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The Moderating Role of Parental Monitoring and Knowledge in the Relationship Between Perceived Parental Approval of Drinking and Alcohol Outcomes Among College Students

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ABSTRACT

A growing body of literature indicates perception of parental approval of drinking predicts college alcohol use. This study examined perception of parental monitoring as a moderator of perceived parental approval of drinking and alcohol use (quantity, frequency) among undergraduate students ($N = 632$). Parental monitoring moderated the relationship between parental approval and alcohol use frequency ($\beta = .082$, $p = .017$); however, parental monitoring did not moderate the relationship between parental approval and weekly alcohol consumption ($\beta = .014$, $p = .695$). Perceived parental knowledge of drinking moderated the relationship between perceived parental approval and both alcohol use frequency and weekly alcohol consumption. Implications are discussed in the context of parental communication based interventions.

Keywords: *Alcohol, college students, parental monitoring, parental knowledge, injunctive norms*

INTRODUCTION

Substance use disorders are the fourth most common psychiatric diagnosis, trailing only mood, anxiety and impulse control disorders in prevalence in the world's population, with the average age of onset between 18 and 29 (Kessler et al., 2007; Kessler et al., 2005). For young people, alcohol is the primary drug of choice; it is consumed more frequently and heavily than all other illicit drugs combined (Monteiro, 2007). Heavy alcohol consumption contributes to a multitude of high-risk behaviors, each with their own associated costs. An estimated 20% of injuries worldwide are alcohol-related, with the majority of affected individuals coming from the late teen and young adult age groups (World Health Organization, 2007).

Traffic fatalities are the leading cause of death among adolescents and young adults age 16 to 24 (Patton et al., 2009) and approximately 41% of traffic fatalities in these age groups can be attributed to alcohol consumption (NHTSA, 2006). Heavy drinking also places an individual at risk for sexual assault (Abbey, 2011; Monk & Jones, 2014) and increased risk of acquiring a sexually transmitted disease (Scott-Sheldon et al., 2009; Seth et al., 2011). In light of this evidence, it is safe to say that alcohol misuse represents a striking public health concern, particularly as it relates to young adults. Thus, an increased understanding of the mechanisms that contribute to amplify alcohol use is needed to adequately abate the relationship between alcohol use and health risk behaviors in young adults.

One factor linked to sharp increases in alcohol consumption in young adults is full-time college enrollment (SAMHSA, 2013). Full-time college students are more likely to drink heavily than their same aged peers not enrolled full-time. Furthermore, heavy episodic drinking (4 or more drinks for women, 5 or more for men on one occasion) on college campuses around the country is commonplace, with nearly half of all college students reporting at least one heavy drinking episode in the past month (SAMHSA, 2013). Importantly, these heavy drinking episodes are connected to various negative alcohol-related consequences (Dunne & Katz, 2015; Nelson et al., 2009). The collegiate environment represents a place where consuming copious amounts of alcohol is encouraged and even expected in some contexts. This culture of normalized drinking coupled with minimal supervision creates a

unique environment where the above discussed alcohol-related risk behaviors propagate (Hingson & White, 2014). Awareness of the many problems associated with college student alcohol use has led to a proliferation of research regarding factors that contribute to college drinking, particularly research on social norms related to risky college drinking (Champion, Lewis, & Myers, 2015; Collins & Spelman, 2013).

Both descriptive and injunctive norms predict alcohol use among college students. In the context of college student drinking, descriptive norms refer to the perception of how much and how often others are drinking and injunctive norms refer to the perception of how much others approve or disapprove of drinking. Research indicates injunctive norms influence personal judgments concerning the acceptability of behaviors (Prince, Maisto, Rice, & Carey, 2015; Real & Rimal, 2007; Rimal et al., 2005). Accordingly, college students are more likely to engage in drinking if they believe it to be more socially acceptable.

Although alcohol use typically increases as adolescents become more individuated from parents and parental monitoring lessens (Baer & Bray, 1999; Barnes, Reifman, Farrell, & Dintcheff, 2000), college students who internalize positive parental norms may make better decisions regarding drinking in the long run (Brody, Ge, Katz, & Arias, 2000). Parents are active in the plans of their children as they prepare for college, and maintain influence after their children have moved on to college (Turrisi et al., 2001). Adolescents continue to seek parental support and assistance in times of stress while in college (Schulenberg & Maggs, 2002), and initiate involvement with parents when making important decisions, such as those involving maintenance of romantic relationships, academic and career choices, roommate conflicts and health (Cullaty, 2011; LaBrie & Cail, 2011; Pizzolato & Hicklen, 2011).

