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COLLEGE STUDENTS' USE OF SOCIAL MEDIA TO COMMUNICATE ABOUT ALCOHOL AND DRINKING BEHAVIORS

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COLLEGE STUDENTS' USE OF SOCIAL MEDIA TO COMMUNICATE
ABOUT ALCOHOL AND DRINKING BEHAVIORS

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DISSERTATION

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A dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy in the College of Communication and Information at the University
of Kentucky

By

Jenna Elizabeth Reno

Lexington, Kentucky

Co-Directors: Dr. Elisia L. Cohen, Associate Professor of Communication
and Dr. Matthew Savage, Assistant Professor of Communication

Lexington, Kentucky

ABSTRACT OF DISSERTATION

COLLEGE STUDENTS' USE OF SOCIAL MEDIA TO COMMUNICATE
ABOUT ALCOHOL AND DRINKING BEHAVIORS

Social networking sites (SNSs) are an increasingly popular channel for communication among college students. Often students disclose more freely via social networking sites than they would in other situations. These disclosures commonly include information about engaging in risky health behaviors (e.g., binge drinking). Study 1 examined students' impression management goals and self-presentation tactics specifically related to self-disclosures of drinking behavior on SNSs. Findings suggest that students use differing self-presentation tactics across various SNSs in order to achieve their impression management goals and to avoid consequences associated with disclosing about risky health behaviors to certain audiences. Study 2 sought to develop and measure SNS communication about alcohol related activities (SNCAA). It used the theory of normative social behavior as framework for investigating and predicting SNCAA. Additional variables that predict SNCAA were also identified. Findings demonstrate partial fit of the TNSB as a framework for explaining SNCAA. The overarching results of this project suggest a need for interventions aimed at reducing students' SNCAA as well as increasing their overall knowledge about privacy and safety online.

KEYWORDS: social networking sites, self-presentation, impression management, binge drinking, theory of normative social behavior

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July 15, 2015
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COLLEGE STUDENTS' USE OF SOCIAL MEDIA TO COMMUNICATE
ABOUT ALCOHOL AND DRINKING BEHAVIORS

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CHAPTER 1

College students' engagement in binge drinking, along with its associated risks, poses a significant public health concern. Despite over 30 years of health campaigns and interventions on college campuses (Conyne, 1984; Haines, 1996; Hutton, 2012; Moreira, Smith, & Foxcroft, 2009; Perkins, 2003; Perkins & Berkowitz, 1986), binge drinking remains as popular and dangerous as ever (Foster, Caravelis, & Kopak, 2013; Hutton, 2012; Kelly-Weeder, 2011; Rhodes & Clinkinbeard, 2013).

According to the 2014 Monitoring the Future study, 35% of college students engage in binge drinking—consuming "five or more drinks in a row at least once in the prior two week period" (Johnston, O'Malley, Bachman, Schulenberg, & Miech, 2014, p. 31). In addition, 14% of college students report participating in heavy drinking—binge drinking on five or more days within a month (Johnston et al., 2014). Binge and heavy drinking poses a significant problem for college administrators, as students who engage in binge drinking also affect other students. "Spillover" effects include students being awakened late at night, being insulted or harassed by drunk students, and having to take care of drunk friends or roommates (Campo, Askelson, & Mastin, 2011; Henry Wechsler & Nelson, 2008). In a study of a rural, northeastern college campus, 66.9% of students reported having to care for an intoxicated student, 52.2% being interrupted while sleeping or studying, 33.1% being insulted or humiliated, and 22.9% experiencing an unwanted sexual advance (Stiles, 2013, p. 529). Even more concerning, alcohol intoxication is to blame for as many as 696,000 instances of assault and 1,825 college student deaths each year in the United States (Hingson, Zha, & Weitzman, 2009a).

In addition to the negative consequences of binge drinking behavior, when students share evidence of their binge drinking online there may be additional risks and side effects. Police frequently use information shared online as an impetus for the prosecution of crimes (i.e., underage drinking, drunk driving, disorderly conduct, etc.; Knibbs, 2013). College staff and administrators monitor social networking site (SNS) content, which can result in disciplinary actions including student removal from athletic teams or campus groups and expulsion (Kaminer, 2012; Santus, 2014; Tomaszewski, 2012). There are also risks to students' sharing of binge drinking behavior associated with future employability. Employers report turning to Facebook and Twitter as a means for conducting background checks on their potential employees (Smith & Kidder, 2010). An abundance of photos or posts related to partying and drinking behavior may result in the loss of future job opportunities. Content posted on social media sites has also been used as grounds for firing current employees (Broderick & Grinberg, 2013). Additionally, some companies are using aggregate online data from sites including Facebook and Twitter to determine whether or not to extend credit (Andrews, 2012).

Research suggests that to some extent college students are aware of the risks related to revealing private information online (Debatin, Lovejoy, Horn, & Hughes, 2009). Yet, research indicates that most college students are unconcerned about the amount or intimacy of information they disclose online through SNSs (Christofides, Muise, & Desmarais, 2009). This may be due to the degree of perceived benefits related to communicating this information, as well as the perception that these risks are more likely to affect others than themselves (i.e., the third person effect; Debatin et al., 2009).

Thus, further research is needed to understand college students' perceptions of the risks and benefits associated with revealing information about their drinking behavior online.

College students are also some of the heaviest users of SNSs such as Facebook, Twitter, and Instagram (Pew Research Center, 2014). boyd and Ellison (2007) define SNSs as places that "allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and, (3) view and traverse their list of connections within the system" (p. 211). Accompanying their abundant social interactions via SNSs is a willingness to share and disclose personal information (Hadley & Caines, 2009).

Often the information disclosed includes details about their drinking behaviors. Fournier and Clarke's (2011) analysis of college students' Facebook pages revealed that 76% of participants' profiles had at least one post or photo related to alcohol. Additionally, 66% of participants had Facebook profiles that consisted of up to 10% alcohol related content. Egan and Moreno (2011) found that references to alcohol were present on 85.33% of male college student public profiles (p. 413). Furthermore, Fournier and Clarke (2011) found that 29% of college students reported communicating via Facebook about alcohol related activities one to three times per month, while 2.9 % reported doing so four or more times per week (para. 23). These studies demonstrate that the use of SNSs by college students is becoming a popular way of communicating about alcohol related activities. This is a problem on college campuses where the use of SNSs is fairly ubiquitous and ostensibly influential. By posting frequently about drinking behaviors users may reify norms regarding college drinking.

Norms have previously been identified as a key predictor of drinking behaviors among college students (Baer, Stacy, & Larimer, 1991; Beck & Treiman, 1996; Haines, 1996; Lewis & Neighbors, 2006; Pedersen, Larimer, & Lee, 2010; Perkins & Berkowitz, 1986). Simply defined, norms are a shared or collective understanding of socially acceptable behaviors. That is, norms guide behavioral decision making processes based on whether or not socially significant others approve. According to Festinger (1954), it has "long [been] argued that people tend to adopt group attitudes and act in accordance with group expectations and behaviors on affiliation needs and social comparison processes" (p. 239). During the 1980s, Perkins and Berkowitz developed a line of research focusing on social norms for drinking on college and high school campuses (Berkowitz, 2004). They found that students' perceptions of the amount and frequency with which other students consumed alcohol were largely discrepant from reality (Perkins & Berkowitz, 1986). Based on these mistaken perceptions, students often feel pressure to match their drinking behaviors comparatively. According to Perkins (1997) "misperceptions are formed when individuals observe a minority of individuals engaging in highly visible problem behavior (such as public drunkenness or smoking) and remember it more than responsible behavior that is more common but less visible" (p. 103). Perkins and Berkowitz (1986) discovered that although heavy drinking was not a behavior shared by the majority of students, the high profile of the behavior led to misperceptions that this was the normative behavior.

This enhancement of misperceptions regarding normative drinking behavior is a significant concern as research by Perkins and Berkowitz (1986) demonstrates that the strength of the misperception is directly tied to engaging in the behavior. Research

consistently has demonstrated that the likelihood of performing the behavior increases along with the size of the perception of behavior (Haines, 1996; Haug, Ulbricht, Hanke, Meyer, & John, 2011; Perkins & Berkowitz, 1986; Woodyard, Hallam, & Bentley, 2013). That is, if someone highly overestimates the normativity of drinking behavior among college students, they are more likely to engage in the behavior. In a study evaluating the use of a social norms campaign to reduce college drinking, Mattern and Neighbors (2004) found that students who experienced a decrease in their perceptions of drinking norms reduced their levels of drinking. Likewise, consumption of alcohol increased among students who experienced an increase in their perceptions of drinking norms (Mattern & Neighbors, 2004). Results of similar studies have consistently demonstrated this pattern between perceived drinking norms and behavior (Neighbors et al., 2010; Perkins, Linkenbach, Lewis, & Neighbors, 2010; Scribner et al., 2011). Despite efforts to correct misperceptions of college drinking norms (DeJong et al., 2006; Perkins & Craig, 2006; Thombs & Hamilton, 2002), students continue to overestimate norms for drinking (Haug et al., 2011; Perkins, 2012; Perkins & Craig, 2012; Woodyard et al., 2013). A meta-analysis performed by Foxcroft, Moreira, Almeida Santimano, and Smith (2015) suggests that "no substantive meaningful benefits are associated with social norms interventions for prevention of alcohol misuse among college/university students" (p. 2). However, it may be that the reason these interventions have proven ineffective is that they are fighting against a communication environment (both face-to-face and online) that is saturated with pro-drinking messages. Therefore, because perceived norms are such a strong predictor of drinking behavior, it is imperative to understand the role that communication

about college drinking behavior via SNSs plays in the proliferation of social norms regarding binge drinking.

The proliferation of drinking related messages shared via SNSs may also serve to intensify students' willingness to engage in the behavior. A primary concern of the proposed research study is the role messages received via SNSs play in informing college students' drinking behaviors. Messages regarding drinking related behavior communicated via SNSs by college students might be a significant contributor to normative misperceptions of the behavior. Litt and Stock (2011) found that students who were exposed to Facebook profiles that included content where alcohol use was portrayed as normative reported (a) being more likely to use alcohol in the future, (b) having a more favorable view of the profiles owner, (c) having more positive attitudes about using alcohol, (d) having lower perception of risks associated with drinking alcohol, as well as (e) perceiving drinking alcohol as being more normative. Additionally, Moreno, Christakis, Egan, Brockman, and Becker (2012) identified how Facebook users who disclosed large amounts of information regarding intoxication and problem drinking were more likely to have an alcohol use disorder. While this group may be in the minority, Perkins and Berkowitz (1986) demonstrated that the behavior of a minority group may be perceived as normative for the majority when it is highly publicized—such is the case on SNSs. Thus, even a small group of prolific communicators could greatly impact misperceptions about normative drinking behavior among college students.

Furthermore, these misperceptions are magnified by social distance (Moreover, Borsari, & Carey, 2003). That is, the further an individual is socially removed from the person performing the behavior, the more discrepant their misperceptions. College

students in the United States often maintain connections to friends across great distance with large social networks via SNSs (Manago, Taylor, & Greenfield, 2012). Many of these connections also consist of acquaintances or other socially distant others (Manago et al., 2012). Thus, in the case of SNS usage, students misperceptions of normative drinking behavior may be further exaggerated by the proliferation of drinking messages posted by relatively socially distant others.

Additionally, it follows that social norms may also inform students desire to disclose their drinking related behaviors through SNSs. Research demonstrates that people use SNSs as a means of managing their self-presentation (Chen & Marcus, 2012; DiMicco & Millen, 2007). Just as choices regarding drinking behavior may be motivated by normative pressure, students may also feel the need to demonstrate their normative status by presenting this behavior via SNSs. Thus, communicating on SNSs about alcohol related behavior might be a result of perceived norms for this behavior.

To first identify whether and how this behavior occurs on SNSs, one goal of this project is to identify self-presentation tactics students employ when using different SNSs. To address this concern, I present a qualitative investigation into the practices of self-presentation online, particularly as it relates to communication about alcohol. Study 1 (see Chapter 2) addresses the broad research question: What self-presentation tactics do students employ when using different SNSs to communicate about alcohol related behaviors?

Due to the dearth of literature on the topic of disclosing these behaviors online, the second study (see Chapter 3) takes a quantitative approach to further identify the ways in which students are using SNSs to communicate about their drinking behavior, as

well as the frequency and prevalence of this type of communication. Additionally, it seeks to describe the reasons and motives for posting alcohol related content on SNSs by examining potential predictors of the behavior by investigating the following overarching research question: What factors explain and predict students' likelihood to communicate via SNSs about their alcohol related behavior?

Project Overview

To address these broad research questions, the purpose of this research project is to identify students' communication on SNSs about their alcohol related activities, as well as their reasons and motives for engaging in the behavior at hand. In answering these questions, the goal of the study is to (a) explain how and why students are communicating on SNSs about alcohol related activities, (b) identify key motives and predictors of this behavior, and (c) develop a model that best predicts students' likelihood to engage in this behavior. This information can then be used as the formative research for a future campaign targeted at reducing this type of communicative behavior.

Chapter 2 outlines the first study for this project that utilizes focus group methodology in order to garner formative data on students' use of SNSs to communicate about their alcohol related activities and to investigate students' motives (e.g., self-presentation tactics and impression management goals on SNSs). Focus group interviews provide a rich description of the behavior and associated motives as well as inform the construction of measures of the behavior and psychographic predictors (e.g., norms, attitudes, etc.) in Study 2. To address these issues, the chapter asks four research questions:

RQ1: What self-presentation tactics do students employ when using different

SNSs? Do students vary their tactics across SNS platform?

RQ2: How do college students report communicating on SNSs related to alcohol

drinking behaviors?

RQ3: In what ways do decisions to communicate on SNSs about alcohol related

behavior reflect students' impression management goals?

RQ4: How does students' imagined SNS audience(s) for self-presentation

constrain or facilitate their SNS communication about alcohol related

behaviors?

The chapter presents data from four focus groups ($n = 30$) where a qualitative

analysis was used to identify self-presentation tactics and impression management goals

regarding using various SNSs and communicating about alcohol related behavior on

these sites. Findings indicate that students use divergent self-presentation tactics across

different SNSs in order to achieve their impression management goals and to avoid

consequences associated with disclosing about their drinking behavior to certain

audiences.

Chapter 3 provides a discussion of relevant literature and theories that inform the

broader research survey of undergraduate students to explain and predict students'

likelihood to communicate via SNSs about their alcohol related behavior. Specifically, it

draws upon the use of the theory of normative social behavior (TNSB; Rimal & Real,

2003) to elucidate the role social norms play in the phenomenon at hand. The TNSB

identifies multiple constructs that mediate the relationship between descriptive norms and

behaviors, including: injunctive norms, outcome expectations (i.e., attitudes), and group

identity. Additionally, Chapter 3 identifies constructs that may also serve as behavioral predictors including instrumental attitudes (Ajzen & Fishbein, 1980), need to belong (Baumeister & Leary, 1995), ego-involvement (Lapinski & Boster, 2001), and individual's consideration of future consequences (Orbell, Perugini, & Rakow, 2004).

The chapter identifies the development of behavioral measures used to examine students' SNS communication about alcohol related activities (SNCAA). It also describes the various behavioral predictor measures included in the study (i.e., norms, outcome expectations, group identity, instrumental attitudes, need to belong, ego-involvement and consideration of future consequences). After completing steps to validate these measures, statistical analyses are used to answer the following research questions and hypotheses:

RQ5: Do students' estimated norms for communicating about alcohol on SNSs significantly differ from the prevalence of students' reported SNS communication about alcohol related activities (SNCAA)?

H1: After controlling for individual differences, descriptive norms for communicating about alcohol on SNSs will predict students' SNCAA.

H2a: After controlling for individual differences and descriptive norms, injunctive norms for communicating about alcohol on SNSs will predict students' SNCAA.

H2b: After controlling for individual differences and the main effect of descriptive norms, injunctive norms will increase the magnitude of the relationship between descriptive norms and students' SNCAA.

H3a: After controlling for individual differences and descriptive norms, outcome expectations (benefits to oneself, benefits to others, anticipatory

socialization) for communicating about alcohol on SNSs will predict

students' SNCAA.

H3b: After controlling for individual differences and the main effect of

descriptive norms, outcome expectations (benefits to oneself, benefits to

others, anticipatory socialization) will increase the magnitude of the

relationship between descriptive norms and students' SNCAA.

H4a: After controlling for individual differences and descriptive norms, group

identity (aspiration & perceived similarity) for communicating about

alcohol on SNSs will predict students' SNCAA.

H4b: After controlling for individual differences and the main effect of

descriptive norms, group identity (aspiration & perceived similarity) will

increase the magnitude of the relationship between descriptive norms and

students' SNCAA.

H5a: After controlling for individual differences and descriptive norms,

instrumental attitudes for communicating about alcohol on SNSs will

predict students' SNCAA.

H5b: After controlling for individual differences and the main effect of

descriptive norms, instrumental attitude will increase the magnitude of the

relationship between descriptive norms and students' SNCAA.

H6a: After controlling for individual differences and descriptive norms, need to

belong will predict students' SNCAA.

H6b: After controlling for individual differences and the main effect of

descriptive norms, need to belong will increase the magnitude of the

relationship between descriptive norms and students' SNCAA.

H7a: After controlling for individual differences and descriptive norms, ego

involvement will predict students' SNCAA.

H7b: After controlling for individual differences and the main effect of

descriptive norms, ego involvement will increase the magnitude of the

relationship between descriptive norms and students' SNCAA.

H8a: After controlling for individual differences and descriptive norms,

consideration of future consequences (CFC) will predict students' SNCAA.

H8b: After controlling for individual differences and the main effect of

descriptive norms, CFC will increase the magnitude of the relationship

between descriptive norms and students' SNCAA.

RQ6: After controlling for individual differences, what social normative

influences and psycho-social factors best predict communication on SNSs

about their alcohol related activities?

The chapter concludes by describing the findings from a first-of-its-kind study measuring young adults' communication on SNSs about drinking, and identifying normative social influences that predict this behavior. Additionally, the study examines these communication behaviors and normative influences in the contexts of other psycho-social and behavioral predictors to answer these research questions.

Chapter 4 provides a conclusion that summarizes the primary findings of the project. In so doing, the chapter explains how this study makes an important contribution

to the field of communication by explaining the role communication on SNSs plays in students' perceptions of drinking norms as well as their choices to engage in drinking behavior. First, the chapter reviews Study 1 which identifies how communicating about alcohol on SNSs is viewed as a normative behavior for college students, that students are fairly aware of the risks associated with communicating this type of information, and that students vary in regard to their decisions to engage in this behavior. Second, the chapter presents the implications of Study 2, which identified a predictive model for students' communication via SNSs about their alcohol related behavior. Finally, the chapter considers the methodological, theoretical, and practical implications for this line of research. First, it demonstrates the importance of conducting thorough formative research. Secondly, it extends the work of Rimal and Real (2003) on the theory of normative social behavior by examining it within a new behavioral context. Third, it identifies areas for future research including the next steps for developing a campaign aimed at reducing the frequency and prevalence of students' communication via SNSs about their alcohol related behavior.

CHAPTER 2

A Qualitative Investigation of Self-Disclosure and Impression Management in

Students' Use of Social Networking Sites

Social networking sites (SNSs) are some of the most highly trafficked websites on the Internet, and young adults continue to be the heaviest users of these sites (Duggan & Brenner, 2013). Given the rapid-paced evolution of trends and motivations surrounding the use of SNS, computer mediated communication (CMC) researchers have difficulty keeping up with trends in consumer behavior (Bryant, Marmo, & Ramirez, 2011). Along with their heavy usage, young adults rely heavily on SNSs as a primary means of communicating with their social network. Thus, it is important that researchers continue to examine these channels in order to understand the way interactions within these media shape and influence the communication habits of young adults, as well as their reasons for using SNSs.

Recent research reveals that college students spend as many as 14.4 hours a day interacting with some type of media—much of which involves the use of SNSs (Nelson, 2013). While Facebook continues to be the top site used by this demographic, the number of college students who use Facebook has been decreasing (88.6% in November 2013, down from 91.5% in February 2013; McDermott, 2014). Meanwhile, audience engagement with other SNSs are on the rise. Young adults' engagement with Instagram jumped from 44.0% to 51.5% of college students who use the site between February and November of 2013. During this same time period, the percentage of college students who used Twitter also rose from 40.1% to 43.7%. Other popular social media platforms include Tumblr, Snapchat, and Vine (each is used by at least 25% of the college student

population; McDermott, 2014). Many students regularly use multiple SNSs to communicate throughout their day. Previous research has examined motives for using particular SNSs (e.g., Facebook; Bazarova & Choi, 2014; Bryant, Marmo, & Ramirez, 2011; Harridge–March, Dunne, Lawlor, & Rowley, 2010; Raacke & Bonds–Raacke, 2008; Shao, 2009). However, research examining multiplatform use is limited and there is a dearth of literature examining how users' motives or patterns of use vary between platforms. Thus, one of the goals of the current research is to reveal reasons for using multiple SNSs.

College students use various SNS platforms to self-disclose personal information, from expressing intimate emotions to sharing mundane aspects of their lives (Chen & Marcus, 2012; Christofides, Muise, & Desmarais, 2009a; Hughes–Roberts, 2013; Manago et al., 2012). According to Bazarova and Choi (2014), "this type of public self-disclosure shared with multiple, diverse, and often ill-defined audiences blurs boundaries between publicness and privacy" (p. 635). Furthermore, research also confirms that students often disclose large amounts of personal information with little concern for who may see it (Fogel & Nehmad, 2009). This information often includes references to risqué behavior such as sex, drugs, and alcohol with the heaviest users being the most likely to post this type of content (Karl, Peluchette, & Schlaegel, 2010). Thus, students seem to publicize their risqué behavior to large audiences often without consideration of potential consequences to themselves of others.

Risky Health Behavior on SNSs

Students often post content on SNSs related to engaging in risky health behaviors (e.g., binge drinking, disordered eating, etc.; Karl et al., 2010; Loss, Lindacher, &

Curbach, 2013; Ridout, Campbell, & Ellis, 2012; Teufel et al., 2013). This is potentially problematic, because other users may see this type of self-disclosure as promoting or endorsing these behaviors, especially when content is "liked" and shared by a multitude of others. Loss, Lindacher, and Curbach (2013) suggest that communicating via SNSs about these unhealthy behaviors may have a larger affect than other forms of communicating (face-to-face) due to its built in promotional features. One study of college students' Facebook profiles found that over half of them had at one time posted an alcohol-related profile photo (Ridout et al., 2012). In Loss et al.'s (2013) study of medical student's Facebook posts, 6.5% of posts contained references to an unhealthy behavior, and of these 70% were related to alcohol. A content analysis of these posts demonstrated that drinking alcohol was associated with impression management goals, including: sociability, having fun, rewards (e.g., passing a test), or being purposeful insensible.

Students' use of SNSs reflects varying attitudes regarding the types of information it is acceptable to disclose online, as well as diverse goals related to impression management. When students communicate about alcohol related behaviors on SNSs, others may see it as endorsement of the behavior, which can have a multitude of social implications (Beullens & Schepers, 2013; Fournier & Clarke, 2011). Binge drinking remains a problematic behavior on many college campuses. According to the 2013 Monitoring the Future study, 35% of college students engage in binge drinking— consuming "five or more drinks in a row at least once in the prior two week period" (Johnston et al., 2014, p. 31). In the same study, 14% of college students report participating in heavy drinking—binge drinking on five or more days within a month

(Johnston et al., 2014). This type of heavy drinking behavior is of concern to college

student affairs officials as alcohol intoxication is to blame for as many as 696,000

instances of assault and 1,825 college student deaths each year in the United States

(Hingson et al., 2009). Previous research demonstrates that students' drinking behavior is

tied to their attitudes and perceived norms for the behavior (Beck & Treiman, 1996;

Borsari & Carey, 2001; Foxcroft, Moreira, Almeida Santimano, & Smith, 1996). Thus,

when students share information about their drinking behavior on SNSs, they may be

unwittingly influencing other students' attitudes and perceived norms for drinking, and

thus, subsequently proliferating the occurrence of problem drinking behavior (Rimal &

Mollen, 2013).

The current study investigates how and why students use SNSs to communicate

about their drinking behavior as a proposed starting point for understanding the influence

of this type of communication on problematic drinking trends. To begin, I explore the

literature bearing upon the motives for this type of communication. The following

sections outline motives for self-disclosure, the role of impression management goals,

and how perceived audiences affect students' choices on what to communicate on SNSs.

Information Disclosure on SNS

Facebook was designed originally as a means for sharing and communicating

with friends (Ledbetter et al., 2010). Ellison, Steinfeld, and Lampe (2007) contend that

building and maintaining social capital is one of the primary motives for SNS usage.

Likewise, Ledbetter et al. (2010) assert that self-disclosure and social connection are the

"fundamental motivations that foster online interpersonal communication more

generally" (p. 28). Often people's inhibitions for disclosing information are lowered

when communicating online (Bargh, McKenna, & Fitzsimons, 2002; Tidwell & Walther, 2002). Additionally, Walther, Anderson, and Park (1994) argued that when people communicate online "they adapt their linguistic and textual behaviors to the solicitation and presentation of socially revealing, relational behavior" (p. 465). Thus, in an environment where hyperpersonal communication is perceived as normative, decisions to self-disclose may be motivated by a desire to fit in and join the social conversation.

Papacharissi's (2002) research provides further insight into the relationship between motivation and online self-disclosure. She identified several motives for using personal homepages (a precursor to SNSs), including entertainment, passing time, self-expression, professional advancement, information, and communicating with friends. Of these, self-expression was most highly correlated with disclosures of personal information. Furthermore, Kim's (2007) study of SNSs found that users' motives dictate the types of information they disclose online. For example, users who were motivated to use SNSs as an escape from real life disclosed more emotional information. People who were motivated to use SNSs as a form of self-expression or a means to communicate with others were more likely to post photos of themselves and presented more opinions. Thus, decisions about what type of information to communicate and reveal is often based on social goals. Similarly, Christofides, Muise, and Desmarais (2009) found that information disclosure on Facebook was predicted by a need for popularity. Therefore, self-disclosing on SNS may have the benefit of strengthening social ties and helping people gain or maintain social capital (Ellison et al., 2007).

