THESIS

SHARING HEALTH RISK BEHAVIORS ON SOCIAL MEDIA

Submitted by

Abigail Lynn Ross

Department of Journalism and Media Communication

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Master's Committee:

    Advisor: Marilee Long

    Gayathri Sivakumar
    Meara Faw

ABSTRACT

SHARING HEALTH RISK BEHAVIORS ON SOCIAL MEDIA

The popularity of social media platforms has provided an outlet for young adults to display risky health behaviors. Previous research has shown sites, such as Facebook provide the perfect platform to share drinking, drug use and sexual behaviors. With the creation of Snapchat and its unique disappearing content affordance, it is the perfect platform to examine how and why young adults display risk health behaviors on social media.

A uses and gratifications theoretical framework was used to help understand how and why college students use Snapchat to display risky health behaviors, specifically alcohol and marijuana use. Particularly the researcher was interested gratifications from sharing risky health behaviors on Snapchat, affordances of the platform, if there was a relationship between content sent and received on Snapchat versus Instagram, and if there was a relationship between age and sharing risky health behaviors on Snapchat. Instagram was included as a comparison to Snapchat since the platforms share some affordances and Instagram, like Snapchat, is popular with the age group studied.

For this study, 194 participants were recruited from undergraduate journalism classes at Colorado State University to complete an online survey. This population was chosen because it was reasonable to assume that participants were members of Gen-Z, who make up 82% of Snapchat users ("21 Snapchat Stats That Matter to Social Media Marketers," 2020). This sample also included participants who had not reached the legal age for consuming alcohol and marijuana in Colorado, as well as participants who had reached the legal age.

The results showed that, when alcohol-related and marijuana-related content were analyzed together, social sharing was the most highly rated gratification from sharing risky health behaviors on Snapchat. When examining affordances, the researcher thought the disappearing content affordance would be the most highly rated reason for using Snapchat. However, it was found that selectivity when sharing content with a few friends was the most highly rated reason for using Snapchat.

Results also indicated that participants sent and received alcohol-related and marijuana-related content more often on Snapchat than Instagram. Last, while no relationship was found between age and sending alcohol-related and marijuana-related content, there was a relationship between age and receiving alcohol-related and marijuana-related content. Limitations, practical applications, and recommendations for future research were also discussed.

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CHAPTER 1: INTRODUCTION

The Youth Risk Behavior Surveillance System (YRBSS) monitors six behaviors that the Centers for Disease Control and Prevention have found to be the leading causes of death and disability for youth and young adults. These include: "behaviors that contribute to unintentional injuries and violence; sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases, including HIV infection; alcohol and other drug use; tobacco use; unhealthy dietary behaviors; and inadequate physical activity" (Centers for Disease Control and Prevention, 2020).

The popularity of social media sites has allowed these platforms to become an outlet for young adults to display risky health behaviors. As of 2017, 97.5% of young adults were using some form of social network (Villanti, Johnson, Ilakkuvan, Jacobs, Graham, & Rath, 2017). As cited in Morgan, Snelson, and Elison-Bowers (2010), "As many as half of all adolescents and young adults with social networking profiles display negative health risk behaviors, including sexual behaviors and substance use" (p. 1405). A 2007 study by Moreno, Parks, and Richardson examined public MySpace profiles to determine the extent of personal risk behavior descriptions. Of the 142 profiles they examined, 47% contained risky behavior information. "Twenty-one percent described sexual activity, 25% described alcohol use, 9% described cigarette use, and 6% described drug use" (p. 2). Loss, Lindacher, and Curbach (2013) found similar results after performing a content analysis of Facebook posts of medical students whose mean age was 21.6 years. They selected three risky behaviors: alcohol use, tobacco smoking, and unhealthy diet. Of the 30 profiles they examined, 27 contained at least one reference to a risky behavior. Of the

381 health-related posts, 42% involved alcohol consumption and 28% showcased unhealthy nutrition.

Although all six risk factors identified by the YRBSS are important, two stand out for their relevance to the college population: the uses of alcohol and other drugs. According to the National Institute of Drug Abuse, from 1994 to 2014, daily drinking increased from 3.7% to 4.3% among full-time college students and daily marijuana smoking more than tripled from 1.8% to 5.9% (Johnson, O'Malley, Bachman, Schulenberg & Miech, 2015). Also, college students now smoke marijuana daily more often than they drink alcohol daily (Johnson et al., 2015). The frequency of marijuana consumption in college students becomes more concerning as recreational marijuana continues to be legalized throughout the United States. Colorado was one of the first states to legalize marijuana, so displays of risky health behaviors, specifically marijuana use, among college students become even more interesting.

Previous research shows that social media sites like MySpace and Facebook provide the perfect platform to share drinking, drug use, and sexual behaviors. However, the permanence of content on these social media platforms has become a detraction of the sites. For example, Moreno, Briner, Williams, Walker, and Christakis (2009) used focus groups to study adolescents' alcohol references on social networking sites (SNS). Of themes identified in the focus groups, one theme pertained to risks associated with publicly displaying alcohol use on SNS. The risks identified included: punishment, blackmail, and promotion of alcohol use among peers. One participant was quoted saying:

"I can't see why they do it [displaying drinking behavior online]. Because it seems like you're putting yourself in a really risky position. Besides, like, doing all that [drinking].

Taking photos is evidence. It's almost like you're giving the evidence to someone" (p. 422).

Snapchat, which was introduced in 2011, addresses this permanency concern. The key feature of this SNS is the short life of content, also known as snaps. Users take photos and/or videos that self-destruct within a short, pre-set time period (1 to 10 seconds per photo; up to 60 seconds for a video) after the receiver opens the message[1]. This type of temporary social media is gaining popularity, specifically among people ages 18 to 24; Snapchat is now the third most popular social media account (Magid, 2013; Volpe, 2015). Its use among college students is widespread; in 2016, 81.7% of college students reported using Snapchat (Viillanti et al., 2017).

The temporary nature of Snapchat's content may encourage users to post risky health behaviors on the platform, because the risk of the behavior being seen by unintended audiences decreases. However, risky behaviors on Snapchat have yet to be extensively studied. Boyle, LaBrie, Froidevauz, and Witkovic (2016) conducted a longitudinal study of how peers' alcohol-related social media content influenced drinking among first-year college students. They studied 408 first-year college students and whether their exposure to alcohol-related content on Facebook, Instagram, and Snapchat during the first six weeks of college influenced their alcohol consumption six months later. They found that Snapchat was the most frequently checked of the three SNSs. Participants also reported a higher frequency of seeing others' alcohol-related posts on Snapchat compared to Facebook and Instagram. Overall, the researchers found that exposure

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[1] The content may last longer if the receiver chooses to make a screenshot of the message. There is also a Stories feature included in Snapchat that allows receivers to view content an unlimited number of times in a 24-hour period.

to alcohol-related content during the first six weeks of school predicted alcohol consumption six months later.

The SNS, Instagram, was used as a comparison platform in this study. Snapchat and Instagram share similar features in the sense that they are both used for photo/video sharing. In addition, Instagram was chosen because, like Snapchat, it is a very popular social media platform among 18-24 year-old adults. Data published in March 2018 show 78% of 18- to 24-year-old adults use Snapchat and 71% use Instagram (Smith & Anderson, 2018).

To add to the body of literature on risky health behaviors and SNSs, this study takes a uses and gratifications approach to examine how and why college students use Snapchat to display risky health behaviors, specifically alcohol and marijuana use. This theory was helpful because it focuses on why people gravitate towards certain media to satisfy their needs. In addition, uses and gratifications theory examines affordances of new media, which is central to this study. Affordances can be defined as "a particular capability possess[ed] by the medium to facilitate a certain action" (Sundar, 2008, p. 79). These affordances are important to understand in uses and gratifications research of new media because "the affordances of modern media will lead users to expect certain gratifications and thereby shape the fulfillment that they receive by using these media" (Sundar & Limperos, 2013 p. 512). Understanding affordances across different platforms could help future researchers understand why people experience certain gratifications from SNSs. Last, by understanding affordances that contribute to the sharing of risky health behaviors, researchers may be able to identify future platforms where these behaviors are shared.

