



Helicopter Parenting, Self-regulatory Processes, and Alcohol Use among Female College Students

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Abstract

Alcohol use, which is often associated with other problems in well-being, is a persistent problem among college students. Helicopter parenting, defined as parental overinvolvement, is an emerging parenting behavior that could be associated with alcohol use among college students. This study of 473 female undergraduate students investigated the association between helicopter parenting and alcohol use through psychological needs satisfaction and self-control. Structural equation modeling suggested that helicopter parenting was associated with higher levels of alcohol use through lower levels of psychological needs satisfaction and self-control. The implications for college students, parents of college students, educators, and university administrators are also discussed.

Keywords Alcohol use · College students · Helicopter parenting · Psychological needs · Self-control

Introduction

Alcohol use is a common problem among college students. A survey of 137 postsecondary institutions (American College Health Association 2016) found that 62.3% of undergraduate students reported using alcohol within the last 30 days. Moreover, 40.2% reported having had five or more drinks the last time they partied or socialized and 32.6% reported having had five or more drinks 1–2 times in the last 2 weeks. Annually, almost 2000 colleges students die from unintentional injuries (including automobile crashes) related to alcohol use (Hingson et al. 2009), 700,000 students are assaulted by another student who is under the influence of alcohol, and 100,000 students experience some type of date rape or sexual assault related to alcohol use (Hingson et al. 2005). It is, therefore, not surprising that alcohol use among college students continues to be a topic of interest among researchers in the U.S. In particular, more attention needs to be paid to female college students because of the growing

number of female emerging adults going to college and the differential health risks of alcohol use for women (e.g., Wechsler et al. 1995).

Several factors in the family of origin are related to alcohol use among college students, including problems in family interaction and relationship, family history of drinking, and family problem solving models (Karwacki and Bradley 1996). Specifically, parenting practices may influence alcohol use through offspring self-regulatory abilities and social relationships (Abar and Turrisi 2008; Patock-Peckham et al. 2001; van Ingen et al. 2015). Although several studies have considered the effect of parenting in childhood and adolescence on alcohol use among college students, few examined current parenting of college students (Nelson et al. 2015). This is important because emerging adults still depend on their parents in many aspects of their lives; thus parenting continues to play a role in the lives of college students (Turner et al. 2009).

Although helicopter parenting—defined as overinvolved parenting behavior—has gained increased attention, little is known about the association between such parenting behavior and alcohol use among college students (Nelson et al. 2015). Further, it is important to explore the mechanisms that might explain the association between helicopter parenting and alcohol use, especially self-regulatory abilities such as psychological needs satisfaction (e.g., autonomy, competence, and relatedness) and self-control (Muraven et al.

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2007). However, few studies have explored self-regulatory abilities as potential mechanisms that might account for the link between helicopter parenting and alcohol use among college students (Patock-Peckham et al. 2001). This study, therefore, examines the association between helicopter parenting and alcohol use among female college students and the potential mediating role of self-regulatory abilities.

Theoretical Perspectives

Helicopter parenting comprises behavior that shows a high level of involvement in the lives of college-aged offspring (LeMoyne and Buchanan 2011; Locke et al. 2012; Padilla-Walker and Nelson 2012; Schiffrin et al. 2013). Because college students, as emerging adults away from parents, are exploring academic and social opportunities and taking on new responsibilities (Arnett 2000), such parenting may not be developmentally appropriate (Segrin et al. 2013). Helicopter parenting may, therefore, lead to poor outcomes among college students including increased risk behaviors such as drug or alcohol use (Nelson et al. 2015).

One reason for an association between helicopter parenting and alcohol use may be that certain traits connected to self-regulatory abilities are likely undermined by helicopter parenting which lead to negative offspring outcomes (Schiffrin et al. 2013). Self-determination theory (SDT; Ryan and Deci 2000) provides a useful theoretical framework for understanding mechanisms that might account for the association between helicopter parenting and college students' alcohol use. SDT suggests that individuals reach for and evolve to gain psychological needs and abilities. When parents encourage growth and achievement in their children's psychological needs and abilities, they are likely promoting overall well-being (Ryan and Deci 2000). In contrast, helicopter parenting creates a system that hinders the development of psychological need satisfaction, which in turn, could potentially lead to maladjustment (Roth et al. 2009).