SNSs are also useful to college students, as they help college students confront the challenges of both maintaining relationships with friends from back home with whom

they may be far removed while working at developing new relationships within a new social setting (Scanlon, Rowling, & Weber, 2007). Attending parties and drinking alcohol is a social behavior that many students associate with being a college student (Rimal & Real, 2005). Therefore, one consideration for researchers is whether and how students may view disclosing about their alcohol related behavior on SNSs as a means for creating social ties with other students at their college or university, and also as a means for maintaining a shared bond with friends who are going through similar experiences at their own schools.

Strategic Impression Management

An additional motive for self-disclosure online involves concerns related to self-presentation and impression management (Toma & Hancock, 2011). SNSs can also be viewed as a means for forming and managing impressions (Rosenberg & Egbert, 2011; Tong, Van Der Heide, Langwell, & Walther, 2008; Walther, Van Der Heide, Kim, Westerman, & Tong, 2008; Zhao, Grasmuck, & Martin, 2008). The formation and management of online impressions has gained importance in recent years and become the subject of numerous studies (Ellison et al., 2007; Tong et al., 2008; Walther et al., 2008; Zhao et al., 2008). Interactions serve a function of presenting an image of the self (Goffman, 1959). Through communicating with others, individuals construct their identity(ies) by presenting various aspects of their self. This process of choosing what to disclose is known as impression management (Leary & Kowalski, 1990). According to Baym (2010) construction of online identities (i.e., impression management) requires "a strategic balance of sharing, withholding, and distorting information" (p. 108). The ability to effectively construct and manage these identities is bounded by the

opportunities and constraints of the medium, as well as each individual's skill in manipulating the medium for self-presentation.

In general, people care the most about how others see them when the desired impression is pertinent to goal fulfillment (Goffman, 1959; Toma & Hancock, 2011). Desired impressions, according to Leary (1996), are the impressions an individual attempts to achieve on an audience as it pertains to a particular goal. Thus, motivation to create or maintain desired impressions is contingent on the importance of the goal. When the goal is of high importance, individuals will put more effort into impression management by using various self-presentation tactics. Self-presentation tactics are ''behaviors used to manage impressions to achieve foreseeable short-term interpersonal objectives or goals'' (Lee, Quigley, Nesler, Corbett, & Tedeschi, 1999, p. 702). Self-presentation tactics can be used as a means for creating and maintaining relationships (Toma & Hancock, 2011). Additionally, research reveals that impression management strategies may be used for the broader motive of enhancing one's reputation (Tosun, 2012). Within the realm of SNSs, these goals are especially salient because impression management is being performed in a fairly public setting in front of a relatively large audience, many of whom the individual will likely see in the near future. These two factors, publicity and likelihood of future interactions, increase the importance of impression management (Leary, 1996; Rosenberg & Egbert, 2011).

Dillard (1990) identified two major categories of goals: influence goals (i.e., primary goals) and secondary goals. Primary goals are related to a person's desire to influence the behavior of another person throughout their interpersonal interactions (Dillard, 1990). These primary goals may include the need to change the relationship,

engage in shared activities, and change the other's opinions (Dillard, Segrin, & Harden, 1989). However, in the case of SNS use, Rosenberg and Egbert (2011) argued that the primary goal of online engagement is the creation or maintenance of the desired impression.

Secondary goals are alternate goals that shape or constrain individual attempts to achieve primary goals (Dillard, 1990). Rosenberg and Egbert (2011) identified four types of secondary goals pertinent to the use of SNS: (a) interaction goals (i.e., being socially appropriate), (b) identity goals (i.e., being true to one's self-concept and personal values), (c) personal resource goals (i.e., avoiding negative repercussions), and (d) arousal management goals (i.e., controlling anxiety or other negative emotions). Results of the Rosenberg and Egbert (2011) study indicate that in regard to interactions on SNS, participants were most concerned with achieving identity goals followed by interaction goals. Personal resource goals and arousal management goals were of much lower concern (Rosenberg & Egbert, 2011). Furthermore, interaction and identity goals were positively related to affinity seeking (i.e., the need to be accepted and included); however, resource goals and arousal management goals were negatively related (Rosenberg & Egbert, 2011). This suggests that those with a higher need to be accepted may be more concerned with making sure their interactions are socially appropriate and representative of their good moral character.

Additionally, Rosenberg and Egbert (2011) examined the relationship between impression management goals and self-presentation tactics on SNS. Results demonstrated that identity and interaction goals were positively related to the use of role-modeling tactics (i.e., setting an example for others to follow; Rosenberg & Egbert, 2011). Personal

resource and arousal management goals were positively related to self-promotional (i.e., broadcasting accomplishments and highlighting positive qualities) and damage control tactics (i.e., offering justifications or apologies for behavior), in addition to role-modeling tactics (Rosenberg & Egbert, 2011). Thus, people who were more concerned with making a good impression and maintaining ethical standards were most likely to communicate on SNSs in a way they felt set a good example for others. While those who were more motivated to avoid negative consequences and uncomfortable emotions were more likely to also employ tactics that sought to excuse their bad behavior and accentuate their positive behavior.

Thus, the present study seeks to expand upon Rosenberg and Egbert's (2011) findings in order to identify and reaffirm self-presentation tactics used in the current social media environment, as well as to investigate how the expanding use of multiple SNSs may influence which self-presentation tactics students choose to employ.

RQ1: What self-presentation tactics do students employ when using different

SNSs? Do students vary their tactics across SNS platforms?

The use of self-presentation tactics associated with communicating on SNSs about alcohol related behavior is of particular interest. The current study explores the ways in which students are communicating on SNSs about alcohol related behavior, as well as the associated impression management goals to address the following research questions:

RQ2: How do college students report communicating on SNSs related to alcohol

drinking behaviors?

RQ3: In what ways do decisions to communicate on SNSs about alcohol related

behavior reflect students' impression management goals?

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Multiple Targets for Impression Management Messages

Although SNS users often maintain a large number of connections who have access to their content, primary targets of impression management are typically friends (Roulin, 2014). Additionally, SNS users are often more concerned about primary targets reactions when crafting messages (Bazarova & Choi, 2014; Karl et al., 2010; Peluchette & Karl, 2009). This concern can lead to instances where users self-disclose information meant to create a desired impression among their close, primary friends without concern for how other audience members may view this information. Christofides, Muise, and Desmarais (2009) argue that this disregard for who has access to information is a risk that Facebook users are willing to accept in exchange for the popularity they seek to gain by disclosing certain information.

Furthermore, Bazarova and Choi (2014) contend that functions of SNSs often facilitate disclosures of information with invisible audiences. For example, when a friend comments on a Facebook profile post, that post often becomes accessible to members of both the profile owner and the commenter. Options for "sharing" content on Facebook, "re-tweeting" or "re-graming" on Twitter and Instagram (respectively), and the ubiquitous use of taking screenshots of content and distributing by various means muddies the waters of identifying audience members. The reach of a message, if not tightly controlled by the original source, may be bounded by the privacy settings of other users. Moreover, the ability to control the reach of the message and privacy settings varies by medium. Thus, difficulties determining the actual scope of audience members often lead SNS users to grossly underestimate audience size. One study by Bernstein, Bakshy, Burke, and Karrer (2013) found that Facebook users estimate "that their

audience is 27% of its true size" (p. 21). Litt (2012) suggests that this underestimation of

audience size is due to cognitive limitations on "the number of people that one can attend

to simultaneously" as well as a physically explicit context and audience cues such as one

typically experiences in offline interactions (p. 332). Thus, when communicating on

SNSs users often employ self-presentation tactics aimed at an *imagined audience*—a

"mental conceptualization of the people with whom he or she is communicating" (Litt,

2012, p. 330)—that is based on cues in the SNS environment (Bazarova & Choi, 2014;

Marwick & boyd, 2011). Imagined audiences are often informed by the people users

regularly interact with on SNSs.

This is potentially problematic when individuals' impression management efforts

fail to succeed with audience members outside of users' imagined audience (e.g.,

potential employers). Often, students who post content related to drinking are those who

care more about being perceived positively by their friends and who are more naïve about

the impact such postings may have on unanticipated targets, such as potential employers

(Karl et al., 2010; Peluchette & Karl, 2008; Roulin, 2014). The question for further

investigation remains whether students consider that messages posted to "impress"

friends (e.g., photos of parties with alcohol) may be seen as undesirable to the

individual's potential employers:

RQ4: How do students' imagined SNS audience(s) for self-presentation constrain

or facilitate their SNS communication about alcohol related behaviors?

The purpose of this study is to explore the ways in which students are using SNSs

to communicate about alcohol and related behaviors. In so doing, I identify the ways in

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which impression management goals, self-presentation tactics, and imagined audiences influence choices to communicate in this manner.

Method

Four focus group interview sessions examined college students' use of SNSs to communicate about alcohol related behavior and associated impression management goals, self-presentation tactics, and imagined audiences. Focus groups are a valuable research tool for researchers interested in exploring "the diversity of opinion on a topic, the collaborative process of meaning construction, and the cultural performance of communication" (Lindlof & Taylor, 2011, p. 183). Because this is a relatively new behavior which lacks extensive research to describe it, focus groups provide a means of procuring descriptive data to elucidate students' engagement in the behavior and their reasons for participating. For the purposes of this study, focus groups were chosen over conducting in-depth interviews for their ability to foster diverse commentary as well as consensus among members regarding their reasons and perceptions of other's reasons for communicating on SNSs about alcohol related activities.

Participants

Student participants ($n = 30$) were recruited through the Department of Communication's online research recruitment system. Four focus group interview sessions were conducted with between five to nine participants each. Timeslot sign-ups were limited to 12 participants per Lindlof and Taylor's (2011) recommendations for ideal focus group size (e.g., $6 - 12$). However, most sessions had multiple students who failed to attend the session they signed up for, and thus, focus group sizes were slightly smaller than initially intended. Participants' ages ranged from 18 to 25 ($M = 19.6$ years

old). Of the participants in the focus group, 43% were male (n = 13), 53% were female (n = 16), and 3% declined to answer (n = 1). Focus groups were not stratified based on gender because, although research demonstrates gender differences in terms of the quantity of SNS posts (Patel, 2014), I did not suspect that the content or the motives for posting would be substantially different.

In regard to ethnicity, 70% self-identified as White/Caucasian (n = 21), 13% were Black/African American (n = 4), 10% were Asian (n = 3), 3% were Hispanic/Latino (n = 1), and 3% reported being of other ethnicity (n = 1). Participants were primarily first and second year students; 57% were freshmen (n = 17), 23% were sophomores (n = 7), 10% were juniors (n = 3), and 10% were seniors (n = 3). This distribution of classification reflects the make-up of the research applicant pool, which is primarily required for lower division courses. Upon completing the four focus groups, the researcher determined that theoretical saturation had been reached as per Strauss and Corbin's (1990) definition wherein "no new or relevant data seem[ed] to emerge" (p. 188).

Data Collection

Focus groups were conducted in a designated research room within the Department of Communication. Once participants arrived at the research location they were given an IRB-approved consent form (see Appendix A) and completed a brief online questionnaire (Appendix B) prior to discussion in order to collect demographic data. Participants were assured that their involvement was fully voluntary and no penalty would be received for non-participation or withdrawal. No participant withdrew. Additionally, participants were informed that their confidentiality would be protected by the researcher and were asked to also maintain the confidentiality of the fellow focus

group participants. Participants were also given the option of using a pseudonym during the discussion in order to further ensure confidentially. Focus group sessions lasted between 40 and 60 minutes. Following the focus group sessions, participants were awarded course credit as an incentive for participating. Audio recordings were transcribed and a generic pseudonym was used for all participants (i.e., R for respondent).

Protocol

A comprehensive focus group guide (Appendix C) was developed with attention to appropriate questions and overall language for student participants. Focus group interviews consisted of first a broad discussion of online content sharing questions including the types of SNSs students frequently use, the type of content they attend to, and the type of content they typically share. This was followed by a more targeted discussion addressing reasons for sharing content related to drinking and partying. Questions were designed to elicit students attitudes and motives related to sharing or not sharing various types of content on SNSs (including content related to drinking and partying), as well their awareness of different audience members and how the potential impressions of those audience members may potentially influence their content sharing decisions.

Data Analysis

The author along with a secondary research assistant analyzed transcripts using an analysis method framework, an iterative approach to qualitative data analysis (Ritchie & Lewis, 2003). This process allows the researchers to approach data analysis in a systematic way while still allowing "the analyst to move back and forth between different levels of abstraction without losing sight of the 'raw' data (Ritchie & Lewis, 2003, p.

220). Data was organized into central themes within the framework the research questions provide. Specifically, themes were identified in regard to students' use of SNSs to communicate about alcohol and related behaviors; related impression management goals; variations in the use of self-presentation tactics; and strategies used to manage different audiences. The author and research assistant identified themes and *in vivo* quotations and then met to create a cohesive framework that demonstrated consensus.

Findings

Analysis of the focus group data revealed several themes that addressed the four research questions that guided this portion of the research project. These questions were developed in order to better understand the ways in which college students are currently using SNSs and to address the behavior of interest—communication on SNSs regarding alcohol related behavior.

Self-presentation Tactics

The first research question describes the goal of identifying how the use of multiple SNSs may affect the types of self-presentation tactics students' use. Participants described engaging in the use of a wide variety of social media sites and applications for a variety of purposes (e.g., entertainment, news, connecting with others). They also identified differences in the type of content they perceived as being appropriate to share on different platforms. These variations in content sharing reflect differences in self-presentation tactics.

Managing multiple identities. One theme that emerged when comparing how participants varied content based on social media platform is the need to present multiple versions of their selves. Participants discussed the need to present themselves in positive

ways by using self-promotion tactics (e.g., "I'm a dancer so I have like pictures of me dancing") as well as role modeling tactics (e.g., "I feel pressure to be like witty and come up with the best tweet or the best Facebook post"). Variations in self-presentation tactics were tied to both characteristics of the media and potential audience members.

Characteristics of the medium. Participants reported that they would alter their self-presentation tactics based on restrictions of the medium as well as perceived content sharing norms. For example, they described how Twitter created a platform where sharing random thoughts and information was more acceptable:

- I feel like on Facebook, the status has to be like a more substantial and like actually mean something but Twitter, you can just put it on and it's not really that big of a deal (focus group 2).

- Twitter is like smaller things that just like happen as the day goes on. Like I posted on the way here something about like are Honda Elements actually Honda Elements if they don't have bumper stickers. And everyone seemed to like that but if I'd posted it on Facebook, people would've been like, what are you talking about (focus group 1).

- I feel like people talk more on Twitter. Like I feel like Facebook is just like you post one thing and it's like you can't post multiple; like you could but it's just like weird if you post a lot of posts at one time (focus group 3).

Others described how sharing photos on Facebook and Instagram differ:

- I'd only Instagram like a picture that I really liked or something; I wouldn't just put up like 800 pictures whereas Facebook I don't really care. It can be like the whole event (focus group 1).

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- Instagram's great for people who like can't take pictures so you can like. I always try to find like the best filter so that my like, I don't know, my face or whatever looks blurred. It's just like, oh that's an awful picture; oh that filter looks nice. Okay, well I'll put that on Facebook profile picture (focus group 2).

Thus, participants demonstrated the need to model their proficiency at using social media by complying with norms for sharing content.

Imagined Audiences. Participants also acknowledged the need to present themselves in different ways based on characteristics of the audience. For example, Facebook was described as a platform that reached a larger and more diverse audience, and thus, participants are more conscious of what they share:

- I use Facebook for specifically my family. Twitter - I keep that separate. My parents, they aren't on Twitter (focus group 1).
- Like for Facebook… I'm friends with like my entire family and stuff so when I share things or like when I put up pictures and stuff, it's mostly like for them to see like what I'm doing or like I shared like I'm doing like the Special Olympics thing and I needed to raise money so I like would share that. Because I know like they would be the people that would like donate and stuff like that. But then like if it's Twitter, I would share like something that was like ridiculously funny but like my family or like the people on Facebook wouldn't think that it was funny (focus group 4).

In this way, participants demonstrated a need to alter their self-presentation tactics based on how they want certain others to see them.

Communicating About Alcohol Related Activities on Social Networking Sites

Research question two focused on the need to examine the ways in which college students communicate on SNSs related to alcohol drinking behaviors. Participants identified content related to alcohol as a common topic on SNSs. In three of the four groups, when asked about content that was not appropriate to share on social media, at least one participant mentioned alcohol related content (e.g., "One thing that is like one of my biggest pet peeves is when people tweet about when they're like intoxicated"). In the group where participants did not bring it up on their own, when asked if content related to drinking and alcohol was appropriate, responses included:

- I don't think that's appropriate… especially on Facebook (focus group 2).

- I don't know, I just refrain from that (focus group 3).

However, even though sharing this type of content was discussed as inappropriate, participants acknowledged that it was still a common behavior by saying:

- I think a lot of people do [post content about alcohol and related behaviors]. Just from my like home… It's not mainly here but like everybody I know from like high school and all that. They're now in college doing it and… especially during freshman year (focus group 1).

- I feel like that's a big problem… [people] post all these pictures drinking (focus group 3).

Participants identified several ways students share content on social networking sites pertaining to alcohol related behaviors including posting photos, videos, and drunken comments (or "drunktweets").

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Photos. A common way participants reported seeing communication about alcohol was through photo sharing:

- One was like a Halloween costume thing and it was just like pictures of Halloween and the person was literally head in the toilet and it had his name and like he just threw up all over them (focus group 2).

- You'll see them in [photos with] like a bunch of red cups in like in a pool but like obviously everybody knows a red cup. It doesn't matter what color it is, like you have a cup in your hand and you're acting belligerent, like clearly it's not water (focus group 1).

- The only time I think I ever have a drink is like it's a really cool glass or something. And I'll like Instagram it; like on vacation when you have like a really cool margarita (focus group 3).

Videos. Participants also identified videos as a common way that people share content related to alcohol.

- I'll see a Vine from my friends and I'll be like, oh they had a good night because they don't make Vines unless… it was like 3:00 a.m. taxi ride home (focus group 2).

- Back in my hometown like this girl got in a [drunken] fight and like the video was on like Vine, Instagram, and Twitter (focus group 3).

Drunken comments. Participants also described the use of social media to make random comments or statements while drinking alcohol (sometimes referred to as "drunk tweeting").

- I kind of do that sometimes; I can't control it, I don't know. And a lot of
  things sounds really funny and I tweet it and I'll look at it and it's like, I don't
  know, there's like 3 g's and a y (focus group 4).

- One thing that is like one of my biggest pet peeves is when people tweet about
  when they're like intoxicated. (focus group 1).

- I've seen drunk rants after breakups and it just made everything 10 times
  worse (focus group 2).

Focus group discussions demonstrate that SNS communication about alcohol
related activities is a common occurrence. In general, most participants agreed that this
type of communication is inappropriate or at the very least potentially problematic;
however, some admitted that it was something they did—often while under the influence
of alcohol (as opposed to posting photos or information about the events afterward).
Focus group participants were also asked to share their reasons or their perceptions of
others' reasons for communicating in this manner. The next section provides an overview
of impression management goals identified as reasons for SNS communication about
alcohol.

Impression Management Goals for Sharing Alcohol Related Content

Research question three focused on motives for communicating on SNSs about
alcohol related behavior that reflect students' impression management goals. Participants
were asked to identify reasons why people want to share this type of content on SNSs.
Answers included attention seeking, looking cool or popular, being humorous, or the
social desirability of being seen at specific events. These responses reflect the impression
management goals identified by Rosenberg and Egbert (2011), particularly interaction

and identity goals. They also suggest that people who share alcohol related content on SNSs may be less concerned with arousal management and personal resource goals.

Interaction goals. Interaction goals focus on demonstrating that one's behavior is socially appropriate. Participants identified getting attention, whether through social media or outside, as a reason why people post content about alcohol and drinking.

- She just does it just to get likes and favorites; that's all it is ever. She posts those kinds of pictures all the time; she does it just for attention (focus group 2).

- I mean people fake it too like just and that's another reason that I think like people want attention because I know like there's people that like fake like being drunk or like I don't know so that's really annoying too especially when you know (focus group 4).

Identity goals. In addition to being a means to seek social approval, these behaviors can also be seen as a means for reinforcing one's identity.

Looking popular. Participants identified posting content about alcohol as a means of fitting into college culture and reinforcing the identity of being someone considered cool by a group of people.

- I feel like because all me and my friends are at different schools so it's kind of like an unspoken like who's going out the most, who's having the most fun. So like it's whoever's posting like pictures like on like a Wednesday night or whatever (focus group 1).

- They'll post pictures of going to parties and drinking and like post pictures of like drugs or something like that so they look cooler (focus group 2).

- I feel like especially like freshman year, I saw people with red cups a lot and they thought they were like cool (focus group 3).

Being humorous. Participants also identified humor as a reason people post content on SNSs about drinking:

- I have a separate [Twitter account] and it's private and only like 20 people follow it and it's just like whatever pops into my head at that point [while drinking] because they'll think it's funny (focus group 3).

- I actually liked a humorous comment on like something that I've seen through Facebook; it's like this I guess meme or a post about like how to hide alcohol in pictures as you Photoshop cats or something ridiculous. And so like people were like sitting there like with a cat upside down like they're pouring alcohol in their mouth but it's like a Photoshopped cat over it and it's probably the best thing that I've ever seen (focus group 2).

Personal Resource and Arousal Management Goals. Participants also identified multiple consequences associated with posting content on SNSs related to alcohol and drinking. This suggests that although students are aware of potential consequences, they either don't care (e.g., "like everybody knows it's bad for you, but people like make the choice to do that and that's their choice") or trust that security settings will protect them (e.g., "If your Twitter is protected, then it's like a big difference as to what you tweet"). However, participants also described how potential consequences affect the way they censor content. Often, this censorship was discussed by participants as based on perceived audiences, as discussed in the following section.

Effect of Imagined Audience on Content Sharing

The final research question (RQ4) asked: How do students' imagined SNS audience(s) for self-presentation constrain or facilitate their SNS communication about alcohol related behaviors? As previously discussed, participants described altering their self-presentation tactics based on perceived audience. This was also the case when it came to sharing content related to alcohol. Participants identified three perceived audience considerations that affected their willingness to share content related to their drinking behavior.

Parents. Participants identified parents and other family members (e.g., grandparents, aunts, uncles, etc.) as an audience from which they restrict access to content about alcohol.

- I feel like it's more common to see [pictures of alcohol/drinking] on like Instagram than it is to see it on Facebook… there like aren't as many people whose like parents follow them on Instagram and like it's like harder to like find somebody on Instagram than it is to find them on Facebook so I think people like think it's safer (focus group 2).

- So I try to keep [things I post on social media] at a point where my parents are like, oh that's okay… Like in my mind, what my parents would think (focus group 4).

Organizations. Additionally, participants noted censure from organizations (e.g., sororities, athletic teams) as a reason for censoring content on SNSs.

- I didn't join the dance team; I was going to… They were just saying like you can't be on the team anymore like if they find anything like related to [alcohol] on the internet and stuff that you'd get kicked off (focus group 3).

- I feel like a lot of people know now not to direct it, like put alcohol in a photograph, like there are a lot of consequences. Like you can get kicked out of your sorority (focus group 4).

Employers. Participants also expressed concern related to employers or future employers seeing content on their SNS profiles related to alcohol.

- I have a separate one because I know that it's not safe like from you know future bosses, so it's under like a different name (focus group 2).

- My mom, she's in HR so she deals with like hiring people and she'll like tell me stories of like how they like look on people's Facebooks and stuff and like see them like out and something, they won't hire them (focus group 1).

- Even with my summer job though… they were very like detailed about what we can and can't post about now (focus group 3).

As illustrated, participants expressed awareness of a constant tension between wanting to disclose information on SNSs as a means of self-presentation while at the same time maintaining a sense of privacy by limiting access to certain audiences even within very public media. Thus, students practice a form of strategic self-disclosure that utilizes differences between SNS characteristics, privacy settings, and calculated censorship choices to attempt to restrict access of information from unintended parties. The following section discusses important implications and limitations of these findings.

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Discussion

Findings demonstrate that students disclose content related to risky health behaviors on SNSs, specifically content related to consuming alcohol. While most participants demonstrated an awareness of specific risks and personal consequences associated with disclosing this type of content, they reported that many students choose to communicate in this manner regardless of potential consequences. One reason for these communicative decisions was a reliance on privacy boundaries that are presumed to exist based on SNS privacy settings and the types of users students associate with different SNSs. Thus, students are making strategic decisions to censor the type of content they share on certain SNSs based on privacy levels and perceived audience access.

Second, these censorship decisions reflect students' awareness of the need to use SNS to manage impressions among various audience members. Thus, students use various self-presentation tactics in order to control impressions. Often this comes in the form of students altering their self-presentation based on which audience members they believe have access to particular SNSs. These findings build on the work of Rosenberg and Egbert (2011) by demonstrating that self-presentation tactics and impression management goals may differ between SNSs. For example, a student may use Facebook as a means for creating impressions among family members and familial connections that they are a responsible and engaged college student. At the same time, they may use Twitter for creating impressions among friends and peers that they are a fun-loving and adventurous partygoer. Thus, engaging in the use of multiple SNSs provides the means for students to manage separate aspects of their self-presentation.