Descriptive norms may help in describing the importance of this study. A descriptive norm can be defined as an individual's perception about the prevalence of a behavior (Lapinski

& Rimal, 2005). This also includes the perception of the popularity of an act or behavior, such as alcohol or marijuana consumption (Park, Klein, Smith, & Martell, 2009). Studies on the effects of descriptive norms have shown that young adults have exaggerated perceptions about the prevalence of risky health behaviors. Specifically related to alcohol consumption, "the greater the prevalence perceived by students, the more likely they are to construe their own consumption patterns as being normative" (Rimal & Real, 2005, p. 390). The influence of descriptive norms involving alcohol has been tested with Facebook; in a 2011 study, Litt and Stock studied adolescents, ages 13-15, and exposed them to one of two Facebook conditions: one alcohol condition and one control condition. It was found that participants who viewed Facebook profiles showing alcohol use among peers as normal reported a greater willingness to use alcohol, more positive attitudes towards alcohol use and peers who consume alcohol, and they perceived fewer consequences around drinking alcohol in comparison to participants who viewed Facebook profiles that did not show alcohol use as normative. Because Snapchat is a vehicle for displaying these behaviors, it is important to understand how and why young people use this type of media, as its use may impact adoption of these risky health behaviors.

CHAPTER 2: LITERATURE REVIEW

Uses and Gratifications Theory

Uses and gratifications research began in the 1950s and 1960s when media effects research shifted perspective from a passive to an active audience (Rubin, 2009). In the 1970s, the theory's focus was refined as studies concentrated on audience motivations and how audiences use the media to satisfy their needs. Uses and gratifications theory takes a view of communication where individual differences impact media effects. It assesses how people use the media and the purposes and functions the media serve for receivers (Rubin, 2009).

Katz, Blumler, and Gurevitch outlined uses and gratifications theory in 1974, noting that the theory seeks to explain the way people use communication to satisfy their needs and achieve their goals. Katz et al. expand on this definition, clarifying that uses and gratifications theory involves "(1) the social and psychological origins of (2) needs, which generate (3) expectations of (4) the mass media or other sources, which lead to (5) differential patterns of media exposure (or engagement in other activities), resulting in (6) need gratifications and (7) other consequences, perhaps mostly unintended ones" (p. 510). Put simply, uses and gratifications theory attempts to explain the ways in which people use mediated communication to meet their needs. The three principal objectives associated with uses and gratifications theory are that the theory strives to explain why people use media to satisfy certain needs, how people use media (e.g., watch TV, listen to radio, surf the Internet) to satisfy certain needs, and potential gratifications from satisfying these needs (Rubin, 2009).

Theoretical Assumptions

Katz, et al. (1974) list five assumptions of the theory, which are better explained by Rubin (2009):

1. The selection and use of media are goal directed, purposive, and motivated.

2. The audiences select and use media to satisfy their needs and desires.

3. Social and psychological factors guide, filter, or mediate behavior.

4. The media compete with other forms of communication, such as interpersonal communication, to gratify needs and wants.

5. People are typically more influential than the media in terms of satisfying other people's needs or desires.

Assumptions 1 through 4 have endured through the evolution of media and technology. However, in relation to assumption 5, new media provide other means for people to get interactions that are similar to face-to-face interactions. Because of this advance in technology, interactions on certain types of new media, such as Snapchat, may be as influential as typical face-to-face interactions.

Needs and Need Categories Defined

Based on review of definitions [e.g., Lometti et al. (1977), Katz et al. (1974), Rosengren (1974)] the researcher defined a need as something that is wanted, and, in uses and gratifications theory, the focus is on satisfying those wants via the media. Katz et al. (1974) state that the media provide three distinct sources from which needs are satisfied: media content, exposure to the media (e.g., killing time by scrolling social media feeds), and social context (e.g., satisfying a need to spend time with family by going to a movie).

Although initial uses and gratifications research lacks a formal definition of need, there have been numerous studies on the types of needs gratified by various media. McQuail, Blumler, and Brown (1972) detailed four categories of needs: diversion, personal relationship, personal identity, and surveillance. Diversion includes an escape from routine and the burden of problems, as well as providing for an "emotional release" (p. 448). Personal relationship includes real, face-to-face relationships as well as para-social relationships. A para-social relationship occurs when "an audience member enters into a vicarious relationship with media personalities as if he [or she] was on friendly terms with them, and as if they could stand in for real persons" (p. 448). The personal identity need includes personal reference, reality exploration, and value reinforcement. Last, surveillance is defined as having information about events in the wider world of public affairs. These need categories were specifically created for the television audience. Not included in McQuail et al.'s research was how changes in the way audiences experience media, such as the social context in which the media was consumed, could alter why a person sought out specific media to satisfy a need. For example, a person may gather with their family to watch a television show because the experience of watching the show together allows them to bond with their family. In this case, the experience of watching television is gratifying a need instead of the television show itself. Because of the potential shift in needs based on audience experience, McQuail et al. called for more precision in researching need categories.

In 1973, Katz, Gurevitch, and Haas developed similar need categories: cognitive needs, affective needs, personal integrative needs, social integrative needs, and escapist needs. The authors developed these categories after grouping a comprehensive list of social and psychological needs that can be satisfied by exposure to the mass media. Their list was taken

from literature as well as the authors' personal insights. Katz, et al. believed that media satisfy needs arising from one's social and psychological nature. Cognitive needs are those related to strengthening information, knowledge, and understanding. Pleasurable and emotional experiences are known as affective needs. Integrative needs serve two functions: personal and social integrative needs. "Needs related to strengthening credibility, confidence, stability, and status" are personal integrative needs, whereas "needs related to strengthening contact with family, friends, and the world" are social integrative needs (p. 163). The last type of need, escapist need, is related to escape or tension release. As a whole, "needs, typically, take the form of (1) strengthening or weakening, (2) a connection - cognitive, affective, integrative (3) with some referent - self, friends, family and tradition, social and political institutions, [and] others" (p. 177).

Gratifications and Gratification Categories

Originating from the attempt to satisfy a need, uses and gratifications theory states that people generate expectations of the media, which then result in gratifications (i.e., satisfaction). An assumption of the theory is that people know what they need/desire and they also know when this need/desire is met. If a need is an identified desire, the assumption is also that a person can articulate what it is that they need/desire and ultimately determine if that desire/need is met. Therefore, for this study, a gratification is the recognition of the fulfillment of the need/desire.

Building on Katz et al. (1973), Cutler and Danowski (1980) created two main categories of media gratifications: content and process. Content gratifications are when one gets value from the information in a message, whereas process gratifications are gained from the experience of using the media itself. In content gratifications, the satisfaction stems from the content of the message, whether it is an increase in knowledge or potentially reducing uncertainty (Stafford &

Stafford, 1996, p. 29). Alternatively, a process gratification may occur, for example, when scrolling Facebook because the user is bored, versus seeking specific information from the medium. It is from the experience of using Facebook that the user is getting a gratification.

However, the line between content and process gratifications seems to be blurry, as there is no clear indicator of when a process gratification could turn into a content gratification. It could even be said that a process gratification could cause a content gratification. With this in mind, consider the following: based on the definition from Cutler and Danowski (1980), media content as a source of gratification can only fit in the category of content gratifications. This categorical exclusivity also applies to social context as it can only be a process gratification. Yet, one could argue that exposure to the media could provide both a content and a process gratification. For example, if one watches a movie in an old movie theatre, the sound quality may not be that great, but the process gratification could come from the nostalgic feeling one gets when attending an old theatre. However, if one watches the same movie in a new theatre, a process gratification could be obtained from enjoying the experience a new movie theatre provides. This experience could include good sound quality, which ultimately becomes a content gratification as well, because one can hear the movie better.

Critiques of the Theory

During the 1970s, a variety of researchers began critiquing the theory and found several pitfalls. These critiques include Elliot (1974), Swanson (1977, 1979), Lometti, Reeves, and Bybee (1977), and Rosengren (1974). Ruggiero (2000) synthesized the critiques from the 1970s into the following list of problems for the theory:

"(a) a vague conceptual framework, (b) a lack of precision in major concepts, (c) a

confused explanatory apparatus, and (d) a failure to consider audiences' perceptions of

media content" (p. 6).

