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## Age as a Moderator of the Association Between Anticipated Regret and the Posting and Deleting of Alcohol-Related Content on Social Networking Sites Among Adolescents and Young Adults

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## Abstract

Research demonstrates associations between alcohol consumption and posting alcohol-related content on social networking sites (SNS); less is known regarding motivations behind deleting alcohol content on SNS and differences by age. The present study examined the associations of anticipated regret with posting and deleting alcohol-related content; age was examined as a moderator. Participants ( $N = 306$ ; 47.1% male) aged 15 – 20 completed a baseline survey for a larger experimental study. Results indicated significant interactions between anticipated regret and age, such that higher levels of both increased the odds of both posting ( $OR = 1.37$ ) and deleting ( $OR = 1.30$ ) alcohol-related content on SNS. Specifically, the association between anticipated regret and posting was stronger for younger individuals, whereas the relationship between anticipated regret and deleting was stronger for older individuals. A personalized age-specific intervention aimed at alcohol-related anticipated SNS regret may lead to changes in posting and deleting of alcohol-related SNS content, which may have implications for subsequent alcohol use.

## Keywords

social media, social networking sites, anticipated regret, alcohol use, age

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### **Abstract**

Research demonstrates associations between alcohol consumption and posting alcohol-related content on social networking sites (SNS); less is known regarding motivations behind deleting alcohol content on SNS and differences by age. The present study examined the associations of anticipated regret with posting and deleting alcohol-related content; age was examined as a moderator. Participants ( $N = 306$ ; 47.1% male) aged 15 – 20 completed a baseline survey for a larger experimental study. Results indicated significant interactions between anticipated regret and age, such that higher levels of both increased the odds of both posting ( $OR = 1.37$ ) and deleting ( $OR = 1.30$ ) alcohol-related content on SNS. Specifically, the association between anticipated regret and posting was stronger for younger individuals, whereas the relationship between anticipated regret and deleting was stronger for older individuals. A personalized age-specific intervention aimed at alcohol-related anticipated SNS regret may lead to changes in posting and deleting of alcohol-related SNS content, which may have implications for subsequent alcohol use.

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### **Introduction**

Adolescent and young adult alcohol use remains problematic as 18.8% of individuals aged 12 to 20 years consumed alcohol in the past 30 days (SAMHSA, 2019). Furthermore, 11.4% consumed alcohol in the form of heavy episodic drinking (i.e., having five drinks for males or four drinks for females in the span of two hours; SAMHSA, 2019). Research indicates that most young adults initiate use by experimenting with alcohol during adolescence, which in some cases may lead to later hazardous alcohol use (Bolland et al., 2016; Eaton et al., 2012; Grant &

Dawson, 1997; Hingson et al., 2002; Hingson et al., 2006; Hingson et al., 2003). Alcohol use is largely social among adolescents and young adults and as such, it is important to examine the social factors and environments related to alcohol use among this age group.

Social networking site (SNS) use is an important issue for adolescents and young adults not only due to the vast number of users, but also due to the way users communicate and interact while on these sites (Egan & Moreno, 2011; Morgan et al., 2010; Smith & Anderson, 2018). Specifically, 40-70% of teens and young adults engage in frequent social media use,