Research on parental approval of drinking has generally focused on adolescents that are high school age and younger (Boyle & Boekeloo, 2006). However, recent research has consistently demonstrated that perception of parental approval is associated with alcohol outcomes among college students (Abar et al., 2009; Chawla et al., 2009; LaBrie et al., 2010; Neighbors et al., 2008; Turrisi & Ray, 2010; Walls et al., 2009). Specifically, college students that perceive their parents as more disapproving

of their alcohol use tend to consume significantly less alcohol and experience fewer associated negative consequences. The results of this literature are encouraging, and have important implications for parent-based intervention efforts. However, the exact conditions under which this relationship operates remains unclear. One interesting factor is the degree to which a student believes his or her parents are actually monitoring their behavior.

Like parental approval, parental monitoring has received much attention in regards to adolescent drinking. Using cross-sectional analyses of older adolescents, perceived parental monitoring has been shown to correlate with alcohol use and associated problems when assessed during college and the summer prior to college matriculation (Patock-Peckham et al., 2011; Wood et al., 2004). Using longitudinal analyses, perceived parental monitoring assessed during the senior year of high school and pre-matriculation has been found to predict subsequent college alcohol use and associated problems (Abar & Turrisi, 2008; Fairlie et al., 2012; Turrisi & Ray, 2010; Walls et al., 2009).

The findings highlighted above have important implications for treatment and prevention. However, future research is needed to examine factors that might moderate the relationship of perceived parental approval and alcohol use among college students. Consistent with this notion, Windle and Davies (1999) noted the importance of considering moderators in the conceptualization of alcohol use, given research increasingly points to associations among etiological factors as being interactive rather than linear. The current study sought to increase understanding of *when* or *for whom* associations between perceived parental approval of drinking and college alcohol use exist, by examining the role of perceived parental monitoring in this context.

First, it was hypothesized that perception of parental monitoring would moderate the relationship between perceived parental approval of drinking and weekly alcohol consumption, after controlling for the influence of gender and perceived friends' approval of drinking, such that the associations between perceived parental approval of drinking and weekly alcohol consumption would be stronger for students with higher perceived parental monitoring compared to students with lower perceived parental monitoring. Second, it was hypothesized that perception of parental monitoring would moderate the relationship between perceived parental

approval of drinking and alcohol use frequency, after controlling for the influence of gender and perceived friends' approval of drinking. That is, the associations between perceived parental approval of drinking and alcohol use frequency were hypothesized to be stronger for students with high perceived parental monitoring as high compared to students with lower perceived parental monitoring.

METHOD

Participants

Respondents ($n = 632$) ranged in age from 18 to 25 years ($M = 19.41$, $SD = 1.53$). Women ($n = 464$) comprised 73.4% of the sample; 90.3% were White, 0.8% were Black or African American, 1.3% were Asian or Asian American, 1.3% were Native American or Alaskan Native, 0.3% were Native Hawaiian or other Pacific Islander, 4.3% were Multiracial, 1.4% were of other races, and 0.3% did not wish to respond. Nineteen participants (3% of the sample) identified themselves as Hispanic or Latino. Regarding year in school, 44.8% of the sample were freshmen ($n = 283$), 28.3% were sophomores ($n = 179$), 12.8% were juniors ($n = 81$) and 14.1% were seniors ($n = 89$). Regarding residence, 7.1% of the sample reported living in Greek housing ($n = 45$), 63.3% reported living in residence halls ($n = 400$), 25.5% reported living off campus without parents ($n = 161$) and 4.1% reported living off campus with parents ($n = 26$).

Procedure

Participants were recruited from courses at a Midwestern university. All surveys were completed online. Participants provided informed consent and received participation credit for their time. All responses were anonymous. The university IRB approved all procedures.