Of the above critique, this study is impacted by both a vague conceptual framework and a

confusing explanatory apparatus, both of which contribute to the lack of precision in major

concepts. Rosengren (1974), Swanson (1977, 1979), and Lometti, et al. (1977) cite the lack of

conceptual clarity as a major problem that plague uses and gratifications theory.

Rosengren (1974) states, "although the term 'need' is often encountered in writings about

uses and gratifications, [it] has not been subject to direct investigation within this tradition and

for a very good reason…when the term 'need' is introduced, what is typically meant is what has

here been called problems or even motives" (p. 272). Swanson (1977) expands on Rosengren's

mention of lack of conceptualization saying, "similar concepts which are used loosely and

without precise meaning include 'use,' 'gratification,' 'motive,' and 'need'" (p. 217). Swanson

points out that each term refers to a specific concept in the literature with a specific definition;

thus the terms cannot be used interchangeably.

Lometti, et al. (1977) define needs as "gratifications sought" (p. 321). This definition is

problematic as they are now using the terms "need" and "gratification" somewhat

interchangeably. Lometti et al. address this shortcoming by saying that the relationship between

gratifications sought (i.e., needs) and actual gratifications has not been tested and therefore pose

the following questions in their critique:

> "Do they become equivalent through some trial-and-error learning process, where
> over time one knows what to expect from a given channel and subsequently
> receives it? … Do the gratifications function as exogenous variables similar to
> exposure, and do they have direct impact on attitudes and behavior? OR do

gratifications serve as intervening variables between exposure and effect?" (p. 337).

Expanding off of Lometti et al.'s definition of a need as a gratification sought, the author would agree that gratifications sought and gratifications obtained are somewhat equivalent. People could choose to watch the news on television, for example, in order to find out about recent events in their town. While someone may seek out the news in order to satisfy a need to know information, they return to watch the news because this need is continuously being satisfied. Therefore, there are a lot of similarities between gratifications sought and gratifications obtained. Because of these similarities, the researchers believes that Lometti et al. are therefore justified in defining a need as a "gratification sought" in their work.

Katz et al. (1974) take a slightly different approach in critiquing the theory, pointing out that researchers are quick to list individual needs that are applicable to their study, but what is missing is a larger clustering of needs, different levels of needs, and the ability to pair certain needs with gratifications. Katz et al. suggest that instead of researching the specific needs that can cause certain gratifications, future researchers could instead "work backwards" from gratifications to needs. For example, if media help an individual escape reality (gratification), the associated need could be a need to release tension and/or reduce anxiety (p. 514).

Even though Katz et al. somewhat skirted the issue of defining a need, the researcher thinks that they bring up a valid point that is helpful in future uses and gratification studies. If researchers can come up with a larger typology of needs, it may be much easier to determine the gratifications that may stem from satisfying those needs.

Although Rosengren (1974), Swanson (1977, 1979), Lometti et al. (1977), and Katz et al. (1974) all point out conceptual shortcomings in the uses and gratification literature, they fail to

provide any conceptualizations/definitions of their own, instead calling on future researchers to do so.

In 1983, Rubin noted that some progress had been made to address critiques of the theory; however, almost two decades later, Ruggerio (2000) noted that there is still a lack of clarity among central concepts (e.g., needs, motives, behavior, consequences), as well as the fact that researchers continue to attach different meanings to concepts (motives, uses, gratifications) which contributes to fuzzy thinking. Ruggerio notes that these main problems still exist due to a revival of uses and gratifications to study new media, mainly the Internet.

The researcher believes that the advent of new media caused researchers to shift from studying radio and TV to studying new media. From their understanding of studies on new media, this shift may be because of researchers' desire to replicate previous studies from traditional media using new media, versus expanding and/or refining what has already been done with the theory. Therefore the same issues that plagued uses and gratifications in the 1970s are still around today. However, uses and gratifications researchers who have studied new media, specifically Sundar (2008) and Sundar and Limperos (2013), have expanded on previous research. They specifically looked at affordances of new media. These additions to the theory include clear definitions of new concepts (e.g., affordances).

Gratifications in the Age of New Media

Original uses and gratifications research focused mainly on traditional media, such as radio (Herzog, 1940), television (Greenberg, 1974; Rubin 1981), and newspapers (Berelson, 1949). The theory has since been expanded to address modern media and ways of communicating, such as the Internet, instant messaging, and various SNS (MySpace, Twitter, and Facebook). However, there has been a fair amount of overlap of need categories between

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old and new media, which suggests that core reasons for media use may exist. For example, entertainment has been shown as a gratification in studies of television, Internet, video games, Twitter, and Facebook (Sundar & Limperos, 2013). With this expansion into new media, uses and gratifications theory has also seen some modifications. Sundar and Limperos (2013) detail these changes in their article, "New Gratifications for New Media."

According to Sundar and Limperos, one conceptualization that has changed with the expansion to new media is that of the audience. Although uses and gratifications theory is still focused on an active audience, the original proposition of the audience as active started as an assumption, which has now turned to a reality due to the interactivity involved with new media. These audiences are now typically known as "users" in current uses and gratifications research.

Content and process gratifications have also been impacted by new media. Content gratifications have been expanded because the way content is accessed, discussed, and created has changed. As noted by Sundar and Limperos (2008), "the tools offered by modern media have expanded the range and scope of our interactions with media content" (p. 505). An example of a content gratification would be that news information can be accessed much quicker than in traditional media. In the past, people would have to wait until the next day's newspaper was published or wait until the evening news was televised. Now, someone could go on Twitter, for example, and find out news information almost instantly. Content is created much more rapidly, allowing people quicker access to information than before. The ways in which new media function are expanding process gratifications as well, which may be even more important in the new media context compared to traditional media. For example, the interactivity offered by social media platforms such as Snapchat and Instagram allow users engage with the content they are seeing. Instagram provides polling and question functionality that allows users to

interact with the platform as well as with other users. The level of interactivity experienced by the user could directly impact the process gratification they receive from using Instagram. Interactivity is an example of an affordance. Affordances, which can be defined as features of new media, provide a great way to examine these platforms as process gratifications from using new media are influenced specifically by these affordances.

Adding to gratification studies on new media, Dhir, Chen, and Chen (2015) developed a new gratifications scale to be used on social media. Their gratification scales includes the following: likes and comment, social influence, peer pressure, gain popularity, entertainment, feel good, social sharing, affection, and convenience. Dhir, Chen, and Chen applied their gratifications scale to Facebook; however, this scale could easily be adapted to other social media platforms.

The following section details the importance of affordances and how they relate to credibility of new media and shape gratifications.

Affordances

An affordance can be defined as "a particular capability possess[ed] by the medium to facilitate a certain action" (Sundar, 2008, p. 79). These affordances transmit cues that impact a user's perceptions and the processing of content. Majchrzak et al. (2013) mention that affordances explain the functionality of technology that allows users to behave in certain ways and achieve their goals. According to Sundar (2008), affordances are present in most digital media and help cue heuristics regarding credibility because these features and characteristics are key in making the first impression on credibility. As shown in Figure 1, the presence of an affordance cues a cognitive heuristic that one uses to assess the quality of the content, therefore

leading to a credibility judgment of the content and source. The more affordances that are present, the greater the judgment in credibility.
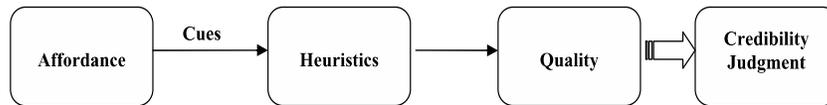

Figure 1: The influence of affordances on credibility judgment (Sundar, 2008, p. 79)

Sundar (2008) details four specific affordances in his work: modality, agency, interactivity, and navigability. He refers to them as the MAIN model. Although source and content of digital media are important in regards to credibility, the MAIN model deals with credibility judgments that are shaped by technological aspects of digital media. Each affordance cues different heuristics, which can lead to different judgments of the quality of the source and content.

