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The association of harsh parenting, parent-child communication, and parental alcohol use with male alcohol use into emerging adulthood

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Abstract

Purpose—This study investigates the association between mother and father harsh parenting, and parent-child communication, and parental alcohol use on males' alcohol use from early adolescence into emerging adulthood.

Methods—Data come from the Iowa Youth and Family Project (IYFP), a prospective 28-year longitudinal study of rural Midwestern youth and their families. Mother and father harsh parenting, parent-child communication, and alcohol use were assessed at Time 1 when males were in early adolescence (13 years old, $n=215$). Target male alcohol use was assessed at Time 2 during late adolescence (18 and 19 years old, $n=206$, 96% follow-up rate), and at Time 3 in emerging adulthood (23 and 25 years old, $n=197$, 92% follow-up rate).

Results—Results obtained from structural equation modeling (SEM) using *Mplus* version 7 statistical software indicated that father harsh parenting in early adolescence was directly associated with alcohol use in emerging adulthood. Mother communication was negatively associated while father alcohol use was positively associated with adolescent alcohol use in late adolescence and emerging adulthood. Alcohol use in late adolescence was significantly related to alcohol use in emerging adulthood.

Conclusion—This study offers unique insights into how mother- and father-son dyads differ in communication and parenting styles, as well as how these associations influence adolescent male alcohol use continuing into emerging adulthood. Multiple informants utilized in the current study provide a more complex understanding of how each parent uniquely contributes to the role of their adolescent's alcohol use in late adolescence into emerging adulthood.

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Keywords

harsh parenting; communication; parental alcohol use; adolescent substance use; and emerging adulthood

INTRODUCTION

Adolescence marks the time when risk-taking behavior, such as alcohol use, increases [1]. Although underage drinking may be viewed as normative [2], it has been linked to negative outcomes such as poor school performance, involvement in other risky behaviors, and even death [3]. In adolescence, areas of the frontal brain begin to mature that support decision-making, making the teen years crucial to brain development. Occupying 50% of the brain, white matter is composed of myelinated axons that connect neurons across the brain [4]. Healthy males show continuous growth in white matter from childhood through early adulthood, while females show growth during mid-adolescence [5]. White matter growth in adolescence is associated with improved inhibitory control, suggesting that timing of growth is crucial for cognitive development [5]. Importantly, compared to light drinkers, adolescents who binge drank (i.e., consuming 5 or more drinks in a row at least once a month) had significantly less white matter quality in multiple regions of the brain [6].

Indeed, males who binge drink are at higher risk for alcohol use disorders in adulthood [7]. Moreover, alcohol use that is initiated in early adolescence can escalate through late adolescence [8], and continue into emerging adulthood [9]. It has been suggested that harsh parenting, parent-child communication, and parental alcohol use may be related to youth drinking. For example, harsh parenting is associated with higher levels of adolescent alcohol use [10]. A lack of parent-child communication, especially with males, is related to increased alcohol use in adolescence [11]. Finally, parental alcohol use is linked to adolescent alcohol use [12]. Despite this evidence, few studies have examined the associations of harsh parenting, parent-child communication, and parental alcohol use on adolescent alcohol use into emerging adulthood all within the same model [13]. Many studies have merged parenting of mothers and fathers [14], or have primarily focused on the mother-child relationship [15], even though research shows that youth identify more with their same-sex parent [16]. Although alcohol use in adolescence significantly increases the likelihood of subsequent alcohol use through late adolescence and into emerging adulthood [17], few studies have examined these effects on rural adolescents in the U.S. [18], despite findings that less urbanized youth are at a higher risk for underage drinking than those in larger metro cities [19].