with 90% of teens going online multiple times each day (Auxier & Anderson, 2021; Smith & Anderson, 2018). Currently, among adolescents and young adults, the most frequently used SNSs include Snapchat, Instagram, Facebook, and Twitter (Statista, 2020). Previous research has demonstrated that many SNS profiles contain references (i.e., posts and pictures) to alcohol (Atkinson et al., 2017; Egan & Moreno, 2011; Morgan et al., 2010; Westgate & Holliday, 2016). It is unclear what role age plays in posting alcohol-related SNS content, as previous research indicates that while high school students post alcohol-related content, individuals of legal drinking age post alcohol-related content on SNS more frequently (Egan & Moreno, 2011; Erevik et al., 2017; Nesi et al., 2017; Westgate & Holliday, 2016). Alcohol-related content on SNS is associated with drinking identity, future drinking activity, and alcohol-related problems (D'Angelo & Moreno, 2019; Hendriks et al., 2017; Jones et al., 2017; Moreno et al., 2012; Rodriguez et al., 2016; Thompson & Romo, 2016). Specifically, research indicates that posting alcohol-related content predicts alcohol-related consequences, such as employment or familial consequences, above and beyond the actual alcohol consumption itself (Thompson & Romo, 2016), indicating that there is a unique contribution of posting alcohol-related content online. Furthermore, alcohol-related SNS posts increase drinking normative beliefs and increase the likelihood of other students engaging in alcohol use and experiencing alcohol-related consequences (Thompson & Romo, 2016). Therefore, gaining a more thorough understanding of factors that are associated with posting alcohol-related content on SNS is important due to potential consequences for both self and others.

To further understand the potential public health impacts, it is imperative to examine specific factors that may be associated with posting alcohol-related content. Previous research has found that increased normative perceptions of friends' alcohol use, more favorable attitudes towards alcohol, and more favorable drinking motives are associated with increased posting of alcohol-related content on SNS among adolescents and young adults (Litt & Stock, 2011; Nesi et al., 2017; Westgate et al., 2014). However, additional cognitions that may motivate the posting of alcohol-related content need to be examined, such as anticipated regret. Furthermore, we are not aware of any studies examining factors or motivations behind decisions to *delete* alcohol-related content on SNS, which is important as these decisions may be related to a person's feeling of guilt or regret and may change their future actions (e.g., future SNS posting or drinking; Wang et al., 2011). As deleting alcohol-related SNS content may be a potential behavioral manifestation of feelings of regret, research is needed to determine what role regret plays related to posting and deleting alcohol-related content on SNS, with the goal of informing future efforts to reduce risky SNS behaviors and subsequent alcohol use.

Regret is conceptually defined as a negative emotion experienced when comparing the present situation to a better situation that would have occurred, had the person acted differently (Zeelenberg, 1999). Regret is generally linked with consequences such as damage to image or self-concept (Gochman, 1977; van Koningsbruggen et al., 2016; Verkijika, 2018). Furthermore, anticipated regret may have stronger associations with behavior than actual experienced regret, and high anticipated regret may lead individuals to reducing their

future risky behaviors (Brewer et al., 2016; Davies & Joshi, 2018; Richard et al., 1996).

Research indicates that individuals tend to weigh anticipated regret and anticipated reward when making decisions (Celuch et al., 2015; Wu et al., 2021) and that anticipated regret may be a potential risk factor for health risk behaviors including gambling (Wu et al., 2021), drinking (Cooke et al., 2007), and unprotected sex (Brewer et al., 2016). Given the associations between anticipated regret and future decision-making for other behaviors, it is logical that anticipated regret may also be associated with SNS-related risk behaviors, including posting and deleting alcohol-related content. Within the present study, anticipated regret related to posting and deleting alcohol-related content was examined due to previous research indicating associations between anticipated regret and engaging in risky behaviors among adolescents and young adults. Specifically, these associations are important to understand given the potential consequences (for both the person posting the content and the person viewing the content) associated with posting alcohol-related content on SNS. As such, these results may have implications regarding specific intervention targets for decreasing negative consequences associated with risky SNS use by reducing the likelihood of posting alcohol-related content.

In addition to understanding if anticipated regret is associated with posting and deleting alcohol-related content, it is important to determine whether these associations are potentially stronger for certain individuals. Research suggests that regretted experiences are more stable as individuals develop (i.e., younger adults and adolescents are less likely to regret something for an extended period of time; Jokisaari, 2003; Nordgren et al., 2007). Several studies suggest that adolescents and young adults tend to *overestimate* risk to

