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DOES FAMILY HISTORY MODERATE THE RELATIONSHIP BETWEEN
PARENTAL MODELING AND PARENTAL APPROVAL ON COLLEGE
DRINKING?

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ABSTRACT

Heavy drinking among the college age population is a prevalent health problem. Current research has examined predictors of heavy alcohol consumption among college students. Parent influences and family history of alcohol problems have been identified as predictors of college drinking. However, the extent to which family history of alcoholism might moderate the relationship between parent influences and college student drinking has yet to be examined. The aims of the current study were to 1) examine parent influences as predictors of high risk college drinking and 2) find how the presence of family history influences the aforementioned relationships. Participants were randomly selected incoming first year students (N=1901) at a large, public mid-Atlantic university. Students received baseline surveys the summer before entering college, where they were asked to report on parental modeling, parental approval, and family history of alcohol problems. During the second survey (15 months after the initial survey) students reported on their typical weekly drinking and alcohol related consequences. The results showed increased father and mother modeling reported at baseline were associated with more drinking and alcohol-related physical consequences. Parental approval of moderate and heavy drinking were associated with more drinking and alcohol-related physical consequences in college students. Family history was shown to moderate the relationship between father modeling and drinking such that father modeling was more strongly related to drinking when family history was not present. Family history also was observed to moderate the relationship between both parental approval (of moderate and heavy) drinking and the amount of college drinking. Parental approval of moderate drinking and parental approval of heavy drinking were each more strongly related when there was family history present. This is one of the first studies to examine how family history moderates the relationships between parental influences and college student drinking, and these findings have important implications for prevention strategies.

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INTRODUCTION

Drinking among college students is a prevalent health problem. Heavy drinking is at its highest during early adulthood and is prevalent for 33% of 18 to 24 year-olds who attend college (Hingson, Heeren, Winter, & Wechsler, 2005; Schulenberg & Maggs, 2002). College students often drink large amounts of alcohol (i.e., binge) over short periods of time. In 2010, the *Monitoring the Future* study found that 37% of full-time college students surveyed reported having engaged in heavy episodic drinking (HED). HED is defined as having five or more drinks in a row for males or four or more drinks for females within a two-hour span of time. Furthermore, 43.6% of the college students surveyed reported having been drunk in the last thirty days (Johnston, O'Malley, Bachman, & Schulenberg, 2011).

It is estimated that 31% of the 8 million students attending college fit the criteria for an alcohol abuse diagnosis (Knight et al., 2002). This type of drinking can result in high blood alcohol concentrations, which can have a dangerous, negative health impact (Fourneir, Ehrhart, Glindemann, & Geller, 2004). Alcohol use has been found to be the greatest single contributor to college student injury and mortality. In 2005 alone, 1,825 college students had a cause of death related to alcohol and 599,000 injuries reported among college students had an alcohol related cause (Hingson, Zha, & Weitzman, 2009). HED is also related to other negative consequences, such as lower grades, risky sexual behavior, and increased violence (Goldman, 2002; Presley, Meilman, & Cashin, 1996; Wechsler, Lee, Nelson, & Lee, 2001). Although it may be that this type of drinking is characteristic for young adults and tends to decline during their mid-twenties, there is still a population who shows sustained or escalating alcohol consumption from college throughout adulthood (Jackson, Sher, Gotham, & Wood, 2001; Jennison, 2004).

Current research has examined predictors of heavy alcohol consumption in the college student population. Some factors which have been found to contribute to drinking include peer influences (Borsari & Carey, 2001; Read, Wood, Kahler, Maddock, & Palfai, 2003), number of bars and liquor stores in close proximity to college campuses (Wechsler, Kuo, Lee, & Dowdall, 2000; Weitzman, Nelson, & Wechsler, 2003), and environment (Cranford, McCabe, Boyd, Lange, Reed, & Scott, 2009). Two factors which have been found to be predictive of drinking are parent influences and family history of alcoholism.

The objective of the current study is to examine parental influences as predictors of high risk and high volume college student drinking. In addition, this study aimed to find how the presence of a family history of alcoholism influences the aforementioned relationships.