Compared to females, male youth engage in higher ratings of sensation-seeking, and impulsivity which are related to heavy- and problem-drinking [20]. Although teen alcohol use is at an all-time low, the prevalence and binge drinking patterns of male youth are still higher than their female counterparts [21]. This suggests that it may be important to investigate parental factors affecting adolescent male problem alcohol use into emerging adulthood. Thus, the current investigation extends previous research by examining the influence of parenting in adolescence on male alcohol use into late adolescence and

emerging adulthood, analyzing parents separately, as well as using both observed and self-reported measures. Additionally, we assess the unique influence that parents have with their adolescent sons in rural Midwestern communities.

Harsh Parenting and Adolescent Alcohol Use

Research suggests that parenting is one of the primary antecedents for predicting adolescent alcohol use [22]. For example, harsh and coercive parenting is associated with adolescent drinking behavior [17] that extends into emerging adulthood [23]. Adolescents whose fathers used an authoritarian style of parenting had a weaker father-child relationship and a greater engagement in substance abuse and delinquency than those whose fathers employed an authoritative parenting style [24]. Results of these studies highlight the importance of understanding how parenting behavior can influence alcohol use in adolescence into emerging adulthood.

Parental Communication and Adolescent Alcohol Use

High levels of parent-adolescent conflict are associated with poor adolescent well-being and increased risk of substance use [12]. Specifically, difficulty talking to one's parents is associated with adolescent alcohol use [25]. It has been demonstrated that adolescents are reluctant to talk to their parents about risky situations [26], despite findings that suggest healthy parent-child communication serves as a protective factor in their youths' decision to engage in risky behaviors [27]. Although mother positive parenting in adolescence may help to lessen the effects of harsh parenting from the father [28], in emerging adulthood, the effects of father harshness may be more detrimental. Taken together, these results highlight the importance of positive communication patterns between parents and their youth in adolescence.

Parental Alcohol Use and Adolescent Alcohol Use

Adolescents who are exposed to parental problem drinking are at higher risk of life stress and psychological problems, as well as substance use disorders [12]. Specifically, high school students are at much higher risk of developing problem drinking behaviors if they have a parent, specifically a father, who drinks heavily [29]. For example, fathers who engage in a higher frequency and volume of alcohol consumption is associated with a higher volume and frequency of alcohol consumed by the adolescent. Other research suggests adolescents are more likely to drink alcohol if they have two parents who are heavy episodic drinkers [30]. Similarly, the probability of an adolescent developing a high trajectory for alcohol use increased with both maternal and paternal severity of drinking, such that adolescents were more likely to develop problem drinking if they were exposed to parents who drank moderately or heavily than those whose parents never or mildly drank alcohol [13]. These results demonstrate the consequences parental problem drinking can impose on the developmental trajectories for adolescent substance use.

Continuity of Alcohol Use Over Time

Approximately 18% of 8th-graders, 38% of 10th-graders, and 56% of 12th-graders in the U.S. have consumed alcohol, and 6%, 21%, and 37% of 8th, 10th, and 12th graders,

respectively, have been drunk in the past year [21]. Early initiation of alcohol use has been shown to predict increasing use throughout adolescence [8]. Indeed, research has found that frequency, heavy episodic drinking (HED), volume, and quantity increased on average from ages 15–21, and measures of HED and volume were strongly correlated from ages 15–25, suggesting those who engage in heavy drinking during high school will likely continue this problem-drinking into emerging adulthood [31]. Additionally, research indicates that less urbanized adolescents may be at an increased risk for alcohol-use disorders than those from larger metro areas [19].

Taken together, parenting behavior, communication, and substance use influence adolescent alcohol use which continues into emerging adulthood. These parental associations may be more profound for adolescent boys. Thus, the present investigation examined the association between harsh parenting, parent-child communication, and parental alcohol use in adolescence with male alcohol use in late adolescence and emerging adulthood. Data come from a two-decade longitudinal study of a cohort of rural Midwestern adolescents and their families whom were followed from early adolescence through emerging adulthood.