Integrating the above observations with the strength model of self-control (Baumeister et al. 2007) suggests that offspring with unmet psychological needs may be particularly vulnerable to experiencing problems with self-control. Specifically, Baumeister et al. (2007) proposed a model in which self-control is likened to a muscle that can be strengthened. Unmet psychological needs for autonomy, competence, and relatedness resulting from helicopter parenting likely decrease opportunities to strengthen the self-control "muscle," leaving offspring with compromised self-control resources. As these resources diminish, they are no longer available for future self-control (Tice and Bratslavsky 2000). Self-control problems can lead to negative coping behaviors such as overeating, frivolous spending, risky sexual choices, and alcohol use (Tangney et al. 2004).

Helicopter Parenting and Alcohol Use among College Students

Despite limited research on helicopter parenting, some important findings have emerged. Many relate to psychological well-being and mental health outcomes such as life satisfaction, depression, and anxiety. For example, Schiffrin et al. (2013) found that college students who reported higher levels of helicopter parenting also reported higher levels of depression and lower levels of life satisfaction. Similarly, LeMoyne and Buchanan (2011) reported positive associations between helicopter parenting and depression, anxiety, and prescription medication use among college students. Segrin et al. (2013) reported an association between helicopter parenting and internalizing behavior problems among college students. In sum, emerging evidence suggested helicopter parenting is linked to adverse mental health outcomes for emerging adult children.

In a similar vein but much less studied, helicopter parenting has been linked to risk taking behaviors among college students, such as drug use (Nelson et al. 2015). There are fewer studies that examined whether helicopter parenting is linked to alcohol use, and the findings are rather inconsistent (e.g., Cui et al. 2016; Earle and LaBrie 2016). This research question is particularly important given that the American College Health Association (2016) is calling for parents to be more involved in their college age children's lives. In light of this call, it is critical to clarify what type of parental involvement is needed.

The Role of Psychological Needs Satisfaction and Self-control

Psychological needs such as autonomy, competence, and relatedness are thought to be important for understanding the connection between parenting and offspring development (Noom et al. 1999). When parents overlook psychological needs in their offspring, especially in emerging adulthood, adverse consequences are likely to occur (Allen et al. 1994). These ideas are consistent with the view in SDT that autonomy is a developmental process, the need for which increases with age. Indeed, college may be an appropriate stepping-stone for parents to begin to grant greater overall autonomy to their children. Schiffrin et al. (2013) suggested that students reporting high levels of helicopter parenting also reported lower levels of competence and autonomy.

Failing to satisfy psychological needs can lead to lower levels of self-control. Building from control theory, self-control represents the "operate phase" wherein an individual initiates, alters, or maintains behavior in response

to environmental demands (Carver and Scheier 1982). Studies have shown that parents who support their children's autonomous development have children who have greater ability to control their behavior (e.g., Roth et al. 2009). On the other hand, parental control could prevent the development of the capacity to fulfill these psychological needs which leads to lower levels of self-control (Betts et al. 2009; Chang et al. 2003). Low levels of self-control, in turn, is associated with negative outcomes (Fischer et al. 2007; Haverfield and Theiss 2016; Laible 2007; Morris et al. 2007).

Delineating the self-regulatory processes, Muraven et al. (2007) suggested that college students who lack the autonomy to make certain decisions potentially lack the self-control resources needed to deal with choices like drinking. Despite several studies on helicopter parenting, psychological needs, self-control, and alcohol use in emerging adulthood, the potential mediating role of self-regulatory abilities in the association between helicopter parenting and alcohol use among emerging adult children remains largely unexplored.

The Current Study

The purpose of this study is to investigate the association between helicopter parenting and alcohol use among female college students. Specifically, this study examines the potential mechanism that might account for the association between helicopter parenting and alcohol use. Based on SDT and previous research, we hypothesized that helicopter parenting would be associated with lower levels of psychological needs satisfaction, which would be associated with lower levels of self-control. Lower levels of self-control, in turn, would be associated with higher levels of alcohol use. The focus is on female college students because the number of female students is growing in college, and studies have shown that alcohol use is associated with more negative health outcomes among women than men (Wechsler et al. 1995). Several covariates—race and ethnicity, age, year in college, and family socioeconomic status—were included because they have been demonstrated to be related to parenting and alcohol use (e.g., race, Cooper 2002).