Theoretical Background: Social Learning Theory and Parental Modeling

Social Learning Theory offers insight as to how parental influences might affect college drinking. Developed by Bandura (1977), Social Learning Theory suggests that people learn new information and behaviors through watching others. This way of gaining information is called observational learning, or modeling. Bandura identified a process in which modeling causes learning, attention, retention, reproduction, and motivation. The ideas of social learning theory can be applied to the present study. The theory would suggest modeling is important because if children grow up seeing their parent(s) drink they may in turn adapt that behavior. If children see parents drink, they see how the behavior is executed. This information is then coded and, consequently, when the child enters a situation later in life where alcohol is available, they may be more inclined to drink. According to the Social Learning Theory, the college students are using information retained from earlier childhood as script for their own actions.

Studies have been done which have found there is a positive relationship between parental modeling and adolescent alcohol use (Hops, Duncan, Duncan, & Stoolmiller, 1996); however, less work has been done on effects of parental modeling on the college population. Abar (2009) looked at the college student population but did not find a significant relationship between the number of drinks consumed by the parents and the number of drinks consumed by their child. Additionally, there is currently a gap in the research in how the association between parental modeling and college student drinking might be moderated by family history of alcoholism, as well as how the association between parental modeling and alcohol related consequences might be moderated by family history.

Parental approval

Approval can be defined as having a favorable opinion or deeming something as acceptable. Reinforcement Theory suggests that social behavior is influenced by the environment (Skinner, 1945). If a specific behavior results in a pleasurable outcome or removal of an aversive outcome then the behavior is more likely to be repeated. Additionally, the opposite is said to be true of an action that increases negative consequences or decreases pleasurable outcomes, which would more likely decrease the behavior. In the case of drinking, Reinforcement Theory suggests

that if parents are seen by their children as having positive or negative attitudes towards drinking, this may affect children's decision in drinking alcohol.

In regards to parental approval of alcohol usage there has been disparity in the parents' cultural attitudes towards supporting alcohol consumption. Popular media has advertised that approving of alcohol use may lead the child to drink less because children will not see drinking as a rebellious activity (Szalavitz, 2011). However the other school of thought says approving of alcohol use leads to more alcohol use by the child (Abar, 2009). LaBrie, Hummer, Lac, Ehret, & Kenney (2011) found that parental approval significantly correlated with their child's attitude towards college drinking but was only marginally significant with respect to the amount the child consumed. Livingston, Testa, Hoffman, & Windle (2010) found that high-school females who were allowed to drink at home with friends during high school had the highest consumption rates during their first year of college as compared to the student who were not allowed to drink at home or only allowed to drink at meals.

Even with the research looking at the relationship between parental approval, parental modeling and college drinking, previous studies have not looked into how family history of alcohol problems moderates these relationships. Therefore, this study is merited in trying to bridge the gap in the research.

Family History of Alcohol Problems

Children with a family history of alcoholism have been shown to be at an increased risk of developing an alcohol problem. Chassin, Mann, and Sher (1988) found that high school students from a Midwestern university who had a family history of alcohol abuse reported drinking a greater quantity of alcohol and more frequently than those students with a negative (or without) family history. In addition, the study found that those adolescents with a positive (or with) family history experienced more negative alcohol related consequences. Fewer studies have been done to examine how family history effects college student drinking. Svikis, McCaul, Turkkan, & Bigelow (1991) showed that college males with a family history of drinking had a higher clinical score on the Michigan Alcoholism Screening Test (MAST) than those males who reported having a negative family history. However, there has been little research into how family history moderates the relationship between parental modeling, parental approval, college student drinking, and alcohol related consequences.

The first aim of this study is to examine the effect of parental modeling on drinking and consequences among college students and to examine the effect of parental approval of drinking

on drinking and consequences among college students. The second aim is to assess how family history might moderate these relationships. It is hypothesized that higher levels of parental modeling will be related to more drinking and consequences and this effect will be increased by the presence of family history of alcohol abuse. It is also hypothesized that higher levels of parental approval of moderate and heavy drinking will be associated with more drinking and consequences and this effect would be increased by the presence of family history.