Specifically, we evaluated observed harsh parenting and parent-reported communication and alcohol use when youth were 13 years old. Alcohol use was self-reported in late adolescence at ages 18 and 19, and again at ages 21 and 23 (see Figure 1). For the current study, observed harsh parenting was defined as hostility, antisocial behavior, and angry coerciveness toward the adolescent. It was expected that parental alcohol use would be associated with late adolescent alcohol use, and that communication between parent and adolescent would be negatively related to late adolescent alcohol use. Based on previous literature, harsh parenting was expected to be associated with emerging adulthood alcohol use. To expand the literature, mother and father parenting and communication were entered into the model separately rather than averaging or creating a parental composite score. Moreover, we expected that late adolescent engagement in alcohol would be related to use in emerging adulthood. To be sure of such associations, early adolescent alcohol use was taken into account. In addition, parent education, family per capita income, and college status were included as covariates, as previous research indicates that parent education attainment and family income are negatively related to adolescent alcohol abuse [32] and college-attending students consume more alcohol than non-college-attending students [19].

METHODS

Participants

Data come from Iowa Youth and Families Project (IYFP) which were collected each year from 1989 through 1994 ($N = 451$). This included the target adolescent (52% female), his/her parents, and a sibling within four years of age of the target. The target adolescent was in seventh grade when first interviewed in 1989 (M age = 13.2 years; 236 girls, 215 boys). Participants were recruited from eight rural Iowa counties from both public and private schools. Attributable to the rural nature of the sample, all of the participants were Caucasian. Seventy-eight percent of eligible families agreed to participate and were primarily lower middle- or middle-class. In 1989, parents had a median family income of approximately \$33,700 and completed an average of 13 years of schooling. Families averaged 4.94

members, with sizes ranging from four to 13 members. Fathers averaged 40 years old, while mothers averaged 38. In 1994, families from IYFP continued in a different project, known as the Family Transitions Project (FTP). The same target adolescents participated in the FTP so as to follow their transition into emerging adulthood. The FTP has followed the target youth with a 90% retention rate, from 1989 through 2010 ($M_{\text{target age}} = 35$ years).

The present study included target males who participated from early adolescence into emerging adulthood ($n=215$). The data were analyzed at three developmental time periods. Time 1 assessed mother and father harsh parenting, parent-child communication, and alcohol use when the target adolescent was 13 years old (1989). Male late adolescent alcohol use was assessed at time 2 when the target was 18 and 19 years old (1994, 1995, $n=206$, 96% follow-up rate). Emerging adulthood alcohol use was assessed at time 3 when the target male was 21 and 23 years of age (1997, 1999, $n=197$, 92% follow-up rate). This project has been approved by the Institutional Review Board at Iowa State University.

Procedure

Families were visited in their homes twice a year by a trained interviewer throughout adolescence. Each visit lasted approximately two hours and a second visit occurred within two weeks of the first visit. Monetary incentives were provided to each family member who participated. During the first visit, each family member completed questionnaires pertaining to areas such as individual characteristics and family relationships. Family members also participated in structured discussion tasks that were videotaped. In the current study, observer ratings from the parent-adolescent interaction task were used. This task lasted 25 minutes and involved parents and their adolescent discussing questions about family life such as household rules and chores. The Iowa Interaction Rating Scale, which demonstrates sufficient reliability and validity [33], was used by trained observers to code the quality of interactions between the adolescent and parents. The means and standard deviations for all study variables are provided in Table 1.

Measures

Harsh Parenting (age 13)—Mother and father hostility, antisocial behavior, and angry coerciveness toward the adolescent during the discussion task were assessed using observer ratings. Each rating was scored on a 9-point scale, ranging from low (no evidence of the behavior) to high (the behavior is highly characteristic of the parent). Hostility was defined as hostile, annoyed, critical, and disapproving behavior toward the adolescent. Angry coercion was characterized by an attempt to control or change the other person's behavior in a hostile manner. Antisocial behavior involved egotistic, immature, rebellious, and indifferent behavior toward the adolescent ($\alpha = .82$ for fathers, $.85$ for mothers).