Method

Sample and Procedures

Students were recruited from introductory classes on family studies at a large, southeastern university through convenience sampling. The study was approved by the Institutional Review Board. Most of the students attending these family studies classes were from human and social sciences

where over 80% of the students in these departments and colleges were female. Students completed an online survey and received extra course credit for their participation. Of 575 students recruited, 531 participated and provided information on their alcohol use, self-control, psychological needs, their parents' current helicopter parenting behaviors, and demographics. Of the 531 students, 473 were female. Because of the focus of the study, only female college students were included. The average age of the participants in the final sample ($N=473$) was 19.78 years ($SD=1.82$), with 28.9% freshman, 33.8% sophomore, 23.1% junior, and 14.2% senior. Of the final sample, 70.6% were Caucasian, 14.6% were Hispanic, 11.1% were African American, and 3.7% were other races. The participants reported on their families' annual income with 7.7% 30k and below, 15.8% between 30+ and 50k, 38.2% between 50+ and 100k, and 38.3% over 100k.

Measures

Helicopter Parenting

Helicopter parenting was assessed using a measure with five items tapping emerging adults' perception of their mother's and father's overinvolvement in their lives (Bradley-Geist and Olson-Buchanan 2014). Participants reported their perception of helicopter parenting for their mother and father separately. Sample items for perception of mothers included, "I feel like my mother sometimes smothers me with her attention" and "I think my mother is too overly involved in my life." Each item ranged from 1 = never to 5 = always. Scores for the five items were summed for mothers with higher scores indicating greater levels of maternal helicopter parenting ($\alpha = .95$ for mothers). The same procedure was used for creating paternal helicopter parenting ($\alpha = .95$ for fathers). Maternal helicopter parenting and paternal helicopter parenting were then used as two indicators of a latent construct of helicopter parenting.

Psychological Needs Satisfaction

The Basic Psychological Needs Satisfaction and Frustration Scale (Deci and Ryan 2000) was used to assess participants' perceptions on their satisfaction of autonomy, self-efficacy, and social acceptance. Sample items include "I feel capable at what I do," "I feel a sense of choice and freedom in the things I undertake," and "I feel excluded from the group I want to belong to." Response categories ranged from 1 = not at all to 6 = always. The 24 items were summed together with a higher score indicating a higher level of psychological needs satisfaction ($\alpha = .93$).

Self-control

Self-control was assessed using the brief self-control scale (BSCS) with 13-items (Tangney et al. 2004). Sample items included “I am good at resisting temptation,” and “I have a hard time breaking bad habits.” Responses ranged from 1 = not at all like me to 5 = very much like me. After reverse coding several items, the items were summed to create a composite score with a higher score indicating a higher level of self-control ($\alpha = .86$).

Alcohol Use

Alcohol use was evaluated with three items. These questions asked (a) how many days in the last 30 that they had consumed alcohol (1 = never, 2 = have drunk, but not in last 30 days, 3 = 1–2 days, 4 = 3–5 days, 5 = 6–9 days, 6 = 10–19 days, 7 = 20–29 days), (b) how many drinks they consumed on a typical day when drinking alcohol (1 = never drank, 2 = 1 or 2, 3 = 3 or 4, 4 = 5 or 6, 5 = 7–9, 6 = 10 or more); and (c) how often they had five or more drinks on one occasion in the last 30 days (1 = never, 2 = 1–2 times, 3 = 3 times, 4 = 4 times, 5 = 5–6 times, 6 = 7–8 times, 7 = 9–10 times, 8 = more than 10 times). Because of the different scales, scores were first standardized then summed to create a composite score.

Covariates

Age in years was assessed. Year in college was coded from 1 = freshman to 4 = senior. Race and ethnicity were categorized by several contrasts (Caucasian, African American, Hispanic, and other). Participants were asked to report family income from these choices 1 = 30k and below, 2 = between 30+ and 50k, 3 = between 50+ and 100k, and 4 = above 100k.

Results

Descriptive Statistics

Table 1 provides the means and standard deviations or percentages of the variables of interest. Mother and father helicopter parenting were reported separately. Paired *t* tests suggested that the mean level of maternal helicopter parenting was significantly higher than that of paternal helicopter parenting ($t = 9.89, p < .01$). Table 2 shows the correlations among key variables used in hypotheses testing. The correlations yield several important insights. First, maternal and paternal helicopter parenting were highly correlated with one another ($r = .57, p < .01$), supporting the construction of a latent variable of helicopter parenting. Second, maternal