These affordances are important to understand in uses and gratifications research of new media because "the affordances of modern media will lead users to expect certain gratifications and thereby shape the fulfillment that they receive by using these media" (Sundar & Limperos, 2013 p. 512). Understanding affordances among different platforms could help future researchers understand why people experience certain gratifications from SNSs. Affordances help establish a framework for understanding the differences among social media platforms in terms of the functions they offer their users (Choi & Sung, 2018; Utz et al., 2015; Waddell, 2016). In addition, by understanding affordances that contribute to sharing of risky health behaviors, researchers can identify future platforms that may be used to share these behaviors.

Modality

Modality refers to media presentation methods that appeal to different senses. Examples of these methods are audio, video, and pictures. Sundar (2008) states that people trust things they see more than things they simply read about. Therefore, people are more likely to perceive an audiovisual modality as credible because the audio and visuals are more similar to reality. Gratifications that may stem from the modality affordance include the following: "being there," which involves greater sensory immersion allowing users to feel like they are a part of the universe being portrayed; "distraction," which is when users experience sensory overstimulation to distract them from reality; and "coolness," where the hipness of the device is shown through numerous modalities.

Agency

Agency is the ability for an individual to act independently and make their own choices. In the uses and gratifications realm, agency-based affordances allow users to act independently by assuming the role of both sender[2] and receiver of content in new media.

At times, it can be difficult to discern whether the source is an authority on the topic, as anyone can assume the role of sender. Because of this, it can be difficult to judge the credibility of a source. New media have allowed the user to assume both the sender and receiver roles and have therefore changed the sender-receiver dynamic; in doing so, new media have allowed for new gratifications. An example of a gratification stemming from the agency affordance is that of a "bandwagon" (Sundar & Limperos, 2013). The ability for users to react to content (e.g., like a photo on Facebook or Instagram) has caused social media users to expect these reactions. Users can feel discouraged when these likes are not present. The agency that users have for creating a bandwagon around a social media post is an example of a need facilitated by new media.

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[2] A sender, in this case, generates and transmits content.

Interactivity

Interactivity is defined as "the affordance that allows the user to make real-time changes to the content in the medium" (Sundar & Limperos, 2013, p. 515). It is the most distinctive affordance of new media, as traditional media[3] typically have little interactivity of this type. An example of an interactive medium could be Snapchat. Numerous functions on Snapchat, such as the ability to add lenses and geofilters[4], allow for a high level of interactivity. The interactivity affordance triggers gratifications such as responsiveness and choice. "Users are likely to expect greater levels of activity from their media experiences, they would want their media interfaces to be responsive to their actions, they will expect to be given more choice and greater control, they will expect more embedded hyperlinks to click through, more flow in their media experiences, and so on" (Sundar & Limperos, 2013, p. 515).

There is a fine line with interactivity; too much interactivity can hurt credibility because it requires more effort from the user and greater scrutiny of content. The right amount of interactivity instead shows openness of information, which can lead to positive judgments of the content (Sundar & Limperos, 2013, p. 515).

Navigability

Navigability is a user's ability to move through the medium. An example of this affordance would be the search bar function built into a website. Websites containing search bars may cue users that the website has good navigation and is, therefore, credible. The presence of hyperlinks on a page can also cue a positive assessment of credibility. In regards to

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[3] In this context, traditional media encompass print newspapers and magazines, as well as radio and television shows, not streamed online.
[4] Geofilters are overlays that help users communicate the "when" and the "where" of the Snap and lenses are 3D filters that, for example, can scan your face to determine where to place pre-made cartoon filters

gratifications stemming from navigability, the "play" gratification can arise from the element of fun that the user could have when moving through the space. An example of this would be gratifications from reaching different levels in video games.

Since affordances can lead users to expect certain gratifications from media, Sundar and Limperos also detailed possible gratifications based on each of the affordance categories, as shown below in Table 1. However, they note their list is not exhaustive and that each proposed gratification may originate from one or more of the classes of affordances.

Table 1: Classes of affordances and expected gratifications (Sundar & Limperos, 2013, p. 513)

Modality	Agency	Interactivity	Navigability
Realism	Agency-Enhancement	Interaction	Browsing/Variety-Seeking
Coolness	Community building	Activity	Scaffolds/Navigation aids
Novelty	Bandwagon	Responsiveness	Play/Fun
Being there	Filtering/Tailoring Owness	Dynamic control	

Social Networking Sites

Social networking sites are defined as "web-based services 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 and those made by others within the system" (Boyd & Ellison, 2007, p. 211). Social networking sites allow communication among people who are already part of a social network, generally from an offline connection. One of the features of SNSs is that they contain a list of friends who have joined the site.   Besides this list of friends, SNSs contain a basic profile, as well as the ability for private and group messages. However, most SNSs varied initially by the type of content that users were allowed to share. Some sites used to work solely for photos, while others supported

video as well, but all platforms now support both photo and video capabilities (Boyd & Ellison, 2007, p. 211).

Snapchat

In September 2011, Snapchat launched in Apple's AppStore. Co-founders Evan Spiegel's and Bobby Murphy's goal was to create "a space to be funny, honest or whatever else you might feel like at the moment you take and share a snap" (Moseley, 2015).

Snapchat, a form of short-lived social media, is based on sharing everyday moments with friends. Spiegel and Murphy wanted the experience to be fun, and they believe there is value in ephemerality. Specifically conversations should be shared and enjoyed, but not saved (Gagnon, 2013). At first, Snapchat only allowed users to send photos. Users chose the duration, between one and ten seconds, that they wanted the receiver to view the photo. After the time expired, the photo self-destructed. This temporary content characteristic was of specific interest for this study as the temporary nature of the content could influence the type of behaviors that are shared on this platform. As Moreno et al.(2009) found, adolescents' are concerned about the risks of publicly showing alcohol references on social networking sites (SNS). The risks identified in their study included: punishment, blackmail, and promotion of alcohol use among peers. However, Snapchat address this concern through their disappearing content feature.

In Snapchat, users create a profile and establish a list of friends that also use the app. Friends are added by username, phone number, or Snapcode[5]. Therefore, people on the friend list can be actual friends, or they can also be someone the user does not know, but may have access to this person's username (i.e., celebrities, public figures, influential others, etc.).

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[5] Snapcodes are unique to each Snapchat user; they could be thought of as a Snapchat thumbprint. This allows other users to scan other people's Snapcodes and add them to their list of friends.

"Snaps"[6] can then be sent to one or many people on the friends list. Each user also has a best friend list, which is composed of the friends the user snaps most frequently. However, only the user can see this list of friends; the list cannot be seen by others.

When a snap is sent, it is uploaded to Snapchat's servers. Once the recipient opens the message, the snap is deleted from the server. Any un-opened snaps are deleted after 30 days (Snapchat Support, n.d.). The only way that a sender or a receiver can save a snap is if a screenshot is taken. However, if a receiver takes a screenshot of a snap, Snapchat notifies the sender that a screenshot has been taken. The receiver still determines what to do with the screenshot.

Since its creation, Snapchat has added video capability, with a duration up to 60 seconds. Users also have the option to add filters to both photo and video, as well as text captions. In 2013, Snapchat expanded its features and added "stories." This feature allows users to document moments of their day and share them with all of their friends. When a user adds a snap to a story (can be photo and/or video), the story is available for 24 hours before it self-destructs. A user can add an unlimited number of snaps to a story. In 2014, Snapchat added an instant messaging feature where users can begin chatting with their friends. However, as soon as the user leaves the chat, the message content disappears (Snapchat Support, n.d.). Geofilters (overlays that help communicate the "when" and the "where" of the Snap), lenses (filters that scan your face to determine where to place pre-made cartoon filters), creative typography, gifs, music, memories (enables users to save photos/videos for themselves to view at a later date), and stories

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[6] Refers to a photo or video taken in Snapchat

(collection of Snaps that can be viewed by Snapchat friends for 24 hours) are also new additions to Snapchat since its creation[7].

Instagram

Instagram is a phone app that allows users to upload photos or videos and share them with their followers. Users can choose what accounts to follow and can subsequently view, like, and comment on photos/videos posted by people they follow (Instagram Help Center, n.d.). Users can apply filters to their photos to make them appear darker or lighter than the original photographs. Captions can also be added below the chosen photo/video.

