitations that need to be considered in interpreting the findings. First, the sample was restricted to a primarily non-Hispanic White sample, and findings may not generalize to other ethnic groups. Second, although three measurement points spanning approximately 10 years from early young adulthood to later young adulthood were used for the young adult child sample to identify trait measures of drinking motives, it is possible that an alternative research design (e.g., with more measurement points at shorter intervals) may have facilitated greater insight into intergenerational mechanisms across time. Third, it is possible that findings may have been different if the same developmental stages (e.g., across young adulthood) had been measured for both parental and offspring generations, although findings on this notion in the intergenerational literature have been inconsistent (Thornberry, 2005). Nevertheless, as an initial foray into intergenerational relations for drinking motives, this article provided novel findings on general and sex-specific patterns of transmission that merit further inquiry.

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