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Meet the Parents: Parental Interactions, Social Influences, and College Drinking

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Abstract

Previous research suggests that, even in college, parents influence the alcohol consumption of their children directly and indirectly through peers. However, research has not tested whether face-to-face interactions with parents buffer students against social influences on drinking. In the current study, 1168 undergraduate students selected 5 people they contact regularly and then completed a 30-day daily diary reporting on interactions with those people and drinking behavior. The 401 students who selected a parent drank less and less often than those who did not select a parent as a frequent contact. In addition, on evenings when these students had met with their parents, they drank less alcohol and the association between others' drinking and participant drinking was weakened. This adds to evidence suggesting that parents continue to influence emerging adults after they have left home and may be helpful in informing future intervention efforts.

Keywords

college students; parents; social influence; alcohol consumption

1. Introduction

One reason cited for heavy drinking during college is the lack of parental oversight as emerging adults leave home (Merrill & Carey, 2016). College is often the first time individuals have lived away from their parents and the physical and social environments of

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Statement 2: Contributors

Howard Tennen and Stephen Armeli designed the study and wrote the protocol. Hannah R. Hamilton conceptualized the manuscript, conducted the statistical analysis, and wrote the first draft of the manuscript. All authors revised the manuscript, and all contributed to and have approved the final manuscript.

Statement 3: Conflict of Interest

All of the authors declare that they have no conflicts of interest.

college set the stage for risky drinking (Wilkinson & Ivsins, 2017). However, most college students communicate with their parents regularly and such communication is related to lower alcohol consumption (Small et al., 2011). Students who live near home may also continue to interact with parents in person even if they no longer live at home. The current study extends this literature by examining face-to-face parental contact as a factor in college students' alcohol consumption.

According to Social Learning Theory, individuals learn behavioral patterns through modeling and reinforcement (Bandura, 1969). The experience of alcohol-related problems is also influenced by parental bonding (Patock-Peckham & Morgan-Lopez, 2007) and, to some extent, parents' alcohol-specific rules may temper alcohol use (van der Vorst et al., 2006). College students who perceive their parents as accessible, monitoring their behavior, and disapproving of heavy drinking report lower alcohol consumption (Turrisi & Ray, 2010), whereas those who perceive their parents as permissive of drinking report greater consumption (Walls et al., 2009). However, the influence of parenting styles and monitoring may depend on the gender of the parent and student (Patock-Peckham & Morgan-Lopez, 2006; Patock-Peckhan et al., 2011). Students also tend to overestimate parental approval of alcohol consumption which may reduce the effectiveness of parental knowledge in reducing drinking (Hummer et al., 2013). Thus, parental attitudes and involvement may limit college students' alcohol consumption, although more frequent communication about alcohol issues has been shown to have a positive effect on adolescent alcohol consumption (van der Vorst et al., 2005). In contrast to these studies focusing on students' beliefs about parental attitudes and involvement, the current study examines the effects of actual contact with parents. Specifically, the current study tests whether students who report frequently interacting with parents face-to-face also report consuming smaller quantities of alcohol and less frequent alcohol consumption.

Social Learning Theory also suggests that parents may influence the selection of peer reference figures as their children grow older and seek extra-familial models of behavior (Bandura et al., 1969). Despite the increased role of peer modeling, parental influences may thus remain important. For example, parents may also influence alcohol consumption by moderating the influence of peers. Wood et al. (2004) found that in the summer immediately prior to college matriculation, perceived parental permissiveness was related to stronger effects of social influences on alcohol use. Parental knowledge of the students' behavior during their free time pre-matriculation has been associated with having friends in the first semester of college who consume less alcohol which, in turn, was associated with less consumption in the second semester of college (Abar & Turrisi, 2008). Finally, disparity in perceived approval of drinking between parents and peers is related to greater alcohol consumption (Cail & LaBrie, 2010), suggesting that it is important to examine how parental and peer influences interact. The current study adds to this literature by testing whether meeting with a parent fact-to-face reduces social influences on drinking behavior.

The current study examined these research questions using a daily diary methodology. College students were asked to list the five people they meet with face-to-face most frequently. Then, for 30 days, they were asked to indicate whether they had met each of those people the night before as well as how much alcohol they consumed that night. We

expected that students who identified at least one parent as a frequent in-person contact would report lower average alcohol consumption and a lower percentage of drinking days across the 30-day daily diary study. We further expected that social influences on alcohol consumption would be attenuated on nights when students reported meeting with a parent face-to-face. That is, we expected that being around others who were drinking would have a weaker effect on alcohol consumption if a student had met with their parent that evening.