In 2016 Instagram launched its Stories feature, which is similar to Snapchat's Stories feature. Users can take a photo and upload it to their story where it will live for 24 hours and can be viewed by any of their followers. Users may add text, gifs, geofilters, interactive questions, and lenses to their stories.

What continues to differentiate Snapchat from Instagram is that only users can select the viewing duration of their photo/video on Snapchat. In addition, once a photo or video is shared on Snapchat, this content disappears.

Popularity of Social Networking Sites

ComScore Mobile Metrix, an industry-leading, cross-platform measurement company that provides usage statistics across apps and the web, published a 2014 study that showed that Snapchat was the third most popular social networking app among 18- to 34-year-old adults who used smartphones (Perez, 2014). In a study by the Pew Research Center between March and April 2015, 90 percent of young adults (ages 18 to 29) in the United States reported using social networking sites (Duggen, 2015). Another 2015 study by Refuel Agency, an independent

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[7] Features are reported based off of Spring 2021 updates to the app.

marketing group, had similar findings. This study showed that in a younger demographic (16 to

19 year-olds), Snapchat was the third most popular SNS, with 42% of this age group using it.

Snapchat also reported that it reached 41% of all 18 to 34 year-olds in the United States

(Perlberg, 2016).

Additional evidence is provided by the independent research firm Piper Jaffray; the

company surveyed 6,500 U.S. teens in the spring of 2016 about their social networking

preferences. They found that Snapchat was the most preferred SNS, with 28% of those surveyed

stating it was the most important; Facebook was just behind Snapchat at 27%. This shift in

popularity is significant, because millennials are the most active generation of mobile social

networking users (Perez, 2014).

Data published in March 2018 show 78% of 18- to 24-year-old adults use Snapchat, 71%

use Instagram, and 45% use Twitter. This demographic also accesses these platforms frequently,

with 82% accessing Snapchat daily and 71% reporting they access Snapchat multiple times a

day. Instagram is not far behind, with 81% of this age group accessing Instagram daily, and 55%

accessing the platform numerous times a day (Smith & Anderson, 2018).

Studies of Uses and Gratifications on Social Networking Sites

Raacke and Bonds-Raacke (2008) applied uses and gratifications theory to a study of

MySpace and Facebook. One hundred sixteen college students participated in a survey that

asked questions regarding general account information, their reasons for using the account, and

reasons other students would not use either a MySpace or Facebook account. Participants were

asked to indicate from a list of gratifications what gratifications they obtained from the social

networking sites (e.g., to make new friends).   Researchers found that 96% of participants who

had either account said their reason was "to keep in touch with old friends," 91% "to keep in

touch with current friends," 57.4% "to post/look at pictures," 56.4% "to make new friends," and 54.5% "to locate old friends" (p. 171). When participants listed reasons as to why someone would not have either a MySpace or Facebook account, typical responses were that they were too busy, had no desire, or that they thought it was a waste of time.

A study by Urista, Dong, and Day (2009) also explored MySpace and Facebook using uses and gratifications as their framework. They conducted six focus groups with a total of 50 undergraduate students from a California university. Their goal was to find out why these individuals used SNSs to fulfill their needs and wants. Results were similar to results from Raacke and Bonds-Raacke (2008) and showed that a majority of the participants used SNSs because they were an easy way to communicate with friends. Another theme was that people use SNSs to acquire information on others, whether it is about people they are interested in, old acquaintances, or even new people they have met. Overall they found that "individuals use SNS to experience a selective, efficient, and immediate connection with others for their interpersonal communication satisfaction and as an ongoing way to seek the approval and support of other people" (p. 226).

In line with findings from Raccke and Bonds-Raacke (2008) and Urista, Dong, and Day (2009) on other social media sites, Chen (2011) found that a reason people use the Twitter is for connection with others. Chen examined how Twitter use gratifies people's need to connect with others. Chen surveyed 317 Twitter users and found that the longer someone spends on Twitter in a week, the more the person is gratifying a need for connection with others. A study by Barker (2009) found similar results. Seven hundred thirty-four students completed a questionnaire on interpersonal, media, and computer-mediated communication motives. Results showed that communication between peer groups was the largest motivator for use of SNSs.

Adding to uses and gratifications research on social media, Papacharissi and Mendelson (2011) found passing time, relaxing entertainment, escapism and companionship to be prevalent reasons for Facebook use. Quan-Haase and Young (2010) also found that passing time was one of the leading gratifications obtained from Facebook use. The authors conducted 77 surveys and completed 21 interviews and found that passing time, affection, fashion, sharing of problems, sociability, and social information were key gratifications from use of Facebook.

One of the newer studies on social media and gratifications is from Dhir, Chen, and Chen (2017). They developed a 35-item instrument for measuring gratifications on Facebook, resulting in nine gratification themes: likes and comments, social influence, peer pressure, popularity, entertainment, feels good, social sharing, affection, and convenience. Although initially applied to Facebook, Dhir et al. call for the expanded use of their measurement with other social media platforms.

One prevalent gratifications theme from the above studies is connection, ranging from meeting new friends to maintaining relationships with current friends (Raacke & Bonds-Raccke, 2008; Urista et al., 2009; Barker, 2009; Chen, 2011). Passing time was also listed as one of the leading gratifications of social media use (Quan-Hasse & Young, 2010; Papacharissi & Mendelson, 2011).

Snapchat and Uses and Gratifications

In the past few years, there have only been a small number of studies published about Snapchat and even fewer using a uses and gratifications approach. In one of the first studies on Snapchat, Roesner, Gill, and Kohno (2014) studied how and why people use Snapchat. After surveying 127 Snapchat users, researchers found that the top five types of content users send (from a survey list) include: funny things, myself, people, "what I'm up to," and events (p. 68).

Another study was done by Bayer, Ellison, Schoenebeck, and Falk (2015) who examined college students' social and emotional experiences on Snapchat. Their research showed that students viewed Snapchat as more enjoyable and had more positive emotions using Snapchat, compared with other social networking platforms. Participants shared "carefree" images including: pets, outdoor scenery, and everyday moments (p. 12). The content of Snapchat was described by one participant as "a message in the form of a picture" with researchers also noting that humorous content is frequently shared. In terms of who users interacted with on the platform, they reported interacting more with close ties, checking in with these people by sharing random content throughout the day (p. 15).

The first known study explicitly using a uses and gratifications approach examined the use of Snapchat and other social networking sites (Facebook, Twitter, Instagram) to follow brands and the gratifications people received from using these sites. This study found that Snapchat scored highest for users passing time, improving social knowledge, and sharing problems (Phua, Jin, & Kim, 2016).

Vaterlaus, Barnett, Roche, and Young (2016) used focus groups and interviews to examine how Snapchat behaviors influenced interpersonal relationships, as one of the main tenets of the theory is to strengthen or weaken the connection with family/friends/etc. It was found that Snapchat was perceived by young adults (ages 18-23) as safe to send content and as a way to enhance their relationships; however, it was also found to be a venue for sexting between romantic partners and a cause for relational jealousy and infidelity.

Waddell (2016) interviewed young adults who were frequent users of Snapchat to determine gratifications stemming from specific affordances of the platform. It was found that participants were skeptical about the level of privacy Snapchat provides. Taking a MAIN

(Modality, Agency, Interactivity, Navigability) model approach, Waddell found that participants said Snapchat was similar to communicating face-to-face. The researcher noted that this similarity "is consistent with 'realism' and 'being there' heuristics, both of which are hypothesized to be elicited by the modality affordances according to the MAIN model" (p. 444).

Punyanunt-Carter, Cruz, and Wrench (2017) surveyed 475 college students regarding their communication behaviors on Snapchat. It was found that students use Snapchat because they think the platform is fun and practical; however, it was also found that users were more likely to be addicted to the medium and therefore posted more frequently (p. 874). The study also showed that, because of the additional cues that are present due to the affordances of Snapchat, misunderstanding when communicating was limited.

Overall, studies that employ a uses and gratifications perspective to study Snapchat are limited. Initial research provides some indications of why people use Snapchat, with passing time and "for fun" listed as commonalities among studies [Roesner et al. (2014); Phua et al. (2016); Runyanunt-Cartner et al. (2017)]. Affordances of Snapchat have also been examined, showing that Snapchat is similar to face-to-face communication (Waddell (2016), Punyanunt-Carter et al. (2017). Yet, more research needs to be done on the gratifications and affordances of Snapchat, specifically how they may contribute to the sharing of health risk behaviors.