Communication (age 13)—Based on a project derived measure, each parent was asked to rate on a scale from 1 (always) to 5 (never) how often s/he and her/his adolescent figure out how to deal with a problem that arises, how often the adolescent comes to her/him to talk about things that bother her/him, and how often s/he asks the adolescent what s/he thinks before making decisions that affect her/him. Ratings were reversed and averaged to create the communication manifest variable. Internal consistency was adequate ($\alpha = .54$ for

fathers, .56 for mothers) as Chronbach alpha levels below .5 are considered unacceptable [34].

Parental Alcohol Use (age 13)—Mother and father alcohol use was assessed via self-report (0 = have not consumed alcohol, 1= have consumed alcohol), and has been shown to be a valid and reliable measure of parental alcohol use [10].

Alcohol Use in Late Adolescence (ages 18, 19) and Emerging Adulthood (ages 21, 23)—Targets reported on their frequency of drinking alcohol (beer, wine, liquor), frequency of having 3 or 4 drinks in a row, and having 5 or more drinks in a row on a scale from 0 (never) to 5 (every day) from the previous 30 days. The mean was used to create a manifest variable ($\alpha = .91, .87$ for adolescence and emerging adulthood respectively) [10]. For consistency across the 10-year assessment period, the same measure of alcohol use was used in early adolescence, late adolescence, and emerging adulthood.

Family of Origin Per Capita Income (age 13)—Total annual household income from the past 12 months was divided by the number of the people in the household, which represented the financial resources available for each family member.

Parent Education Level (age 13)—Each parent reported his/her highest level of education completed which ranged from 8.5 (beyond eighth grade) to 19 (master's degree). Parent scores were averaged to create manifest variables in the model.

Early Adolescent Alcohol Use (age 13)—Adolescents reported on their frequency of drinking alcohol (beer, wine, liquor), frequency of having 3 or 4 drinks in a row, and having 5 or more drinks in a row on a scale from 0 (never) to 5 (every day). The mean of the scores was used to create a manifest variable.

Late Adolescent Education (age 19)—Adolescents reported on their college enrollment in a two-year community college or a four-year college/university at age 19 (0=not enrolled in college, 1=enrolled in college).

RESULTS

Table 2 shows the correlations among theoretical constructs including observed mother and father harsh parenting, parent-reported mother- and father-child communication, parental alcohol use as reported by the mother and father, late adolescent alcohol use, and emerging alcohol use as reported by the target male. The control variables are also included in the table. The patterns of associations justified the formal test of the model and were consistent with theoretical assumptions.

To conduct Structure Equation Models (SEM), data were analyzed using *Mplus* Version 7 [35] with standard coefficients used for all paths in the model. Any missing data were handled by Full Information Maximum Likelihood (FIML) [36]. The model was estimated based on our hypotheses and included all of the control variables in the analyses. This model showed a good fit, $\chi^2 = 39.78$, $df = 27$, $p = .05$, CFI = .95, RMSEA = .05. Standardized

coefficients that reached statistical significance are presented in Figure 2. Father alcohol use was associated with male alcohol use during late adolescence ($\beta = .23$, $SE = .07$), while mother communication was negatively associated with late adolescent alcohol use ($\beta = -.16$, $SE = .07$). Furthermore, late adolescent alcohol use was associated with emerging adulthood alcohol use ($\beta = .59$, $SE = .05$). In addition, father harsh parenting during early adolescence was related to alcohol use in emerging adulthood ($\beta = .14$, $SE = .06$). We also tested for indirect paths in the model, which refer to the mediation path between a causal variable and an outcome variable, as mediated by a third variable [35, 37]. In the present model, indirect paths from parental behavior in early adolescence to alcohol use in emerging adulthood through late adolescent alcohol use were tested. The results indicated that father alcohol use was related to late adolescent alcohol use, which in turn, was related to alcohol use in emerging adulthood ($\beta = .14$, $SE = .04$). Finally, mother communication was associated with late adolescent alcohol use which was related to use in emerging adulthood ($\beta = -.09$, $SE = .04$).