Additionally, findings reveal that students continue to rely on privacy settings as a means to protect content they see as inappropriate for some audience members. For example, one participant shared about a separate private Twitter account that she maintained in order to send messages to a small group of friends—particularly pertaining to her drinking behavior. She indicated that because it was private and used a pseudonym that her content was safe from being accessed by unintended audience members. While this may be an effective short-term strategy, SNSs are known to frequently update their privacy policies—sometimes in ways that allow outside parties access to private information (cf. Carlyle & White, 2010). This means that private information may not necessarily stay private in the long-term. This seems to be a primary concern of students who censor their online self-disclosure in order to secure future employment. Thus, future research should focus on examining how students are using privacy settings, the extent to which students place their trust in online privacy settings, and whether increasing privacy concerns is an effective strategy for reducing risky self-disclosure online.

This study also serves as a launching point for future research that examines motives and predictors for communicating on SNSs about drinking. Previous research has demonstrated the link between communication of norms and students' problematic drinking behavior (Rimal & Mollen, 2013; Rimal & Real, 2005). Thus, further research is needed to understand the role this often public and increasingly popular type of communication plays in propagating normative perceptions and attitudes regarding binge drinking. Additionally, by identifying motives for students' use of SNSs to communicate about alcohol related behavior, health communicators will be able to more effectively design potential initiatives for reducing binge drinking on college campuses because they

will have a greater understanding of the communicative environment surrounding the behavior. One potential strategy for reducing binge drinking could be to start by reducing the propagation of messages on SNSs that idealize or otherwise celebrate binge drinking culture. By understanding the motives for communicating about drinking online, as well as the role this communication plays in promoting drinking, health communicators will be able to better identify ways to target messages to college students that encourage them to limit or ideally eliminate their self-disclosures on SNSs about their problematic drinking behaviors. Impression management goals provide a clear starting point for targeting messages as the findings of this study demonstrate that students are motivated to employ self-presentation tactics that are not only found acceptable by their parents, but also will appeal to potential employers. Campaign messages could focus on increasing the salience of impression management goals surrounding students' need to be respected and hirable, and thus, emphasize the need to avoid sharing messages on SNSs that could potentially compromise these goals—such as messages about drinking. In this way, a campus campaign could both promote positive future individual outcomes (e.g., getting a job) and reduce the proliferation of messages that promote problem drinking.

Limitations

One clear limitation of this study is that the study was not able to fully address the timeframe in which students are actively communicating on SNSs about their alcohol related behavior. While some students discussed the phenomenon of 'drunk tweeting' or otherwise sharing content while intoxicated, it was not clear whether or not this was their primary manner of communicating on their SNSs about their alcohol related behavior. It could be that students also choose to share this type of content after participating in

alcohol related activity (e.g., sharing event photos, posting about being hungover, etc.). Students may also choose to share about their future plans to engage in alcohol related activities. Thus, future research should focus on not only identifying the manner in which students communicate about their drinking on SNSs, but also the timing and context for this communication.

Second, as with similar research, social desirability bias likely played a role regarding participants' willingness to discuss the use of SNSs to communicate about their alcohol related behavior. While participants were able to easily identify people they knew who engaged in this behavior, few were willing to admit to currently and actively engaging in it themselves. Thus, additional research strategies allowing for anonymous survey responses and quantitative data collection could be utilized to provide more reliable self-report data by creating greater social distance between the researcher and respondent and thus diminishing the effects of social desirability bias. However, one strength of this study is that it employed indirect questioning by asking participants to describe other SNS users' behavior and to speculate as to their motives. This not only provided a wide description of the behavior, but also allowed participants to frame their own behavior and motives as something that "others" do (Fisher & Tellis, 1998).

A third limitation of this study is the lack of stratification used when structuring focus groups in order to identify differences between groups. Future research might employ this strategy in order to identify differences based on classification or gender. For example, one participant addressed gender differences in self-presentation tactics on SNSs by saying, "I feel like boys usually just let whatever happened and just post whenever they feel like it and girls like, and not that they want approval but they're like,

what will people think of me if I do this." Thus, future research is needed to explore these differences.

Conclusion

Study 1 aimed to identify ways in which college students are using SNSs to communicate about their alcohol related behaviors. Specifically, it sought to identify reasons related to their impression management goals and how these goals manifested in their use of strategic self-presentation tactics. Finally, consideration was given to the ways in which perceived audience members impact the type of content college students share on SNSs.

Students continue to use SNSs as a means to communicate about their engagement in alcohol related behaviors. However, findings suggest an increasing awareness of the negative consequences associated with broadcasting these behaviors as well as a need to strategically censor their self-disclosures from others. While they may be able to avoid direct consequences associated with information about their drinking being seen by the wrong audience (i.e., parents, potential employers, etc.), there are still risks associated with sharing this information on platforms with variable privacy and security settings. Additionally, by broadcasting their behaviors, students actively contribute to the proliferation of drinking norms that often lead students to engage in dangerous levels of drinking. Thus, further efforts are needed to identify the nature of social normative beliefs, attitudes, and behavioral actions to explain and predict students' communication about alcohol on SNSs. Identifying these predictors is a necessary step toward further understanding SNS communication about alcohol in order to develop interventions for reducing this communicative behavior. Chapter 3 that follows provides

a description of Study 2 and its results. Specifically, it describes how the findings of Study 1 were used to inform the development of quantitative measures used in Study 2, and extends this research by developing and testing measures of (a) students' attitudes and beliefs pertaining to the identified impression management goals, as well as (b) the prevalence and scope of students' SNS communication about alcohol related activities.

CHAPTER 3

A Quantitative Exploration of Students' Social Networking Site Communication

about Alcohol and Associated Predictors

Given the findings of Study 1 in this project, Study 2 identifies the prevalence of

students' use of social networking sites to communicate about their drinking behavior.

Additionally, it identifies factors that may motivate or otherwise increase the likelihood

of students' engagement in this type of communication. To that end, the theory of

normative social behavior (TNSB) is employed as a starting point for theorizing on

relationships between these factors and the behavior at hand. Additional variables are

also discussed and tested as potential predictors of this communicative behavior. This

chapter presents an overview of the theoretical underpinnings of Study 2 as well as

descriptions of the methodology, results, and discussion of the findings.

Literature Review

Binge drinking continues to be a problem on college campuses. According to the

2013 Monitoring the Future study, 35% of U.S. college students regularly engage in

binge drinking—consuming five or more alcoholic beverages in a row at least once

during a two-week period (Johnston et al., 2014). This same study also reports that 14%

of college students engage in heavy drinking—binge drinking five or more times in one

month. Additionally, episodes of extreme binge drinking—consuming 10 or more

alcoholic beverages—are also at their height among the college-aged population. Among

21 – 22 year olds, 14.4% reported having 10 or more drinks on at least one occasion in

the past two weeks, and 6.1% reported having 15 or more. These numbers decline

significantly after students graduate from college (9.0% and 2.5% respectively among

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ages 29 – 30). Despite concerted efforts to reduce drinking on college campuses, these numbers have seen limited decline over the past 30 years (Hutton, 2012; Moreira et al., 2009; Perkins, 2003).

Binge drinking is associated with numerous negative consequences. According to research by the National Institute on Alcohol Abuse and Alcoholism, as many as 1,825 U.S. college students die each year from alcohol-related injuries (Hingson, Zha, & Weitzman, 2009). Additionally, close to 600,000 students are unintentionally injured while under the influence of alcohol and almost 700,000 students are assaulted by another student who has been drinking (Hingson et al., 2009). Other problems associated with binge drinking among college students include sexual abuse, unsafe sex, academic problems, alcohol dependence, drunk driving, property damage, and involvement with police (National Institute on Alcohol Abuse and Alcoholism, 2013). These effects also spillover onto other students who do not engage in drinking but may have to deal with noise disturbances, caring for drunken friends, or being assaulted by those who are intoxicated (Campo, Askelson, & Mastin, 2011; H. Wechsler, Davenport, Dowdall, Moeykens, & Castillo, 1994). Due to the broad range of negative direct and indirect effects associated with binge drinking and its continued prevalence on college campuses, more research is needed to identify factors contributing to the proliferation of this risky health behavior.

In the current study, I identify students' use of social networking sites to communicate about their drinking behavior as a potential contributor to binge drinking on college campuses. The following sections provide an overview of previous research that demonstrates the connection between the communication of norms for drinking and

student's drinking behavior. Additionally, it proposes a framework for investigating factors that may contribute to student's decisions to engage in communication on social networking sites about their drinking behavior.

Social Norms and Student Drinking

Previous research has established a clear link between students' perceptions of what is normative drinking behavior among their peers and their actual drinking behavior (Baer et al., 1991; Borsari & Carey, 2003; Haug et al., 2011; Perkins & Berkowitz, 1986; Woodyard et al., 2013). During the 1980s, Perkins and Berkowitz developed a line of research focusing on social norms for drinking on college and high school campuses (Berkowitz, 2004). They found that students' perceptions of the amount and frequency with which other students consumed alcohol were largely discrepant from reality. It was based on these mistaken perceptions that students felt pressure to match their drinking behaviors comparatively. They discovered that although heavy drinking was not a behavior shared by the majority of students, the high profile of the behavior led to the perception that this was the normative behavior. Perkins and Berkowitz (1986) refer to this difference between perceived norms and actual norms as misperceptions. Their social norms approach is based on the idea that misperceptions inform and guide individual's behavioral choices.

According to Perkins (1997), "misperceptions are formed when individuals observe a minority of individuals engaging in highly visible problem behavior (such as public drunkenness or smoking) and remember it more than responsible behavior that is more common but less visible" (p. 103). Borsari and Carey (2003) explain that these misperceptions are magnified by social distance. That is, the further an individual is

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socially removed from the person performing the behavior, the more discrepant their misperceptions. However, greater social distance also diminishes the influence of the behavior. In contrast, behavior of closer or more salient social groups has a stronger influence on an individual's behavior (Borsari & Carey, 2003). Additionally, sub-groups may supplant wider, more popular norms if the individual identifies most strongly with the subgroup. For example, while binge drinking might be a widely held norm across a college campus, an individual who is a member of a tight knit religious group may choose to abstain in accordance with the group's norms. In this way, the influence of the group supersedes the more visible problem behavior because the norms of the group are more salient.

Perkins and Berkowitz's (1986) research demonstrates that while saliency is certainly a factor, it is the strength of the misperception that is most directly tied to behavior. The likelihood of performing the behavior increases along with the size of perception of behavior. That is if someone highly overestimates the behavior, they are more likely to perform the behavior. Similarly, if someone underestimates the behavior they are less likely to engage in it.

Social networking sites provide an outlet where students are able to broadcast their drinking behavior. If students are exposed to an abundance of messages depicting binge drinking via social networking sites, it follows that they may misperceive the prevalence and intensity of drinking behavior within their social circles. That is, even if students who post these messages make up a small percentage of a user's online social network, the user may extrapolate—without evidence to the contrary—that binge drinking is a behavior in which many students engage yet are not communicating about

on SNSs. Although messages from socially distant others may not carry the same weight

as those from students' more immediate social networks; they still serve to increase

exposure to messages that communicate that binge drinking is a socially normative

behavior (Lapinski & Rimal, 2005). Thus, communication on social networking sites

about drinking may increase students' misperceptions of norms and their drinking

behavior accordingly.

Theory of Normative Social Behavior

Rimal and Real's (2003) theory of normative social behavior (TNSB) expands on

previous theorizing (e.g., the social norms approach) on the relationship between

perceived norms and behavior. Specifically, they make a distinction between descriptive

norms (Cialdini, Reno, & Kallgren, 1990) and injunctive norms. Descriptive norms are

individuals' perceptions of the prevalence of a given behavior (e.g., how many students

engage in binge drinking, average number of drinks, etc.), while injunctive norms focus

on the social pressure individuals experience to conform to these norms (e.g., do others

approve of binge drinking? is it expected of me?). While the difference between

descriptive and injunctive norms is a distinction made by previous scholars, a primary

rationale for the development of the TNSB was to provide further clarification on the

nature of these two types of norms (Rimal & Real, 2005). Additionally, although there is

a large body of research demonstrating the influence of social norms on behavior, there is

limited explication of the how and why of this influence (Rimal & Real, 2005). Rimal

and Real (2003) identify three mechanisms illustrating the means by which descriptive

norms affect behavior.

Injunctive Norms. Injunctive norms involve perceptions of how strongly others approve or advocate for the behavior. The role of their influence is reliant on one's desire for social approval and their desire to 'do the right thing' (Rimal & Real, 2005). If the behavior is perceived to be sanctioned by important others, the prevalence of the behavior (i.e., the descriptive norm) will have a greater influence. Although people often infer based on the actions of others that they must condone a behavior, the distinction between injunctive and descriptive norms is still essential. First, as already discussed, perceptions of the prevalence and frequency of a behavior (descriptive norms) can be highly distorted. Therefore, often people rely on conversations and other messages (as opposed to observations) to determine perceptions of descriptive and injunctive norms. Second, descriptive and injunctive norms are frequently received from two different sources. For example, a student might observe that drinking is a prevalent behavior among students on campus. However, although they perceive descriptive norms highly, they may still believe that important others (e.g., parents, college administrators, community members, etc.) do not condone the activity. In this instance, their conflicting perception of injunctive norms would limit the impact of descriptive norms on their behavior.

Social networking sites provide features that allow users to express their support for content thus contributing to perceptions of injunctive norms. For example, if a student posts a photo of a keg stand on Facebook and it receives 73 "Likes", it could easily be inferred that this is a behavior of which many people approve. Additionally, commenting features allow users to explicitly state their approval (or lack thereof), which can also contribute to perceptions of injunctive norms.

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Outcome Expectations. In addition to injunctive norms, Rimal and Real (2003)

identify three types of expectations that influence the relationship of descriptive norms on

behavior. First, according to Bandura's (1977, 1986) social cognitive theory, human

behavior is highly motivated by expectations for positive outcomes. That is, a person acts

in ways they believe will benefit them. Rimal and Real (2003) refer to this as *benefits to*

oneself. In regard to drinking, students may perceive that drinking is fun and will allow

them to socialize more easily. Portrayals of drinking on SNSs may also cast the behavior

in a positive light as most people are highly motivated to engage in positive impression

management on SNSs (Siibak, 2009). Therefore, if a student is highly motivated by the

types of benefits to oneself highlighted on SNSs, the influence of the perceived

descriptive norm for drinking will be stronger.

Similarly, the second expectation identified by Rimal and Real (2003) is *benefits*

to others which involves the expectation that people who engage in a particular behavior

are experiencing benefits that are specifically tied to that behavior. Thus, those who

choose not participate in the behavior may perceive that they cannot accrue those same

benefits—what is often referred to as the 'fear of missing out.' Research by Kahneman,

Knetsh, and Thaler (1991) demonstrates that the threat of losing something is often a

greater motivator than potential for gaining something of equal or lesser value. Therefore,

with regard to college drinking behavior, students may engage in the behavior because

they are afraid that they will not have fun or will lose friends if they choose not to.

However, if a person believes that they have viable alternatives or are at little risk of

losing out, they will be less influenced by descriptive norms.

SNSs are often used as a means for broadcasting users' offline social activities. A steady stream of these messages creates for some a perception that their social network consists of people who are constantly engaging in fun, social activities (e.g., college parties) that they themselves are not (Przybylski, Murayama, DeHaan, & Gladwell, 2013). This may lead to increased perceptions of benefits to others related that in turn increases the influence of descriptive norms for drinking.

The last outcome expectation involves Merton's (1949) concept of *anticipatory socialization*. Even before entering college, students have preconceived notions of what it will be like and what they will need to do to fit in based on information from parents, older friends and siblings, and the media. Mauss (1969) demonstrated that high school boys begin using marijuana because they believe that is what college students do. By contrast, boys who did not intend to go to college did not have the same inclinations toward marijuana use. This is also true for alcohol use. Many students are socialized to believe that drinking is part of the college experience. The proliferation of drinking related messages shared by college students on SNSs may serve to increase the perceptions of younger friends and siblings that drinking is a normal part of college life. Therefore, even before entering college they anticipate that this is a behavior they are expected to participate in. An individual who has been more highly socialized to anticipate this behavior would be more strongly influenced by descriptive norms (Rimal & Real, 2005).

Group Identity. The final mechanism which influences the relationship between descriptive norms and behavior is based on humans desire to identify and imitate others. Previous research has demonstrate the role that *group identity* plays in individual's

behavioral choices (Donohew et al., 1999; Hibbard, 1985; Valente, 1995). According to

social cognitive theory, people are influenced by behavior that is modeled by those we

aspire to become (Bandura, 1977). Therefore, as students enter college they are naturally

inclined to imitate the behavior of those around them especially older students. Cheney

(1983) describes this process as identification wherein "individuals link themselves to

elements in the social scene" (p. 342). Additionally, students are more strongly motivated

to behave in ways modeled by those who they believe to be similar to themselves (Rimal

& Real, 2005). Those people who are perceived as similar or whom students aspire to be

like are likely to be among those with whom students communicate most often on SNSs.

Accordingly, if perceived similar others are sharing about their drinking behavior on

SNSs, students may see these communications as social cues for how they should behave

in order to be part of the in-group.

Understanding Students' Motives for Communicating on SNSs about Drinking

In addition to explaining the means by which communication on SNSs about

alcohol may influence students drinking decisions, the theory of normative social

behavior (TNSB) may also be useful for explicating why students choose to communicate

in this way in the first place. As demonstrated in Study 1, students recognize and

demonstrate concern regarding consequences associated with communicating about

drinking alcohol on SNSs. However, most participants acknowledged that this form of

communication is still seen as being fairly common. Thus, according to TNSB, it may be

the case that the very fact that this form of communication is seen as normative (i.e.,

descriptive norms) provides the impetus for students choosing to use SNSs to

communicate about their drinking. The current study, therefore, proposes the use of

TNSB as a framework for exploring motives associated with students' use of SNSs to communicate about their drinking behavior.

Injunctive norms for SNS communication about drinking. As previously described, TNSB makes an important distinction between descriptive and injunctive norms (Rimal & Real, 2005). Descriptive norms are based on perceptions of the prevalence of the behavior—in this case the frequency and percentage of students who use SNSs to communicate about their drinking behavior. As described in Study 1, many students perceive the frequency and percentage of students who communicate in this manner to be noteworthy suggesting that they may have moderate to high perceived descriptive norms for this behavior. However, injunctive norms pertain to perceptions of whether or not there is social approval for the behavior. Responses in Study 1 suggest that injunctive norms may be mixed. Many participants identified communicating about drinking on SNSs as an inappropriate or inadvisable form of communication. They identified influential groups such as parents, employers, and campus organizations as stating explicit disapproval for this behavior. However, the TNSB would suggest that despite this, students may recognize tacit approval of this behavior from other, seemingly more influential, others. Specifically, most SNSs have built in features that allow users to express their "liking" of shared content. When users "like" content they are implicitly endorsing or demonstrating their approval. Thus, if students see that content related to drinking receives a lot of "likes" on Facebook or Instagram (or "favorites" on Twitter), they may interpret this as others approving of this type of content. Likewise, they may be motivated to seek this same type of approval by posting similar content.

Outcome expectations for SNS communication about drinking. Additionally, Study 1 demonstrated that students also have a wide array of outcome expectations associated with using SNSs to communicate about their drinking behavior. Censure and punishment by family, employers, and campus organizations was a primary concern. However, students also identified positive outcomes associated with the behavior such as increased popularity, attention, and esteem. Receiving responses such as having other users "like" or comment positively on their drinking related content may also be considered a desirable outcome. Indeed, receiving positive responses, such as "likes," comments, and re-tweets, can be a motive for sharing content on SNSs (Davenport, Bergman, Bergman, & Fearrington, 2014; Ellison & boyd, 2013). Burke, Marlow, and Lento (2010) found that directed communication on Facebook (e.g., comments and "likes") is associated with higher perceived bonding capital and lower levels of loneliness. Therefore, if students believe that the positive outcomes (e.g., directed communication, popularity, attention, etc.) outweigh the risk of negative outcomes (e.g., censure, punishment, etc.)—or if they believe they can limit the risk of negative (e.g., by using privacy settings or other means of protecting their content from being seen by "the wrong people")—they may be more likely to communicate in this way.

Furthermore, TNSB states that anticipatory socialization may moderate the relationship between descriptive norms and behavior (Rimal & Real, 2005). In this instance, before entering college students may be exposed to messages that not only suggest that drinking is a normal part of college life, but that using SNSs, particularly to share about drinking activities, is also a quintessential college student behavior. Thus, students who have been socialized to believe this type of communication is part and

parcel to college life may be more likely to engage in the behavior. Alternatively, when students do not experience this type of anticipatory socialization prior to entering college, they may exhibit decreased influence of descriptive norms on their drinking behavior.

Group identity and SNS communication about drinking. Finally, students' need to imitate the actions of those who they perceive to be similar to themselves or those who they aspire to be like may influence their likelihood to use SNS to communicate about their drinking behavior. That is, the degree to which they desire to be like and to be assimilated into peer groups may moderate the influence of descriptive norms on their decisions to communicate in this way.

Other Potential Influential Factors Related to SNS Communication about Drinking

While TNSB provides a primary framework for examining psychographic factors related to students' use of SNSs to communicate about their drinking behavior, there may be other factors that influence this behavior. Hence, the study also considers attitudes, ego involvement, need to belong, and consideration of future consequences as potential explanatory factors of students' use of SNSs to communicate about alcohol related activities.

Attitudes. One of the predecessors of the TNSB that examines social norms is Ajzen and Fishbein's (1980; 1975) theory of reasoned action (TRA), which aims to explain predictors of volitional behavior. The central tenant of the TRA is that behavioral intention is the most important determinant of a person's behavior. According to the TRA, behavioral intention is influence by both attitude and norms. Attitude is considered one's general way of thinking toward a behavior based on their belief that the behavior is associated with various positive or negative outcomes. This conceptualization of attitude

is based on Rotter's (1954) notion of expectancy value. Thus, attitude is composed of (a) expectations that engaging in a behavior will result in a particular outcome (*experiential attitude*), and (b) evaluations of whether that outcome is positive or negative (*instrumental attitude*). Within the TNSB, Rimal and Real (2005) focus their measurement of outcome expectations, including benefits to oneself and others, on affective outcomes (i.e., degree of favorability). This is similar to the way Ajzen and Fishbein (1980) define experiential attitudes. However, the TRA also recognizes instrumental attitudes which focus on cognitive elements (e.g., wise-foolish, beneficial-harmful; Fishbein & Ajzen, 2011).

In the case of students' use of SNS to communicate about drinking, it is probable that they may have conflicting experiential and instrumental attitudes. That is, while they may find the act of communicating in this manner produces positive affects (e.g., pleasure, excitement), they may also recognize cognitively that such communication is potentially foolish and harmful. Thus, it is important to identify the role these divergent attitudes may play in dictating their communicative behavior.

Ego involvement. Study 1 explores impression management in relation to students' use of SNS to communicate about their drinking behavior. Likewise, Lapinski and Rimal (2005) suggest that ego involvement may be an additional moderating factor in the relationship between descriptive norms and behaviors. *Ego involvement*, as defined by Johnson and Eagly (1989), is the "motivational state induced by an association between an activated attitude and some aspect of the self" (p. 293). Or in other words, ego involvement refers to the degree to which a particular belief is an integral part of how a person sees oneself. Lapinski and Rimal (2005) argue that ego involvement may also

pertain to self-defining behaviors. That is, people may see drinking—or, in college student vernacular, "partying"—as a central component of their self-concept. It follows that, students whose self-concept is closely aligned with their drinking behavior (i.e., higher ego involvement) may be more likely to use SNSs to communicate about their drinking as a means of constructing and maintaining this identity.

Need to belong. Another factor that could potentially predict students' likelihood to use SNSs to communicate about drinking is their need to belong. Baumeister and Leary (1995) define the *need to belong* as "a pervasive drive to form and maintain at least a minimum quality of lasting, positive, and significant interpersonal relationships" (p. 497). The need to belong impels people to seek regular, enjoyable interactions with a consistent set of others with whom they share concern for each other's wellbeing. However, this need is not consistent among all people meaning those who have higher levels of needing to belong will seek more affirmations of their belongingness than those with lower levels (Leary, Kelly, Cottrell, & Schreindorfer, 2013). Previous research has demonstrated the relationship between need to belong and individuals' attitudes toward and use of SNSs (Gangadharbatla, 2008; Ljepava, Orr, Locke, & Ross, 2013; Sun & Wu, 2011; Utz, Tanis, & Vermeulen, 2012).

As described in the TNSB, an individual's behavior can be influenced by the degree to which those seen performing the behavior are viewed as similar to the individual or who they aspire to be like (Rimal & Real, 2005). Underlying this relationship is the idea that human behavior is motivated by a need to demonstrate belongingness within social groups (Brewer & Kramer, 1985; Guerin, 1994; Tajfel, 1974; Terry & Hogg, 1999). It follows that the degree to which a person feels a need to belong

may influence their willingness to engage in behaviors exhibited by similar others or those who they aspire to be like. That is, those who have a higher need to belong may be more likely to communicate on SNS about their drinking in order to demonstrate their belonging.

Consideration of future consequences. A final factor considered as a potential predictor of students' use of SNS to communicate about drinking is the degree to which they consider future consequences. Strathman, Gleicher, Boninger, and Edwards (1994) describe these individual differences in *consideration of future consequences (CFC)* as "the extent to which people consider the potential distant outcomes of their current behaviours and the extent to which they are influenced by these potential outcomes" (p. 743). Accordingly, people who are low in CFC will be more concerned and more highly motivated by consequences that are more immediate. However, people who are high in CFC will be more prone to account for the likelihood of far removed consequences when choosing whether or not to engage in a behavior (Orbell & Hagger, 2006).

Previous research using TNSB has focused primarily on short term (proximal) consequences (outcomes) associated with behaviors (e.g., enjoyment of the behavior, stress relief, increased esteem of others; Brown & Moodie, 2009; Lapinski, Anderson, Shugart, & Todd, 2014; Real & Rimal, 2007; Rimal & Real, 2005). However, as noted in Study 1, students are also concerned with consequences in the distant future associated with using SNS to communicate about drinking, such as being expelled from sports teams or campus groups and trouble gaining employment. This suggests that the weight an

individual places on long term (distal) consequences may predict their likelihood to use SNS to communicate about drinking.