Health Risk Behaviors Defined

Conceptual definitions of health risk behaviors seem to be divided into two camps based on the level of their effects: societal level or individual level. In the societal-level camp, McCubbin, Needle, and Wilson (1985) define health risk behaviors in their study on the use of cigarettes, liquor, and marijuana as those that are "not only considered 'at risk' to the health and well-being of the developing adolescent, but are also viewed as social problem behaviors for a

health-conscious society" (p. 51). The CDC define health risk behaviors as "behaviors that contribute markedly to the leading cause of death, disability, and social problems" (Centers for Disease Control and Prevention, 2018). The CDC provides a specific list of these risky health behaviors, including: "behaviors that contribute to unintentional injuries and violence; sexual behaviors related to unintended pregnancy and sexually transmitted infections, including HIV infection; alcohol and other drug use; tobacco use; unhealthy dietary behaviors; inadequate physical activity" (2018).

Studies that focus on individual-level effects include Gullone and Moore (2000); they define risk-taking behaviors as "participation in behavior which involves potential negative consequences (or loss) balanced in some way by perceived positive consequences (or gain)" (p. 393). Steptoe and Wardle (2004) also take an individual-level approach. They define health risk behavior as a behavior that performed at a certain frequency increases risk of disease or injury. A more recent individual-level definition comes from Cawley and Ruhm (2011) who define them as "any action, or deliberate inaction, by an individual that affects his or her own health or the health of others" (p. 2).

This study examined alcohol and marijuana use and employed Cawley and Ruhm's (2011) definition of health risk behaviors: "any action, or deliberate inaction, by an individual that affects his or her own health or the health of others" (p. 2).

Health Risk Behaviors on College Campuses

Alcohol and marijuana use are two of the six behaviors that are included in the Centers for Disease Control and Prevention's Youth Risk Behavior Surveillance System. Risky behaviors, such as these, have been shown to negatively impact students' academic performance;

they can also cause short- and long-term health issues including injury and violence, sexually

transmitted diseases, and a greater risk of heart disease (Scott-Sheldon, Carey, & Carey, 2007).

These behaviors are concerning as they are frequently exhibited on college campuses.

The University of Michigan's Institute of Social Research has partnered with the National

Institute of Drug Abuse to study the previously mentioned risk behaviors in the college

population. Known as "Monitoring the Future (MTF)," this long-term, national study examines

drug, alcohol, and cigarette use among secondary-school students, college students, and young

adults. 2014 data indicate that daily marijuana use among college students has tripled since 1994

with 6.2% of college students and young adults reporting daily use. In addition, 42.6% of

college students reported having been intoxicated in the past month. Also, college students now

smoke marijuana daily more often than they drink alcohol daily (Johnson et al., 2015). The

frequency of marijuana consumption in college students becomes more concerning as

recreational marijuana continues to be legalized throughout the United States. Alcohol and other

drug use can also be concerning because studies have shown that college students under the

influence of alcohol and/or drugs are more likely to participate in other risky behaviors, for

example, not using a condom or other form of birth control (Brown, Gause, & Northern, 2016).

The Role of Descriptive Norms in Health Risk Behaviors

An individual's perception about the prevalence of a behavior is referred to as a

descriptive norm (Lapinski & Rimal, 2005). Peer groups have been shown to influence an

individual's behavior, as adoption of similar behaviors in friend groups is common. This is

because among friend groups, people like to view themselves as similar to one another; therefore

if one individual in the group is engaging in a behavior, there is a higher likelihood that others in

the group will also adopt the same behavior because they view themselves as similar to their

friend. For example, Cialdini (2001) states that when people engage in a behavior, the

engagement provides a social cue where others "view a behavior as correct in a given situation to

the degree that [they] see others performing it" (p. 100). Students tend to have exaggerated

perceptions about the amount and frequency they believe their fellow students drink. The larger

this perceived prevalence, the greater the chance that individuals will interpret their own drinking

behavior as normal (Rimal & Real, 2005). Young adults have also shown exaggerated

perceptions about marijuana use (Kilmer, Walker, Lee, Palmer, Mallett, Fabiano, & Larimer,

2005, p. 280). These descriptive norms regarding the prevalence of drinking and marijuana use

are significant because, "young adults self-select into peer groups and [those] socialization

processes promote greater alcohol [and marijuana] use" (Scott-Sheldon et al., 2007, p. 2).

Furthermore, the effects of descriptive norms become even stronger when the behavior is

performed by a similar other because there are positive emotions related to conforming to

members of a tight-knit circle of friends (Rimal & Real, 2005, p. 395).

A noteworthy study on descriptive norms, social networking sites, and alcohol use was

conducted by Litt and Stock in 2011. They examined the impact of descriptive norms on

willingness to drink alcohol, attitudes toward alcohol, and consequences related to alcohol

consumption. They manipulated Facebook profiles, with some profiles showing peers drinking

and others not showing this behavior. Litt and Stock found that participants who viewed

Facebook profiles that showed alcohol use as normative reported "greater willingness to use

alcohol, more favorable images of alcohol users, more positive affective attitudes toward alcohol

use, lower perceived vulnerability to the consequences of drinking alcohol, and greater perceived

norms of alcohol use compared to adolescents who viewed profiles that did not portray alcohol

use as normative" (p. 711). It is necessary to expand on these finding by Litt and Stock and

research risky health behaviors on other popular social media platforms. As Snapchat is growing

in popularity, it is important to study the platform as it may have similar impacts on norms, as

listed above.

Research Question and Hypotheses

The overarching research question for this study is how and why do college students use

Snapchat to display risky health behaviors, specifically alcohol and marijuana use? To answer

this overarching question, the following research questions and hypotheses were posed.

To this author's knowledge, the uses and gratifications of Snapchat as they relate to

sending and receiving health risk behaviors have not been studied. It is important to understand

why college students use Snapchat to display health risk behaviors and the resulting

gratifications from sharing these behaviors on the platform. By examining the gratifications

from Snapchat use for sharing health risk behaviors, the researcher can understand what

motivates students to use this platform.

RQ 1: What is the most highly rated gratification from sharing health risk behaviors on

Snapchat?

The temporary nature of Snapchat's content is one affordance that causes it to differ from

other social networking sites. The temporary nature of the content may be the main reason

college students use Snapchat. Therefore, hypothesis 1 states:

H1: The affordance of disappearing content will be the most highly rated reason for

using Snapchat.

From a health risk behavior perspective, it is important to know the extent to which

college students use Snapchat to send risky health behaviors. It is also important to know how

much of the content they view consists of risky health behaviors. Students who view risky

health behaviors on Snapchat may learn from these actions and ultimately view these behaviors as normative. Therefore, descriptive norms may provide insight into the potential impacts of viewing risky health behaviors on Snapchat. The following hypotheses provide insight into the uses of Snapchat for displaying risky health behaviors. Instagram was used as a comparison point because while the platforms are similar in certain aspects, the affordances of the platforms are different. The researcher believes the disappearing affordance of Snapchat is the reason why Snapchat will be the preferred platform over Instagram.

> H2: Participants will be more likely to share alcohol-related content on Snapchat versus Instagram.

> H3: Participants will be more likely to share marijuana-related content on Snapchat versus Instagram.

> H4: Participants will report receiving alcohol-related content more often on Snapchat than Instagram.

> H5: Participants will report receiving marijuana-related content more often on Snapchat than Instagram.

Colorado is one of 10 states[8] to have legalized recreational use of marijuana for adults 21 and over. Due to this fact, college students above or below that age may be more or less likely to send and/or view snaps with those specific health risk behaviors.

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[8] At the time of the study, 10 states had legalized recreational marijuana. As of May 2021, 18 states including Washington, D.C. have legalized recreational marijuana. However, at the time the survey was conducted in 2019, only 10 states had legalized recreational marijuana.

The following four hypotheses test the extent to which the researcher thinks there will be a difference in the reporting of sending and viewing snaps with alcohol-related or marijuana-related content depending on whether the participant is of legal age.