METHODS

Participants

Participants were randomly chosen incoming first year students (N=1901) at a large, public mid-Atlantic university. Students were contacted the summer prior to college entrance. Students contacted met the following criteria: a) they had not previously been enrolled in another university, b) they consented to participate, and c) they completed the survey assessment prior to entering college. There was a 68.4% response rate which fits into the norms outlined by previous web-based surveys (Larimer et al., 2007; McCabe et al., 2002). The baseline survey asked students to report on parental modeling, parental approval, and family history of drinking. During follow-up (15 months after the initial survey) students reported on their typical weekly drinking and alcohol related consequences.

Participants were randomly selected from the roster of students listed in the university registrar's database. A sample of students was selected from the roster and sent a letter inviting them to participate in the study with an explanation of the study, procedures, compensation, and a URL of where to complete the study. In addition, a personal identification Number (PIN) was created for each of the candidates to participate. An emailed invitation, a post card reminder about the study, and instructions of how to participate were given to each student. Participants were informed of the compensation they would receive for taking part in the study: \$25 for the baseline survey and \$30 for the follow-up survey. Participants received a \$5 bonus per survey for responding within 48 hours of the email being sent.

The demographic characteristics of the population of the 1901 subjects that consented to participate and completed the baseline survey assessment were as follows: 52.3% female, 86.7% Caucasian, 4.9% Asian, 2.9% African American, 5.0% Hispanic, and 2.1% multi-racial or 2.8% other. The mean age for the sample was 17.94 (SD = .32) years old, 89.5% were 18 years old, and 92.6% perceived their family to be of average or above average socio-economic status relative to their peers.

Measures

Parental Modeling

Parental modeling of alcohol consumption was measured with two items, both of the questions asked about the participant's father and mother separately. Participants were asked "In the past year, how often do you think that your father/mother drank alcohol?" and were given

nine answer choices: “Not at all,” “1-5 times a year,” “6-11 times a year,” “About once a month,” “2 or 3 times a month,” “once or twice a week,” “3 or 4 times a week,” “Nearly everyday,” and “Everyday.” Participants were also asked, “In the past year, how many drinks do you think your father/mother had per drinking occasion?” Response items ranged on an 8 point scale: “1 drink,” “2 drinks,” “3 drinks,” “4 drinks,” “5 drinks,” “6 drinks,” “7-8 drinks,” and “9 or more drinks”. The two items were summed to create a composite dad modeling variable ($\alpha = .606$) and a composite mom modeling variable ($\alpha = .619$).

Parental approval of alcohol use

Parental approval of moderate alcohol use was measured with one item (Wood et al., 2004). Participants were asked, how their parents would respond if “you drank one or two drinks on one occasion” and were given 5 point scale for responses, from “strongly disapprove” (1) to “strongly approve” (5).

Parental approval of heavy alcohol use was measured by summing the scores of three items (Wood et al., 2004). Participants were asked how their parents would respond if “[you] drank three or four drinks on one occasion”, “five or more drinks on one occasion”, and “five or more drinks once or twice each weekend?” Again, students were given a 5 point scale for responses, ranging from “strongly disapprove” to “strongly approve”. Items were summed to create a composite parental approval of heavy drinking variable ($\alpha=.848$).

Family History

Family history was measured using one question asking about the mother and father respectively, “Do you think your biological father/ mother is/was an alcoholic?” and students were given 2 response choices “yes” and “no”. These items were coded such that if the answer was yes for either one or both parents the student was said to be family history positive. If the student selected no for both parents then the student was said to be family history negative.

Frequency of drunkenness

Amount of drinking was measured using a single item asking students, “During the past 30 days, how many times have you gotten drunk or very high from alcohol?” and were given a 6 point scale: “Never” “1-2 times” “3-4 times” “5-6 times” “7-8 times” and “9 or more times”. A standard drink definition was included with the question (i.e., 12 oz. beer, 10 oz. wine cooler, 4 oz. wine, 1 oz. 100 proof (1 ¼ oz. 80 proof) liquor).

Alcohol-related consequences.