Current Study

Binge drinking continues to be a problem on college campuses. Previous research has demonstrated that the communication of norms pertaining to drinking can influence individuals' drinking behavior. Thus, the current study seeks to examine SNSs as a source of communication about norms for drinking. Specifically, it seeks to identify the prevalence of this specific communicative behavior as well as to explore potential contributing factors that explain students' decisions to engage in this type of communication. To that end, the following research questions are proposed:

> RQ5: Do students' estimated norms for communicating about alcohol on SNSs significantly differ from the prevalence of students' self-reported SNS communication about alcohol related activities (SNCAA)?

> H1: After controlling for individual differences, descriptive norms for communicating about alcohol on SNSs will predict students' SNCAA.

> H2a: After controlling for individual differences and descriptive norms, injunctive norms for communicating about alcohol on SNSs will predict students' SNCAA.

> H2b: After controlling for individual differences and the main effect of descriptive norms on SNCAA, injunctive norms will increase the magnitude of the relationship between descriptive norms and students' SNCAA.

> H3a: After controlling for individual differences and descriptive norms, outcome expectations (benefits to oneself, benefits to others, anticipatory

socialization) for communicating about alcohol on SNSs will predict
students' SNCAA.

H3b: After controlling for individual differences and the main effect of
descriptive norms on SNCAA, outcome expectations (benefits to oneself,
benefits to others, anticipatory socialization) will increase the magnitude of
the relationship between descriptive norms and students' SNCAA.

H4a: After controlling for individual differences and descriptive norms, group
identity (aspiration & perceived similarity) for communicating about alcohol
on SNSs will predict students' SNCAA.

H4b: After controlling for individual differences and the main effect of
descriptive norms on SNCAA, group identity (aspiration & perceived
similarity) will increase the magnitude of the relationship between
descriptive norms and students' SNCAA.

H5a: After controlling for individual differences and descriptive norms,
instrumental attitudes for communicating about alcohol on SNSs will predict
students' SNCAA.

H5b: After controlling for individual differences and the main effect of
descriptive norms on SNCAA, instrumental attitude will increase the
magnitude of the relationship between descriptive norms and students'
SNCAA.

H6a: After controlling for individual differences and descriptive norms, need to
belong will predict students' SNCAA.

H6b: After controlling for individual differences and the main effect of

descriptive norms on SNCAA, need to belong will increase the magnitude

of the relationship between descriptive norms and students' SNCAA.

H7a: After controlling for individual differences and descriptive norms, ego

involvement will predict students' SNCAA.

H7b: After controlling for individual differences and the main effect of

descriptive norms on SNCAA, ego involvement will increase the magnitude

of the relationship between descriptive norms and students' SNCAA.

H8a: After controlling for individual differences and descriptive norms on

SNCAA, consideration of future consequences (CFC) will predict students'

SNCAA.

H8b: After controlling for individual differences and the main effect of

descriptive norms on SNCAA, CFC will increase the magnitude of the

relationship between descriptive norms and students' SNCAA.

RQ6: After controlling for individual differences, what social normative

influences and psycho-social factors best predict communication on SNSs

about their alcohol related activities?

Methodological Considerations. In developing the current study, special

attention was given to how previous studies had measured use of SNSs, particularly

communication about alcohol on SNS. Some studies have employed a qualitative

approach using interviews and focus groups to ask participants about their experiences

related to SNSs and alcohol (Barnes et al., 2015; Griffiths & Casswell, 2010; Moreno,

Grant, Kacvinsky, Egan, & Fleming, 2012). Many studies feature the use of content

analysis methods to evaluate publicly available SNS content for the presence of alcohol and drinking themes (Aphinyanaphongs, Ray, Statnikov, & Krebs, 2014; Egan & Moreno, 2011; Langenfeld, Cook, Sudbeck, Luers, & Schenarts, 2014; Moreno et al., 2010; Moreno, Egan, & Brockman, 2011; Moreno, Parks, Zimmerman, Brito, & Christakis, 2009). However, one of the goals of this study is to capture the extent to which a college population engages in SNCAA. Thus, only using publicly accessible data would not allow for an accurate portrayal of all students as it would not include students with private SNS profiles. Additionally, it does not allow the researcher to measure any psychographic variables related to this form of SNS communication as users typically are unaware their content is being studied. Other studies have attempted to account for this by collecting SNS data after gaining consent to access this information from SNS users (Fournier & Clarke, 2011; Morris, 2014). This process presents its own complications in that not only is it time consuming to access and code content, but it also presents potential concerns about privacy invasion. Therefore, in the current study participants were asked to assess their own SNS content by counting occurrences of specific types of content. This meant that the researcher never had access to their SNS profiles (thus allowing a sense of privacy) while providing detailed and accurate information about their SNS content. It also enabled the researcher to collect additional data (based on the variables previously identified) in order to identify predictors of SNCAA. Based on my review of the literature, this is the first study of its kind that has used this method to measure communication about drinking on SNSs.

<center>**Methods**</center>

Participants and Recruitment

Participants were 299 undergraduate students enrolled in communication courses at a large Midwestern university. The majority of participants were white ($n = 246$, 82.3%), female ($n = 191$, 63.9%), and between the ages of 18 and 20 ($n = 217$, 72.6%). Additionally, freshmen ($n = 125$, 41.8%) were overrepresented in comparison to sophomores ($n = 58$, 19.4%), juniors ($n = 64$, 21.4%), and seniors ($n = 52$, 17.4%). This sample is representative of the research participant pool, which consists of students enrolled in lower-division communication course.

Participants were recruited through SONA, the Department of Communication's research management system, which provides access to more than 3,500 students enrolled in communication courses from a variety of majors across the university. Students enrolled in these courses are required to complete a research study in order to receive course credit. The following study information (Table 3.01) was posted to SONA:

Table 3.01

Study Recruitment Information

Study Information	
Study Name	Study on Students' Use of Alcohol and Social Media Sites
Description	This study is about using social networking sites such as Facebook and Twitter to share information. Participants will participate in a study session where they will complete a survey about the type of content they share on social media sites. Afterwards, they will be asked to discuss their use of social networking sites with a small group. Study sessions will last approximately 45 minutes. All sessions will be held in the Media Center Research Theater (Room 23) in the basement of the Grehan Journalism Building. Please arrive 5-10 minutes early for check-in. Each session will start promptly at the top the hour. Once a session starts, late-comers cannot be admitted.

Table 3.01 (cont.)

Study Recruitment Information

Eligibility Requirements	1) You must be at least 18 years of age; 2) have consumed at least 1 alcoholic beverage in the past month; and 3) have an active Facebook, Twitter or Instagram account.
Preparation	Please make sure you know your account log-in and password information for Facebook, Twitter, and/or Instagram. You may want to write them down so you can easily log-in to your accounts during the study.
Duration	45 minutes
Credit	1 credits

Students who desired to participate and who met the eligibility requirements were instructed to sign-up for a 45 minute timeslot at a pre-arranged time. Up to 13 participants were allowed to sign-up for each study session. Research sessions were held in the Department of Communication's research theater. Attendance ranged from two to 13 participants per session. In total, 36 sessions were held until sufficient participation was reached.

Procedures

Once participants arrived at the research location they were given an IRB-approved consent form (see Appendix D) and were instructed to sign it before beginning the study. Participants were assured that the consent form was the only record of their personal information and would not be connected to their survey responses. After completing the consent form, participants were given instructions for completing the study. First, participants were asked to complete an electronic survey asking questions about their use of SNSs. Computers were arranged so that screens were split with the electronic survey on one side and the Facebook sign-in page on the other. If participants had an active Facebook account, they were instructed to go to their personal profile page

in order to answer survey items about their Facebook content. Additionally, they were instructed to take similar measures if they used Twitter or Instagram. Participants were also instructed that after completing the electronic survey they should wait until everyone had finished at which point a short focus group was conducted. The survey portion of the research session lasted approximately 25 – 35 minutes.

A focus group guide was prepared and was used to conduct a short (approximately 10 minute) discussion with research participants. Questions primarily focused on generating ideas for a future research-based campaign targeting students' use of SNSs and helping them manage their impressions in a responsible and professional manner. The responses to the focus group sessions were not included in the current study, but instead are intended to guide future research. After the discussion, participants were thanked for their participation and told that they had been assigned one research participation credit.

Measures

The complete survey can be found in Appendix E; however, only items applicable to the current dissertation study and the research questions outlined in the literature review section of this chapter are presented in detail here.

Estimated norms were measured using one item: "What percentage of students at UK do you think use social media to communicate about alcohol related activities?" This measure was adapted from Rimal and Real (2005). Responses ranged from 0% and 100% ($M = 52.69\%$, $SD = 19.70$).

SNS communication about alcohol related activities (SNCAA) was assessed for each of three major social networking sites: Facebook, Twitter, and Instagram. These

sites were chosen as the most commonly use SNSs identified by Study 1. After determining whether or not students use the respective social networking site, participants were instructed to log-in to the site and to bring up their user profile in a separate window from the survey. Participants were then prompted to count certain types of content they had posted to their own SNS profile during the past month. 15 items were used to measure the frequency and breadth of content students share on these sites. For Facebook and Twitter, three items for each respectively addressed text-only posts (e.g., "During the past month, count how many of your status updates on Facebook contain a reference to an alcoholic beverage [e.g., 'I love tequila!' 'It's a wine kind of night.']"). These items are adapted from content analysis categories developed by Egan and Moreno (2011). They include references to an alcoholic beverage (e.g., "I love tequila!"); references to drinking alcohol or a drinking related activity (e.g., "Getting wasted!" "I'm the beer pong champion!"), and references to missing class or an activity as a result of being intoxicated (e.g., "I can't go to class. I'm way too hungover").

Additionally, for Facebook and Twitter, three items for each respectively addressed photographic content (e.g., "During the past month, count how many of your photos on Facebook contain images of alcohol [e.g., keg, beer bottles, wine glasses, alcohol brand signs/posters]"). Items are adapted from content categories used by Fournier and Clarke (2011) to code photos for images that (a) contain alcohol, (b) are taken at a drinking establishment, and 3) include a comment or caption about drinking or intoxication (e.g., "Happy hour with the boys." "You look so drunk!"). Participants were asked not to include posts that they had already counted in subsequent item counts. For

Instagram, only the 3 items pertaining to photographic content were used since Instagram does not allow users to post text only content.

The month time frame was chosen in order to account for fluctuations in sharing patterns. Research by Lu and colleagues (2007) demonstrates that this recall period can be as, if not more, accurate than shorter recall periods. With the addition of counting, the current research should be able to capture exceptionally accurate data for how often students are posting to these sites. Responses were an open-ended numeric response (0 – 999) allowing participants to indicate the exact number of items posted. All responses were summed to create a total SNCAA variable ($M = 5.43$, $SD = 12.23$).

Theory of normative social behavior. Five variables were adapted from Rimal and Real's (2005) study testing the theory of normative social behavior, including: benefit to self, benefit to others, anticipatory socialization, aspiration, and perceived similarity. To measure injunctive norms, four items were adapted from Rimal and Real (2005) and two items were adapted from Fishbein and Ajzen (2011). The two injunctive norms measurement scales are very similar (and in fact include overlapping items); thus, the two items taken from Fishbein and Ajzen (2011) were included to increase construct validity. Additionally, items for measuring descriptive norms were adapted from Fishbein and Ajzen (2011). Rimal and Real's (2005) measure of descriptive norms asked participants to estimate how often other students drink and how many drinks they typically consume. However, for the purposes of this study, it was determined that this format of questioning would be difficult to answer in relation to SNCAA, and thus, Fishbein and Ajzen's (2011) measure which reports more general perceptions (see items on the next page) was employed. The means, standard deviations, Cronbach's α

reliability, skewness, and kurtosis of each of the constructs are reported in Table 3.02. In general, the scales were reliable (Cronbach's α ranged from .70 to .94) and symmetrical (absolute skewness ranged from -0.80 to 0.99). To meet assumptions of normality for regression analyses, the "rule of 1"—which states that skewness values between -1 and 1 are acceptable—was used to determine satisfactory levels of skewness (George & Mallery, 2013).

Table 3.02

Constructs' Descriptive Statistics

	M (*SD*)	α	Skewness	Kurtosis
Descriptive norms	2.74 (0.97)	0.70	0.11	-0.35
Injunctive norms	1.83 (0.90)	0.90	0.99	0.24
Benefits to self	2.35 (1.11)	0.94	0.15	-1.23
Benefits to others	3.61 (1.04)	0.93	-0.80	0.74
Anticipatory socialization	2.88 (1.08)	0.89	-0.16	-0.60
Aspiration	3.97 (1.01)	0.90	-0.39	-0.10
Perceived similarity	3.51 (0.92)	0.81	-0.26	-0.51

Descriptive norms were measured by three items: "Most people like me regularly use social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities," "Most people I respect and admire will use social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities," "In general, most people use social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities." Responses included six point Likert-type scales that ranged from very strongly disagree – very strongly agree, very unlikely – very likely, and very strongly disagree – very strongly agree, respectively. A principal component analysis was conducted to determine item cohesion. The three item descriptive norms scale had an

overall Eigenvalue of 1.883 and accounted for 62.75% of the variance. No other Eigenvalues were greater than 1. Descriptive statistics can be found in Table 3.02.

Injunctive norms were measured using six items: "Most people who are important to me think that _____ use social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities," "Most people whose opinions I value would approve of me using social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities," "It is expected of me that I should use social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities," "People who are important to me want me to use social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities," "It is appropriate to use social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities," and "Society in general considers this activity to be appropriate." Responses included six point Likert-type scales that ranged from I should not – I should for the first item, and very strongly disagree – very strongly agree for the remaining five. A principal component analysis was conducted to determine item cohesion. One item was removed to improve fit ("Society in general considers this activity to be appropriate"). The five item injunctive norms scale had an overall Eigenvalue of 3.56 and accounted for 71.70% of the variance. No other Eigenvalues were greater than 1. Descriptive statistics can be found in Table 3.02.

Benefit to oneself was assessed using four items: "Using social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities is rewarding;" "Using social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities is pleasurable;" "Using social media (Facebook, Twitter, Instagram,

etc.) to communicate about alcohol related activities is enjoyable;" "Using social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities is fun." Responses included six point Likert-type scales that ranged from very strongly disagree – very strongly agree. A principal component analysis was conducted to determine item cohesion. The four item benefit to self scale had an overall Eigenvalue of 3.38 and accounted for 84.57% of the variance. No other Eigenvalues were greater than 1. Descriptive statistics can be found in Table 3.02.

Benefit to others was assessed using four items: "For most people, using social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities is rewarding;" "For most people, using social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities is pleasurable;" "For most people, using social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities is enjoyable;" and "For most people, using social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities is fun." Responses included six point Likert-type scales that ranged from very strongly disagree – very strongly agree. A principal component analysis was conducted to determine item cohesion. The four item benefit to others scale had an overall Eigenvalue of 3.34 and accounted for 83.37% of the variance. No other Eigenvalues were greater than 1. Descriptive statistics can be found in Table 3.02.

Anticipatory socialization was assessed using four items: "Using social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities is part of a college experience;" "It is an important part of social life to use social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities;"

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"College students are expected to use social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities;" and "Using social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities allows students to make friends." Responses included six point Likert-type scales that ranged from very strongly disagree – very strongly agree. A principal component analysis was conducted to determine item cohesion. The four item anticipatory socialization scale had an overall Eigenvalue of 3.02 and accounted for 75.53% of the variance. No other Eigenvalues were greater than 1. Descriptive statistics can be found in Table 3.02.

Aspiration was assessed using four items: "To what extent do you believe that University of Kentucky students are respectable?;" "To what extent do you believe University of Kentucky students are inspiring?;" "To what extent do you look up to University of Kentucky students?;" and "To what extent do you think highly of other University of Kentucky students?." Responses included six point Likert-type scales that ranged from not at all – very much. A principal component analysis was conducted to determine item cohesion. The four item aspiration scale had an overall Eigenvalue of 3.10 and accounted for 77.44% of the variance. No other Eigenvalues were greater than 1. Descriptive statistics can be found in Table 3.02.

Perceived similarity was assed using four items: "How similar do you think most University of Kentucky students are to you intellectually?;" "How similar do you think most University of Kentucky students are to you in the way they think?;" "How similar do you think most University of Kentucky students are to you in their values?;" and "How similar do you think most University of Kentucky students are to you in their behaviors?." Responses included six point Likert-type scales that ranged from not at all –

very much. A principal component analysis was conducted to determine item cohesion. The four item perceived similarity scale had an overall Eigenvalue of 2.57 and accounted for 64.17% of the variance. No other Eigenvalues were greater than 1. Descriptive statistics can be found in Table 3.02.

Additional predictor variables. In addition to the variables identified by the TNSB, five additional predictor variables were measured: instrumental attitudes, belief strength, ego involvement, consideration of future consequences, and need to belong. The means, standard deviations, Cronbach's α reliability, skewness, and kurtosis of each of the constructs are reported in Table 3.03. In general, the scales were reliable (Cronbach's α ranged from .80 to .94) and symmetrical (absolute skewness ranged from -0.39 to 0.99).

Table 3.03

Additional Predictor Variables' Descriptive Statistics

	M (*SD*)	α	Skewness	Kurtosis
Instrumental attitudes	1.78 (0.83)	0.90	0.99	0.41
Belief strength	2.58 (1.10)	0.80	0.30	-0.69
Ego involvement	3.01 (1.00)	0.87	-0.21	-0.76
Consideration of future consequences	3.42 (0.74)	0.83	-0.27	-0.05
Need to belong	3.40 (0.72)	0.80	-0.39	-0.07

Instrumental attitudes were assessed by the item "Using social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities is:." Responses included scales from foolish – wise, bad – good, harmful – helpful, unnecessary – necessary, and unimportant – important. These were adapted from Fishbein and Ajzen (2011). A principal component analysis was conducted to determine item cohesion. The five item instrumental attitude scale had an overall Eigenvalue of 3.55 and accounted for

71.06% of the variance. No other Eigenvalues were greater than 1. Descriptive statistics can be found in Table 3.03.

Belief strength. Additionally, attitudes were assessed using five indirect belief based items (e.g., "Using social media to communicate about my alcohol related activities will help me fit in with my peers.") with responses to six point Likert-type scales that ranged from very unlikely – very likely. These were adapted from Fishbein and Ajzen (2011). A principal component analysis was conducted to determine item cohesion. Two items were removed due to lack of fit. The three item belief strength scale had an overall Eigenvalue of 2.19 and accounted for 73.06% of the variance. No other Eigenvalues were greater than 1. Descriptive statistics can be found in Table 3.03.

Per Fishbein and Ajzen' (2011) expectancy value model, the composite measure for instrumental attitude was multiplied by belief strength to create an overall instrumental attitude variable.

Ego involvement was assessed by six items modified from Lapinski and Boster's (2001) scale. They included: "I place high value on being someone who likes to party;" "Being someone who likes to drink is central to how I see myself;" "Drinking with my friends is an important part of who I am;" "I am not the type of person oriented who goes to college parties;" "I would feel at a loss if were forced to give up participating in alcohol related activities;" and "I think of myself as someone who regularly goes out to drink with my friends." Responses included six point Likert-type scales that ranged from not at all – very much. A principal component analysis was conducted to determine item cohesion. The six item ego involvement scale had an overall Eigenvalue of 3.65 and

accounted for 60.85% of the variance. No other Eigenvalues were greater than 1.

Descriptive statistics can be found in Table 3.03.

Need to belong was assessed by the ten item scale developed by Baumeister and

Leary (1995). Respondents were asked to indicate the extent that they agree with each

item using a five point Likert-type scale that ranges from 1 (strongly disagree) to 5

(strong agree). Examples of items include the following: "If other people don't seem to

accept me, I don't let it bother me," "I try hard not to do things that will make other

people avoid or reject me," "I seldom worry about whether other people care about me."

A principal component analysis was conducted to determine item cohesion. Three items

were removed due to lack of fit. The seven item need to belong scale had an overall

Eigenvalue of 3.26 and accounted for 46.58% of the variance. No other Eigenvalues were

greater than 1. Descriptive statistics can be found in Table 3.03.

Consideration of future consequences (CFC) was assessed using the 12-item

CFC measure developed by Strathman and colleagues (1994). Respondents were asked to

indicate the extent that each item characterizes them using a five point Likert-type scale

that ranges from 1 (extremely uncharacteristic) to 5 (extremely characteristic). Examples

of items include the following: "I often consider how things might be in the future and try

to influence those things with my day to day behavior," "I only act to satisfy immediate

concerns, figuring the future will take care of itself," and "I think that sacrificing now is

usually unnecessary since future outcomes can be dealt with at a later time" (Orbell et al.,

2004; Strathman et al., 1994). A principal component analysis initially identified four

factors with Eigenvalues greater than 1.0 among the 12 items. Per Petrocelli's (2003)

recommendation, four items were removed and a principal component analysis was

conducted with the eight remaining items. One additional item was removed due to lack of fit. The remaining seven item CFC scale had an overall Eigenvalue of 3.49 and accounted for 49.82% of the variance. No other Eigenvalues were greater than 1.

Control variables. The following variables were included in order to control for potential confounders.

Alcohol consumption was assessed using two items adapted from the National Institute on Alcohol and Abuse and Alcoholism's (NIAAA) National Epidemiologic Survey on Alcohol and Related Conditions-III (NESARC-III).

Table 3.04

Alcohol Consumption Survey Items

Survey Question	Responses	*M* (*SD*)
Frequency of binge drinking During the last 12 months, how often did you have 5 or more (males) or 4 or more (females) drinks containing any kind of alcohol in within a two-hour period? That would be the equivalent of at least 5 (4) 12-ounce cans or bottles of beer, 5 (4) five ounce glasses of wine, 5 (4) drinks each containing one shot of liquor or spirits.	9 = Every day 8 = 5 – 6 days a week 7 = 3 – 4 days a week 6 = 2 days a week 5 = 1 day a week 4 = 2 – 3 days a month 3= 1 day a month 2 = 3 – 11 days in the past year 1 = 1 – 2 days in the past year	4.33 (2.31)
Average amount of alcohol per occasion During the last 12 months, how many alcoholic drinks did you have on a typical day when you drank alcohol?	10 = 25 or more drinks 9 = 19 – 24 drinks 8 = 16 – 18 drinks 7 = 12 – 15 drinks 6 = 9 – 11 drinks 5 = 7 – 8 drinks 4 = 5 – 6 drinks 3 = 3 – 4 drinks 2 = 2 drinks 1 = 1 drink	3.78 (1.72)

Content monitored. In Study 1, participants indicated that many University groups monitor members' social media profiles and have strict guidelines and

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consequences associate with content deemed inappropriate. Thus, in order to control for students who were members of these groups, students were asked to first identify University groups of which they are members (e.g., fraternity, sorority, athletics, residence life, student government, etc.)—73% indicated they were a member of at least one University affiliated group. Additionally, when asked if "any of these groups monitor or restrict the content you post on social media," 47.2% of all participants indicated "Yes."

   Frequency of SNS use. Participants were also asked to report how often they used the SNSs of interest—Facebook, Twitter, and Instagram. If participants answered "Never," skip logic was used to pass over the pertinent set of use of SNS to communicate about drinking items. Responses to the three items were averaged to create the overall SNS use variable.

Table 3.05

Frequency of SNS Use Survey Item

Survey Question	Responses	*M* (*SD*)
How often do you use [Facebook/Twitter/Instagram] (posting photos, browsing others photos, commenting on photos, direct messaging, etc.)?	8 = More than 3 times a day 7 = 2 – 3 times a day 6 = About once a day 5 = 3 – 5 days per week 4 = 1 – 2 days per week 3 = Every few weeks 2 = Less often 1 = Never	5.94 (1.07)

Pilot Testing

   Two months prior to conducting data collection for Study 2, pilot testing of the survey items (described above) was conducted in order to ensure procedures for

responding were clear and easy to follow—particularly items asking students to identify

and count various types of SNS posts (i.e., SNCAA items). Participants were recruited

from the Department of Communication's summer undergraduate courses. Instructors of

these courses were contacted and asked to (a) help recruit students, and (b) offer students

extra credit for participating. Alternative extra credit assignments were made available

for students who were not able to participate. Figure 3.01 below displays the recruitment

text that was email to students by their instructors. Out of the 12 students who

participated, seven were female (58%). Most participants were 21 or older ($n = 10$; 83%),

white ($n = 7$; 58%), and upperclassmen ($n = 11$; 92%).

Jenna Reno, a doctoral candidate in the Department of Communication, is looking for
research participants. The study is part of her dissertation research, which focuses on
students' use of social media websites. If you participate in the study, you will receive
___ extra credit points. Other opportunities for extra credit are available if you cannot
participate. If you are interested in signing up for the study, follow the link below for
more information.
http://www.signupgenius.com/go/10c0545a4ad28a2f94-study

Figure 3.01. Pilot Study Recruitment Information

Students who desired to participate were instructed to sign-up for a 45 minute

timeslot at a pre-arranged time. Research sessions were held in the Department of

Communication's research theater. Attendance ranged from two to five participants per

session. In total, four sessions were held until sufficient participation was reached to

determine that survey procedures were straightforward and easy to complete.

Pilot testing procedures. Upon arriving at the research location, participants

were given IRB-approved consent forms to complete (see Appendix F). Only students

who agreed to the terms specified in the consent form were allowed to participate. After

consent forms were signed, students were asked to complete the survey and instructed to

make note of any questions or confusion they encountered while completing the survey. I

provided them with paper and pens to take notes. Once everyone was finished, a short

focus group was conducted. Figure 3.02 below provides the questions used to guide the

focus group discussions. After the discussion, participants were thanked for participating

and told that their instructors would be contacted in order to grant extra credit.

Identifying information (i.e., participant names and instructor names) were only used to

grant extra credit and were not attached to survey responses.