Measures

Injunctive drinking norms. Attitudes toward drinking behaviors were assessed using the Modified Injunctive Norms Questionnaire (Baer, 1994). The measure was modified slightly with the inclusion of a single item assessing less severe injunctive drinking norms. Five items were used for two reference groups

(parents and friends). Participants reported the extent to which they believed each reference group would respond if they knew “you drank alcohol occasionally,” “you drank alcohol every weekend,” “you drank alcohol daily,” “you drove a car after drinking alcohol” and “you drank enough alcohol to pass out.” Response options were based on a seven-point scale ranging from 1 (*strong disapproval*) to 7 (*strong approval*). A composite score for each reference group was used in the analysis. Cronbach’s alpha was .80 for friends’ approval and .74 for parents’ approval in the current sample.

Alcohol use. Alcohol use frequency in the past 90 days was assessed using a 9-point rating scale (0 = *Not at all*, 8 = *More than once a day*; Kills-Small et al., 2007). Alcohol consumption in the past 90 days was assessed utilizing the Modified Daily Drinking Questionnaire (DDQ-M; Dimeff et al., 1999). The DDQ-M, consisting of a grid representing the seven days of the week, assessed participants’ typical daily alcohol consumption for a typical week during the last 90 days. Typical weekly consumption was calculated by summing the number of standard drinks reported by the participant. Number of drinks per drinking occasion was computed by dividing the number of drinking days reported by the sum of standard drinks reported for a typical week during the past 90 days.

Perceived parental monitoring and knowledge. Parental monitoring and knowledge in the past 90 days was assessed with a modified version of the nine-item Strictness/Supervision Scale (Steinberg et al., 1992), whereby only items that appeared more relevant to older adolescents were selected. Eight items asked participants to report the degree to which their parents try to know (monitoring) and actually know (knowledge) “where you go at night”, “what you do with your free time,” “where you are most afternoons when not in class” and “about your drinking” in the past 90 days. Response options were based on a three-point scale ranging from 1 (*don’t try/know*) to 3 (*try/know a lot*). Composite scores for monitoring and knowledge were used in the analysis. Cronbach’s alpha was .78 for perceived parental monitoring and .86 for perceived parental knowledge in the current sample.

Statistical Analysis

Descriptive statistics were used to characterize the sample. Predictor variables were evaluated for normality and transformed as appropriate. Collinearity was assessed by examining tolerance diagnostics among predictor variables. Two separate three-step hierarchical multiple linear regression analyses were used to test the interaction of perceived parental approval and perceived parental monitoring on alcohol use frequency and weekly alcohol consumption while controlling for variance due to gender and perceived friends' approval of drinking (Aiken & West, 1991). Similarly, two additional three-step hierarchical multiple linear regression analyses were used to test the interaction of perceived parental approval and perceived parental knowledge of drinking on alcohol use frequency and weekly alcohol consumption while controlling for variance due to gender and perceived friends' approval of drinking. Each covariate and predictor variable was mean centered. All descriptive statistics, bivariate correlations, and regression analyses were performed using SPSS version 21.0 (IBM Corp). Alpha was set at .05 and all tests were two-tailed.

RESULTS

Descriptive and bivariate statistics

Composite scores for perceived friends' approval of drinking ranged from 5 to 33 ($M = 14.93$, $SD = 5.25$) and composite scores for perceived parental approval of drinking ranged from 5 to 30 ($M = 9.50$, $SD = 3.74$). A total of 83.5% of the sample reported using alcohol in the past 90 days with the majority of participants ($n = 357$) having reported using alcohol "Once or twice a week" or "3-4 times a week" in the past 90 days. One hundred and four participants reported using alcohol "Not at all" in the past 90 days. Participants reported drinking an average of 8.79 ($SD = 10.05$) standard alcoholic drinks per week in the past 90 days. Average number of drinks per drinking occasion ranged from 0 to 20 ($M = 4.78$, $SD = 3.35$). Composite scores for perceived parental monitoring ranged from 4 to 12 ($M = 7.38$, $SD = 2.13$) and composite scores for perceived parental knowledge ranged from 4 to 12 ($M = 8.56$, $SD = 2.52$). Correlations between variables are presented in Table 1.