H6: There will be a relationship between participants' age and their reporting of sharing snaps that exhibit alcohol use.

H7: There will be a relationship between participants' age and their reporting of having snaps shared that exhibit alcohol use.

H8: There will be a relationship between participants' age and their reporting of sharing snaps that exhibit marijuana use.

H9: There will be a relationship between participants' age and their reporting of having snaps shared that exhibit marijuana use.

CHAPTER 3: METHODOLOGY

Instrument

This study utilized a survey consisting of original questions, as well as questions adapted from previous Snapchat studies by Roesner et al. (2014) and Dhir et al. (2015). The survey was set up in Qualtrics and accessed via a link from SONA, which is an online recruiting tool.

Variable Measurement

Gratification

For this study, gratification is defined as the recognition of the fulfillment of a need/desire through media. This study utilized Dhir, Chen, and Chen's (2017) 35-item gratifications scale. The scale was first applied to Facebook but is easily applied to other social media sites. To the author's knowledge, this was the first time the scale was applied to Snapchat. These survey questions are numbers 33 and 36 in Appendix A.

Share

This study utilized Kietzmann, Hermkens, McCarthy, and Silvestre's (2011) definition of sharing: "the extent to which users exchange, distribute, and receive content" (p. 245). For this study, sharing included the sending and receiving of images via Snapchat, either photo or video, to other Snapchat users. A person could share photos/videos through Snapchat and have photos/videos shared with them. However, sharing did not include secondhand views. For example, if someone showed a photo or video they received on Snapchat to a friend they were spending time with, this did not count as sharing. A share must happen electronically through Snapchat and is only meant for the person the snap was sent to. Also included in this study's

definition of sharing is posting photos/videos on Instagram, as well as seeing photos or videos on the user's Instagram feed[9] that were posted by the user's Instagram friends. A person could post photos/videos to their Instagram account and these will be seen by anyone that is friends with the user. The user can also see photos/videos that their friends post via the user's feed.

This study was particularly interested in the type of content shared on Snapchat as well as Instagram. Survey questions were created asking participants to rank how frequently they shared alcohol and marijuana-related content on a scale from very frequently to very rarely. These survey questions appear as numbers 26, 29, 51, and 53 in Appendix A.

Affordance

An affordance can be defined as, "a particular capability possess[ed] by the medium to facilitate a certain action" (Sundar, 2008, p. 79). This study examined specific affordances of Snapchat, including: temporary content, the ability to customize who sees snaps, geofilters[10], and lenses[11]. The question examining affordances of Snapchat is number 38 in Appendix A.

Alcohol-related content

Alcohol-related content was defined as photos or videos that showed alcohol, such as a photo of a drink, or depicted alcohol use, such as someone drinking an alcoholic beverage. For a full list of survey questions examining alcohol-related content, please see questions 25-27, 33, 38, 43, 50-51, 54, 56, 58, and 60 in Appendix A.

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[9] The term for where photos and videos are seen on Instagram. Each user's feed is different based on the Instagram accounts they follow. A user's content appears in feeds of those who follow the user.

[10] A filter added on top of a photo or video within Snapchat. These allow users to share information about their location, such as city or neighborhood.

[11] 3D effects within Snapchat that can be applied on the on the photo or video. For example, a lens placed on the face of the user to turn their face into a dog.

Marijuana-related content

Marijuana-related content was defined as photos or videos of marijuana [for example, people at a party consuming marijuana (includes edibles or smoking), or photos/videos of marijuana/edibles/bong/blunt/etc.]. For a full list of survey questions regarding marijuana-related content, please see questions # 28-30, 36, 38, 41, 44, 52-53, 55-56, 61, and 63 in Appendix A.

Sampling Frame

Undergraduate students aged 18 and older who were enrolled in JMC classes at Colorado State University's campus in Fort Collins were eligible for this study. Because this study was focused on examining Snapchat behavior, it was important that a majority of participants had a Snapchat account. Ultimately, more participants had an Instagram account (n = 182, 94%) than a Snapchat account (n = 178, 92%).

This population was chosen because when this study was conducted it was reasonable to assume that participants were members of Gen-Z (anyone born between 1997 and 2012), who make up 82% of Snapchat users ("21 Snapchat Stats That Matter to Social Media Marketers," 2020). This sample also included participants who had not reached the legal age for consuming alcohol and marijuana in Colorado as well as participants who had reached the legal age.

Recruitment and Survey Administration

Recruiting occurred using SONA Systems survey management. SONA is a survey system software that is used to schedule studies and recruit participants quickly and effectively. Students chose whether they wanted to participate in the study by opting in via SONA. Instructors chose to have their courses participate in SONA and extra credit for survey

participation was given. In addition, there was no need for an alternate assignment to be offered as students self-selected which surveys in SONA were of most interest to them.

Emails were initially sent to recruit participants using SONA's mass email function. However, due to low response numbers, in-person recruitment was conducted in three undergraduate JMC classes: JTC 100, JTC 300, and JTC 340.

Institutional Review Board Approval and Informed Consent Procedures

The study was approved by Colorado State University's Institutional Review Board (IRB) to ensure it complied with appropriate human subjects protections.

When participants opened the survey, the landing page provided information about the length of the survey, categories of questions that were asked, etc. Participants were also ensured of the anonymity of their answers. The informed consent can be found in Appendix B, and the in-person recruitment script can be found in Appendix C.

Survey Pilot Testing

After the study received IRB approval, it was pilot tested using undergraduate students who worked at the CSU Health Network, as well as by family and friends. This pilot testing indicated that participants understood the survey questions and that there were no issues with the SONA or Qualtrics systems.

CHAPTER 4: RESULTS

Sample

In total, 225 students participated in the study which was conducted during the Fall semester of 2019 and took an average of 7.5 minutes to complete. Of these participants, 31 were eliminated due to failure to complete the entire survey, for the appearance of straight-lining answers (n = 9), or for taking longer than 15 minutes to complete the survey (n = 13). Therefore, the final sample for this study was 194 participants.

Demographics

Of the 194 respondents, more identified as female (n = 133, 69%), than male (n = 60, 31%) with one respondent preferring not to share their gender identity (0.5%). Students who identified as being in their third year of school made up the majority of the sample (n = 52, 27%) followed by fourth-year students (n = 46, 24%), second year students (n = 43, 33%), first-year students (n = 42, 22%), and "other" (n = 11, 6%).

Participants were asked to select all that applied when identifying their race and/or ethnicity. While the majority of participants selected only one option (n = 177), 17 participants selected more than one option for their race and/or ethnicity. By far, the majority of participants identified as white (n = 149), followed by Hispanic/Latino (n = 24), and Asian (n = 17). See Table 2 for a full breakdown of participants' race/ethnicity.

Table 2. Race/Ethnicity of Participants

Race/Ethnicity	N	Percent
White	149	76.8%
Hispanic/Latino	24	12.4%
Asian	17	8.8%
Black/African American	12	6.2%
American Indian/Alaskan Native	3	1.5%
Native American	1	0.5%
Other	2	1%
Prefer not to answer	5	2.6%

For this sample, more participants were underage (n = 120, 62%) than were of legal age (n = 73, 38%). Participant ages ranged from 18 to 29; the mean age was 20.16, and the median age was 20. Only one participant did not disclose their age.

Research Question and Hypothesis Testing

For this study, the survey included three open-ended questions that were related to the research question and hypotheses. After reviewing the answers that participants provided for these open-ended questions, the researcher found that some of the data was unusable. This was because questions were either unanswered, uninterpretable, or off-topic. Because of this, the researcher chose to eliminate the open-ended questions and just use the close-ended questions to answer the research question and hypotheses.

RQ1 asked what was the most highly rated gratification from sharing health risk behaviors on Snapchat? In order to answer this research question, seven scales were created with each scale corresponding to a different gratification. The seven scales were adapted from Dhir et al. (2015). These gratifications were analyzed for alcohol-related content, marijuana-related content, and then they were combined in order to answer this research question. With the exception of the affection scale on alcohol-related content, all scales were reliable, as shown in Table 3. In addition, when the affection scale for alcohol-related content was combined with

marijuana-related content, it performed better. Table 4 shows the means and standard deviations

for each gratification, broken down by content type.