experiencing negative outcomes (Fischhoff et al., 2000; Millstein & Halpern-Felsher, 2003), whereas other research has found the opposite, that adolescents and young adults tend to *underestimate* risk, or feel invulnerable to health-threatening activities (e.g., drunk driving, sexual risk behavior; Cohn et al., 1995; Potard et al., 2018; van der Pligt & Richard, 1994). Given the evidence of associations between age and regret, it is essential to determine the *direction* of associations regarding how adolescents' and young adults' anticipated regret is associated with posting and deleting alcohol-related content on SNS. Having this information would allow for interventions to be more specific and delivered at developmental stages that may have the most impact. In line with our primary interest of determining whether anticipated regret is associated with posting and deleting alcohol-related content and testing whether those associations may be stronger depending on an individual's developmental stage/age, the current study conceptualized and tested age as a potential moderating factor. Specifically, this study aims to further illuminate possible associations between these constructs, inform harm reduction models that seek to mitigate future negative consequences by making people more aware of anticipated regret relating to alcohol-related SNS behavior, and inform future SNS-based interventions that may be targeted towards individuals at different developmental stages.

Based on the larger literature, we had two primary aims. First, we aimed to determine whether there was an association between general anticipated regret and both posting and deleting of alcohol-related content on SNS. Second, we aimed to explore whether age moderated the associations between anticipated regret and posting and deleting of alcohol-related content on SNS.

## Methods

### Sampling and Participants

Data were collected from March 2017 to April 2018 as baseline data from a larger longitudinal experimental study. Recruitment efforts were conducted in the Seattle-metro area through various methods (i.e., online recruitment, print advertisements, friend referral, and in-person recruitment) and included a link to the screening survey. Consent (and parental consent if aged 15-17) was required to proceed to the online screening survey. Eligibility criteria included 1) being 15 to 20 years old, 2) living in the Seattle-metro area, 3) having drank at least once within the past 6 months (applies only to 18-20 year olds to ensure representative samples of drinkers in different age categories), 4) having an active Facebook, Snapchat, or Instagram account [top three SNS sites at time of data collection; Statista, 2020], 5) having consistent Internet access, and 6) being willing to attend two in-person sessions at the research lab space. Eligible participants attended an in-person session where they completed a baseline assessment (prior to experimental manipulation) from which the current data were drawn. All participants consented to study procedures, the University of Washington Institutional Review Board approved the study, and no adverse events were reported. At baseline, participants ( $N = 306$ ) were on average 18.4 years old ( $SD = 1.3$ ) and 47.1% were male. The sample was diverse with 55.9% reporting being Caucasian/white, 27.5% Asian, 10.1% more than one race, 3.3% black, and 3.2% other; 9.2% identified as Hispanic/Latino.

## Measures

**Demographics.** Participants were asked to provide several key demographics including their age and birth sex.

**Social networking site use.** Although eligibility criteria only included select SNS, all participants were asked, “Which social networking sites do you have an active profile with? Check all that apply.” Prevalence of the top four SNS at the time of data collection (i.e., Snapchat, Instagram, Facebook, and Twitter) are mentioned in the results.

**Peak drinks per occasion.** All participants, regardless of age, reported the largest number of standard drinks they consumed on a single occasion in the past month (Baer, 1993; Marlatt et al., 1995). A standard drink was defined as 5 oz. of wine, 12 oz. of beer, 10 oz. of wine cooler, or 1 oz. of 100 proof liquor.

**Parental residence.** Participants were asked, “With whom do you live?” Given the primary residence of interest was whether or not participants lived with parents, responses were dichotomized as ‘with parents’ (1) or elsewhere (0; ‘with siblings, with other relatives, with foster parents, with friends, with partner/spouse, with children, alone, and other’).

**Student status.** Participants were asked, “What type of school are you currently attending?” College status was dichotomized as yes (1) ‘4-year university/college’ or no (0) if not selected. High school status was dichotomized as yes (1) ‘high school’ or no (0) if not selected. Other response options included ‘alternative high school, running start (i.e., a program that allows 11<sup>th</sup> and 12<sup>th</sup> grade students to take college courses in Washington State), pursuing a GED, community college, vocational/tech school, graduate/professional school, and other’.