2. Method

2.1 Participants and Procedure

The University of Connecticut and UConn Health institutional review boards approved all study procedures. Undergraduate students above the age of 18 who had used alcohol at least twice in the past 30 days and had never been treated for alcohol problems were recruited via the undergraduate psychology participant pool and campus-wide emails during nine semesters (Spring 2008–Spring 2012) for a daily diary study examining daily experiences and alcohol use. Variables assessing daily parental contact were included in a separate form of the larger study starting in Fall 2009; 1324 students received this version. Participants first provided informed consent and then completed an initial online survey assessing demographic and baseline information. Next, participants were asked to complete a daily survey about their activities each day for 30 days that could be accessed on a secure website between 2:30pm and 7:00pm (a time window selected to coincide with most students' naturally occurring end of school day but before typical evening activities including drinking begin). Compliance was high, and 1168 (88%) of participants completed at least 15 daily diary surveys and were included in analyses.[1],[2] Participants included in analyses were on average 19.26 years old (SD=1.34) and were mostly White (80.3%), women (53.5%), and in either their first (37.9%) or second (33.2%) year of college. Sixty participants (5.1%) reported that they were living with family members.

2.2 Measures

2.2.1 Parental Contact—In the initial survey, participants were asked to indicate the "5 people with whom [they] meet with face-to-face most frequently" and to identify their relationship with that person. In the diary surveys, participants indicated whether they had met with each person face-to-face the previous night.

2.2.2 Alcohol Consumption—In each daily survey, participants were asked to indicate how many alcoholic drinks they had "with others/in a social setting" and "alone/not interacting with others" the previous night from 0 to 15 or >15. Participants were reminded that 1 drink equals 12-oz. of beer or wine cooler, 5-oz. of wine, or 1-oz. of liquor straight or in a mixed drink. Total alcohol consumption calculated as the sum of drinks consumed alone and with others. Participants were also asked to indicate how many drinks the people they

[1] The current study analyzes preexisting data, but we are confident we have high power to detect interaction effects on daily drinking.
[2] Participants who completed at least 15 diary surveys and were included in analyses did not differ from those excluded in race, $\chi^2(1, N=1302)=0.26$, $p=.61$, age, $t(1299)=0.22$, $p=.83$, whether they listed a parent, $\chi^2(1, N=1324)=0.01$, $p=.93$, or average other alcohol consumption, $t(139)=1.73$, $p=.09$. However, women were more likely than men to complete at least 15 diary surveys, $\chi^2(1, N=1302)=14.44$, $p<.001$, and those who completed at least 15 diary surveys reported lower average consumption, $t(137)=2.10$, $p=.04$. Degrees of freedom for drinking variables adjusted because Levene's test indicated unequal variances.

were with consumed on average from 0 to 15 or >15. If they had not interacted with others, they indicated that this question did not apply.

3. Results

When listing their five frequent contacts, 401 (34.3%) participants listed a parent. Of these 401 participants, all but 14 (3.5%) also indicated at least one friend as a frequent contact. Table 1 shows descriptive statistics and correlations for between-persons and aggregate daily variables. Participants who lived with family were older and more likely to list a parent as a frequent contact, reported meeting their parents more frequently, and reported lower average alcohol consumption by themselves and others. Women were also more likely to list a parent, met parents more frequently, drank less, and perceived others as drinking less. Participants who listed a parent drank less on average and perceived others as drinking less. Individuals who met with parents more frequently also reported that others drank less, although frequency of meeting a parent was uncorrelated with alcohol consumption. There was a positive correlation between reported consumption and perceived other consumption.

Because listing a parent was correlated with gender, one-way analyses of covariance (ANCOVA) were conducted comparing the average alcohol consumption and the percentage of drinking days reported by participants who did versus did not list a parent controlling for gender. Students who identified a parent reported lower average alcohol consumption across the 30 days (M=0.84, SD=1.00) than students who did not identify a parent (M=1.27, SD=1.38), $F(1, 1164)=19.31$, $p<.001$, $\eta_p^2=0.02$. Students who identified a parent reported drinking alcohol on a smaller percentage of days (M=16.18, SD=13.54) than students who did not (M=19.69, SD=14.98), $F(1, 1164)=10.30$, $p=.001$, $\eta_p^2=0.01$.