"Now that you've completed the survey, I am wondering what you think could be changed to make these kinds of surveys better. Will you help me figure out a few issues?"
1) "What could we do to make it easier for people to be honest about their online posting behavior?"
2) "What could we do to make it easier for people to be accurate about their online posting behavior?"
3) "What the best time frame to ask people to remember their online posting behavior?"
4) What do you want me to keep in mind about asking people questions about online posting behavior in a survey?"
5) Are there any new trends in the way students are using social media or sharing information online that I should know about?
6) Were there any words that I used today that were hard to understand?

Figure 3.02. Pilot Study Focus Group Guide

Pilot testing results. In general, participants in the pilot testing sessions were able

to successfully complete the survey and had few suggestions for improvement. Only

minor changes were made to the survey before full implementation of Study 2

commenced. Examples of changes that were made follow:

- Clarifying of instructions for differentiating between text posts and photos posts

  when counting SNCAA. For example, the following instructions were given

  before participants responded to SNCAA items about Facebook text posts: "Do

not include posts that only contain photos or content shared from other places

(e.g., Twitter, Instagram, other websites)."

- Allowing students to skip survey items pertaining to SNSs that they use but on
which they had not recently posted content (e.g., Facebook). For example, the
following item was added before the SNCAA items about Facebook: "Have you
posted content (e.g., status updates, shared photos, etc.) to your Facebook profile
in the past 30 days?" Students who responded by answering "no" were directed
to the next section of items about Twitter.

- The content monitored item was added to control for students who participate in
campus organizations that monitor or restrict their SNS content.

Other changes included corrections of small errors in the online survey structure (e.g.,
repeat questions, faulty survey progress bar, etc.) and adding additional items that were
not included in Study 2's analyses.

Statistical Analyses

The current study employs negative binomial regression to analyze relationships
between the independent variables and the dependent variable (SNCAA) of interest (see
H1 – H8b, RQ6). Negative binomial regression is recommended for count variable
outcomes that are over dispersed (i.e., the variance is much larger than the mean
[SNCAA; $M = 5.43$, variance = 149.46]; Hilbe, 2011). I adapted the procedures described
by Rimal and Real (2005) for testing the theory of normative behavior within the current
context. Rimal and Real (2005) conducted hierarchical regression analyses where they
entered their control variables in the first block and descriptive norms in the second
block. Each proposed normative mechanism (i.e., injunctive norms, outcome expectation,

and group identity variables) were then entered into the third block and tested individually. For each subsequent model, changes in the explained variance were assessed. However, negative binomial regression does not allow for this form of hierarchical regression where variables are entered in different blocks nor does it provide the proportion of the explained variance. Thus, this study employs a series of multiple regressions where variables were added sequentially and each model was examined for changes in fit statistics (e.g., Deviance value/df, AIC, and BIC; Hilbe, 2011). All predictor variables were mean centered per Aiken and West's (1991) recommendations in order to aid interpretations of parameter estimates in regression models. SPSS 22 was used for all statistical analyses.

Results

The first research question in Study 2 (RQ5) sought to identify differences in students' estimated norms for communicating about alcohol related behavior and the percentage of students' who reported using SNS to communicate in this way. Measures of students' use of SNSs to communicate about alcohol related behavior indicate that 62% of the sample have posted at least once about this topic in the past month. A Student's t-test was used to identify if on average students' estimated norms (i.e., the percentage of UK students who engage in SNCAA) differ from the reported sample mean of students who engage in SNCAA. A Student's t-test is used "when you have one measurement variable, and you want to compare the mean value of the measurement variable to some theoretical expectation" (McDonald, 2014, p. 121). In this instance, the measure variable is students' estimated norms and the "theoretical expectation" is the reported sample mean of students who engage in SNCAA. On average, students

perceived descriptive norms for UK students' SNCAA ($M = 52.69\%$; $SD = 19.70$) are lower than the students' reported SNCAA, $t(297) = -8.25$, $p < .001$.

Testing the Theory of Normative Social Behavior

In order to examine the application of TNSB to the behavior of interest (i.e., SNS communication about alcohol related activities [SNCAA]), first Pearson correlations were conducted amongst all of the hypothesized predictor variables identified in TNSB and SNCAA. All but one of the hypothesized predictor variables (benefit to others) was significantly correlated with SNCAA (see Table 3.06).

Table 3.06

Correlations

	Descriptive Norms	Injunctive Norms	Benefit to Self	Benefit to Others	Anticipatory Socialization	Aspiration	Perceived Similarity	SNCAA
Descriptive Norms	-	.603**	.527**	.327**	.525**	.110	.079	.351**
Injunctive Norms		-	.658**	.258**	.539**	.063	.036	.343**
Benefit to Self			-	.376**	.578**	.109	.090	.293**
Benefit to Others				-	.346**	.099	-.009	.113
Anticipatory Socialization					-	-.001	-.014	.270**
Aspiration						-	.591**	.135*
Perceived Similarity							-	.140*
SNCAA								-

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Next, hypotheses were tested using negative binomial regression. The following control variables were included in all analyses: age, gender, race, class, frequency of SNS use, content monitoring, frequency of binge drinking, and average number of alcoholic beverages per occasion.

First, each of the control variables was tested individually to determine its relationship to SNCAA. Participants who were 21 or older were 1.45 times more likely to communicate on SNSs about alcohol related activities (Wald's $X^2 = 6.69$, p = .01). Similarly, upperclassmen (juniors and seniors) were 1.37 times more likely to engage in this communicative behavior (Wald's $X^2 = 5.99$, p = .014). Interestingly, those who reported being in a University sponsored group who monitored their social media use were 1.46 times more likely to communicate on SNS about alcohol related behavior (Wald's $X^2 = 9.04$, p = .003). Differences in gender and race were not statistically significant. Additionally, frequency of binge drinking (IRR = 1.16, 95% CI = 1.10, 1.22), average number of alcoholic beverages per occasion (IRR = 1.08, 95% CI = 1.01, 1.16), and frequency of SNS use (IRR = 1.48, 95% CI = 1.31, 1.69) were all significant independent predictors of SNCAA.

Second, I tested the model by entering all control variables together. In this multivariate model, only age, frequency of binge drinking, and frequency of SNS use were significant (see Table 3.07).

Table 3.07

Model 1: Control Variable Predictors of Communication on SNSs about Alcohol Related Activities

		95% CI	
	IRR[a]	Lower	Upper
Age **(0 = under 21, 1 = 21+)**	**1.615**	**1.051**	**2.481**
Gender (0 = male, 1 = female)	1.102	.827	1.469
Class (0 = freshman/sophomore, 1 = junior/senior)	1.161	.802	1.681
Average number of drinks	.928	.838	1.029
Frequency of Binge Drinking	**1.239**	**1.145**	**1.340**
Frequency of SNS Use	**1.514**	**1.322**	**1.733**
Content Monitored **(0 = no, 1 = yes)**	**1.267**	**.962**	**1.670**

    a. Exp(Beta) from regression equations
    b. All bolded variables were significant, where $p < .05$

Next, descriptive norms were added to the model and were found to be a significant predictor of SNCAA (IRR = 2.165, 95% CI = 1.873, 2.502). Adding descriptive norms to the model also improved the overall goodness of fit (see Table 3.08, Model 2). Thus, Hypothesis 1 was supported.

To test H2a – H4b, multiple regression analyses were conducted by determining whether the addition of the remaining proposed predictor variables and the predictor variable x by descriptive norms interaction term resulted in (a) statistically significant IRRs, and 2) improved goodness of fit (see Table 3.08, Model 3a – 3k). Each of the subsequent predictor variables were tested independently of each other; thus, each

predictor variable (and the associated interaction term) was removed from the model before testing the effects of the next predictor variable (and its interaction term).

Injunctive norms. The main effect of injunctive norms when added to the model was significant (IRR = 1.54, 95% CI = 1.21, 1.95). However, the interaction term (injunctive norms x descriptive norms) was not significantly related to SNCAA (IRR = .97, 95% CI = .830, 1.14). Thus, Hypothesis 2a was supported, whereas Hypothesis 2b was not.

Benefit to oneself. The main effect of benefit to oneself when added to the model was significant (IRR = 1.38; 95% CI = 1.17, 162). However, the interaction term (benefit to oneself x descriptive norms) was not significantly related to SNCAA (IRR = 1.10, 95% CI = .97, 1.26).

Benefit to others. The main effect of benefit to others when added to the model was not significant (IRR = .996, 95% CI = .846, 1.72). Likewise, the interaction term (benefit to others x descriptive norms) was also not significantly related to SNCAA (IRR = .971, 95% CI = .830, 1.14).

Anticipatory socialization. The main effect of anticipatory socialization when added to the model was significant (IRR = 1.38, 95% CI = 1.19, 1.61). However, the interaction term (anticipatory socialization x descriptive norms) was not significantly related to SNCAA (IRR = 1.04, 95% CI = .92, 1.18).

Both benefit to oneself and anticipatory socialization were positively related SNCAA; thus, Hypothesis 3a receive partial support. However, none of the outcome expectation variables (i.e., benefit to oneself, benefit to others, and anticipatory socialization) increased the magnitude of the relationship between descriptive norms and

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students' communication on SNSs about alcohol related activities. Hence, Hypothesis 3b was not supported. And so, although outcome expectations do not moderate the relationship between descriptive norms and SNCAA, they do demonstrate predictive value within the model.

Aspiration. The main effect of aspiration when added to the model was not significant (IRR = 1.15, 95% CI = .995, 1.34). Neither was the interaction term (aspiration x descriptive norms) significantly related to SNCAA (IRR = 1.16, 95% CI = 1.00, 1.34).

Perceived similarity. The main effect of perceived similarity when added to the model was not significant (IRR = 1.14, 95% CI = .97, 1.34). However, the interaction term (perceived similarity x descriptive norms) did demonstrate a significant relationship with SNCAA (IRR = 1.20, 95% CI = 1.01, 1.40).

Thus, neither group identity variables (i.e., aspiration and perceived similarity) were significantly associated with SNCAA within the model; therefore, Hypothesis 4a was not supported. However, results demonstrate that the magnitude of the relationship between descriptive norms and SNCAA will become slightly greater as perceived similarity increases—demonstrating partial support for Hypothesis 4b.

Additional Predictor Variables

The remaining predictor variables (i.e., those tested in addition to the TNSB measures) were tested in the same fashion as described above wherein they were added to Model 2 in order to test for main affects as well as moderating effects on the relationship between descriptive norms and SNCAA.

Instrumental attitude. The main effect of instrumental attitude when added to the model was significant (IRR = 1.06, 95% CI = 1.003, 1.12). However, the interaction term (instrumental attitudes x descriptive norms) was not significantly associated with SNCAA (IRR = .984, 95% CI = .95, 1.01). Thus, while instrumental attitudes do not increase the magnitude of the relationship between descriptive norms and students' communication on SNSs about alcohol related activities (Hypothesis 5b), they do increase the predictive value of the model (Hypothesis 5a).

Need to belong. The main effect of need to belong when added to the model was not significant (IRR = .93, 95% CI = .77, 1.11). Additionally, the interaction term (need to belong x descriptive norms) was also not significantly associated with SNCAA (IRR = 1.04, 95% CI = .855, 1.25). Thus, need to belong is not significantly associated with SNCAA nor does it increased the magnitude of the relationship between descriptive norms and SNCAA; therefore, both Hypothesis 6a and 6b did not receive support.

Ego involvement. The main effect of ego involvement when added to the model was significant (IRR = 1.41, 95% CI = 1.15, 1.72). However, the interaction term (ego involvement x descriptive norms) was not significantly associated with SNCAA (IRR = 1.01, 95% CI = .86, 1.18). Thus, while ego involvement does add predictive value to the model (Hypothesis 7a), it does not increase the magnitude of the relationship between descriptive norms and SNCAA (Hypothesis 7b).

Consideration of future consequences. The main effect of consideration of future consequences (CFC) when added to the model was not significant (IRR = .883, 95% CI = .71, 1.09). Additionally, the interaction term (CFC x descriptive norms) was not significantly associated with SNCAA (IRR = .97, 95% CI = .80, 1.17). Thus, CFC

does not increase the magnitude of the relationship between descriptive norms and

SNCAA; therefore, both Hypothesis 8a and 8b did not receive support.

Table 3.08

Goodness of Fit Statistics

	Deviance value/df	AIC	BIC
Model 1: Control Variables	2.02	1579.93	1609.51
Model 2: Descriptive Norms	1.63	1465.73	1502.70
Model 3a: Injunctive Norms Inj. Norms x Desc. Norms	1.58	1448.30	1492.62
Model 3b: Ben. to oneself Ben. to oneself x Desc. Norms	1.57	1451.45	1495.82
Model 3c: Ben. to others Ben. to others x Desc. Norms	1.64	1469.60	1513.96
Model 3d: Anticipatory socialization Anticipatory soc.. x Desc. Norms	1.57	1451.38	1495.75
Model 3e: Aspiration Aspiration x Desc. Norms	1.61	1462.43	1506.80
Model 3f: Perceived similarity Perceived similarity x Desc. Norms	1.61	1462.31	1505.68
Model 3h: Instrumental Attitudes Instrumental Attitudes x Desc. Norms	1.62	1464.98	1509.34
Model 3i: Need to belong Need to belong x Desc. norms	1.63	1468.98	1513.34
Model 3j: Ego involvement Ego involvement x Desc. Norms	1.60	1458.50	1502.87

Table 3.08 (continued)

Goodness of Fit Statistics

	Deviance value/df	AIC	BIC
Model 3k: CFC CFC x Desc. Norms	1.63	1468.21	1512.57

Developing a Predictive Model

In order to construct a model that would provide the best predictive value, all of

the control variables and predictor variables were entered into the model. Subsequently,

variables that were not significant were removed in a backwards elimination fashion until

only significant variables remained and goodness of fit statistics could no longer be

improved. The final model can be found in Table 3.09.

Table 3.09

Predictors of Students' Communication on SNSs about Alcohol Related Activities (All Variables Included Simultaneously)

	IRR[a]	95% CI Lower	95% CI Upper
(Intercept)**	2.178	1.666	2.848
Age (0 = under 21, 1 = 21+)**	1.865	1.354	2.57
Gender (0 = male, 1 = female)*	1.368	1.016	1.841
Frequency of SNS Use**	1.285	1.108	1.49
Frequency of Binge Drinking*	1.093	1.013	1.18
Descriptive Norms**	1.454	1.201	1.76
Injunctive Norms**	1.38	1.093	1.742
Anticipatory Socialization**	1.378	1.175	1.615
Instrumental Attitudes*	0.945	0.896	0.998
Ego Involvement**	1.314	1.068	1.616
Perceived Similarity x Descriptive Norms**	1.31	1.105	1.553
Deviance value/df	1.5		
AIC	1424.73		
BIC	1465.36		

a. Exp(Beta) from regression equations
b. * $p < .05$
c. ** $p < .01$

Discussion

The current study sought to identify psychographic predictors of students' SNS communication about alcohol related activities (SNCAA). Approximately 62% of participants reported communicating at least once in the past month about alcohol across the three SNSs of interest: Facebook, Twitter, and Instagram—with the average number of posts per month being around 5.5. This means that the average student in this study is sending over 5 messages a month on SNSs to a relatively large audience (research by the Pew Research Center indicates that the average Facebook user ages 18-29 has over 300 "friends"; Smith, 2014). The reach of these messages grows even larger if other users "like" or share the content with their network of connections. Thus, a single photo shared of a college party where heavy drinking occurs could reach several thousand SNS users with the message that this type of behavior is normative and (unless noted otherwise) socially approved. In light of the negative consequences associated with binge drinking, this study seeks to understand the reasons students choose to communicate in this way as a starting point for understanding the potential effect of this type of communication.

Previous research has demonstrated a positive relationship between social norms and intention to perform a behavior. The theory of normative social behavior (TNSB) postulates that several factors moderate the relationship between descriptive norms and behavioral intent (i.e., injunctive norms, outcome expectations, and group identity; Rimal & Real, 2005). The TNSB was used as an initial framework for exploring predictors of SNCAA. As theorized, descriptive norms consistently were found to be a strong predictor of SNCAA—even when controlling for other variables. That is, the strength of students'

perceptions that SNCAA is a normal behavior practiced by a large majority of college students predicted higher levels of their personal SNCAA.

When examining the potential moderators identified in the TNSB (H2a – H4b), only one variable was found to increase the magnitude of the positive relationship between descriptive norms and SNCAA: perceived similarity. This suggests that the degree to which a student perceives other students to be similar to them *and* they perceive those similar others to SNCAA predicts their personal SNCAA. However, perceived similarity does not on its own predict SNCAA when controlling for descriptive norms as well as the other identified control variables. Likewise, the other group identity variable, aspiration, was not significantly associated with SNCAA. This finding could represent a potential disconnect between some students' perceptions of the behavior of students they aspire to be like and their own behavior. In Study 1, participants noted that even though they know they should not post to social media while drinking, the alcohol lowers their inhibitions for this behavior, and thus, they post content they later regret. Therefore, although on average participants reported that they aspire to be like and see themselves as similar to other University students, the degree to which their SNCAA conforms to their sense of group identity may vary. Indeed, the finding that perceived similarity moderates the relationship between descriptive norms and SNCAA suggests that only when students perceive that similar others perform the behavior are they more likely to communicate in this manner.

Additionally, other TNSB variables were found to significantly predict SNCAA even while controlling for the effect of descriptive norms and the other control variables (i.e., age, gender, class, race, alcohol use, etc.). First, injunctive norms independently

predicted SNCAA adding increased support for incorporating injunctive norms in addition to descriptive norms when applying theoretical models to behavior change interventions (Borsari & Carey, 2003; Schultz, Nolan, Cialdini, Goldstein, & Griskevicius, 2007; Webb, Joseph, Yardley, & Michie, 2010). In addition to injunctive norms, the TNSB's outcome expectation variables benefit to oneself and anticipatory socialization were both significant predictors of SNCAA; however, benefit to others was not. This could be an example of the third person effect—where individuals perceive media effects to be stronger for distant others (i.e., the third person) than they do for themselves (Davison, 1983). The reference group used to measure benefit to others was the generic "most people"—a potentially distant other. The correlation between benefit to self and benefit to others was statistically significant yet relatively small ($r = .376, p < .001$)—especially considering the phrasing of items for these variables was very similar. On average, participants scores for benefit to self ($M = 2.35. SD = 1.11$) were considerably lower than scores for benefit to others ($M = 3.61, SD = 1.04$). Thus, it appears that participants believe that "most people" perceive the benefits of SNCAA to be higher than they themselves do. This discrepancy could explain why benefit to self was a significant predictor of SNCAA while benefit to others was not.

In addition to the TNSB variables, several variables were examined as additional moderators of the relationship between descriptive norms and SNCAA (H5a – H8b)—instrumental attitudes, ego involvement, need to belong, and consideration of future consequences. While none of these variables increased the magnitude of the relationship between descriptive norms and SNCAA, both instrumental attitudes and ego involvement demonstrated a main effect on SNCAA. Previous research on attitudes has suggested that

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two variations of attitude may predict behavioral intention: experiential and instrumental (Fishbein & Ajzen, 2011). As definitions of experiential attitude fall closely in line with the TNSB's outcome expectations, a separate experiential attitude variable was not included in this study. However, the significance of instrumental attitudes as a predictor of SNCAA suggests that in addition to considering outcome expectations (experiential attitudes), attitudes pertaining to the judiciousness of these outcomes (instrumental attitudes) should also be considered.

Furthermore, the relationship between ego involvement and SNCAA suggests additional consideration be given to the role of group identity. Ego involvement looks at an individual's motivation to maintain a particular aspect of their identity—in this case, the identity of interest is that of someone who likes to drink and party. Thus, for those who are highly motivated to maintain this identity they are more likely to participate in SNCAA. Future research could examine the TNSB group identity variables (aspiration and perceived similarity) in relation specifically to groups of students who share this identity.

The final research question (RQ6) sought to identify a model that would best predict students' likelihood to participate in SNCAA. In this model, all of the previous predictor variables identified as having a main effect on SNCAA were retained with the exception of benefit to self. This may be an additional indicator in discrepancies pertaining to attitudes regarding the general enjoyment of SNCAA (benefit to self/experiential attitude) versus the value of the outcomes (instrumental attitudes—which were retained in the final model).

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Additionally, in the final model control variables that demonstrated a significant main effect included age, gender, frequency of SNS use, and frequency of binge drinking. While both frequency of SNS use and binge drinking seem to be rather obvious predictors, the inclusion of gender and age present interesting findings. In regard to age, results demonstrate that those who are over the age of 21 are more like to participate in SNCAA. This is in contrast to participants' remarks in Study 1, which suggest that as students get older they are less like to communicate on SNSs about alcohol related activity. One explanation could be related to differences in content type. While the current study identified different categories of SNCAA, it did not clearly differentiate between content portraying binge drinking (e.g., a party photo with multiple alcoholic beverage containers shown) and content portraying more responsible forms of drinking (e.g., a glass of wine with dinner). Thus, it could be that while those over the age of 21 are participating in more SNCAA, the content of these messages may be considerably more innocuous than the content of those under the age of 21. This suggests one area for future research is a more systematic examination of qualitative content students are sharing on SNSs.

Gender also was a significant predictor of SNCAA in the final model with females reporting 1.37 times more SNCAA than males. This is consistent with the findings of Patel (2014) that reveal that not only are women more likely to use Facebook, Twitter, and Instagram than men, but that women have 55% more Facebook wall posts than men. However, this finding may be due to the fact that the outcome variable (SNCAA) was strictly a count variable (number of posts) and was not transformed to a ratio (e.g., number of posts about alcohol / number of total posts). If this type of ratio had

been examined, gender differences may not have been significantly different. Further

limitations and strengths of the current project are discussed below.

Strengths and Limitations

Another limitation of this study is that RQ5 ("Do students' estimated norms for

communicating about alcohol on SNSs significantly differ from the prevalence of

students' reported SNS communication about alcohol related activities (SNCAA)?") was

tested by using the average number of students in the current study that reported

communicating on SNS about alcohol related activities. However, the sample is not

representative of the entire University student body. Thus, it may be that the finding of

the current study wherein 62% of participants reported engaging in SNCAA does not

reflect the true population average. One of the underlying assumptions of the TNSB is

that students misperceive the number of people who engage in the behavior. With respect

to drinking, students typically overestimate the number of other students who drink and

how heavily they drink (Perkins & Berkowitz, 1986; Perkins, Meilman, Leichliter,

Cashin, & Presley, 1999; Woodyard et al., 2013). However, the results of this study

found that on average students underestimate how many other students engage in

SNCAA. Implications of this finding are discussed in the next chapter.

Finally, when measuring aspiration and perceived similarity, I used the reference

group "UK students" for all items in order to ensure uniformity. A limitation of this

method is that "UK students" as a whole may not be a group that has the most influence

on students' SNCAA. Other reference groups (e.g., friends, peers, college students,

Facebook friends, etc.) may be a more salient influence of students' SNCAA. Thus,

future studies should seek to answer the question: what group(s) has the most influence on students SNS communication about alcohol related activities?

Conclusion

In summary, results of Study 2 indicate that, as theorized, descriptive norms are a primary predictor of SNCAA. Most of the other predictor variables proposed in the TNSB including injunctive norms, benefit to self, anticipatory socialization, perceived similarity, and aspiration were also found to have a main effect on SNCAA. Only benefit to others did not. However, perceived similarity was the only variable found to increase the magnitude of the positive relationship between descriptive norms and SNCAA. None of the other TNSB variables demonstrated a moderating effect as proposed by Rimal and Real (2005). Additionally, instrumental attitudes and ego involvement were also found to have a main effect on SNCAA, although they do not moderate the effect of descriptive norms. Theoretical, methodological, and practical implications of these findings (as well as the findings of Study 1) are discussed in the next chapter. Suggestions for future health campaigns and interventions are also provided.

CHAPTER 4

The overarching purpose of the current project was to examine how students communicate on SNSs about their alcohol related activities as well as their reasons and motives for communicating in this manner. Study 1 looked at communication on SNSs as a means for students to practice strategic self-presentation in relation to their impression management goals—specifically those surrounding their participation in alcohol related activities. Study 2 applied the findings of Study 1, along with previous research on behavioral predictors, to develop measurements that predict students' SNS communication about alcohol related activities (SNCAA). The following chapter discusses implications associated with the overall findings of both studies as well as directions for future research and health interventions.

Theoretical Implications

This project offers a novel perspective on college students' SNS communication about alcohol related activities by first examining theories of self-presentation and impression management online. Previous research demonstrates that young adults and college students are increasingly using SNSs as a primary form of communication and often use these sites as an outlet for disclosing highly personal information about their lives (Bazarova & Choi, 2014; Christofides et al., 2009; Nelson, 2013). Thus, Study 1 sought to investigate the ways in which students are disclosing about their use of alcohol on SNSs as well as their associated self-presentation tactics and impression management goals.

In examining these phenomena, Rosenberg and Egbert (2011) provide an important starting point for this study's understanding of self-presentation tactics and

impression management goals specific to Facebook. Study 1 expands on this research by (a) looking at SNSs beyond Facebook, (b) using qualitative methods to identify additional self-presentation tactics and impression management goals, and (c) specifically identifying tactics and goals related to communication on SNSs about alcohol related activity.

Previous research on SNSs, self-presentation, and impression management has focused on adapting scales based on face-to-face communication (Dominick, 1999; Huang, 2014; Jung, Youn, & Mcclung, 2007; Rosenberg & Egbert, 2011; Yoo, Kim, & Moon, 2012). However, communication on SNSs often falls outside of normal social conventions for face-to-face communication (Wright & Webb, 2011). For example, many people use SNSs as a means to broadcast their accomplishments in a manner (i.e., bragging) that would be considered uncouth in most social settings (Shavladze, 2015). Study 1 employs a qualitative approach to examining use of SNSs in order to identify new self-presentation tactics and their associated impression management goals.