Alcohol-related consequences were defined by using a subset of three questions pertaining specifically to consequences of a physical nature from the 33 items from the Young Adult Alcohol Problems Screening Test (YAAPST, Hurlbut & Sher, 1992). Participants were asked, “Have you had a headache (hangover) the morning after you had been drinking?”; “Have you felt very sick to your stomach or thrown up after drinking?”; and “Have you ever awakened the morning after a good bit of drinking and found that you could not remember a part of the evening before?” and were given a 10 point scale to respond, “Never,” “ Yes, but not in the past year,” “ 1 time in the past year,” “2 times,” “3 times,” “4-6 times,” “7-11 times,” “12-20 times,” “21-39 times,” and “40 or more times”. These items were summed to create a composite score representing negative physical consequences variable ($\alpha=.805$).

RESULTS

Hierarchical linear regression was used to test for interaction effects. In the first step, drinking scores were regressed onto dad modeling and family history (yes vs. no). In the second step, drinking was regressed onto modeling, family history, and a product term representing the interaction of the two predictors. Together, the predictors accounted for 1.5% of the variance in the drinking scores, $R^2 = .015$, $F(2,1238) = 9.346$, $p < .001$. Examination of the main effect of dad modeling revealed a significant positive relationship, $b = .224$, $se = .052$, $t = 4.312$, $partial\ r = 0.133$. As dad modeling increased, college student drinking increased. Family history was not related to drinking, $b = .029$, $se = .165$, $t = .173$, $partial\ r = 0.008$. Individuals with family history did not drink significantly more than those without a family history. Finally, examination of the product term revealed a marginally significant interaction effect, $b = .257$, $se = .131$, $t = 1.956$, $p = .051$. As seen in Table 1, the drinking means were higher for the average dad modeling groups than the above average dad modeling groups for both the family positive and family history negative groups. Comparison of the means in Table 1 using Tukeys HSD revealed that drinking did not differ by the amount of dad modeling for the group with a family history ($mean\ diff. = 0.014$, $p > .05$), but did for the group without Family History ($mean\ diff. = .231$, $p < .05$). This suggests the influence of dad modeling on drinking was greater for the group without family history than the group with family history.

Table 1: Drinking Means for Dad Modeling and Family History

		Dad Modeling		
Family History		Average	Above Average	Mean Difference
	No	1.687 (.045)	1.456 (.066)	0.231*
	Yes	1.733 (.163)	1.719 (.212)	0.014
	Mean Difference	-0.046	-0.263*	

Note: *Indicates that mean difference exceeds Tukeys HSD critical difference $p < .05$

Following the same procedure, drinking amount scores were regressed onto mom modeling, family history (yes vs. no), and a product term representing the interaction between family history and modeling. Together, the predictors accounted for 1.3 % of the variance in the drinking scores, $R^2 = .013$, $F(2,1245) = 8.013$, $p < .001$. Examination of the main effect of mom modeling revealed a significant positive relationship, $b = .205$, $se = .052$, $t = 3.938$, $partial\ r = 0.102$. As mom modeling increased drinking increased. Family history was not significantly related to amount of drinking No significant moderator effects were observed, $p > .05$.

Drinking scores were regressed onto parental approval of moderate drinking, family history (yes vs. no), and a product term representing the interaction between family history and approval. Together, the predictors accounted for 3.8% of the variance in drinking scores, $R^2 = .038$, $F(2,1245) = 24.363$, $p < .001$. Examination of the main effect of parental approval of moderate drinking revealed a significant positive relationship, $b = 0.334$, $se = .048$, $t = 6.942$, $partial\ r = 0.169$. As parental approval increased, college student drinking increased. Family history was not significantly related to the amount of drinking. Finally, examination of the product term revealed a significant interaction effect, $b = -.399$, $se = .179$, $t = -2.224$, $p < .05$. As seen in Table 2, the drinking means were higher for the average parental approval of moderate drinking groups than the above average groups for parental approval of moderate drinking for both the family history positive and family history negative groups. Comparison of the means in Table 2 using Tukeys HSD revealed that drinking did not differ by the amount of parental approval for the group without a family history ($mean\ diff. = .082$ $p > .05$), but did for the group with a family history ($mean\ diff. = .191$, $p < .05$). This suggests the influence of parental approval of moderate drinking was greater for those with family history than those without a family history.