DISCUSSION

The current study utilized a prospective longitudinal research design to examine the association between mother and father harsh parenting, parent-child communication, and parental alcohol use on male alcohol use in late adolescence and emerging adulthood. This type of design helps to eliminate biases based on recall of experiences in early adolescence. The present study also assessed data from multiple informants, including mother, father, and adolescent self-report, as well as ratings of parenting behavior by trained observers which helps to reduce reliance on a single informant. Thus, the magnitude of the associations between variables is noteworthy due to the inclusion of multiple reporters. Beyond the methodological advancements of this study, the findings add to the body of research on parental predictors of adolescent alcohol use by examining mothers and fathers separately.

We found an association between father harsh parenting at age 13 and emerging adulthood alcohol use at ages 21 and 23. Some have suggested that father discipline toward his son contributes to risk for later substance use disorder [38] more so than mothers. Additionally, mother communication was negatively associated with late adolescent alcohol use. In a recent study, it was found that time spent with the mother was negatively related to risky behaviors in adolescence, indicating that engaged mother time was negatively related to adolescent delinquent behavior. It was found that adolescents whose fathers used harsher parenting style had weaker father-child relationship and a greater engagement in substance abuse and delinquency [24]. Although mother positive parenting in adolescence may help to lessen the effects of harsh parenting from the father [39], in emerging adulthood, the effects of father harshness may be more detrimental, as the offspring move out and start living more independently. Thus, it may not be the amount of time fathers spend with their adolescent that impacts them, but the quality of these interactions. These results highlight the unique importance of what each parent contributes to the dyadic and triadic relationship with their adolescent. Consistent with previous research, we also found that parental alcohol use was directly related to late adolescent male alcohol use, particularly use by fathers [30]. Finally, father alcohol use and mother communication with their son was indirectly associated with alcohol use in emerging adulthood through alcohol use in late adolescence.

Ultimately, results of the current study highlight the importance of mother-son communication and father harsh parenting in adolescence, as they are associated with later adolescent alcohol use. Given the prevalence of adolescent drinking in the U.S. and the likelihood of continued drinking patterns over time, it is imperative that research continues to examine how each parent uniquely influences their adolescent sons' decision to engage in substance use. Parental drinking behaviors also have a strong association with subsequent adolescent alcohol use; thus it is important for intervention efforts to help reduce such behavior. Efforts to strengthen parent-child relationships to reduce the risk of substance use in early adolescence is of utmost importance, as adolescents will then be less likely to use in late adolescence, and less likely to continue drinking in emerging adulthood.

Limitations

There are several limitations in the current study that should be addressed. First, there were no questions that address parent-child communication about alcohol use directly. Second, the current sample is restricted in terms of ethnic and racial diversity, as well as family structure, though out of the three largest ethnic/racial groups in the United States, in late adolescence, White youths' use of alcohol is significantly higher than African-American or Hispanic students' use [21]. Future studies should continue to explore these associations in other diverse samples. In addition, although the data were collected in the 90s, they confirm previous work that has found predictive influences of harsh parenting, parent-child communication, and parent alcohol use on adolescent alcohol use [10, 11, 12]. While research suggests that there has been a decrease in adolescent alcohol use levels since the 1990s, underage drinking rates among Midwestern, non-urbanized, male youth are still of high concern and continue to have detrimental consequences on adolescents and their families [7, 40]. Specifically, Iowa's underage and binge drinking rates currently exceed the national average, as well as binge drinking and current alcohol use rates for emerging adults aged 18–25 [40]. Additionally, for those in treatment settings, alcohol continues to be the primary substance of choice [40].