Table 1 Descriptive information on study variables

Variables	M or %	S.D.	Min.	Max.
Helicopter parenting				
Maternal	10.38	4.76	5	25
Paternal	8.46	4.25	5	25
Emerging adults				
Psychological needs satisfaction	75.44	11.90	47	96
Self-control	44.49	8.72	20	64
Alcohol use	0.01	2.66	– 3.87	7.05
Demographics				
Age	19.78	1.82	18	28
Year in college				
Freshman	28.9%			
Sophomore	33.8%			
Junior	23.1%			
Senior	14.2%			
Race and ethnicity				
Caucasian	70.6%			
African American	11.1%			
Hispanic	14.6%			
Other	3.7%			
Income				
30 k and below	7.7%			
Between 30+ and 50 k	15.8%			
Between 50+ and 100 k	38.2%			
Above 100 k	38.3%			

$N = 473$ for total sample. Bolded numbers indicate significant differences in mean levels between mothers' and fathers' helicopter parenting based on paired *t* tests

and paternal helicopter parenting were significantly and negatively correlated with psychological needs satisfaction ($r = -.38$ for mother, $p < .01$; $r = -.42$ for father, $p < .01$) and self-control ($r = -.18$ for mother, $p < .01$; $r = -.20$ for father, $p < .01$). Third, psychological needs satisfaction was strongly and positively associated with self-control ($r = .48, p < .01$). Finally, self-control was negatively associated with alcohol use ($r = -.36, p < .01$). With these preliminary findings, we now turn to hypotheses testing.

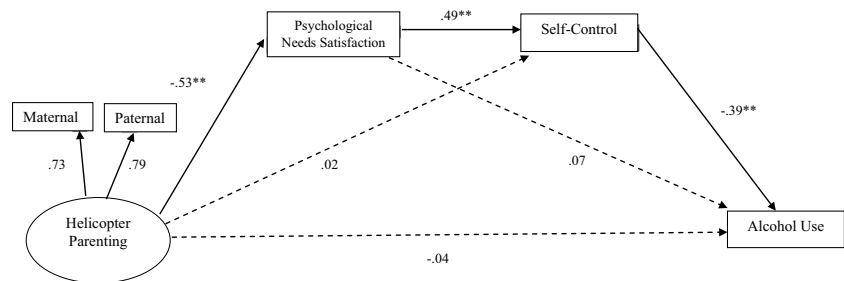
Hypotheses Testing

Structural equation modeling (SEM) was used to test the hypotheses (Kline 2015) that the path from helicopter parenting to college students' alcohol use was mediated by psychological needs satisfaction and self-control. In examining the proposed model, we used Full Information Maximum Likelihood (FIML), which computed maximum likelihood estimates and standard errors for SEM from data with missing values. FIML provided less biased estimations than some ad hoc procedures such as pairwise deletion or imputation

Table 2 Correlations among variables in the model

	1	2	3	4	5
1. Maternal helicopter parenting	1.00				
2. Paternal helicopter parenting	.57**	1.00			
3. Psychological needs satisfaction	-.38**	-.42**	1.00		
4. Self-control	-.18**	-.20**	.48**	1.00	
5. Alcohol use	.01	.03	-.09*	-.36**	1.00

** $p < .01$; * $p < .05$. Two-tailed test

Fig. 1 Helicopter parenting, psychological needs, self-control, and alcohol use among female college students

of means (Schafer 1997). Figure 1 shows the results of the SEM for the full model with standardized path coefficients reported. Covariates (i.e., age, year in college, race and ethnicity, income) were added in the model (not shown). For reasons of parsimony, only significant paths from covariates were included in the final model. The data showed a good fit of the model to the data, $\chi^2(24) = 30.31$, CFI = .99, RMSEA = .02, and p close = .97.

Several important findings should be noted. First, helicopter parenting was negatively and significantly related to college students' psychological needs satisfaction ($b = -1.82$, $se = .20$, $\beta = -.53$, $p < .01$). Second, psychological needs satisfaction was positively associated with self-control ($b = .36$, $se = .04$, $\beta = .49$, $p < .01$). Self-control was negatively and significantly related to alcohol use among female college students ($b = -.12$, $se = .01$, $\beta = -.39$, $p < .01$). The direct paths from helicopter parenting to alcohol use ($b = -.03$, $se = .05$, $\beta = -.04$), from helicopter parenting to self-control ($b = .04$, $se = .15$, $\beta = .02$), and from psychological needs satisfaction to alcohol use ($b = .01$, $se = .01$, $\beta = .07$) were not significant.