Table 2. Drinking Means for Parental Approval of Moderate Drinking and Family History.

		Parental Approval of Moderate Drinking		
Family History		Average	Above Average	Mean Difference
	No	1.877 (.054)	1.795 (.048)	0.082
	Yes	2.202 (.181)	2.011 (.161)	0.191*
	Mean Difference	0.324*	0.216*	

*Note: * Indicates that mean difference exceeds Tukeys HSD critical difference $p < .05$*

Drinking scores were regressed onto parental approval of heavy drinking, family history (yes vs. no), and a product term to reflect the interaction as predictors in the model. Together, the predictors accounted for 7.1% of the variance in drinking scores, $R^2 = .071$, $F(2,1245) = 47.817$, $p < .001$. Examination of the main effect of parental approval of heavy drinking revealed a significant positive relationship, $b = 0.342$, $se = .035$, $t = 9.751$, $partial\ r = 0.242$. As parental approval of heavy drinking increased, college student drinking increased. Family history was not significantly related to drinking. Finally, examination of the product term revealed a significant interaction effect, $b = -.352$, $se = .141$, $t = -2.491$, $p < .05$. As seen in Table 3, the groups with above average approval drank more than the groups with average approval in both with and without family history conditions. In addition, those with a family history drank more than those without the family history for both the average and above average approval groups. Comparison of the means in Table 3 using Tukeys HSD revealed that drinking did differ by the amount of parental approval for the group without a family history (mean diff. = -0.585 $p < .05$), and did for the group with a family history (mean diff. = -1.23, $p < .05$) but the difference was greater for those with a positive family history. This suggests the influence of parental approval of heavy drinking on drinking amount was greater for the family history group than the group without a family history.

Table 3. Drinking Means Parental Approval of Heavy Drinking and Family History.

		Parental Approval of Heavy Drinking		
Family History		Average	Above Average	Mean Difference
	No	2.684 (.121)	3.269 (.185)	-0.585 *
	Yes	3.800 (.433)	5.030 (.673)	-1.23 *
	Mean Difference	-1.116 *	-1.761 *	

*Note: * Indicates that mean difference exceeds Tukeys HSD critical difference $p < .05$*

Finally, alcohol-related consequences were regressed onto dad modeling, family history (yes vs. no), and a product term representing the interaction between dad modeling and family history. Together, the predictors accounted for 2.5 % of the variance in the drinking scores, $R^2 = .025$, $F(2,1238) = 15.982$, $p < .001$. Examination of the main effect of dad modeling revealed a significant positive relationship, $b = .982$, $se = .549$, $t = 13.599$, $partial\ r = 0.158$. As dad modeling increased, physical alcohol-related consequences experienced by college students increased. There was no association between family history status and consequences. No significant moderator effects were observed, $p > .05$.

Amount of physical alcohol-related consequences were regressed onto mom modeling, family history (yes vs. no), and a product term representing the interaction between mom modeling and family history. Together, the predictors accounted for 3.4 % of the variance in the drinking scores, $R^2 = .034$, $F(2,1243) = 22.152$, $p < .001$. Examination of the main effect of mom modeling revealed a significant positive relationship, $b = 1.148$, $se = .179$, $t = 6.421$, $partial\ r = 0.167$. As mom modeling increased, physical alcohol-related consequences experienced by college students increased. There was no association between family history status and consequences. No significant moderator effects were observed, $p > .05$.

Amount of physical alcohol-related consequences were regressed onto parental approval of moderate drinking, family history (yes vs. no), and a product term representing the interaction between approval and family history. Together, the predictors accounted for 3.5 % of the variance in the drinking scores, $R^2 = .035$, $F(2,1243) = 22.317$, $p < .001$. Examination of the main effect of parental approval of moderate drinking revealed a significant positive relationship, $b = 1.078$, $se = .167$, $t = 6.447$, $partial\ r = 0.168$. As parental approval increased, physical alcohol-related consequences experienced by college students increased. There was no association between family history status and consequences. No significant moderator effects were observed, $p > .05$.