**Anticipated regret.** General anticipated regret related to SNS was measured using a single item adapted from a validated measure (Litt & Lewis, 2016; Litt & Stock, 2011). Participants responded to, “How likely is it that you would regret posting content about yourself on social networking sites when drinking?” This item was measured on a 5-point Likert scale ranging from ‘Very Unlikely’ (1) to ‘Very Likely’ (5).

**Posting alcohol-related content.** An adapted version of the Daily Drinking Questionnaire (Collins et al., 1985) was used to assess posting alcohol-related content. Participants were asked to “Consider a typical week during the past month. How many posts about your own alcohol use, on average, did you share on each day of a typical week on social networking sites?” Responses for each day of the week were summed to create a total number of alcohol-related posts per week.

**Deleting alcohol-related content.** Participants responded to, “How frequently do you delete alcohol-related posts that you have posted?” using a 4-point Likert scale ranging from ‘Never’ (0) to ‘All of the Time’ (3).

### Data Analytic Plan

For the first outcome regarding posting alcohol-related content on SNS, due to the excessive rate of zero posting (69.6%), a negative binomial hurdle model (i.e., separately models the probability of the outcome and the number of events) was estimated using the “pscl” R package (Zeileis et al., 2008). For the second outcome, deleting alcohol-related content, an ordinal logistic regression model was estimated using the “MASS” R package (Venables & Ripley, 2002). The predictors of interest in each model were participant’s degree of

anticipated regret, age, and their interaction. Each model also controlled for other covariates including biological sex, whether or not they resided with their parents, peak drinks per occasion, and whether or not they were a high school or college student, to adjust for potential confounding effects. Peak drinks, rather than drinks per week, were controlled for in models due to the lack of sufficient variation reported in drinks per week (i.e., over 70% of the sample reported zero drinks per week). Moreover, the item assessing peak drinks was chosen to better reflect risky drinking days, which prior research indicates may be more related to alcohol-related consequences compared to drinks per week (Borsari et al., 2001).

## Results

### Descriptives and Correlations

Approximately 89.9% of the sample reported having an active Facebook account, 63.7% had an active Twitter account, 90.8% had an Instagram account, and 96.7% had an active Snapchat account. In addition, 35.3% of the sample resided with their parents, 77.1% were college students in a 4-year university, and 15.7% were high school students. On average, participants reported drinking 5.8 drinks for their peak drinks in the past 30 days ( $SD = 4.5$ ), and 11% reported not drinking within the past month.

Correlation analyses indicated that at the bivariate level, age was significantly correlated with peak drinks, SNS anticipated regret, posting, and deleting alcohol-related content (all  $ps < 0.05$ ). SNS anticipated regret was also found to be significantly correlated with peak drinks, posting alcohol-related content, and deleting alcohol-related content (all  $ps < 0.05$ ). See Table 1 for full descriptives and correlations.

### Posting Alcohol-related Content

In the first model, none of the tested predictors or covariates were statistically significant in the count portion of the hurdle model. In the hurdle section of the model, with each increasing unit in age, participants had 54% lower odds of posting alcohol-related content on SNS (odds ratio; OR = 0.46). Additionally, males, compared to females, had 75% lower odds of posting alcohol-related content on SNS (OR = 0.25). For each increasing unit an individual reported for their peak drinks, there was a 120% increase in the odds an individual would post alcohol-related content on SNS (OR = 1.2). Although anticipated regret was significant in the model, the OR was close to zero. However, the interaction between anticipated regret and age was significant, with an odds ratio of 1.37, indicating increased odds of posting alcohol-related content on SNS. Specifically, younger individuals were more likely to have higher anticipated regret relating to posting alcohol-related content. Whether the participant lived with their parents or was a college or high school student were not significant covariates. See Table 2 for full results.