Additionally, Study 1 examines self-presentation tactics and impression management goals as they relate to risky health behaviors—specifically binge drinking. Findings demonstrate that many of the impression management goals associated with disclosing this type of information online are similar to previously identified goals. However, one unique finding of Study 1 pertains to self-presentation tactics used to facilitate personal resource and arousal management goals. Participants could identify clear goals related to choosing not to disclose about their drinking behavior on SNSs such as not upsetting their parents (arousal management goals) or being able to maintain their standing in a campus organization (personal resource). However, findings suggest that

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some students are choosing to communicate in this way despite knowing the consequences that conflict directly with their impression management goals. One way students mitigate these potential consequences is by being strategic about where and how they present this type of information. While SNSs are largely considered to be publicly accessible, students appear to believe that some SNSs are more public than others (e.g., Facebook vs. Twitter). Thus they attempt to control potential threats to their personal resource and arousal management goals by switching self-presentation tactics between different SNSs based on their imagined audience members associated with the site.

Study 1 presents unique contributions to communication scholarship by examining how SNSs facilitate self-presentation tactics and impression management. However, additional research is needed to test the salience of these newly identified areas especially as it pertains to students' understanding of their own motives for strategically communicating on SNS. To address this concern, Study 2 builds on the work of Rimal and Real (2005) to examine their theory of normative social behavior (TNSB) as means of exploring predictors of SNCAA. The TNSB has been used to examine various behaviors including: college drinking, environmental conservation (Goldstein, Cialdini, & Griskevicius, 2008; Lapinski, Rimal, DeVries, & Lee, 2007), hand washing (Lapinski, Anderson, Shugart, & Todd, 2014), and health eating and exercise (Yun & Silk, 2011). This is the first study of its kind that examines communication as the behavior of interest using the TNSB model. Specifically, it explores communication about alcohol related activities. While the TNSB was developed as a means for explaining normative influences on drinking behavior (Rimal & Real, 2003), it has not been used to investigate norms for the ways in which students communicate about drinking. Thus, Study 2

presents a novel approach to understanding college drinking behavior by looking directly at norms for communicating about drinking on SNSs.

The TNSB identifies several normative mechanisms that potentially moderate the relationship between descriptive norms and behavior. While Study 2 did find that there was a significant relationship between descriptive norms and SNCAA, only one of the normative mechanism variables (perceived similarity) was found to increase the magnitude of the relationship. The five remaining variables did not produce a moderating effect, although they all (with the exception of benefit to others) demonstrated main effects on the outcome. These findings are similar to the results of Rimal and Real's (2005) initial test of the model where the majority of interactions terms were judged to be nonsignificant (either due to lack of statistical significance or because it failed to explain more than 1% of the variance). However, other tests of the TNSB have found that the proposed normative mechanisms do moderate the relationship between descriptive norms and behavioral outcomes (cf. Carcioppolo & Jensen, 2012; Lapinski et al., 2014; Rimal, 2008). One implication of this finding may be that the TNSB, as proposed, does not fit communicative behaviors—or at least online communication. These findings also suggest that the role of behavioral predictors on SNCAA falls more in line with models such as the theory of planned behavior (TPB; Azjen, 1991) wherein descriptive norms are considered an independent factor not influenced by other variables in the model. Thus, additional testing of this behavior could consider alternative theories that may best explain SNCAA by comparing the predictive value of different theoretical models (e.g., TNSB vs. TBP vs. TRA).

Additionally, Study 2 makes a substantial contribution to the development of the TNSB and behavior change theoretical models by identifying other predictor variables relevant to communication outcomes. Both instrumental attitudes (an element of the theory of reasoned action [TRA]; Ajzen & Fishbein, 1980) and ego involvement (a proposed addition to Rimal and Real's original 2005 conceptualization of the TNSB; cf. Lapinski & Rimal, 2005; Lapinski, Anderson, Shugart, & Ewen, 2014) were found to be significant predictors in the final model. As described in Chapter 3, instrumental attitudes are related to the TNSB's outcome expectations (which TRA terms experiential attitudes). Thus, future iterations of the TNSB might consider including instrumental attitudes as an additional form of outcome expectations. Likewise, the role of ego involvement in relation to group identity should also be considered. While ego involvement typically refers to one's personal identity (Johnson & Eagly, 1989), in some instances ego involvement may be formed or predicated upon one's sense of group identity (Siegenthaler & Lam, 1992). Hence, future research should explore how ego involvement is potentially related to group identity.

While there are multiple theories that are used to study and predict behavior, continued research examining theories might lead to the development of a hybrid model that incorporates elements from multiple theories in order to best understand behavior and behavior change. However, the biggest challenge to developing this type of model is that different behaviors (including communicative behaviors) are related to different psychographic and environmental predictors.

An alternative to the "kitchen sink" model described above would be to develop theory based frameworks that are specific to individual behaviors and contexts. This

would allow for health behavior scholars to generate theoretically sound yet contextually specific health interventions. The following section describes practical implications regarding the findings of this project along with recommendations for future campaigns and interventions related to SNCAA.

Practical Implications

Findings of the current project provide several considerations for understanding SNS communication, particularly communication related to alcohol. First, the results of Study 2 demonstrate that the majority of participants shared at least one message on SNSs about alcohol related behavior over the last month. Additionally, Study 1 participants remarked that despite being aware of associated consequences some students still choose to communicate publicly about their drinking. Even with new forms of social media that allow for greater privacy and censorship (Snapchat, YikYak), students are continuing to communicate in a way that may be detrimental to their future goals. This suggests a need for better education on how students may responsibly communicate via SNSs.

One necessary area for continued education pertains to students' awareness of online privacy or lack thereof. Findings of Study 1 indicate that students use multiple SNSs as a means of managing their self-presentation and jointly as a form of privacy management online. By differentiating the type of information they disclose between SNSs, students are able to attempt to not only manage multiple identities, but also control who has access to what information. However, this strategy appears to be potentially problematic as it is based off of their perceptions of who is using a particular SNS and not who has access to that information. For example, even though their parents might not

be active Twitter users, they still have access to any Tweets that are made public. Thus, further research is needed to explore communication privacy management on SNSs in order to develop better education for users lest they find themselves 10 years from now regretting information they would rather have not made public.

Additionally, Study 2 provided insight as to how students learn what types of self-presentation tactics are appropriate or expected from college students. Before entering college, many students may be exposed to messages on SNSs from older friends and siblings. If they see numerous messages about binge drinking in college, not only will they be socialized into expectations for communicating in the same manner, but they may also develop expectations that impact their own drinking behavior. Future research should examine the role SNCAA plays in anticipatory socialization related to drinking in college as well as other normative mechanisms (e.g., descriptive norms, injunctive norms, group identity).

Anticipatory socialization may also affect the role ego involvement plays in predicting SNCAA. That is, as behavior is often tied to identity (i.e., ego involvement), anticipatory socialization through SNCAA may contribute to students glorifying others who identify as being partiers and may increase their desire to adapt their own identity to conform to this model of behavior. Previous research has demonstrated the powerful role social relations play in the construction of identity (Cheney, 1983; Scott, Corman, & Cheney, 1998). The process by which a group or organization begins to play a key role in defining an individual's identity is known as organizational identification (Mael & Ashforth, 1992). In this instance peer groups may serve as an organization that students seek to identify with, and thus, construct their identity (e.g., "the party guy") in a manner

that aligns with group norms. Thus, further research is needed to explore the relationship between anticipatory socialization, group identification, and ego involvement.

Methodological Implications

Study 2 also extends the research on SNSs by employing novel means for measuring online communication—especially communication related to alcohol. Previous studies have asked to participants to estimate the number of times they use or post to SNSs in a given time period (e.g., once a day, twice per week, etc.; Chen, 2011; Hampton, Goulet, Rainie, & Purcell, 2011; Panek, Nardis, & Konrath, 2013; Morris, 2014; Ross et al., 2009; Wang, Jackson, Wang, & Gaskin, 2015)—this method does not present precise data. Other studies have employed content analysis methods to either publicly available SNS data (Egan & Moreno, 2011; Langenfeld et al., 2014; Moreno et al., 2011; Shelton & Skalski, 2014) or private SNS data after gaining subjects' permission (Morris, 2014). However, this process can be very time consuming for researchers and, in regard to publicly available SNS data, does not allow for the measurement of psychographic variables that may predict the type of content users' post. While accessing private SNS data with permission may also allow the researcher to survey subjects in connection to their SNS activity, it presents concerns regarding privacy. In contrast, this study required participants to count and code their SNS posts and report exact numbers of communication instances. Thus, one strength of this study is that the outcome variable of interest (SNCAA) is very precise and accounted for a large range of differences in communication on SNSs. It also allowed for the SNS data to be collected in a manner that provided a greater degree of privacy for participants (i.e., they did not have to allow the researcher direct access to their SNS content) than previous studies and included

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survey items for psychographic variables that could be linked to the type of content shared.

However, this method also presented several challenges. First, previous studies using the TNSB have collected behavior or behavioral intention data using continuous variables (i.e., Likert-type scale responses). SNCAA is a count variable meaning it deviates from this model in that (a) hierarchical regression analysis cannot be used, and (b) the range of responses is large ($0 - 148$ vs. $1 - 7$). Future research could account for some of these issues by converting the count variable to a scope variable wherein the range of students' communication about alcohol related activities on SNS (e.g., photos of alcoholic beverages, photos of drinking activity, text references to being drunk or hungover, etc.). In this case, the range of a scope variable for SNCAA would be $0 - 12$ based on the presence of counts for each of the 12 items used to measure SNCAA. A second challenge, as detailed in Chapter 3, is that negative binomial regression (which is used for modeling over dispersed count data) does not provide the standard R and R^2 statistics that are used to interpret variance explained and overall model fit when conducting multiple regression using continuous variables. Therefore, interpretations of model fit could not be compared to previous studies that test the TNSB. Future research should investigate the strength of fit of the TNSB for explaining SNCAA when measuring it using standard, Likert-type scale responses. Future research may also examine the outcome variable as a proportion or ratio variable, considering the number of SNCAA to SNS communication about other topics.

The use of count measures of SNCAA also presented challenges related to assessing validity and reliability. The key issue here is lack of available comparisons by

which to determine validity and reliability. Construct validity is "the extent to which a measure 'behaves' the way that the construct it purports to measure should behave with regard to established measures of other constructs (DeVellis, 2003, p. 53). In the instance of this study, I found partial support for this. That is, while most of the TNSB variables predicted SNCAA, the majority of the normative mechanisms (i.e., injunctive norms, benefit to self, benefit to others, anticipatory socialization, and aspiration) did not moderate the relationship between descriptive norms and SNCAA as theorized. However, since SNCAA (or even a communicative behavior) has never been studied in relation to the TNSB, it is not possible to fully determine construct validity.

Additionally, reliability of the measure is also equally challenging to determine. While count data does lend itself to being more accurate than other forms of measurement, such as psychological constructs (Allison, 1978), it still presents difficulties in determining reliability. Essentially, count data is a form of observational data, and thus, is subject to reliability error based on the observer (Mitchell, 1979). In regard to SNCAA, the observers were each individual participant. Even though all efforts were made by the researcher to provide clear instructions for counting observations (i.e., SNS posts about alcohol related activities), there is still room for error in regard to the accuracy of students counts. One way I attempted to control for this type of error was to require participants to complete the survey in-person at the research lab instead of at home. The purpose of this was to increase participants' motivation to take the time to accurately answer SNCAA items by providing direct counts as opposed to estimates. Research demonstrates that people are more cooperative when they are being watched (Bateson, Nettle, & Roberts, 2006; Burnham & Hare, 2007; Ernest-Jones, Nettle, &

Bateson, 2011). However, it is still likely that participants interpreted various types of posts they were asked to count differently or that they miscounted. In such a case, the best way to test reliability would be to have multiple observers (Mitchell, 1979); however, this was not practical within the confines of Study 2. Thus, future research may choose to employ multiple observers to increase the reliability of count data.

Despite the challenges related to evaluating validity and reliability, SNCAA performed well within the context of Study 2. Findings indicate that it is an acceptable, if not superior, means for measuring online communicative behaviors. Indeed, it may be a useful method for studying other forms of online communication, such as cyberbullying, health information seeking, and social support. The following section provides additional considerations for how the findings of the current project can be applied to future health interventions.

Practical Implications for Future Interventions

One concern of the current project is the need for future interventions aimed at reducing communication on SNSs about alcohol related activities. Not only does this type of communication have direct consequences (e.g., diminished job prospects, expulsion from campus organizations, relational conflict, etc.), it also may indirectly contribute to increased rates of binge drinking on college campuses by providing a source of normative messages regarding alcohol consumption. Thus, I detail below the insights gleaned from the current project that may inform future interventions.

First, results of Study 2 indicate that the typical social norm campaign strategy of correcting misperceptions may not be appropriate. Previous campaigns based on social norms have attempted to correct misperceptions wherein individuals believe the behavior

is more prominent than it actually is. For example, students often overestimate both the

number of students who drink as well as the average number of drinks consumed on any

given occasion (Perkins & Craig, 2012; Perkins et al., 1999; Woodyard et al., 2013).

Thus, social norms campaigns targeting drinking have attempted to reduce drinking on

college campuses by correcting these misperceptions. However, results of Study 2

demonstrate that on average students estimated norms for SNCAA were lower than the

prevalence of the behavior reported in the study. While this finding is not necessarily

representative of the entire University population or trends in estimated norms among

other college populations, the fact that estimated norms for SNCAA were significantly

lower (as opposed to being similar or higher) than the reported prevalence of the behavior

could be indicative of a trend that holds across other populations.

Second, other social norm campaigns have focused on incremental reduction (e.g.,

fewer drinks at a party; DeJong et al., 2006; Mattern & Neighbors, 2004; Thombs &

Hamilton, 2002) or increases in behavior (e.g., washing your hands more often; Lapinski,

Anderson, Shugart, & Todd, 2014). However, in this instance the goal is to eliminate

students' SNCAA—particularly when it pertains to binge drinking. This finding—along

with the limited effects of previous social norms campaigns to reduce drinking among

college students (Foxcroft et al., 2015)—suggests that the traditional format for social

norms campaigns may not be appropriate. Instead, consideration of gain framing models

may be a potential format of message design. Salovey, Schneider and Apanovitch (2014)

define message framing as "the emphasis in the message on the positive or negative

consequences of adopting or failing to adopt a particular health-relevant behavior" (p.

392). When using message framing, gain framed messages typically highlight the

benefits of adopting a behavior (i.e., not posting about alcohol on SNSs), while loss

framed messages illustrate the costs of not adopting a behavior (Salovey et al., 2014).

Findings of Study 1 demonstrate that many students may already be aware of the

potential losses associated with not censoring their SNCAA. Instead messages might

choose to focus on the benefits secured when students choose to communicate on SNSs

in a way that is considered professional and responsible across multiple audiences.

Finally, Study 2 identifies a set of predictor variables that may be useful in

designing theoretically informed campaign messages. While campaigns employing social

norms theories have traditionally focused on correcting descriptive norms (DeJong et al.,

2006; Mattern & Neighbors, 2004; Perkins et al., 2010), based on the arguments

proposed above, injunctive norms and instrumental attitudes for SNCAA may be more

appropriate targets for campaign messages. For example, messages based on injunctive

norms might say, "Most UK students agree that sharing photos of parties with alcohol on

social media is not appropriate" (In Study 2, 85% [$n = 253$] of participants indicated

some degree of disagreement with the item "It is appropriate to use social media to

communicate about alcohol related activities."). Messages targeting instrumental attitudes

might say, "Most UK students think that talking about drinking alcohol on social media is

foolish and that it will likely result in negative consequences" (In Study 2, 89% [$n = 265$]

of participants indicated that it was unlikely that "using social media to communicate

about alcohol related activities will NOT have any negative consequences"). Both of

these examples also indirectly target descriptive norms by using the phrase "most UK

students." However, the messages do not follow the traditional social norms campaign

strategy of correcting misperceptions about the behavior (i.e., SNCAA) as findings

suggest that students underestimate the prevalence of SNCAA. Previous research demonstrates that using behavior change theory to design health campaign messages improves outcomes (Rice & Atkin, 2012).

Future Research

In addition to the development and testing of messages related to reducing SNCAA. I propose several additional areas of research that would lead to greater understanding as well as better informed interventions related to reducing SNCAA and college drinking.

First, Study 2 demonstrates the role normative beliefs and attitudes play in college students' SNCAA; however, it does not demonstrate the effect SNCAA may play in proliferating similar normative beliefs and attitudes as they pertain to the actual drinking behavior. While, previous research has demonstrated the role communication plays in developing and proliferating drinking norms (Lapinski & Rimal, 2005), further research is needed to explicitly test the role SNCAA plays in reinforcing problematic drinking behavior.

Moreover, for the purposes of this study SNCAA was examined on the SNSs Facebook, Twitter, and Instagram. These three sites were chosen because they were identified in Study 1 as being the most commonly used social media platforms. However, recent trends in social media development, including social media platforms that allow for greater privacy control, may exhibit varying results for how students communicate about drinking. For example, Snapchat is a media application that facilitates users sending photos that can only be viewed for a short period of time (1 – 10 seconds), disappear once viewed, and are not stored on either users phone. YikYak is another

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people social media application that allows users to anonymously post short messages to a media feed that can only be viewed by other users in a limited geographical region (1.5 miles). Both of these applications are growing in popularity and would easily facilitate the types of self-disclosure, self-presentation, and impression management needs identified in Study 1. Additionally, social media applications of this type differ in regard to the sense of social presence and immediacy they offer (Kietzmann, Silvestre, McCarthy, & Pitt, 2012; Ogara, Koh, & Prybutok, 2014). It may be that students are more likely to engage in SNCAA via channels that provide higher levels of social presence and immediacy. Thus, future research should expand examination of SNCAA to the use of these social media applications and others like them in order to create a fuller picture of how and why students are sharing messages on social media about their alcohol related activities.

Binge drinking continues to be a problem on college campuses (Foster et al., 2013; Hutton, 2012; Kelly-Weeder, 2011; Rhodes & Clinkinbeard, 2013). Thus, for the purposes of this study, college students were chosen as the target population. However, research has also demonstrated a relationship between social media use and drinking among teens (Johnson & Shapiro, 2011). These outcomes are worthy of exploration in future research. In a nationally representative study of 1,003 teens, ages 12 to 17, CASAColumbia found that teens who have seen pictures on SNSs of other teens partying with alcohol or marijuana were found to be four times more likely to have used marijuana, more than three times likelier to have used alcohol, and almost three times more likely to have used tobacco (Johnson & Shapiro, 2011). Thus, examining SNCAA among high school students would certainly be warranted in order to understand the

affect it has on their drinking behaviors. This type of study might also provide additional insight into how teens are experiencing anticipatory socialization regarding college drinking, and the role of social normative influences on these outcomes in an adolescent population.

Finally, results of Study 2 indicate that students over the age of 21 are more likely to participate in SNCAA. However, it is not clear whether or not there are differences between the qualities of messages sent by those who are under 21 and those who are 21 and older. It may be that those who are of age are more likely to post content that exhibits more responsible forms of drinking. Thus, future measurement of SNCAA should be sensitive to differences between communication about responsible drinking behavior and binge drinking. Portrayals of responsible drinking behavior could potentially have a positive influence on norms for drinking.

Conclusion

The current project presents a groundbreaking examination of the prevalence of SNS communication about alcohol related activities. It uses a multi-method approach to understanding how and why college students are choosing to communicate in this way, their awareness of potential positive and negative consequences of disclosing this type of information on SNS, and how their normative beliefs and attitudes shape their decisions to (semi-)publicly broadcast their drinking behavior. Findings suggest that college students are beginning to become more cognizant of the negative consequences associated with this type of disclosure and recognizing an increased need for privacy. Thus, the landscape for implementing potential interventions to reduce this type of problematic communication is a bright one.

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Appendix A
Study 1: Consent Form

Consent to Participate in a Research Study

Study on Students' Use of Social Media and Content Sharing Online

WHY ARE YOU BEING INVITED TO TAKE PART IN THIS RESEARCH?

You are being invited to take part in a research study about the types of information that people share online. More specifically, you are being invited to take part in this research study because of your experience as a student at UK. If you volunteer to take part in this study, you will be one of about 40 people to do so.

WHO IS DOING THE STUDY?

The person in charge of this study is Jenna E. Reno. She is a Ph.D. candidate in the Department of Communication at the University of Kentucky. She is being guided in this research by Dr. Don Helme. There may be other people on the research team assisting at different times during the study.

WHAT IS THE PURPOSE OF THIS STUDY?

The purpose of this study is to identify the type of information people share online. Additionally, the study hopes to gain greater understanding of the norms and motives for sharing different types of information online.

ARE THERE REASONS YOU SHOULD NOT TAKE PART IN THIS STUDY?

You should not take part in this study if you are under 18 years of age. You should not participate if you are not student at the University of Kentucky.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?

The research will be conducted at an agreed upon campus location. You will attend one focus group discussion during the study. That visit will take approximately 60-70 minutes. Thus, the total amount of time that you will be asked to contribute will be approximately 60-70 minutes during a one-time visit to a focus group location.

WHAT WILL YOU BE ASKED TO DO?

During this focus group you will be asked to do several things. First, you will be asked to complete this informed consent form and a brief demographic questionnaire, which will include information about things like your educational background and computer use. This should take approximately 10 minutes. Your name will not be required, and the

demographic information will only be reported in cumulative form for descriptive purposes. This information will not be associated with specific feedback that you provide during the focus group, and will not be used to identify you in research reports.

Second, you will discuss your use of various social networking sites and the types of information you share with others online. Additionally, you will also be asked to discuss the types of information people within your social network (e.g., Facebook friends, Twitter followers, etc.) share online. This discussion will take the bulk of the time, lasting approximately 50 minutes. Additionally, you will be asked to provide feedback on several survey questions that may be used in future studies regarding sharing information online. This will take approximately 10 minutes.

Student participants will automatically receive one SONA research credit for participation.

As part of this study, the focus group discussions will be recorded to assist the researchers in thoroughly and accurately capturing the information that will benefit research on disclosure of information online. Your name will not be associated with the focus group information or the demographics that are collected, so your opinions will remain confidential when we share or publish research results.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

To the best of our knowledge, the things you will be doing have no more risk of harm than you would experience in everyday life. No sensitive topics that might cause distress are anticipated.

WILL YOU BENEFIT FROM TAKING PART IN THIS STUDY?

Beyond the incentives for taking part in this study (see below), there is no guarantee that you will get any benefit from taking part in this study. However, your willingness to take part may help society as a whole better understand this research topic, which might eventually lead to safer online environments.

DO YOU HAVE TO TAKE PART IN THE STUDY?

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you choose not to volunteer. You can stop at any time during the study and still keep the benefits and rights you had before volunteering.

IF YOU DON'T WANT TO TAKE PART IN THE STUDY, ARE THERE OTHER CHOICES?

If you do not want to be in the study, there are no other choices except not to take part in the study.

WHAT WILL IT COST YOU TO PARTICIPATE?

There are no costs associated with taking part in the study, save for the time you spend to participate.

WILL YOU RECEIVE ANY REWARDS FOR TAKING PART IN THIS STUDY?

Each student participants will receive one SONA research credit for taking part in the study, even if you withdraw from the study early.

WHO WILL SEE THE INFORMATION THAT YOU GIVE?

We will make every effort to keep private all research records that identify you to the extent allowed by law. However, confidentiality cannot be guaranteed because of the nature of focus groups. That is, other participants who are present will know what was said and by whom.

Your information will be combined with information from other people taking part in the study. When we write about the study to share it with other researchers, we will write about the combined information we have gathered. You will not be personally identified in these written materials. We may publish the results of this study; however, we will keep your name and other identifying information private.

We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. The recordings of focus group discussions will be transcribed using pseudonyms (e.g., Participant A) and will be stored electronically by the primary researcher in password protected computer files.

We will keep private all research records that identify you to the extent allowed by law. However, there are some circumstances in which we may have to show your information to other people. For example, the law may require us to show your information to a court or to tell authorities if you report information about a child being abused or if you pose a danger to yourself or someone else. Also, we may be required to show information which identifies you to people who need to be sure we have done the research correctly; these would be people from such organizations as the University of Kentucky.

CAN YOUR TAKING PART IN THE STUDY END EARLY?

If you decide to take part in the study you still have the right to decide at any time that you no longer want to continue. You will not be treated differently if you decide to stop taking part in the study. There will be no consequences for withdrawing from the study. If you wish to withdraw, please inform the focus group facilitator at any time during the focus group discussion. Student participants will still receive one SONA research credit for completing the study.

WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS, CONCERNS, OR COMPLAINTS?

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study, you can contact the investigator, Jenna Reno at Jenna.Reno@uky.edu. If you have any questions about your rights as a volunteer in this research, contact the staff in the Office of Research Integrity at the University of Kentucky at 859-257-9428 or toll free at 1-866-400-9428. We will give you a signed copy of this consent form to take with you.

_____   _____
Signature of person agreeing to take part in the study   Date

_____
Printed name of person agreeing to take part in the study

_____   _____
Name of [authorized] person obtaining informed consent   Date

Study 1: Online Questionnaire

Demographic Survey Questionnaire Items (to be formatted)

What is your gender?

- Male
- Female
- Prefer not to answer

In what year were you born? 19_____

Would you describe yourself as:
- American Indian / Native American
- Asian
- Black / African American
- Hispanic / Latino
- White / Caucasian
- Pacific Islander
- Other:_____

What is your current classification?

- Freshman
- Sophomore
- Junior
- Senior
- Graduate

Technology Use

Generally speaking, how comfortable do you feel using a computer?

- Very comfortable
- Somewhat comfortable
- Not very comfortable
- Not at all comfortable

On average, how often do you use the Internet?

- More than 9 times/day
- 5 to 8 times/day
- 1 to 4 times/day
- A few times a week
- Once a week

- Once a month

On average, how many hours a week do you spend online (i.e., checking email, surfing the web, chatting with friends, etc.)?