CONCLUSION

More generally, the current study enlarges the body of research that aims to understand the role each parent plays in their adolescent sons' decision to engage in alcohol use from late adolescence into emerging adulthood. The prospective longitudinal design of the study, as well as use of multiple informants, helps to provide a more complex understanding of mother- and father- son dyads in early adolescence on late adolescent and emerging adulthood male drinking behaviors. Results indicate a need for preventative measures in early adolescence in terms of decreasing harsh parenting for fathers and increasing communication for mothers to further reduce the risk of later adolescent substance abuse that is likely to continue into emerging adulthood, specifically for Midwestern born, non-urban, male youth.

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IMPLICATIONS AND CONTRIBUTION

Adolescence is a critical time developmentally for male youth; it is imperative that rural-dwelling parents continue to be educated on the unique gendered effects of their alcohol use patterns, harsh parenting, and the importance of positive communication practices, as they all influence their sons' alcohol consumption in late adolescence into emerging adulthood.

Figure 1. Conceptual Model

Figure 2.

Structural Equation Modeling

* $p < .05$, * $p < .01$, *** $p < .001$, Model fit: $\chi^2 = 39.85$ $df = 27$, $p = 0.05$, CFI = .95, RMSEA = .05

Table 1

Descriptive Statistics of Study Variables (N = 215)

Study Variables	Mean	SD	Range
<i>Early Adolescence (Age 13)</i>			
Father Harsh Parenting.	2.65	1.43	1 ~ 7
Mother Harsh Parenting	2.45	1.32	1 ~ 8.33
Father Communication	3.50	.55	1.67 ~ 5
Mother Communication	3.69	.51	2 ~ 5
Father Alcohol Use (1=Yes)	78%		
Mother Alcohol Use (1=Yes)	61%		
<i>Late Adolescence (Age 18 and 19)</i>			
Adolescent Alcohol Use	.91	.77	0 ~ 3.75
<i>Emerging Adulthood (Age 21 and 23)</i>			
Emerging Adult Alcohol Use	1.24	.82	0 ~ 3.75
<i>Covariates</i>			
Family of Origin Per Capita Income	7982	5251	−1466 ~ 44000
Father Highest Education Level (Years)	13.34	2.07	8 ~ 20
Mother Highest Education Level (Years)	13.31	1.69	9 ~ 18
Early Adolescent Alcohol Use	.33	.55	0–3
College Enrollment (1=Yes)	63%		

Table 2

Correlations among Study Constructs

Study Constructs	1	2	3	4	5	6	7	8	9	10	11	12
1. Father Harsh Parenting	-											
2. Mother Harsh Parenting	.36***	-										
3. Father Communication	-.10**	-.21**	-									
4. Mother Communication	-.19**	-.23***	.23***	-								
5. Father Alcohol Use	.16*	.04	-.12*	-.17**	-							
6. Mother Alcohol Use	.03	-.01	-.10	-.13*	.36***	-						
7. Late Adolescent Alcohol Use	.16*	.11	-.01	-.21**	.31***	.22**	-					
8. Emerging Adult Alcohol Use	.22**	.05	-.01	-.19**	.27**	.16*	.64***	-				
9. Family of Origin Per Capita Income	-.16**	-.22**	.05	.15*	-.11	-.13*	-.16*	-.03	-			
10. Father Education	-.20**	-.16**	.14*	.04	-.13*	-.11*	-.22**	-.15*	.30***	-		
11. Mother Education	-.14*	-.11	.05	.18**	-.15*	-.10	-.12*	-.09	.39**	.53**	-	
12. Early Adolescent Alcohol Use	.11	.15*	-.10	-.03	.10	.16*	.18**	.10	-.10	-.04	-.10	-
13. College Enrollment	-.16*	-.11.	.05	.20**	-.04	-.04	-.06	.07	.14*	.27*	.21**	-.01

Note.

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