Weekly alcohol consumption

A hierarchical multiple regression analysis, as described by Aiken and West (1991), was used to test our hypothesis that college students' perception of parental monitoring would moderate the relationship between perceived parental approval of drinking and weekly alcohol consumption, after controlling for gender and perceived friends' approval of drinking. Gender, perceived friends' approval of drinking and perceived parental approval of drinking were entered in Step 1 and explained 24.9% of the variance in weekly alcohol consumption, $F(3, 628) = 69.44, p < .001$. Perceived parental monitoring was added in Step 2 and did not explain any additional variance in weekly alcohol consumption, $\Delta F(1, 627) = .01, p = .92$. The interaction of perceived parental approval of drinking and perceived parental monitoring were entered in Step 3 and did not explain any additional variance in weekly alcohol consumption, $\Delta F(1, 626) = .15, p = .70$. In the final model, gender ($\beta = -.232, p < .001$) and perceived friends' approval of drinking ($\beta = .368, p < .001$) were the only significant predictors of weekly alcohol consumption. The non-significant interaction ($\beta = .014, p = .695$) suggests the relationship between perceived parental approval of drinking and weekly alcohol consumption does not vary across levels of perceived parental monitoring. Thus, our hypothesis that perception of parental monitoring would moderate the relationship between perceived parental approval of drinking and weekly alcohol consumption was not supported.

Alcohol use frequency

A separate hierarchical multiple regression analysis was used to test our hypothesis that perception of parental monitoring moderates the relationship between perceived parental approval of drinking and alcohol use frequency while controlling for gender and perceived friends' approval of drinking. Gender, perceived friends' approval of drinking, and perceived parental approval of drinking were entered in Step 1. Together, these variables explained 27.0% of the variance in alcohol use frequency, $F(3, 628) = 77.39, p < .001$. Perceived parental monitoring was entered in Step 2 and accounted for a non-significant increase in explained variance in alcohol use frequency, $\Delta R^2 = .00, \Delta F(1, 627) = .72, p = .40$. The product of perceived parental approval of drinking and perceived parental monitoring was added to

the model in Step 3 and accounted for a significant increase in explained variance, $\Delta R^2 = .01$, $\Delta F(1, 626) = 5.70$, $p = .02$. In the final model, perceived friends' approval of drinking ($\beta = .341$, $p < .001$), perceived parental approval of drinking ($\beta = .254$, $p < .001$) and the interaction of perceived parental approval of drinking and perceived parental monitoring ($\beta = .082$, $p = .017$) were significant predictors of alcohol use frequency. Thus, our hypothesis that perception of parental monitoring would moderate the relationship between perceived parental approval of drinking and alcohol use frequency was supported. The simple effect of parental approval on alcohol use frequency was examined at high (+1 SD) and low (-1 SD) values of parental monitoring (Aiken & West, 1991). The simple slopes of perceived parental approval of drinking on alcohol use frequency, were significant at high ($\beta = .148$, $p < .001$) and low ($\beta = .073$, $p = .001$) levels of perceived parental monitoring, while controlling for gender and perceived friends' approval of drinking. See Figure 1. These results suggest that greater perceived parental approval is associated with higher levels of alcohol use frequency for students high and low in perceived parental monitoring. However, the positive association between perceived parental approval and alcohol use frequency is significantly stronger for students who perceived high levels of parental monitoring compared to those who perceived low levels of parental monitoring.

Exploratory Analysis

Hierarchical multiple regression analysis was used to investigate whether perceived parental knowledge would moderate the relationship between perceived parental approval of drinking and weekly alcohol consumption. The simple slope of parental approval on alcohol use frequency was examined at high (+1 SD) and low (-1 SD) values of parental monitoring. The simple slope of perceived parental approval of drinking on weekly alcohol consumption, while controlling for gender and perceived friends' approval of drinking, was significant and positive for students high in perceived parental knowledge ($\beta = .509$, $p < .001$). In contrast, for students low in perceived parental monitoring, the simple slope of perceived parental approval of drinking on weekly alcohol consumption, while controlling for gender and perceived friends' approval of drinking was not significant ($\beta = .104$, $p = .425$). See Figure 2.

Hierarchical multiple regression analysis was used to investigate whether perceived parental knowledge would moderate the relationship between perceived parental approval of drinking and alcohol use frequency. The simple slope of parental approval on alcohol use frequency was examined at high (+1 SD) and low (-1 SD) values of parental monitoring. The simple slope of perceived parental approval of drinking on alcohol use frequency, while controlling for gender and perceived friends' approval of drinking, was significant and positive for students high ($\beta = .216$, $p < .001$) and low ($\beta = .046$, $p = .024$) in perceived parental knowledge. See Figure 3.