### Deleting Alcohol-related Content

In the second model, age was also significant, and with each increasing unit in age, participants had 62% lower odds of deleting alcohol-related content on SNS (OR = 0.38). Additionally, males had 48% lower odds of deleting alcohol-related content on SNS (OR = 0.52), compared to females. For each additional drink an individual reported consuming on a peak occasion, there was a 117% increase in the odds that an individual would delete alcohol-related content on SNS (OR = 1.17). Similar to the first model,

anticipated regret was significant but had an OR close to zero. However, once again the interaction between anticipated regret and age was significant, with an odds ratio of 1.3, indicating an increased odds of deleting alcohol-related content on SNS. Overall, having higher anticipated regret was related to more deleting behavior, with this effect increasing with age. Residing with a parent or being a college or high school student were not significant. See Table 3 for full results.

### Discussion

The findings of the current study expand the body of literature related to alcohol-related posting and deleting on SNS by indicating that anticipated regret may be associated with both types of alcohol-related behaviors, posting and deleting, on SNS (Curtis et al., 2018; Gerrard et al., 1996; Moore & McElroy, 2012; Wang et al., 2011; Wild & Cunningham, 2001; Xie & Kang, 2015). To our knowledge, this study is the first to investigate the associations between anticipated regret and both posting and deleting alcohol content on SNS. Additionally, the present study indicates that associations between anticipated regret and posting and deleting alcohol-related content is moderated by age.

The current study found that increased anticipated regret related to SNS alcohol content was associated with an increased likelihood of not having any alcohol-related posts in the last week, with this effect decreasing as an individual ages. These findings indicate that overall, younger individuals with higher anticipated regret tended not to post, which expands upon Wang et al.'s (2011) findings regarding experiencing regret due to posting on SNS. These results suggest that as individuals age, they may have less concern regarding posting

Table 1  
*Descriptive Statistics and Correlations*

	<i>M</i>	<i>SD</i>	Range	1	2	3	4
1. Age	18.39	1.32	15 - 20				
2. Peak Drinks	5.76	4.45	0 - 18	.24***			
3. Anticipated Regret	3.44	1.29	1 - 5	-.12*	-.22***		
4. Posting	1.34	3.67	0 - 35	.12*	.19**	-.16**	
5. Deleting	0.69	0.98	0 - 3	-.12*	.12*	.21***	.05

Note. *N* = 306, \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 2  
*Posting Alcohol-related Content*

	Predicting the Count of Posts				Predicting the Likelihood of Posting			
	$\beta$ (SE)	<i>RR</i>	z-value	<i>RR</i> 95% <i>CI</i>	$\beta$ (SE)	<i>OR</i>	z-value	<i>OR</i> 95% <i>CI</i>
Intercept	-7.11 (7.87)	-	-0.90	-	14.44 (7.04)	-	2.05*	-
Age	0.44 (0.41)	1.55	1.09	(0.70, 3.44)	-0.78 (0.38)	0.46	-2.09*	(0.22, 0.95)
Male Sex	-0.30 (0.40)	0.74	-0.76	(0.34, 1.62)	-1.38 (0.34)	0.25	-4.11***	(0.13, 0.49)
Reside with Parent	-0.56 (0.52)	0.57	-1.08	(0.21, 1.57)	-0.36 (0.39)	0.70	-0.92	(0.33, 1.50)
College Student	-0.47 (0.80)	0.62	-0.59	(0.13, 2.98)	-0.33 (0.63)	0.72	-0.52	(0.21, 2.46)
High School Student	0.70 (1.15)	2.02	0.61	(0.21, 19.16)	0.92 (0.76)	2.50	1.20	(0.56, 11.13)
Peak Drinks	0.09 (0.05)	1.09	1.75	(0.99, 1.21)	0.18 (0.04)	1.20	4.82***	(1.11, 1.29)
Anticipated Regret	0.96 (1.92)	2.61	0.50	(0.06, 111.78)	-6.11 (1.94)	0.00	-3.15**	(0.00, 0.10)
Anticipated Regret * Age	-0.06 (0.10)	0.94	-0.61	(0.77, 1.15)	0.31 (0.10)	1.37	3.03**	(1.12, 1.68)

Note. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ . *RR* = risk ratio; *OR* = odds ratio; *CI* = confidence interval. Reside with parent, college and high school student were coded 0 = no, 1 = yes.