Consequences were regressed onto parental approval of heavy drinking, family history (yes vs. no), and a product term representing the interaction between family history and modeling. Together, the predictors accounted for 5.4 % of the variance in the drinking scores, $R^2 = .054$, $F(2,1243) = 35.731$, $p < .001$. Examination of the main effect of parental approval of heavy drinking revealed a significant positive relationship, $b = 1.014$, $se = .123$, $t = 8.266$, $partial\ r = 0.242$. As parental approval increased physical alcohol-related consequences experienced by college students increased. There was no association between family history status and consequences. No significant moderator effects were observed, $p > .05$.

DISCUSSION

The purpose of the present study was to examine parent influences as predictors of high risk and high volume college student drinking. In addition, this study aimed to find how the presence of family history of alcoholism influences the aforementioned relationships.

The results indicated that father and mother modeling are related to an increase in college student drinking. The present results are consistent with previous studies. Hops and colleagues (1997) found that increased parental modeling was related to an increase in adolescent drinking. However, Hops' study differed from the present study in that it did not differentiate between mom and dad modeling. Additionally, Hops' study looked at the effects on adolescent drinking as opposed to college-aged drinking. The present study's results showed that both parental approval of moderate and heavy drinking were associated with an increase in college student drinking. The more the parents approved of alcohol, the more the college students drank. These results are consistent with the study done by Livingston and associates (2010), which found that high-school females whose parents approved of drinking in high school drank more in college. Furthermore, the results showed that there was a significant positive relationship with both parental modeling (dad and mom) and approval (moderate and heavy) on negative physical consequences experienced.

There were three relationships found to be significantly moderated by family history. The results implied that family history moderates the relationship between dad modeling and college drinking. Dad modeling is more strongly related to drinking when there is no family history present. The results showed that family history moderates both the relationship between parental approvals of moderate and heavy drinking with the amount of college student drinking. Parental approval is more strongly related when there is family history present. No other interactions were found to be significant.

Support for Hypotheses

Overall, these results partially support my hypotheses. My first hypothesis was not supported, which stated that parental modeling would be more important when there is family history present. Dad modeling seems to have a greater effect on children that do not have family history of alcoholism. When family history is present, drinking is high across all conditions (average and above average) of modeling. Therefore, family history is a much more important

variable when it is present. Mom modeling does not seem affected by the presence of family history.

The results support the hypothesis that parental approval of moderate drinking and heavy drinking is more important when there is family history present. Overall, college student drinking is higher in students with a parental approval of heavy drinking than students with a parental approval of moderate drinking.

The discrepancy between the moderation of family history of alcoholism on dad modeling and parental approval of alcohol may be due to the different types of exposures. Children without a family history of alcohol may look towards their parents' behaviors because that may be their primary exposure unlike children with a family history of alcohol. Additionally, children with a family history may have more exposure to drinking through observing family members. Therefore, reinforcement theory would support that it is up to the parent to approve or disapprove of the familial alcohol problems. The tagging in the case of family history may prove to be more effective. These results do not support the hypothesis that family history has positive effect on the relationship between parental modeling and parental approval of alcohol use on physical alcohol-related consequences.

Implications of the study

The implications of this study were not as simple as predicted. Parental modeling and approval are often grouped together on the assumption that parental influences behave the same way. However, in this study, they seem to have differing effects. Parental modeling tends to have a greater effect on lighter drinking, while parental approval of heavy drinking has a greater effect on heavy drinking behavior.

Additionally, this is one of the first studies to examine how family history of alcoholism moderates the effects of parental influences on drinking and alcohol-related consequences among college students. These findings support that modeling has a greater influence when family history is not present. This has important intervention implications. These results imply that intervention addressing parental modeling may be more effective when there is not a family history present. In contrast, the results imply that parental approval of moderate and heavy drinking has a greater influence when family history is present. Therefore, intervention efforts addressing parental approval of drinking may be most beneficial for students with a family history. It may be advantageous to survey students for a family history of alcohol abuse during high school and tailor intervention programs accordingly. Consequently, students can be provided

with strategies and information about alcohol prior to entering an environment like college where there will be increased access and exposure to alcohol.