Correlation coefficients were computed using a subset of respondents that reported any alcohol consumption for a typical week during the last 90 days ($n = 498$). The results of the correlational analysis are presented in Table 2.

DISCUSSION

Our first hypothesis predicted that perception of parental monitoring would moderate the relationship between perceived parental approval of drinking and weekly alcohol consumption, after controlling for the influence of gender and perceived friends' approval of drinking. No interaction effects were observed when using weekly alcohol consumption as the dependent variable in our regression analyses. This suggests the relationship between perceived parental approval of drinking and weekly alcohol consumption did not vary across levels of perceived parental monitoring. Thus, our first hypothesis was not supported.

Our second hypothesis predicted that perception of parental monitoring would moderate the relationship between perceived parental approval of drinking and alcohol use frequency, after controlling for the influence of gender and perceived friends' approval of drinking. In our regression analyses using alcohol frequency as the dependent variable, perceived friends' approval of drinking, perceived parental approval of drinking and the product of perceived parental approval and perceived parental monitoring were significant predictors of alcohol use frequency. This suggests the relationship between perceived parental approval of drinking and alcohol use frequency varied across levels of per-

ceived parental monitoring. Thus, our second hypothesis was supported.

Decomposition of the two-way interaction suggests that when perceived parental approval of drinking is low, college students perceiving parental monitoring as high consume alcohol less frequently than those perceiving lower parental monitoring. Interestingly, the two-way interaction plotted also suggests that when perceived parental approval of drinking is high, college students perceiving parental monitoring as high actually consume alcohol more frequently compared to those perceiving lower parental monitoring. Perhaps for parents high in approval of drinking, monitoring behaviors may be better typified not as an authority figures' attempts to "keep tabs" on his or her child, but rather as attempts to be involved in his or her child's life in the role of a friend.

As stated above, results indicated that moderation effects were significant when using alcohol use frequency as the dependent variable, but were not significant when using weekly alcohol consumption as the outcome. This finding may relate to alcohol myopia theory (Steele & Joseph, 1990). This theory posits that the perceptions and cognitive processing of individuals consuming alcohol may be altered to a degree that they are only able to focus on the most salient and immediate cues in their surroundings (Maisto et al., 2012; Patrick, Maggs, & Lefkowitz, 2015). That is, when college students are soberly contemplating going to bars or parties to consume alcohol, more peripheral inhibitory cues such as internalizations of parental values or fear of parental repercussions may impact decision-making. However, once students are out on the town with peers, more salient and immediate social cues may become the focal point of attention; as the reinforcing value of peer approval has been shown to be a driving force of behavior in this population (Neighbors et al., 2008; Steinberg, 2011).

To further explore this notion, we calculated the average number of drinks per drinking occasion and reran zero-order correlations among variables using a subset of respondents that reported any alcohol consumption for a typical week during the last 90 days. This post-hoc analysis suggests there is effectively no relationship between perceived parental approval of drinking and number of drinks per drinking occasion among college students.

However, a significant relationship remains between perceived friends' approval of drinking and number of drinks per drinking occasion. Although this finding may have important implications for college drinking theory, *a priori* hypothesis testing is needed before more definitive conclusions can be drawn.

As exploratory analyses, we tested perceived parental knowledge as a moderator between perceived parental approval of drinking and alcohol use. We found that perceived parental knowledge was a significant moderator when using alcohol use frequency and weekly alcohol consumption as dependent variables. Furthermore, upon inspection of the two-way interactions using alcohol use frequency as the dependent variable, it is clear that knowledge has a stronger moderating effect compared to monitoring. This finding is consistent with previous research that concluded the extent to which parents are knowledgeable concerning their children's whereabouts, activities and associates is a robust predictor of adolescent problem behavior (Jones, Ehrlich, Lejuez, & Cassidy, 2015; Kerr & Stattin, 2000; Stattin & Kerr, 2000). That said, the deterrent effects of monitoring cannot be entirely explained by higher levels of knowledge (Fletcher et al., 2004). In other words, when parents make efforts to know about the behavior of their college age children, these children may be less inclined to engage in behaviors their parents disapprove of, regardless of whether such efforts result in accurate parental knowledge (Fletcher et al., 2004).