Table 3  
*Deleting Alcohol-related Content*

	$\beta$ (SE)	t-value	OR	OR 95% CI
Age	-0.97 (0.35)	-2.81**	0.38	(0.19, 0.75)
Male Sex	-0.65 (0.26)	-2.44*	0.52	(0.31, 0.88)
Reside with Parent	-0.33 (0.34)	-0.96	0.72	(0.37, 1.41)
College Student	-0.15 (0.57)	-0.27	0.86	(0.28, 2.60)
High School Student	1.12 (0.60)	1.86	3.06	(0.94, 9.97)
Peak Drinks	0.16 (0.03)	4.93***	1.17	(1.10, 1.24)
Anticipated Regret <sup>A</sup>	-4.40 (1.58)	-2.79**	0.01	(0.00, 0.27)
Anticipated Regret * Age <sup>B</sup>	0.26 (0.09)	3.02**	1.30	(1.10, 1.53)
Never vs. Some of the time	-15.60 (6.36)	-2.45*	0.00	(0.00, 0.04)
Some of the time vs. Most of the time	-14.29 (6.35)	-2.25*	0.00	(0.00, 0.16)
Most of the time vs. All of the time	-13.43 (6.35)	-2.12*	0.00	(0.00, 0.37)

*Note.* \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ . OR = odds ratio; CI = confidence interval. Reside with parent, college and high school student were coded 0 = no, 1 = yes. <sup>A, B</sup>: The overall effect of anticipated regret comes from the main effect of anticipated regret (-4.40) and its interaction with age (0.26 \* age), summing to (-4.40 + 0.26 \* Age). Therefore, age = 17 is the turning point of the direction of the effect, as when age  $\geq 17$  the overall effect is positive and vice versa.

alcohol-related content on SNS. In contrast, higher levels of anticipated regret were associated with deleting more alcohol-related content on SNS, with this effect getting stronger as age increased. Although not examined in this study, one possible reason the effects get stronger with increasing age may be that older individuals may have more life pressure and awareness of consequences of alcohol-related content they had impulsively posted, thus they may tend to delete more. Moreover, there may be more stigma associated with posting alcohol-related content among those who are younger.

The variance in anticipated regret between different ages may be due in part to increasing self-disclosure in SNS posts and privacy setting knowledge, more experience among older individuals, or increasing responsibility among older adolescents and young adults (Christofides et al., 2012; Trepte & Reinecke, 2011). With respect to the sex-specific findings of males having lower odds of deleting alcohol-related content, this may be due to less posting among males to begin with ( $OR = 0.25$ ) or increased perceived social pressures related to image among females (Bell, 2019; Chua & Chang, 2016). Results also indicated that whether an individual lived with their parents and whether they were a college or high school student were not associated with either posting or deleting alcohol-related content on SNS. These findings suggest that perceptions of regret have more of an impact on alcohol-related SNS behaviors than parental residence or school and education status, both of which are important developmental factors to consider in this age group.

## Implications for Health Behavior Theory

Previous literature has shown that increased anticipated regret is related to less alcohol use; this study adds that anticipated regret is also related to how alcohol use is posted and deleted in online settings (Litt & Lewis, 2016; Litt & Stock, 2011; Wild et al., 2001). Thus, levels of anticipated regret may be associated with health-risk behaviors, particularly in online environments. An interesting extension of the present study would be to test whether an intervention increasing an individual's anticipated regret may decrease their alcohol use and subsequent posting and increase their deleting of alcohol-related content, which may reduce the amount of negative consequences experienced. Furthermore, increasing anticipated regret before an individual reaches legal drinking age may be the most beneficial, as alcohol-related SNS posts tend to increase after reaching this age (Egan & Moreno, 2011; Erevik et al., 2017).