Limitations and Future Directions

This study has a few limitations in its definition of family history. This study is limited in its homogeneous sample. Further studies should be done with a variety of college student populations. In the present study, a dichotomous variable was chosen to define family history because the number of individuals with a positive family history was low. It may be advantageous to use a coding scheme which differentiates the number of parents with a family history of alcohol. Additionally, only parents were used in the definition of family history but other family members may be influential as well. Future studies may want to use a more nuanced coding to include a more extensive definition of family history, encompassing grandparents, aunts, and uncles. Additionally, this study did not differentiate for single parent households. Future work should address how parental influences on college drinking are different in a single parent household. This study was exploratory in looking at how parental influences may contribute to physical consequences experienced in college students. Future studies may want to expand on this idea and address the different types of consequences such as social and academic.

Conclusion

This study looks at the effects of parental modeling and parental approval of drinking on college drinking amount and physical alcohol-related consequences exhibited. This is one of the first studies to examine how family history of alcoholism moderates these relationships. These findings have important implications for alcohol prevention strategies for students entering college.

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ACADEMIC VITAE

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EDUCATION

Undergraduate **Bachelors of Science**, Biology & Psychology with Honors in Bio-Behavioral Health, Pennsylvania State University, University Park, PA, expected May 2012
Honors Thesis: Does Family History Moderate the Relationship Between Parental Modeling and Parental Approval effect on College Aged Drinking?
Advisor: Robert Turrisi, Ph.D.

SCHOLARSHIP AWARDS

2009 Schreyer Ambassador Travel Grant Recipient
2008-2012 Raymond and Charlotte Marshall Scholarship Recipient

HONORS

2008 – 2012 Member of the Schreyer Honors College, Pennsylvania State University

RESEARCH/EMPLOYMENT EXPERIENCE

2011-present **Undergraduate Research Assistant**, Alcohol and Skin Cancer Projects (Director: Rob Turrisi, Ph.D.), Department of Biobehavioral Health and the Prevention Research Center, The Pennsylvania State University, University Park, PA.
The focus of the lab is to decrease potentially harmful behaviors related to alcohol use and UV exposure in young adults through parent and peer based interventions. Duties include subject recruitment, data collection, and data entry.

2009 – 2011 **Undergraduate Research Assistant**, Vascular Health Intervention Lab (Director: Sheila West, Ph.D.), Department of Biobehavioral Health, The Pennsylvania State University, University Park, PA.
Research in the lab examines effects of dietary supplements, nutrition, and foods on vascular health. My contributions included blood processing, standardized blood pressure monitoring, acting as a “confederate” during a standardized stressor battery (the Trier Social Stress test), and data entry.

2008 **Undergraduate Research Assistant**, Nutritional Neuroscience Lab (Director: Mihai Covasa, Ph.D.), Department of Nutrition, The Pennsylvania State University, University Park, PA
The focus of the lab includes examining changes of brain peptides in diabetic rats. My contributions included preparing rat brain samples using a microtome and the euthanizing of animals.

EMPLOYMENT AND VOLUNTEER EXPERIENCE

2011-present **Undergraduate Intern**, Child Study Center, The Pennsylvania State University, University Park, Pa .
I work with high-risk children and work to improve their social and behavioral skills.

2011 **Volunteer**, Silver Hill Psychiatric Hospital, New Canaan, CT.
I worked with adolescent unit assisting with school, worked admissions greeting patients and filing charts, recreational therapy assistant, and assisted in the library

2010-Present **Resident Assistant**, Atherton Hall, The Pennsylvania State University, University Park, PA.
I design programs to promote community for special living option and enforce resident hall policies in dorms of 400 residents.

2011-present **Undergraduate Intern**, Child Study Center, The Pennsylvania State University, University Park, Pa.
I work with high-risk children and work to improve their social and behavioral skills.

2010 **Intern**, Pediatric Cardiology Office, New York City, NY. (Director: Salvatore Presti, M.D.)
Greeted patients, filed medical forms, and helped with initial vital sign collection.

INTERNATIONAL EXPERIENCE

2010 **STUDIED ABROAD**, Peking University, Beijing, China. Integrated Developmental and Cancer Biology Class

2010 **STUDIED ABROAD**, London, England. Integrated theatre in Society Class.