The indirect effects were tested by bootstrapping the mediating effects based on 2000 resamples. The results suggested that the indirect effect from helicopter parenting to self-control through psychological needs satisfaction ($-.26$, $p < .01$) was significant. Overall, the indirect effect from helicopter parenting to alcohol use through psychological needs satisfaction and self-control was statistically significant (.10, $p < .01$).

Regarding the covariates (not shown), African American participants reported significant lower levels of alcohol use than Caucasian counterparts ($b = -1.31$, $se = .37$, $\beta = -.15$,

$p < .01$). Higher family income was positively associated with alcohol use ($b = .41$, $se = .13$, $\beta = .14$, $p < .01$).

Discussion

College life allows for easy access to alcohol. This ease of access leaves the door open for misuse and negative consequences. It is, therefore, important to identify and understand possible factors that may contribute to alcohol use among college students, especially female college students. Relying on self-determination theory (Deci and Ryan 2000) and the current literature, it was hypothesized that perceived helicopter parenting would be positively associated with higher reported drinking among female college students through the mechanisms of psychological needs satisfaction and self-control. The results from this study supported the hypothesis by showing that (1) helicopter parenting was negatively associated with psychological needs satisfaction, (2) psychological needs satisfaction was positively associated with self-control, and (3) self-control, in turn, was negatively associated with alcohol use.

This study provided support for the negative impact helicopter parenting has on internal processes of basic psychological needs satisfaction (Kwon et al. 2015; LeMoyné and Buchanan 2011; Segrin et al. 2015). When children perceive their parents as taking over their lives or swooping in to rescue them from challenging situations, these children may miss out on necessary experiences needed to build internal psychological needs and skills. This then may prevent emerging adult children from developing the

essential skills to build and strengthen their self-control (Baumeister et al. 2007).

In particular, the negative association between helicopter parenting and basic psychological needs satisfaction gave credence to the use of self-determination theory in the helicopter parenting literature (Schiffrin et al. 2013; Segrin et al. 2013). Throughout the self-determination literature, findings supported the fostering of psychological needs within individuals. Developing the ability to satisfy these needs is associated with greater mental, physical, and emotional well-being (Deci and Ryan 2008). Results from this study suggested that the helicopter parenting of emerging adult offspring hampers the development of the skills needed to fulfill these important psychological needs.

Further, findings from this study supported the idea that lower levels of psychological needs satisfaction are associated with lower levels of self-control (Hagger et al. 2010; Muraven et al. 2007). As these emerging adults struggle with novel situations requiring restraint, reserves of self-control may weaken. Thus, when they find themselves in situations containing alcohol but with weakened self-control, alcohol use may occur and over time increase (Muraven et al. 2002). Therefore, college students who have not satisfied this psychological needs development may drain their self-control reservoirs, which then affects their self-control in resisting risk behaviors like alcohol and drug use (e.g., Nelson et al. 2015).

In sum, this study demonstrated that helicopter parenting and alcohol were related through the mechanisms of basic psychological needs satisfaction and self-control. These are important findings for colleges and universities in that they can be used to inform their efforts to educate parents on best practices for supporting their college-aged children's health and well-being. Furthermore, these findings emphasized the importance of developing psychological needs satisfaction and self-control. Educators, physical and mental health providers, and lawmakers can help provide resources and support for the tools parents need to help build these basic needs and skills.

Several limitations of the study merit mentioning. First, the sample used in the study was primarily non-Hispanic Caucasian females majoring in social and human sciences. As this line of research moves forward, more diverse samples are needed to help test the generalizability of the findings to other populations (e.g., racial and ethnic minority college students, male college students). Second, all of the data were self-reported by the college students. This may inflate the correlations that were tested (Cui et al. 2005). Future research would also be wise to examine both parent and child views on the topic. Third, the study was cross-sectional. To unpack the direction and order of the mechanisms put forth in the study, it is suggested that longitudinal studies

be conducted. Longitudinal studies may also shed light on the underlying causes of such a system being perpetuated.

Altogether, this study established possible associations among helicopter parenting, female college students' self-regulatory processes, and alcohol use. This study contributed to the field by establishing an indirect effect of perceived helicopter parenting on female college students' alcohol use through mechanisms including psychological needs satisfaction and self-control. Using theory and current literature to guide our assessments and analyses, this study moved beyond mass media discussions and anecdotal observation to show a connection between helicopter parenting practices and how they affect internal processes in emerging adult offspring which influence certain risky behavior choices.

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