- 0 to 1 hours/week
- 2 to 4 hours/week
- 5 to 6 hours/week
- 7 to 9 hours/week
- 10 to 20 hours/week
- 21 to 40 hours/week
- Over 40 hours/week

What do you primarily use the Internet for?
(Please check all that apply.)

- ☐ Education
- ☐ Shopping/gathering product information
- ☐ Entertainment
- ☐ Work/Business
- ☐ Communication with others (not including email)
- ☐ Gathering information for personal needs
- ☐ Wasting time
- ☐ Other

Please rank the following social media sites in order of how much you use them (1 being the most and 10 being the least). Leave blank if you don't use that site.

__ Facebook
__ Twitter
__ Instagram
__ Tumblr
__ Pinterest
__ YouTube
__ Google+
__ Reddit
__ LinkedIn
__ MySpace
__ Friendster
__ Other:

Appendix C
Study 1: Focus Group Guide

(1) Informed consent letter: Read student consent form to students. Ask if there are any questions. Invite students who would not like to participate to leave. Those who will participate must sign the letter.

(2) Introduction: "Today we are here to talk about your thoughts and feelings about issues related to communicating with technology. The only ground-rule to remember is that there is no right or wrong answer. Your honest opinions are important. I ask that you speak one at a time and keep in mind that everything you say is completely confidential."

(3) Survey: Have students complete demographic survey before we get started.

(4) Pseudonyms: Invite people to use a pseudonym if they wish.

I. Exploring Technology and Social Media Use

"The first issue to discuss is what you think about how people use the internet and other technology. Let's begin by going around the table. Will you tell me your name and how you use a cell phone and computer? For example, what do you use it for?"

(SUMMARIZE AND TRANSITION)

"One thing I am really interested in is how people use social media sites such as Facebook and Twitter. Can you tell me a story or an anecdote about something funny you've seen online recently?"

1. Which social networking sites do you use the most? (Probe: Facebook? Twitter? Which ones do you like the most? Spend the most time on?)
2. For what reasons do you use these social networking sites? (Probe: How do you benefit? Do you get certain information from these sites? Does it help you stay in touch with others?)
3. How do you interact with others on social networking sites? (Probe: Do you poste photos, commenting on posts, tweeting at people, etc.? What do you do the most?).
4. What types of things do you disclose/post online? (Probe: Do you re-post information/news/blogs? Do you talk about your own life?)
5. What type of information do you think is appropriate to disclose online? (Probe: Is it ok to share personal information such as thoughts, feelings, opinions? What types of life events would you want to post about online?)
6. What type of information do you think is NOT appropriate to disclose online? (Probe: What type of things would you not want to share online?)
7. Can you give an example of something you've seen online that you think someone should not have posted? (Probe: An inappropriate Tweet or Facebook post? What about pictures?)
8. Do you ever disclose information related to attending college parties? Why? (Probe:

What motivates you? What do you get out of this?)
9. Do you or your friends post photos when you're at college parties? Why? (Probe: Does it make the party more fun?)
10. Are there any risks that you think are related to disclosing this type of information online? (Probe: Have you experienced any negative effects of posting this type of info?)
11. Who has access to the information you post online? (Probe: How many people? Do you personally know all of them?)
12. Do you ever worry that the 'wrong people' will see things you post online? (Probe: Who might you not want to see things you post online?)
13. What would convince you to change the types of things that you post online? (Probe: What if privacy settings changed? Do you worry your future employers might see things?)

(SUMMARIZE AND TRANSITION)

II. Addressing Measurement Issues

"One thing researchers like me want to do is to be able to gather survey data on students' social media use. I've brought a survey with me today and wanted to get your ideas about some of the questions. I am interested in using a version of this survey to get quality responses from participants in future research. Specifically, I would like to get accurate data that people are comfortable reporting. I think that you might be able to help me accomplish these goals by seeing the actual questions I've been asking people in different studies. Read through these for a few minutes and then we'll talk about your reactions."

Give students a copy of the behavioral measure within the survey (next page):

=

During the past week, have you posted information online about your personal thoughts and opinions?

☐ Yes   ☐ No

If "yes," how many times have you posted this type of information online in the past week?

☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6 or more

During the past week, have you posted information online about your personal actions, activities or events?

☐ Yes   ☐ No

If "yes," how many times have you posted this type of information online in the past week?

☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6 or more

During the past week, have you posted information online about your drinking or partying behavior?

☐ Yes   ☐ No

If "yes," how many times have you posted this type of information online in the past week?

☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6 or more

a. "What comes to mind when you read through these questions?"
b. "What could be confusing when people read this?"
c. "When you read the definition and descriptions of the behaviors, did they describe the type of things you post online?"
d. "Is there any kind of online posts that these questions are not getting at – Are we glossing over anything?"
e. "Do you think people will be able to easily remember what they've posted online in the 'past week'? – What about a month, semester, or forever?"
f. "Would you tell the truth if you responded to these questions in a survey?"

(SUMMARIZE AND TRANSITION)

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IV. Improving Measurement Issues

"Now that you've seen an example of how researchers ask questions about sharing information online, I am wondering what you think could be done to make these kinds of surveys better. Will you help me figure out a few issues?"

    a. "What could we do to make it easier for people to be honest about their online posting behavior?"
    b. "What could we do to make it easier for people to be accurate about their online posting behavior?"
    c. "What the best time frame to ask people to remember their online posting behavior?"

(SUMMARIZE AND TRANSITION)

V. Closing

"Before we go, will you write on the paper in front of you answers to a few questions?

(SUMMARIZE AND TRANSITION)

The paper will have four questions with space to write responses. These questions are
    a. What do you want me to keep in mind about asking people questions about online posting behavior in a survey?"
    b. Are there any new trends in the way students are using social media or sharing information online that I should know about?
    c. Were there any words that I used today that were hard to understand?

(WRAP UP, SUMMARIZE, THANK PARTICIPANTS)

Appendix D

Study 2 – Consent Form

Consent to Participate in a Research Study

Study on Students' Use of Alcohol and Social Media Sites

WHY ARE YOU BEING INVITED TO TAKE PART IN THIS RESEARCH?

You are being invited to take part in a research study about the types of information that people share online. More specifically, you are being invited to take part in this research study because of your experience as a student at UK. If you volunteer to take part in this study, you will be one of about 550 people to do so.

WHO IS DOING THE STUDY?

The person in charge of this study is Jenna E. Reno. She is a Ph.D. candidate in the Department of Communication at the University of Kentucky. She is being guided in this research by Dr. Elisia Cohen. There may be other people on the research team assisting at different times during the study.

WHAT IS THE PURPOSE OF THIS STUDY?

The purpose of this study is to identify the type of information people share online, specifically information related to students drinking and drinking related behavior. Additionally, the study hopes to gain greater understanding of the norms, attitudes, and motives for sharing this type of information online.

ARE THERE REASONS YOU SHOULD NOT TAKE PART IN THIS STUDY?

- You should not take part in this study if you are under 18 years of age.

- You should not participate if you have not consumed at least one alcoholic beverage in the last 30 days.

- You should not participate if you do not have an active Facebook, Twitter or Instagram account.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?

The research will be conducted at an agreed upon campus location. You will attend one research group session during the study. That visit will take approximately 45 minutes. Thus, the total amount of time that you will be asked to contribute will be approximately 45 minutes during a one-time visit to the research location.

WHAT WILL YOU BE ASKED TO DO?

During this focus group you will be asked to do several things. First, you will be asked to complete this informed consent form. Your name will not be associated with specific feedback that you provide during the research group session, and will not be used to identify you in research reports. This will take approximately 5 minutes.

Second, you will complete a survey regarding your use of social networking sites including Facebook, Twitter and Instagram. As part of the survey process, you will be asked to log-in to all of the aforementioned social networking site accounts that you use in order to use them as a reference to answer survey questions. Your personal account information will not be tracked or recorded in any form. This will take approximately 30 minutes.

Additionally, after completing the survey, you will be asked to provide feedback on several survey questions via group discussion. You responses may be used in future studies regarding sharing information online. This will take approximately 10 minutes.

Student participants will automatically receive one SONA research credit for participation.

As part of this study, the group discussions will be recorded to assist the researchers in thoroughly and accurately capturing the information that will benefit research on disclosure of information online. Your name will not be associated with this information or the survey responses you provide, so your opinions will remain confidential when we share or publish research results.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

The only possible risks to you are any embarrassment or anxiety you might feel answering confidential questions about alcohol-related attitudes, beliefs, and behaviors. However, this risk should be no greater than what you would experience in everyday conversations with other college students such as yourself about these alcohol-related issues.

WILL YOU BENEFIT FROM TAKING PART IN THIS STUDY?

There is no guarantee that you will get any benefit from taking part in this study. However, your willingness to take part may help society as a whole better understand this research topic, which might eventually lead to safer online environments.

DO YOU HAVE TO TAKE PART IN THE STUDY?

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you choose not to volunteer. You can stop at any time during the study and still keep the benefits and rights you had before volunteering.

IF YOU DON'T WANT TO TAKE PART IN THE STUDY, ARE THERE OTHER CHOICES?

If you do not want to be in the study, you may choose to participate in another research study or complete the alternative non-research assignment.

WHAT WILL IT COST YOU TO PARTICIPATE?

There are no costs associated with taking part in the study, save for the time you spend to participate.

WILL YOU RECEIVE ANY REWARDS FOR TAKING PART IN THIS STUDY?

Each student participants will receive one SONA research credit for taking part in the study, even if you withdraw from the study early.

WHO WILL SEE THE INFORMATION THAT YOU GIVE?

We will make every effort to keep private all research records that identify you to the extent allowed by law. However, confidentiality cannot be guaranteed because of the nature of collecting information via group discussion. That is, during the discussion portion of the study, other participants who are present will know what was said and by whom.

Your information will be combined with information from other people taking part in the study. When we write about the study to share it with other researchers, we will write about the combined information we have gathered. You will not be personally identified in these written materials. We may publish the results of this study; however, we will keep your name and other identifying information private.

We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. The recordings of focus group discussions will be transcribed using pseudonyms (e.g., Participant A) and will be stored electronically by the primary researcher in password protected computer files.

We may be required to show information which identified to people who need to be sure we have done the research correctly; these would be people from such organizations as the University of Kentucky.

Your name will not be attached to any of the materials that you complete during the study. Thus, all information you provide will be confidential. Agents for the University of Kentucky and the sponsoring agency, if applicable, will be allowed to inspect sections of research records related to this study. All information from the study will be used only for research purposes. However, researchers can be forced to tell people who are not connected with the study, including the courts, about your participation.

CAN YOUR TAKING PART IN THE STUDY END EARLY?

If you decide to take part in the study you still have the right to decide at any time that you no longer want to continue. You will not be treated differently if you decide to stop taking part in the study. There will be no consequences for withdrawing from the study. If you wish to withdraw, please inform the focus group facilitator at any time during the focus group discussion. Student participants will still receive one SONA research credit for completing the study.

WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS, CONCERNS, OR COMPLAINTS?

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study, you can contact the investigator, Jenna Reno at Jenna.Reno@uky.edu. If you have any questions about your rights as a volunteer in this research, contact the staff in the Office of Research Integrity at the University of Kentucky at 859-257-9428 or toll free at 1-866-400-9428. We will give you a signed copy of this consent form to take with you.

_____   _____
Signature of person agreeing to take part in the study   Date

_____
Printed name of person agreeing to take part in the study

_____   _____
Name of [authorized] person obtaining informed consent   Date

Study on Students' Use of Alcohol and Social Media Sites

Items included in Study 2's analysis are labeled with their respective variables names (e.g., ***Instrumental Attitude***). Unlabeled items were part of the survey but were not included in analysis.

Age
1. What is your current age?
❍ Less than 18 (1)
❍ 18 to 20 (2)
❍ 21 to 24 (3)
❍ 25 to 34 (4)
❍ 35 to 44 (5)
❍ 45 to 54 (6)
❍ 55 to 64 (7)
❍ 65 or over (8)
If Less than 18 Is Selected, Then Skip To End of Survey

Gender
2. What is your gender?
❍ Male (1)
❍ Female (2)

Race
3. What is your race?
❍ White/Caucasian (1)
❍ African American (2)
❍ Hispanic (3)
❍ Asian (4)
❍ Native American (5)
❍ Pacific Islander (6)
❍ Other (please specify) (7) _____

Class
4. What is your current Class Year?
❍ Freshman (1)
❍ Sophomore (2)
❍ Junior (3)
❍ Senior (4)
❍ Graduate Student (5)

5a. Are you a member of any of the following groups or organizations? (choose all that apply):
- ❑ UK Athletics (1)
- ❑ Sorority (2)
- ❑ Fraternity (3)
- ❑ UK Residence Life (4)
- ❑ UK Student Government (5)
- ❑ UK music ensemble (6)
- ❑ Other UK sponsored group or organization (7)
- ❑ I'm not a member of any groups or organizations at UK. (8)

If "I'm not a member of any groups or organizations at UK" is selected, skip question 5b

Content Monitored
5b. Do any of these groups monitor or restrict the content you post on social media?
- ❍ Yes (9)
- ❍ No (10)

The first part of the survey will ask you questions about the types of things you post on social networking sites. The first set of questions will be about Facebook. To answer these questions, you will need to log into your account in another browser window. If you have an active Facebook account, please log into your account and go to your profile page.

SNS Use - Facebook
6. How often do you use Facebook (browsing, viewing others content, posting your own content, messaging, etc.)?
- ❍ More than 3 times a day (1)
- ❍ 2-3 times a day (2)
- ❍ 3-5 days per week (3)
- ❍ 1-2 days per week (4)
- ❍ Every few weeks (5)
- ❍ Less often (6)
- ❍ I don't have a Facebook account (7)

If "I don't have a Facebook account" is Selected, Then Skip To Q17

7. Have you posted content (e.g., status updates, shared photos, etc.) to your Facebook profile in the past 30 days?
- ❍ Yes (1)
- ❍ No (2)

If "No" Is Selected, Then Skip To Q17

The next set of questions will ask you about using Facebook to post status updates. For these questions, you should consider a status update to include posts on your profile that

contain original text. Do not include posts that only contain photos or content shared from other places (e.g., Twitter, Instagram, other websites). To answer the questions below, look at your Facebook profile page in another window.

8. During the past month, count the number of times you have posted a status update on Facebook and report the number below.
❍ 1-5 posts (1)
❍ 6-10 posts (2)
❍ 11-15 posts (3)
❍ 16-20 posts (4)
❍ 21-30 posts (5)
❍ 31-40 posts (6)
❍ 41-50 posts (7)
❍ 51-60 posts (8)
❍ 61-70 posts (9)
❍ 71-80 posts (10)
❍ 81-90 posts (11)
❍ 91-100 posts (12)
❍ Over 100 posts (13)

SNCAA - Facebook
9. During the past month, count how many of your status updates on Facebook contain a reference to an alcoholic beverage (e.g., "I love tequila!" "It's a wine kind of night.").

10. During the past month, count how many of your status updates on Facebook contain a reference to participating in drinking related activity (e.g., "Getting wasted!" "I'm the beer pong champion!" "Can't wait to party at Keeneland this weekend!").

11. During the past month, count how many of your status updates on Facebook contain a reference to missing class or an activity as a result of intoxication (e.g., "Can't go to class. I'm so hungover." "After last night, there's no way I'm making it to work.").

12. The next set of questions will ask you about using Facebook to share photos. For these questions, you should not include posts that you counted in the previous section. Do not include photos originating from other sources (e.g., Twitter, Instagram).

13. During the past month, count the number of times you have posted a personal photo (i.e., one that you took) on Facebook and report the number below:

14. During the past month, count how many of your photos on Facebook contain images of alcohol (e.g., keg, beer bottles, wine glasses, alcohol brand signs/posters).

15. During the past month, count how many of your photos on Facebook contain images with obvious bar scenery (e.g., taken in front of the bar, alcohol brand signs/posters,

etc.). DO NOT INCLUDE PHOTOS ALREADY COUNTED IN THE PREVIOUS QUESTION.

16. During the past month, count how many of your photos on Facebook contain a caption or comment about drinking or being intoxicated (e.g., "At happy hour with the boys." "You look so drunk."). DO NOT INCLUDE PHOTOS ALREADY COUNTED IN THE PREVIOUS QUESTIONS.

The next set of items will ask you questions about the type of content you post on Twitter. If you have an active Twitter account, go to the second window and log into your account. Then, go to your personal Twitter profile page.

SNS Use - Twitter
17. How often do you use Twitter (reading tweets, tweeting, re-tweeting, direct messaging, etc.)?
❍ More than 3 times a day (1)
❍ 2-3 times a day (2)
❍ About once a day (3)
❍ 3-5 days per week (4)
❍ 1-2 days per week (5)
❍ Every few weeks (6)
❍ Less often (7)
❍ I do not have a Twitter account (8)
If "I do not have a Twitter account" Is Selected, Then Skip To Q28

18. Have you tweeted at least once within the past 30 days?
❍ Yes (1)
❍ No (2)
If "No" Is Selected, Then Skip To Q28

The next set of questions will ask you about tweeting. For these questions, you should consider a tweet to include posts that contain original text. Do not include tweets that only contain photos or content shared from other places (e.g., Instagram, Facebook, other websites). To answer the questions below, look at your Twitter profile page in another window.

19. During the past month, count the number of times you have tweeted (including retweets) and report the number below:
❍ 1-5 tweets/retweets (1)
❍ 6-10 tweets/retweets (2)
❍ 11-15 tweets/retweets (3)
❍ 15-20 tweets/retweets (4)
❍ 21-30 tweets/retweets (5)
❍ 31-40 tweets/retweets (6)
❍ 41-50 tweets/retweets (7)
❍ 51-60 tweets/retweets (8)
❍ 61-70 tweets/retweets (9)
❍ 71-80 tweets/retweets (10)
❍ 81-90 tweets/retweets (11)
❍ 91-100 tweets/retweets (12)
❍ Over 100 tweets/retweets (13)

SNCAA - Twitter
20. During the past month, count how many of your tweets (including retweets) contain a reference to an alcoholic beverage (e.g., "I love tequila!" "It's a wine kind of night.").

21. During the past month, count how many of your tweets (including retweets) contain a reference to participating in drinking related activity (e.g., "Getting wasted!" "I'm the beer pong champion!" "Can't wait to party at Keeneland this weekend!").

22. During the past month, count how many of your tweets (including retweets) contain a reference to missing class or an activity as a result of intoxication (e.g., "Can't go to class. I'm so hungover." "After last night, there's no way I'm making it to work.").

23. The next set of questions will ask you about using Twitter to share photos. For these questions, you should not include posts that you counted in the previous section. Do not include photos originating from other sources (e.g., Facebook, Instagram).

24. During the past month, count the number of your tweets (including retweets) that include a personal photo (i.e., one that you took) and report the number below:

25. During the past month, count how many of your photos on Twitter (including retweets) contain images of alcohol (e.g., keg, beer bottles, wine glasses, alcohol brand signs/posters).

26. During the past month, count how many of your photos on Twitter (including retweets) contain images with obvious bar scenery (e.g., taken in front of the bar, alcohol brand signs/posters, etc.). DO NOT INCLUDE PHOTOS ALREADY COUNTED IN THE PREVIOUS QUESTION.

27. During the past month, count how many of your photos on Twitter (including retweets) contain a caption or comment about drinking or being intoxicated (e.g., "At happy hour with the boys." "You look so drunk."). DO NOT INCLUDE PHOTOS ALREADY COUNTED IN THE PREVIOUS QUESTIONS.

The next set of items will ask you questions about the type of content you post on Instagram. If you have an active Instagram account, use the second window and log into your account. Then, go to your personal Instagram profile page.

SNS Use - Instagram
28. How often do you use Instagram (posting photos, browsing others photos, commenting on photos, etc.)?
❍ More than 3 times a day (1)
❍ 2-3 times a day (2)
❍ About once a day (3)
❍ 3-5 days per week (4)
❍ 1-2 days per week (5)
❍ Every few weeks (6)
❍ Less often (7)
❍ I do not have an Instagram account. (8)
If "I do not have an Instagram account" Is Selected, Then Skip To Q33

29. Have you posted at least one photo to Instagram in the past 30 days?
❍ Yes (1)
❍ No (2)
If "No" Is Selected, Then Skip To Q33

To answer the questions below, look at your Instagram account in another window.

During the past month, count the number of photos you have shared on Instagram and report the number below:

SNCAA - Instagram
30. During the past month, count how many of your photos on Instagram contain images of alcohol (e.g., keg, beer bottles, wine glasses, alcohol brand signs/posters).

31. During the past month, count how many of your photos on Instagram contain images with obvious bar scenery (e.g., taken in front of the bar, alcohol brand signs/posters, etc.). DO NOT INCLUDE PHOTOS ALREADY COUNTED IN THE PREVIOUS QUESTION.

32. During the past month, count how many of your photos on Instagram contain a caption or comment about drinking or being intoxicated (e.g., "At happy hour with the

boys." "You look so drunk."). DO NOT INCLUDE PHOTOS ALREADY COUNTED IN THE PREVIOUS QUESTIONS.

33. In the past, have you posted content to Facebook, Twitter, or Instagram related to drinking alcohol?
❍ I have posted and continue to post content related to drinking alcohol. (1)
❍ I have posted content related to drinking alcohol in the past, but I no longer post this type of content. (2)
❍ I have never posted content to Facebook, Twitter, or Instagram related to drinking alcohol. (3)

34. Have you ever deleted content (including photos) related to drinking alcohol that you posted to your Facebook, Twitter, or Instagram account?
❍ Yes, I have deleted content related to drinking alcohol that I posted. (1)
❍ No, I have not deleted any alcohol related content that I posted. (2)

35. Have you ever untagged yourself in a photo where you were drinking alcohol that someone else posted?
❍ Yes, I have untagged myself in a photo where I was drinking alcohol. (1)
❍ No, I have not untagged myself in a photo where I was drinking alcohol. (2)

36. Have you ever asked someone to remove or delete content (such as a photo) from Facebook, Twitter, or Instagram related to you drinking alcohol?
❍ Yes, I have asked someone to remove or delete content related to me drinking alcohol. (1)
❍ No, I have not asked anyone to remove or delete content related to me drinking alcohol. (2)

37. During the last 12 months, how often did you usually have any kind of drink containing alcohol? By a drink we mean half an ounce of absolute alcohol (e.g., a 12

ounce can or glass of beer or cooler, a 5 ounce glass of wine, or a drink containing 1 shot of liquor). Choose only one.

❍ Every day (1)

❍ 5-6 times a week (2)

❍ 3-4 times a week (3)

❍ twice a week (4)

❍ once a week (5)

❍ 2-3 times a month (6)

❍ once a month (7)

❍ 3-11 times in the past year (8)

❍ 1-2 times in the past year (9)

❍ I did not drink any alcohol in the past year, but I did drink in the past (10)

❍ I never drank any alcohol in my life (11)

If "I did not drink any alcohol in the past year…" is selected, Skip to Q40

If "I never drank any alcohol in my life" is selected, Skip to Q41

Average Number of Drinks (this item was reverse coded before analysis)

38. During the last 12 months, how many alcoholic drinks did you have on a typical day when you drank alcohol?

❍ 25 or more drinks (1)

❍ 19-24 drinks (2)

❍ 16-18 drinks (3)

❍ 12-15 drinks (4)

❍ 9-11 drinks (5)

❍ 7-8 drinks (6)

❍ 5-6 drinks (7)

❍ 3-4 drinks (8)

❍ 2 drinks (9)

❍ 1 drink (10)

Frequency of Binge Drinking (males only)

39a. During the last 12 months, how often did you have 5 or more drinks containing any kind of alcohol within a two-hour period? [That would be the equivalent of at least 5 12-

ounce cans or bottles of beer, 5 five ounce glasses of wine, 5 drinks each containing one shot of liquor or spirits - to be provided by interviewer if asked.] Choose only one:
❍ Every day (1)
❍ 5-6 days a week (2)
❍ 3-4 days a week (3)
❍ 2 days a week (4)
❍ 1 day a week (5)
❍ 2-3 days a month (6)
❍ 1 day a month (7)
❍ 3-11 days in the past year (8)
❍ 1 or 2 days in the past year (9)
❍ Never in the past 12 months (10)

Frequency of Binge Drinking (females only)
39b.During the last 12 months, how often did you have 4 or more drinks containing any kind of alcohol in within a two-hour period? [That would be the equivalent of at least 4 12-ounce cans or bottles of beer, 4 five ounce glasses of wine, 4 drinks each containing one shot of liquor or spirits - to be provided by interviewer if asked.] Choose only one:
❍ Every day (1)
❍ 5-6 days a week (2)
❍ 3-4 days a week (3)
❍ 2 days a week (4)
❍ 1 day a week (5)
❍ 2-3 days a month (6)
❍ 1 day a month (7)
❍ 3-11 days in the past year (8)
❍ 1 or 2 days in the past year (9)
❍ Never (10)

40. During your lifetime, what is the maximum number of drinks containing alcohol that you drank within a 24-hour period?
❍ 36 drinks or more (1)
❍ 24-35 drinks (2)
❍ 18-23 drinks (3)
❍ 12-17 drinks (4)
❍ 8-11 drinks (5)
❍ 5-7 drinks (6)
❍ 4 drinks (7)
❍ 3 drinks (8)
❍ 2 drinks (9)
❍ 1 drink (10)

41. So you have never had a drink containing alcohol in your entire life. (asked only of those who say they never drank alcohol in their lives [Q37])
◯ Yes, I never drank. (1)
◯ No, I did drink. (2)

42. In the next week, how likely are you to do the following:

	Very Unlikely (1)	Unlikely (2)	Somewhat Unlikely (3)	Somewhat Likely (4)	Likely (5)	Very Likely (6)
a. Send a tweet while intoxicated.	◯	◯	◯	◯	◯	◯
b. Post on Facebook while intoxicated.	◯	◯	◯	◯	◯	◯
c. Share photos (on Facebook, Twitter, Instagram, etc.) from a party/event where there was alcohol.	◯	◯	◯	◯	◯	◯
d. Share (on Facebook, Twitter, etc.) details about a party/event where there was alcohol.	◯	◯	◯	◯	◯	◯
e. Share (on Facebook, Twitter, etc.) stories or details about a time when you were intoxicated.	◯	◯	◯	◯	◯	◯

43. Using social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities is:

	(1)	(2)	(3)	(4)	(5)	(6)
Unpleasant(1)---Pleasant (6)	❍	❍	❍	❍	❍	❍
Unenjoyable(1)---Enjoyable (6)	❍	❍	❍	❍	❍	❍
Embarassing(1)---Socially accepted (6)	❍	❍	❍	❍	❍	❍
Dull(1)---Exciting (6)	❍	❍	❍	❍	❍	❍
Boring(1)---Interesting (6)	❍	❍	❍	❍	❍	❍

Instrumental Attitude

44. Using social media (Facebook, Twitter, Instagram, etc.) to communicate about alcohol related activities is:

	(1)	(2)	(3)	(4)	(5)	(6)
Foolish(1)---Wise (6)	❍	❍	❍	❍	❍	❍
Bad(1)---Good (6)	❍	❍	❍	❍	❍	❍
Harmful(1)---Helpful (6)	❍	❍	❍	❍	❍	❍
Unnecessary(1)---Necessary (6)	❍	❍	❍	❍	❍	❍
Unimportant(1)---Important (6)	❍	❍	❍	❍	❍	❍

Belief Strength

45. How likely are the following outcomes?

	Very Unlikely (1)	Unlikely (2)	Somewhat Unlikely (3)	Somewhat Likely (4)	Likely (5)	Very Likely (6)
a. Using social media to communicate about my alcohol related activities will help me fit in with my peers	O	O	O	O	O	O
b. Using social media to communicate about my alcohol related activities will make other people like me more.	O	O	O	O	O	O
c. Using social media to communicate about my alcohol related activities will NOT have any negative consequences.	O	O	O	O	O	O
d. Using social media to communicate about my alcohol related activities will make my online friends laugh.	O	O	O	O	O	O
e. Using social media to communicate about my alcohol related activities will draw attention from others.	O	O	O	O	O	O

Benefit to Self
46. How much do you agree with the following statements?