Interventions aimed at increasing anticipated regret levels have done so by providing individuals with information regarding prevalence of negative outcomes of a health-risk behavior, by asking individuals to imagine themselves experiencing the negative outcomes, or by providing personal accounts of someone who has experienced the negative outcome (DePalma et al., 1996; Hou et al., 2002; Malmir et al., 2018). These interventions can be tailored to ask individuals to imagine themselves posting alcohol-related content on SNS and experiencing negative outcomes such as their parents, significant others, or supervisors seeing it. By using this harm reduction approach, researchers may increase an individual's anticipated regret which ultimately may improve the well-being and

safety of an individual by decreasing the amount of alcohol consumed and thus, decrease the number of alcohol-related posts made that may cause harm or stress due to negative consequences arising from them.

### **Limitations and Future Directions**

Despite the strengths of this study, there are a few limitations to consider. Due to the cross-sectional design of this study, causality cannot be determined. Additionally, the current study did not evaluate the severity of alcohol-related content that was posted and deleted, or the anticipated regret related to severity of posts. For example, an image of a glass of wine could subjectively be considered less harmful than an image of a group heavy drinking at a party (Groth et al., 2017). Moreover, cross-posting was not considered, and as such it is unclear if individuals posted the same item to multiple SNS accounts (e.g., Facebook and Instagram) and counted it as one post or two. An additional limitation regards the measures for anticipated regret and deleting, which were single item measures. The temporal ordering of variables may also be a limitation, as anticipated regret is future-oriented while posting and deleting is past-oriented, however utilizing a future-oriented predictor may allow for targeted interventions before the risk behavior has occurred. Furthermore, the measure for posting alcohol-related content was a count, whereas the measure for deleting was based on a Likert scale, so a ratio of posts to deletions was unable to be calculated. In addition, because the overall goal was to obtain a representative sample of adolescents and young adults, drinking criteria was only included for 18-20 year old participants, but not for 15-17 year olds, as recruiting a drinking sample in this younger age range would have likely resulted in a

riskier sample which was not appropriate given the aims of the parent study. Moreover, given the sample was composed of underage drinkers in college, the current study was unable to assess the potential effects of being of legal drinking age. A final limitation includes SNS platform-specific differences and the nature of profile privacy, which varies between different SNS platforms and was not assessed in this study (Jernigan & Rushman, 2014).

Future research should seek insight into the underlying mechanisms that impact adolescent and young adult cognitions and subsequent decisions when sharing alcohol-related content on SNS. Specifically, the nuances between early adolescent and young adult cognitions and behaviors warrant further research, due to the variances in the strength of the association between anticipated regret and posting and deleting alcohol-related content between younger and older individuals. Some topics for future research include examining how anticipated regret is associated with an individual's privacy settings on their SNS, their knowledge of privacy settings, and their job status. For example, perhaps if an individual has set up stricter privacy settings on their SNS accounts about who is able to view the information they post, they will have decreased anticipated regret and increased posting of alcohol-related content. Relatedly, if an individual is employed or is looking for a job, they may have increased anticipated regret, as they are aware that it may impact their current or future standing at their job. Additionally, conducting these analyses in a sample with higher rates of posting and deleting may further illuminate the nuances between these cognitions and behaviors. Moreover, utilizing more complex and detailed measures to capture different dimensions of anticipated regret and

behavior, rather than single items, will be helpful to better understand associations. For example, measures assessing anticipated regret specifically related to posting alcohol-related content or regret when not drinking may more fully explain the pathways to risky behavior on SNS.

This research has expanded on the previous findings regarding cognitions behind posting alcohol-related content on SNS, indicating that if individuals have higher levels of anticipated regret, they are less likely to post alcohol-related content. This relationship is particularly true for younger individuals. In addition, this research has added to the literature by examining cognitions behind the deletion of alcohol-related posts made on SNS. Specifically, results indicate that higher levels of anticipated regret are associated with deleting more alcohol-related posts, particularly for older individuals. These results are important to consider when implementing interventions to reduce alcohol-related behaviors on SNS.

### Discussion Question

Our findings indicate a difference in alcohol-related risky behaviors among adolescents and young adults of different ages. How can these age-specific findings be incorporated into future research, prevention, and intervention materials?

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