Because our design contains two levels in which repeated daily assessments (Level 1) are nested within participants (Level 2), we conducted multilevel regression analyses predicting alcohol consumption each evening as a function of meeting with a parent, others' alcohol consumption, and their interaction. We used SPSS, which uses listwise deletion at the day-level (i.e., subjects with missing days included if they had some daily observations, individual diary surveys not included if they included missing variables; 9789 valid cases nested in 387 participants; i.e., participants who listed a parent and indicated whether they met). We used maximum likelihood estimation, modeled a random intercept and a random slope for other drinking, and estimated the model using an unstructured covariance matrix. We controlled for gender (1=*female*, −1=*male*), age, race (1=*White*, −1=*non-White*), whether participants lived with family (1=*lives with family*, −1=*does not live with family*), whether participants met with a friend listed as a frequent interaction partner (1=*met friend*, −1=*did not meet friend*), number of diary surveys completed, diary day (controls for changes over time), and weekday (1=*Friday or Saturday night*, −1=*weeknight*; accounts for increased consumption on weekends). Meeting with a parent was effect coded (1=*met parent*, −1=*did not meet parent*) and other drinking was person-centered (i.e., each participant's mean across the 30 days was subtracted from daily levels). Therefore, a participant's coefficient for other drinking describes the relation between daily changes from the average amount that person reports others consuming and the number of drinks they consumed. We also included

between-subjects means, allowing us to disentangle within-versus between-persons associations (Kenny et al., 1998; Nezlek, 2001).

Analyses revealed that men drank more than women, and that participants drank more on weekends than on weekdays. Participants who reported higher average other alcohol consumption reported greater alcohol consumption themselves. Effects of meeting a parent and the other drinking were qualified by a significant interaction. Probing of the significant Met with parent × Drinks consumed by others interaction using the procedures outlined by Aiken and West (1991) revealed a significant effect of others' drinking behavior on participant consumption when participants did not meet with their parents that night, b=0.68, SE=0.02, t(397)=36.82, p<.001, d=3.70. This effect was attenuated when participants reported meeting with their parents that night, b=0.59, SE=0.03, t(1715)=21.32, p<.001, d=1.03.

4. Discussion

Consistent with hypotheses, participants who listed a parent as one of their five most frequent interaction partners reported lower average alcohol consumption and less frequent drinking than participants who did not list a parent. However, it should be noted that effect sizes in these analyses were small. In addition, participants consumed less alcohol on evenings when they met (versus did not meet) a parent. In line with hypotheses, meeting with a parent also attenuated the impact of social influences on alcohol consumption. Specifically, the association between how much others in the environment were drinking and participants' reported alcohol consumption was weaker on evenings when participants met with their parents than on evenings when they did not. Further, effect sizes of these results (indicated by Cohen's d) were large. These findings are consistent with research suggesting that communication with parents is related to lower alcohol consumption among college students (Small et al., 2011) and that, prior to matriculation, parental permissiveness exacerbates social influences on alcohol use (Wood et al., 2004).

However, this study did have some limitations. We did not inquire about the nature of the contact reported (e.g., disclosure, conflict). It is possible that the limiting effects on alcohol consumption reported in the current study would not be found among students who report high conflict with their parents. We also cannot be sure that participants who did not list a parent did not frequently interact with their parents, although parents were specifically mentioned as an option. A large proportion of students in the current study were attending a university in their small home state and therefore had the opportunity to meet their parents face-to-face. College students attending school out of state or studying abroad are unlikely to have this opportunity, although they may still communicate regularly with parents. Most students in the current study were also in their first or second year of college. Although analyses controlled for age, results may differ for older students. Although daily diary methodologies limit retrospection error and bias (Bolger et al., 2003; Tennen et al., 2006), variables reported here were measured the following day and we cannot guarantee that reports of drinking behavior and perceptions of others' drinking were accurate. In addition, we did not ask participants whether they drank with their parent and we do not have information about who participants were referring to when they recorded drinking behavior

of others. It is possible that students attended family gatherings where they would be less inclined to consume alcohol or that they met with their parents and then went to other gatherings with friends. It is also possible that meeting with parents was related to lower alcohol consumption in part because spending time with parents decreases time spent with friends and therefore reduces the opportunity for alcohol consumption. Further research is needed to explore these possibilities.