	Very Strongly Disagree (1)	Strongly Disagree (2)	Disagree (3)	Agree (4)	Strongly Agree (5)	Very Strongly Agree (6)
a. Using social media to communicate about alcohol related activities is rewarding.	○	○	○	○	○	○
b. Using social media to communicate about alcohol related activities is pleasurable.	○	○	○	○	○	○
c. Using social media to communicate about alcohol related activities is enjoyable.	○	○	○	○	○	○
d. Using social media to communicate about alcohol related activities is fun.	○	○	○	○	○	○

Benefit to Others
47. How much do you agree with the following statements?

	Very Strongly Disagree (1)	Strongly Disagree (2)	Disagree (3)	Agree (4)	Strongly Agree (5)	Very Strongly Agree (6)
a. For most people, using social media to communicate about alcohol related activities is rewarding.	○	○	○	○	○	○
b. For most people, using social media to communicate about alcohol related activities is pleasurable.	○	○	○	○	○	○
c. For most people, using social media to communicate about alcohol related activities is enjoyable.	○	○	○	○	○	○
d. For most people, using social media to communicate about alcohol related activities is fun.	○	○	○	○	○	○

Anticipatory Socialization

48. How much do you agree with the following statements?

	Very Strongly Disagree (1)	Strongly Disagree (2)	Disagree (3)	Agree (4)	Strongly Agree (5)	Very Strongly Agree (6)
a. Using social media to communicate about alcohol related activities is part of the college experience.	○	○	○	○	○	○
b. It is important part of social life to use social media to communicate about alcohol related activities.	○	○	○	○	○	○
c. College students are expected to use social media to communicate about alcohol related activities.	○	○	○	○	○	○
d. Using social media to communicate about alcohol related activities allows students to make friends.	○	○	○	○	○	○

Injunctive Norms

49. Most people who are important to me think that _____ use social media to communicate about alcohol related activities.

	(1)	(2)	(3)	(4)	(5)	(6)
I should not(1)---I should (6)	○	○	○	○	○	○

Injunctive Norms (cont.)

50. How much do you agree with the following statements?

	Very Strongly Disagree (1)	Strongly Disagree (2)	Disagree (3)	Agree (4)	Strongly Agree (5)	Very Strongly Agree (12)
a. Most people whose opinions I value would approve of me using social media to communicate about alcohol related activities.	○	○	○	○	○	○
b. It is expected of me that I should use social media to communicate about alcohol related activities.	○	○	○	○	○	○
c. People who are important to me want me to use social media to communicate about alcohol related activities.	○	○	○	○	○	○
d. Society in general considers this activity to be appropriate.	○	○	○	○	○	○
e. It is appropriate to use social media to communicate about alcohol related activities.	○	○	○	○	○	○

51. Other college students think that _____ use social media to communicate about alcohol related activities.

	(1)	(2)	(3)	(4)	(5)	(6)
I should not(1)---I should (1)	○	○	○	○	○	○

52. How much do you agree with the following statements?

	Very Strongly Disagree (1)	Strongly Disagree (2)	Disagree (3)	Agree (4)	Strongly Agree (5)	Very Strongly Agree (24)
a. My friends want me to use social media to communicate about alcohol related activities.	❍	❍	❍	❍	❍	❍
b. My peers would approve of me using social media to communicate about my alcohol related activities.	❍	❍	❍	❍	❍	❍

53. How much do you agree with the following statements?

	Very Strongly Disagree (1)	Strongly Disagree (2)	Disagree (3)	Agree (4)	Strongly Agree (5)	Very Strongly Agree (6)
a. When it comes to matters of using social media, I want to do what other college students think I should do.	❍	❍	❍	❍	❍	❍
b. When it comes to matters of using social media, I want to do what my peers think I should do.	❍	❍	❍	❍	❍	❍
c. When it comes to matters of interacting online, I want to do what my close friends think I should do.	❍	❍	❍	❍	❍	❍

Descriptive Norms

54. How much do you agree with the following statements?

	Very Strongly Disagree (1)	Strongly Disagree (2)	Disagree (3)	Agree (4)	Strongly Agree (5)	Very Strongly Agree (6)
a. Most people like me regularly use social media to communicate about alcohol related activities.	○	○	○	○	○	○
b. In general, most people use social media to communicate about alcohol related activities.	○	○	○	○	○	○

Descriptive Norms (cont.)

55. How likely is the following?

	Very Unlikely (1)	Unlikely (2)	Somewhat Unlikely (3)	Somewhat Likely (4)	Likely (5)	Very Likely (6)
Most people I respect and admire will use social media to communicate about alcohol related activities.	○	○	○	○	○	○

Estimated Norms for SNCAA

56. What percentage of students at UK do you think use social media to communicate about alcohol related behaviors?

_____ %

57. Respond to the following questions.

	Not at all (1)	Not much (2)	A little bit (3)	Somewhat (4)	Quite a lot (5)	Very much (6)
a. When it comes to matters of interacting online, how much do you want to be like your close friends?	○	○	○	○	○	○
b. When it comes to matters of interacting online, how much do you want to be like your peers?	○	○	○	○	○	○
c. When it comes to matters of interacting online, how much do you want to be like other college students?	○	○	○	○	○	○

Aspiration

58. Respond to the following questions.

	Not at all (1)	Not much (2)	A little bit (3)	Somewhat (4)	Quite a lot (5)	Very much (6)
a. To what extent do you believe that UK students are respectable?	○	○	○	○	○	○
b. To what extent do you believe that UK students are inspiring?	○	○	○	○	○	○
c. To what extent do you look up to UK students?	○	○	○	○	○	○
d. To what extent do you think highly of other UK students?	○	○	○	○	○	○

Perceived Similarity

59. Respond to the following questions.

	Not at all (1)	Not much (2)	A little bit (3)	Somewhat (4)	Quite a lot (5)	Very much (6)
a. How similar do you think most UK students are to you intellectually?	○	○	○	○	○	○
b. How similar do you think most UK students are to you in the way they think?	○	○	○	○	○	○
c. How similar do you think UK students are to you in their values?	○	○	○	○	○	○
d. How similar do you think most UK students are to you in their behavior?	○	○	○	○	○	○

Ego Involvement

60. How much do you agree with the following statements?

	Very Strongly Disagree (1)	Strongly Disagree (2)	Disagree (3)	Agree (4)	Strongly Agree (5)	Very Strongly Agree (6)
a. I place high value on being someone who likes to party.	○	○	○	○	○	○
b. Being someone who likes to drink is central to how I see myself.	○	○	○	○	○	○
c. Drinking with my friends is an important part of who I am.	○	○	○	○	○	○
d. I am not the type of person who goes to college parties.	○	○	○	○	○	○
e. I would feel at a loss if I were forced to give up participating in alcohol related activities.	○	○	○	○	○	○
f. I think of myself as someone who regularly goes out to drink with my friends.	○	○	○	○	○	○

Consideration of Future Consequences
61. How characteristic are the following statements of who you are?

	Extremely Uncharacteristic (1)	Uncharacteristic (2)	Uncertain (3)	Somewhat Characteristic (4)	Extremely Characteristic (5)
a. I consider how things might be in the future, and try to influence those things in my day to day behavior.	○	○	○	○	○
b. Often I engage in a particular behavior in order to achieve outcomes that may not result for many years.	○	○	○	○	○
c. I only act to satisfy immediate concerns, figuring the future will take care of itself.	○	○	○	○	○
d. My behavior is only influenced by the immediate (i.e., a matter of days or weeks) outcomes of my actions.	○	○	○	○	○
e. My convenience is a big factor in the decisions I make or the actions I take.	○	○	○	○	○
f. I am willing to sacrifice my immediate happiness or well-being in order to achieve future outcomes.	○	○	○	○	○
g. I think it is important to take warnings about negative outcomes seriously even if the negative outcome will not occur for many years.	○	○	○	○	○

Consideration of Future Consequences (cont.)

	Extremely Uncharacteristic (1)	Uncharacteristic (2)	Uncertain (3)	Somewhat Characteristic (4)	Extremely Characteristic (5)
h. I think it is more important to perform a behavior with important distant consequences than a behavior with less-important immediate consequences.	○	○	○	○	○
i. I generally ignore warnings about possible future problems because I think the problems will be resolved before they reach crisis level.	○	○	○	○	○
j. I think that sacrificing now is usually unnecessary since future outcomes can be dealt with at a later time.	○	○	○	○	○
k. I only act to satisfy immediate concerns, figuring that I will take care of future problems that may occur at a later date.	○	○	○	○	○
l. Since my day to day work has specific outcomes, it is more important to me than behavior that has distant outcomes.	○	○	○	○	○

Need to Belong
62. How much do you agree with the following?

	Strongly Disagree (1)	Moderately Disagree (2)	Neither Agree nor Disagree (3)	Moderately Agree (4)	Strongly Agree (5)
a. If other people don't accept me, I don't let it bother me.	○	○	○	○	○
b. I try hard not to do things that will make other people avoid or reject me.	○	○	○	○	○
c. I seldom worry about whether other people care about me.	○	○	○	○	○
d. I need to feel that there are people I can turn to in times of need.	○	○	○	○	○
f. I want other people to accept me.	○	○	○	○	○
g. I do not like being alone.	○	○	○	○	○
h. Being apart from my friends for long periods of time does not bother me.	○	○	○	○	○
i. I have a strong need to belong.	○	○	○	○	○
j. It bothers me a great deal when I am not included in other people's plans.	○	○	○	○	○
k. My feelings are easily hurt when I feel that others do not accept me.	○	○	○	○	○

63. In the next week, how likely are you to do the following:

	Very Unlikely (1)	Unlikely (2)	Somewhat Unlikely (3)	Somewhat Likely (4)	Likely (5)	Very Likely (6)
a. Think twice before tweeting offensive content.	○	○	○	○	○	○
b. Remove photos that contain alcohol from your Facebook profile.	○	○	○	○	○	○
c. Post information on Facebook that your parents would be okay with.	○	○	○	○	○	○
d. Tweet content that is professional.	○	○	○	○	○	○
e. Avoid using social media to communicate about alcohol related activities.	○	○	○	○	○	○
f. Consider what your employer or future employer would think the content before posting or tweeting.	○	○	○	○	○	○

The following set of questions will ask you about using social media websites (i.e., Facebook, Twitter, Instagram, etc.) to communicate in a professional manner. Communicating in a professional manner includes posting or tweeting content that would not be considered offensive, disrespectful, or inappropriate by most people (including your employer or future employer).

64. Using social media to communicate in a professional manner is:

	(1)	(2)	(3)	(4)	(5)	(6)
Unpleasant (1)---Pleasant (6)	❍	❍	❍	❍	❍	❍
Unenjoyable (1)---Enjoyable (6)	❍	❍	❍	❍	❍	❍
Embarassing (1)---Socially accepted (6)	❍	❍	❍	❍	❍	❍
Dull(1)---Exciting (6)	❍	❍	❍	❍	❍	❍
Boring(1) ---Interesting (6)	❍	❍	❍	❍	❍	❍

65. Using social media to communicate in a professional manner is:

	(1)	(2)	(3)	(4)	(5)	(6)
Foolish (1)---Wise (6)	❍	❍	❍	❍	❍	❍
Bad (1)---Good (6)	❍	❍	❍	❍	❍	❍
Harmful (1)---Helpful (6)	❍	❍	❍	❍	❍	❍
Unnecessary (1)---Necessary (6)	❍	❍	❍	❍	❍	❍
Unimportant (1)---Important (6)	❍	❍	❍	❍	❍	❍

66. How likely are the following outcomes?

	Very Unlikely (1)	Unlikely (2)	Somewhat Unlikely (3)	Somewhat Likely (4)	Likely (5)	Very Likely (6)
a. Using social media to communicate in a professional manner will help me fit in with my peers	○	○	○	○	○	○
b. Using social media to communicate in a professional manner will make other people like me more.	○	○	○	○	○	○
c. Using social media to communicate in a professional manner will NOT have any negative consequences.	○	○	○	○	○	○
d. Using social media to communicate in a professional manner will make my online friends laugh.	○	○	○	○	○	○
e. Using social media to communicate in a professional manner will draw attention from others.	○	○	○	○	○	○

67. How much do you agree with the following statements?

	Very Strongly Disagree (1)	Strongly Disagree (2)	Disagree (3)	Agree (4)	Strongly Agree (5)	Very Strongly Agree (6)
a. Using social media to communicate in a professional manner is rewarding.	○	○	○	○	○	○
b. Using social media to communicate in a professional manner is pleasurable.	○	○	○	○	○	○
c. Using social media to communicate in a professional manner is enjoyable.	○	○	○	○	○	○
d. Using social media to communicate in a professional manner is fun.	○	○	○	○	○	○

68. How much do you agree with the following statements?

	Very Strongly Disagree (1)	Strongly Disagree (2)	Disagree (3)	Agree (4)	Strongly Agree (5)	Very Strongly Agree (6)
a. For most people, using social media to communicate in a professional manner is rewarding.	❍	❍	❍	❍	❍	❍
b. For most people, using social media to communicate in a professional manner is pleasurable.	❍	❍	❍	❍	❍	❍
c. For most people, using social media to communicate in a professional manner is enjoyable.	❍	❍	❍	❍	❍	❍
d. For most people, using social media to communicate in a professional manner is fun.	❍	❍	❍	❍	❍	❍

69. Most people who are important to me think that _____ use social media to communicate in a professional manner.

	(1)	(2)	(3)	(4)	(5)	(6)
I should not (1) ---I should (6)	❍	❍	❍	❍	❍	❍

70. How much do you agree with the following statements?

	Very Strongly Disagree (1)	Strongly Disagree (2)	Disagree (3)	Agree (4)	Strongly Agree (5)	Very Strongly Agree (12)
a. Most people whose opinions I value would approve of me using social media to communicate in a professional manner.	○	○	○	○	○	○
b. It is expected of me that I should use social media to communicate in a professional manner.	○	○	○	○	○	○
c. People who are important to me want me to use social media to communicate in a professional manner.	○	○	○	○	○	○
d. Society in general considers this activity to be appropriate.	○	○	○	○	○	○
e. It is appropriate to use social media to communicate in a professional manner.	○	○	○	○	○	○

71. Other college students think that _____ use social media to communicate in a professional manner.

	(1)	(2)	(3)	(4)	(5)	(6)
I should not (1)----I should (6)	○	○	○	○	○	○

72. How much do you agree with the following statements?

	Very Strongly Disagree (1)	Strongly Disagree (2)	Disagree (3)	Agree (4)	Strongly Agree (5)	Very Strongly Agree (24)
a. My friends want me to use social media to communicate in a professional manner.	○	○	○	○	○	○
b. My peers would approve of me using social media to communicate in a professional manner.	○	○	○	○	○	○

73. How much do you agree with the following statements?

	Very Strongly Disagree (1)	Strongly Disagree (2)	Disagree (3)	Agree (4)	Strongly Agree (5)	Very Strongly Agree (6)
a. Most people like me regularly use social media to communicate in a professional manner.	○	○	○	○	○	○
b. In general, most people use social media to communicate in a professional manner.	○	○	○	○	○	○

74. How likely is the following?

	Very Unlikely (1)	Unlikely (2)	Somewhat Unlikely (3)	Somewhat Likely (4)	Likely (5)	Very Likely (6)
Most people I respect and admire will use social media to communicate about alcohol related activities.	○	○	○	○	○	○

Memorable messages are significant messages that people remember for a long time and have a considerable impact on our lives. They may be words of advice told to us by a friend or family member, messages communicated by a person we admire or who holds a position of authority, or even actions we observe that change the way we think about things.

75. Based on the explanation above, please describe a memorable message (i.e. words of advice or an important event) that has had a SIZABLE AND SIGNIFICANT impact on your ideas about what is or is not appropriate to post on social media sites.

76. Why did you find this message meaningful?

77. In what way did this message have an impact on the types of information you communicate with others on social media sites?

The message was sent by: (CHOOSE ONE)
○ a close friend (1)
○ a student at UK (2)
○ a teach or mentor (3)
○ a parent (4)
○ a boss or employer (5)
○ other, please specify: (6) _____

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Pilot Test − Consent Form

Consent to Participate in a Research Study

Study on Students' Use of Alcohol and Social Media Sites

WHY ARE YOU BEING INVITED TO TAKE PART IN THIS RESEARCH?

You are being invited to take part in a research study about the types of information that people share online. More specifically, you are being invited to take part in this research study because of your experience as a student at UK. If you volunteer to take part in this study, you will be one of about 550 people to do so.

WHO IS DOING THE STUDY?

The person in charge of this study is Jenna E. Reno. She is a Ph.D. candidate in the Department of Communication at the University of Kentucky. She is being guided in this research by Dr. Elisia Cohen. There may be other people on the research team assisting at different times during the study.

WHAT IS THE PURPOSE OF THIS STUDY?

The purpose of this study is to identify the type of information people share online, specifically information related to students drinking and drinking related behavior. Additionally, the study hopes to gain greater understanding of the norms, attitudes, and motives for sharing this type of information online.

ARE THERE REASONS YOU SHOULD NOT TAKE PART IN THIS STUDY?

- You should not take part in this study if you are under 18 years of age.

- You should not participate if you have not consumed at least one alcoholic beverage in the last 30 days.

- You should not participate if you do have an active Facebook, Twitter or Instagram account.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?

The research will be conducted at an agreed upon campus location. You will attend one research group session during the study. That visit will take approximately 45 minutes. Thus, the total amount of time that you will be asked to contribute will be approximately 45 minutes during a one-time visit to the research location.

WHAT WILL YOU BE ASKED TO DO?

During this focus group you will be asked to do several things. First, you will be asked to complete this informed consent form. Your name will not be associated with specific feedback that you provide during the research group session, and will not be used to identify you in research reports. This will take approximately 5 minutes.

Second, you will complete a survey regarding your use of social networking sites including Facebook, Twitter and Instagram. As part of the survey process, you will be asked to log-in to all of the aforementioned social networking site accounts that you use in order to use them as a reference to answer survey questions. Your personal account information will not be tracked or recorded in any form. This will take approximately 30 minutes.

Additionally, after completing the survey, you will be asked to provide feedback on several survey questions via group discussion. You responses may be used in future studies regarding sharing information online. This will take approximately 10 minutes.

Student participants will receive extra course credit for participation.

As part of this study, the group discussions will be recorded to assist the researchers in thoroughly and accurately capturing the information that will benefit research on disclosure of information online. Your name will not be associated with this information or the survey responses you provide, so your opinions will remain confidential when we share or publish research results.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

The only possible risks to you are any embarrassment or anxiety you might feel answering confidential questions about alcohol-related attitudes, beliefs, and behaviors. However, this risk should be no greater than what you would experience in everyday conversations with other college students such as yourself about these alcohol-related issues.

WILL YOU BENEFIT FROM TAKING PART IN THIS STUDY?

There is no guarantee that you will get any benefit from taking part in this study. However, your willingness to take part may help society as a whole better understand this research topic, which might eventually lead to safer online environments.

DO YOU HAVE TO TAKE PART IN THE STUDY?

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you choose not to volunteer. You can stop at any time during the study and still keep the benefits and rights you had before volunteering.

IF YOU DON'T WANT TO TAKE PART IN THE STUDY, ARE THERE OTHER CHOICES?

If you do not want to be in the study, you may choose to participate in another research study or complete the alternative non-research assignment.

WHAT WILL IT COST YOU TO PARTICIPATE?

There are no costs associated with taking part in the study, save for the time you spend to participate.

WILL YOU RECEIVE ANY REWARDS FOR TAKING PART IN THIS STUDY?

Each student participants will receive one SONA research credit for taking part in the study, even if you withdraw from the study early.

WHO WILL SEE THE INFORMATION THAT YOU GIVE?

We will make every effort to keep private all research records that identify you to the extent allowed by law. However, confidentiality cannot be guaranteed because of the nature of collecting information via group discussion. That is, during the discussion portion of the study, other participants who are present will know what was said and by whom.

Your information will be combined with information from other people taking part in the study. When we write about the study to share it with other researchers, we will write about the combined information we have gathered. You will not be personally identified in these written materials. We may publish the results of this study; however, we will keep your name and other identifying information private.

We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. The recordings of focus group discussions will be transcribed using pseudonyms (e.g., Participant A) and will be stored electronically by the primary researcher in password protected computer files.

We may be required to show information which identified to people who need to be sure we have done the research correctly; these would be people from such organizations as the University of Kentucky.

Your name will not be attached to any of the materials that you complete during the study. Thus, all information you provide will be confidential. Agents for the University of Kentucky and the sponsoring agency, if applicable, will be allowed to inspect sections of research records related to this study. All information from the study will be used only for research purposes. However, researchers can be forced to tell people who are not connected with the study, including the courts, about your participation.

CAN YOUR TAKING PART IN THE STUDY END EARLY?

If you decide to take part in the study you still have the right to decide at any time that you no longer want to continue. You will not be treated differently if you decide to stop taking part in the study. There will be no consequences for withdrawing from the study. If you wish to withdraw, please inform the focus group facilitator at any time during the focus group discussion. Student participants will receive extra course credit for completing the study.

WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS, CONCERNS, OR COMPLAINTS?

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study, you can contact the investigator, Jenna Reno at Jenna.Reno@uky.edu. If you have any questions about your rights as a volunteer in this research, contact the staff in the Office of Research Integrity at the University of Kentucky at 859-257-9428 or toll free at 1-866-400-9428. We will give you a signed copy of this consent form to take with you.

_____   _____

Signature of person agreeing to take part in the study   Date

_____

Printed name of person agreeing to take part in the study

_____   _____

Name of [authorized] person obtaining informed consent   Date

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Vita

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EDUCATION

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Bethel University, St. Paul, MN, Department of Health and Physical Education
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ACADEMIC EMPLOYMENT

Teaching Assistant/Instructor, University of Kentucky (Fall 2011 – Current)

Editorial Assistant, *Communication Yearbook*, International Communication
Association, Elisia Cohen, Ph.D. (Ed.) (Spring 2014 – Current)

Research Assistant, University of Kentucky, various projects (Fall 2012 - Current)

Research Assistant, Baylor University, Lacy G. McNamee, Ph.D. (Spring 2010,
Summer 2013)

Graduate Assistant, Armstrong Browning Library, Baylor University (Spring 2010
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AWARDS & HONORS

Provost's Outstanding Teaching Award Finalist, University of Kentucky (2015)

Bruce H. Westley Memorial Scholarship *(excellence in mass communication
theory and research),* College of Communication and Information, University of
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Graduate Teaching Assistant Award Nominee, College of Communication and
Information, University of Kentucky (2014)

Research Fellowship, College of Communication and Information, University of
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Phil Palmgreen Fellowship *(excellence in health communication campaign research)***,** College of Communication and Information, University of Kentucky (2013)

Graduate Teaching Assistant Award Nominee, College of Communication and Information, University of Kentucky (2013)

Research Fellowship, College of Communication and Information, University of Kentucky (2013)

R. Lewis Donohew Fellowship, an award presented to an incoming doctoral student studying mass communication or health communication, College of Communication and Information, University of Kentucky (2012)

Research Fellowship, College of Communication and Information, University of Kentucky (2012)

PUBLICATIONS

Goldsmith, J., Wittenberg-Lyles, E., Platt, C. M., Iannarino, N., & **Reno, J. E.** (in press). Family caregiver communication patterns in oncology: Advancing a typology. *Psycho-Oncology.*

Reno, J. E., & McNamee, L. G. (2015). Do sororities promote members' health? A study of memorable messages regarding weight and appearance. *Health Communication, 30*(4), 385-397. doi:10.1080/10410236.2013.863702

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