Parental involvement is changing on many campuses (Shutt, Oswalt, & Cooper, 2006). Colleges and universities have established more ways (i.e., parent relations offices, parent committees, parent associations and parent orientations) to connect with parents and increase their involvement. These increases in parental involvement could potentially play an important role in alcohol and drug prevention and education (LaBrie & Cail, 2011; Shutt et al., 2006). Clearly, college students' relationships with parents can play a major protective role in promoting their development and success.

Limitations

There are several limitations to the current study. First, our sample was primarily White and female, and all participants were from the same institution. Replication of this study with diverse

subgroups of college students is necessary to increase the generalizability of the findings. Second, this is a cross-sectional study and the relationship between parental attitudes regarding alcohol use and college-drinking outcomes should be investigated longitudinally. However, the moderation analyses used for the purposes of this study do not imply causal effects among variables. Third, this study was an analysis of college student perceptions of parents' approval, thus, the extent to which parents actually approve of their drinking is unknown. However, it is adolescent perception of parent behavior that has been found to be protective against risk involvement, including drinking (Cottrell et al., 2003). Future research should survey parents to determine actual rates of approval.

CONCLUSION

The goal of our study was to examine the moderating role of student beliefs about parental monitoring and knowledge on the associations between perceived parental approval of drinking and college alcohol use. This study demonstrates that among college students, the relationship between perceived parental approval of drinking and weekly alcohol consumption does not vary across levels of perceived parental monitoring. However, our results showed that the association between parental approval and alcohol use frequency does vary at high and low levels of perceived parental monitoring.

This finding was interpreted using an alcohol myopia framework. In other words, as college students soberly contemplate going to bars or parties to consume alcohol, more peripheral inhibitory cues such as internalizations of parental values or fear of parental repercussions may impact decision-making. However, once students are out on the town with friends and peers, more salient social cues may drown out parental influence.

Although more research is needed, our findings suggest parent-based interventions aimed at increasing parental communication of disapproval of drinking may be beneficial in efforts to reduce alcohol consumption among college students. This is encouraging, as there are considerable strengths associated with parent-based interventions. For example, parents can tailor the timing of communications regarding alcohol use, and previous

research has demonstrated that parents, especially mothers, are eager and willing to implement interventions aimed at reducing college student drinking (Turrisi et al., 2001). Furthermore, electronic methods of communication may be a viable strategy for reducing alcohol use and consequences among college populations (Campbell & Hester, 2012). Future research should investigate other factors that might moderate the relationship between perceived parental approval of drinking and alcohol use among college students.

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TABLE 1***Correlations Between Variables***

Variable	1	2	3	4	5	6	7
1. Gender	-	-.13**	-.00	-.09*	-.28**	.09*	.10*
2. Perceived Friends' Approval	-		.47**	.47**	.44**	-.06	-.13**
3. Perceived Parental Approval	-			.41**	.26**	-.11**	.02
4. Alcohol Use Frequency				-	.62**	-.08*	-.19**
5. Weekly Alcohol Consumption					-	-.05	-.18**
6. Perceived Parental Monitoring						-	.41**
7. Perceived Parental Knowledge							-

Note. For gender, men = 0 and women = 1, $N = 632$, * $p < .05$, ** $p < .01$

TABLE 2

Correlations Between Variables Using a Subset of Respondents that reported any alcohol consumption for a typical week during the last 90 days

Variable	1	2	3	4	5	6	7	8
1. Gender	-	-.15**	-.02	-.16**	-.33**	-.34**	.07	.07
2. Friends' Approval	-		.40**	.35**	.25**	.36**	.02	-.07
3. Parental Approval	-			.27**	.03	.14**	-.08	.14**
4. Alcohol Use Frequency	-				.31**	.51**	.01	-.02
5. Drinks Per Occasion	-					.82**	.02	-.12**
6. Alcohol Consumption							-.01	-.10*
7. Parental Monitoring							-.40**	
8. Parental Knowledge								-.01