The current study adds to research suggesting that, although college students are entering emerging adulthood and moving away from home, their parents may continue to have a limiting effect on their alcohol consumption. Students who continued to have regular face-to-face contact with their parents drank less and less often in the current study and were less influenced by the drinking behavior around them. Future research should further explore how parental influences interact with other social influences as students form new relations in college. Findings also suggest that researchers should explore interventions designed to help students who are not in frequent contact with parents and are thus at greater risk of heavy drinking. Research is needed to examine whether encouraging close mentorship relationships with individual faculty members or other interventions may help fulfill this parental role. Future research should also compare face-to-face interaction with other forms of communication and explore parental contact as a potential intervention when possible.

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Highlights

- College students who meet a parent regularly consumed less alcohol over 30 days
- Students who meet a parent regularly had a lower percentage of drinking days
- On evenings college students met with a parent, they drank less alcohol
- Meeting with a parent attenuated social influences on alcohol consumption

Table 1

Means, Standard Deviations, and Correlations for Between-Person and Aggregate Daily Variables

Measure	*M*	*SD*	*N*	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Number of days completed	26.39	3.80	1168	–								
2. Gender			1167	.15**	–							
3. Race			1167	.03	.02	–						
4. Age	19.26	1.34	1167	−.01	−.03	−.06*	–					
5. Living with family			1168	−.01	.04	−.02	.10**	–				
6. Listed parent			1168	.03	.14**	.05	.02	.14**	–			
7. Percentage days met parent	13.77	16.04	401	.02	.11*	.08	.08	.48**	–	–		
8. Average daily other drinks	1.51	1.29	1167	−.16**	−.25**	.19**	.08**	−.07*	−.16**	−.05	–	
9. Average daily drinks	1.12	1.28	1168	−.21**	−.31**	.16**	.09**	−.08**	−.16**	−.12*	.81**	–

Note: Gender was coded −1 = *male*, 1 = *female*; thus, positive correlations denote higher values for women relative to men. Race was coded −1 = *non-White*, 1 = *White*; thus, positive correlations denote higher values for White participants relative to others. Living with family was coded −1 = *not living with family*, 1 = *living with family*; thus, positive correlations denote higher values for participants living with family than those not. Listed parent was coded −1 = *did not list*, 1 = *did list parent*; thus, positive correlations denote higher values for participants who listed a parent.

*$p < .05$;

**$p < .01$

Table 2

Alcohol Consumption as a Function of Meeting with Parent and Other Drinking

Variable	*b*	*SE*	*t*	*df*	*p*	95% CI	*d*
Gender	−0.05	0.02	−2.38	396	.02	−0.09, −0.01	0.24
Age	0.02	0.02	1.57	437	.12	−0.01, .05	0.15
Race	−0.02	0.03	−0.83	457	.41	−0.08, 0.03	0.08
Lives with family	0.02	0.02	0.44	434	.66	−0.06, 0.09	0.04
Weekend	0.04	0.02	2.44	9335	.02	0.01, 0.08	0.05
Met with friend	0.03	0.02	1.52	3296	.13	−0.01, 0.06	0.05
Average meeting with parent	−0.06	0.08	−0.83	568	.41	−0.22, 0.09	0.07
Average drinks consumed by others	0.76	0.02	38.87	387	<.001	0.72, 0.80	3.95
Met with parent	−0.09	0.02	−3.74	9453	<.001	−0.14, −0.04	0.08
Drinks consumed by others	0.64	0.02	31.30	574	<.001	0.60, 0.68	2.61
Met with parent × Drinks consumed by others	−0.05	0.01	−3.83	9689	<.001	−0.07, −0.02	0.08

Note: Gender was coded −1 = *male*, 1 = *female*; race was coded −1 = *non-White*, 1 = *White*; lives with family was coded 1=*lives with family*, −1=*does not live with family*; weekend was coded −1 = *weekday night*, 1 = *weekend night*; met with friend was coded −1 = *did not meet*, 1 = *met with friend*; and met with parent was coded −1 = *did not meet*, 1 = *met with parent*.