Note. For gender, men = 1 and women = 2, N = 498, * p < .05, ** p < .01

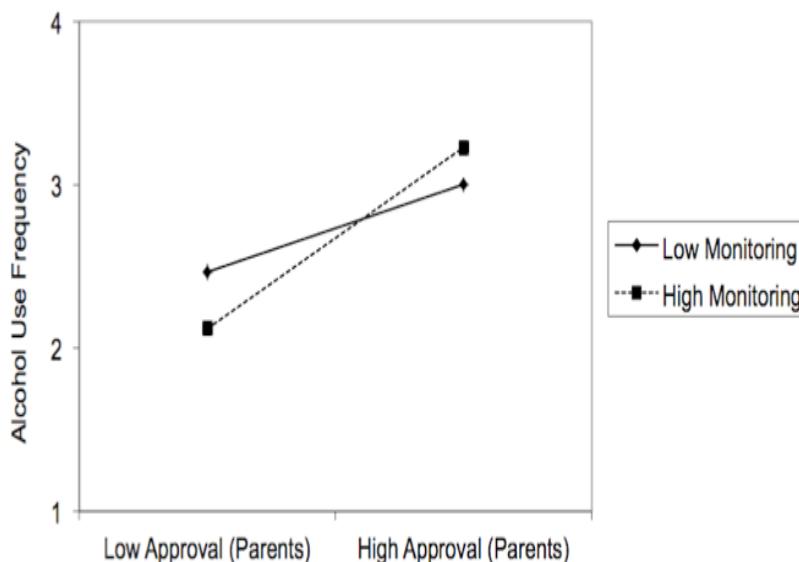


Figure 1. Moderating effect of perceived parental monitoring on the perceived parental approval of drinking-alcohol use frequency relationship. $N = 632$.

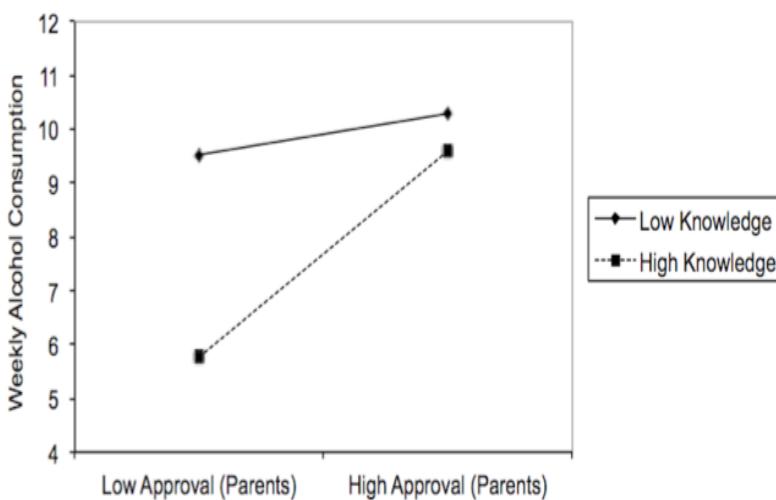


Figure 2. Moderating effect of perceived parental knowledge on the perceived parental approval of drinking-weekly alcohol consumption relationship. $N = 632$.

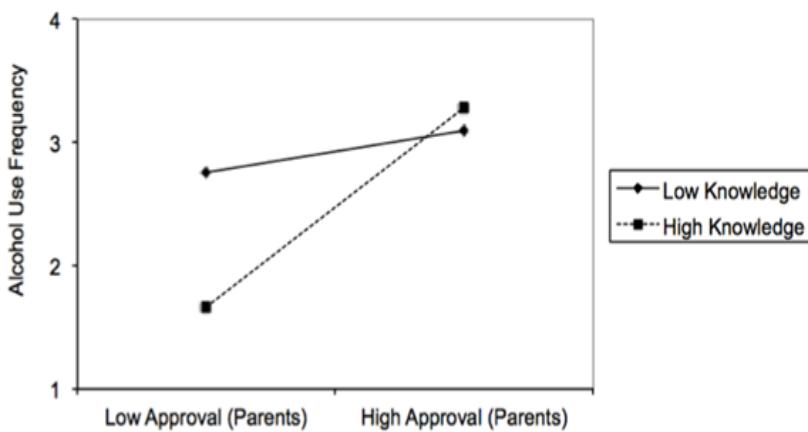


Figure 3. Moderating effect of perceived parental knowledge on the perceived parental approval of drinking-alcohol use frequency relationship. $N = 632$.

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