Table 3: Cronbach's Alphas for Alcohol- and Marijuana-Related Content Gratifications Scales

Gratification	Questions per scale (*N*)	α – Alcohol	α - Marijuana	α - Alcohol and Marijuana combined
Social Influence	4	.82	.88	.89
Peer Pressure	8	.77	.89	.91
Entertainment	8	.77	.84	.87
Feel Good	5	.72	.87	.87
Social Sharing	10	.76	.94	.92
Affection	4	.55	.70	.82
Convenience	4	.93	.88	.92

Table 4: Means and Standard Deviations for Alcohol and Marijuana-Related Content Gratifications Scales

Gratification	Alcohol-Related Content, Mean (SD)	Marijuana-Related Content, Mean (SD)	Alcohol and Marijuana-Related Content Combined, Mean (SD)
Social Sharing	2.52 (.78)	2.77 (1.12)	2.54 (.84)
Convenience	2.65 (1.10)	2.74 (1.24)	2.59 (1.04)
Entertainment	2.70 (.75)	2.92 (.93)	2.79 (.77)
Peer Pressure	2.80 (.83)	2.99 (1.05)	2.87 (.93)
Affection	3.05 (.77)	3.13 (1.10)	3.09 (.93)
Feel Good	3.10 (.78)	3.15 (.95)	3.13 (.83)
Social Influence	3.40 (1.06)	3.57 (1.15)	3.47 (1.06)

Note: Scale was 1 = strongly agree and 5 = strongly disagree

As shown in Table 4, social sharing was the most highly rated gratification for sharing

health risk behaviors on Snapchat, followed by convenience, entertainment, peer pressure,

affection, feel good, and social influence.

H1 predicted that the affordance of disappearing content would be the most highly rated

reason for using Snapchat. To test this hypothesis, the researcher examined four affordances:

disappearing content, geofilters, lenses, and selectivity. Scales were created in order to test the

reliability of the questions measuring disappearing content (n = 3) and selectivity (n = 2); the

geofilters affordance and the lenses affordance were measured using single questions. While the

scale was reliable for disappearing content ($\alpha = .86$), it was not for selectivity ($\alpha = .60$).

Therefore, the researcher broke the selectivity scale into its two individual questions to test H1.

The two questions used to create the selectivity scale asked participants about their ability

to choose the number of friends who receive their snaps. One question measured the extent to

which participants agreed (1 = highly agree, 5 = highly disagree) that they like to send their

snaps to a select number of Snapchat friends (M = 2.15, SD = 1.19). The other question

measured the extent to which participants agreed that they liked to send their snaps to all their

Snapchat friends (M = 3.18, SD = 1.38).

As shown in Table 5 below, the most highly rated affordance was selectivity when the

snap was sent to a few friends (M = 2.15, SD = 1.19), while H1 predicted that disappearing

content would be first. Therefore, H1 was not supported

Table 5: Means for Affordances of Snapchat

Affordance	Number of Questions (N)	α	M	SD
Selectivity- few friends	1	n/a	2.15	1.19
Disappearing Content	3	.86	2.93	1.22
Selectivity- all friends	1	n/a	3.18	1.38
Geofilters	1	n/a	3.42	1.41
Lenses	1	n/a	3.65	1.35

H2 predicted that participants would more often share alcohol-related content on Snapchat versus Instagram. In order to answer this question, participants had to have Snapchat and Instagram accounts as well as have indicated that they had shared alcohol-related content on both platforms. Twenty-eight participants responded that they had both accounts and had shared alcohol-related content on each. As predicted, the results of a paired-sample t-test showed participants were more likely to share alcohol-related content on Snapchat ($M = 3.57$, $SD = 0.92$) versus Instagram ($M = 4.29$, $SD = 0.98$), $t(27) = -4.42$, $p < .05$. Therefore, H2 was supported.

H3 predicted that participants would be more likely to share marijuana-related content on Snapchat versus Instagram. Similar to how H2 was tested, participants had to have Snapchat and Instagram accounts and have indicated that they shared marijuana-related content on each ($n = 3$). Because the subsample size was so small, the researcher did not move forward with analysis.

H4 predicted participants would report receiving alcohol-related content more often on Snapchat than Instagram. In order to answer this question, participants had to have both Instagram and Snapchat accounts and indicated they received alcohol-related content ($n = 169$). Using a McNemar test, H4 was supported; the results showed participants received alcohol-related content more often on Snapchat (90%) versus Instagram (82%), chi square $(1, 169) = 5.33$, $p < .05$.

H5 predicted participants would report receiving marijuana-related content more often on Snapchat than Instagram. Participants needed to have both Snapchat and Instagram accounts and indicated they shared marijuana-related content (n = 167). To test this hypothesis, another McNemar test was conducted. As predicted, the results showed participants were more likely to have marijuana-related content shared with them on Snapchat (76%) versus Instagram (58%), chi square (1,167) = 18.23, p < .05. Therefore, H5 was supported.

H6 predicted there would be a relationship between participants' age and the reporting of sharing snaps that exhibited alcohol use. This prediction was not supported. The results of a chi-square test found that the proportion of legal-aged participants who had shared snaps that exhibited alcohol use (n = 35, 56%) was not significantly different from the proportion of underage participants who had shared snaps that exhibited alcohol use (n = 60, 52%), chi square (1, 95) = 0.36, p = .55

H7 predicted there would be a relationship between participants' age and the reporting of having snaps shared that exhibit alcohol use. This prediction was supported. The results of a chi-square test found that the proportion of legal-aged participants who had snaps shared with them that exhibited alcohol use (n = 48, 77%) was significantly different from the proportion of underage participants who had snaps shared with them that exhibited alcohol use (n = 108, 93%), chi square(1, 156) = 9.18, p < .05 Therefore, there is a relationship between participants' age and snaps shared that exhibit alcohol use, specifically that underage participants were more likely than legal-aged participants to have had snaps shared with them that exhibited alcohol use.

H8 predicted there would be a relationship between participants' age and the reporting of sharing snaps that exhibited marijuana use. This prediction was not supported. A chi-square test

showed that the proportion of legal-aged participants who had shared snaps exhibiting marijuana use (n = 17, 27%) was not significantly different from the proportion of underage participants who had shared marijuana-related content on Snapchat (n = 28, 24%), chi square (1, 45) = 0.23, p = 0.63

H9 predicted there would be a relationship between participants' age and their reporting of having snaps shared that exhibit marijuana use. This prediction was supported. A chi-square test showed the proportion of legal-aged participants who had snaps shared with them that exhibited marijuana use (n = 40, 65%) was significantly different from the proportion of underage participants who reported having snaps shared with them that exhibited marijuana-use (n = 93, 80%), chi square(1, 133) = 5.24, p < .05 Therefore, there is a relationship between participants' age and snaps shared that exhibit marijuana use; underage participants were more likely than legal-aged participants to have snaps shared with them that exhibited marijuana use.

CHAPTER 5: DISCUSSION

The results of this study contribute to the body of literature on social media use and risky health behaviors. In addition, the results add to literature on uses and gratifications of social media, specifically from an affordance lens. This study also has practical implications surrounding descriptive norms of college students.

As mentioned in the literature review, studies of descriptive norms have found that young adults have exaggerated perceptions about the prevalence of risky health behaviors among their peers (Rimal & Real, 2005; Kilmer et al., 2005; Scott-Sheldon et al., 2007; Perkins & Berkowitz, 1986; Lewis & Neighbors, 2004; Lewis & Neighbors, 2006). It has been found that the greater the perceived prevalence among college students, the more likely they are to justify their own alcohol consumption (Rimal & Real, 2005). Because Snapchat is a way for college students to share their experiences and behaviors, its use may impact the adoption of risky health behaviors, in this case, by contributing to exaggerated perceptions of alcohol and marijuana use. While the questionnaire used in this study did not specifically ask participants if the snaps they were sharing and receiving were with their peers, it is a reasonable assumption that a large proportion of the snaps they sent and/or received involved their friends. Receiving this type of content on Snapchat from their friends reinforces descriptive norms around the prevalence of alcohol and marijuana use and ultimately may promote greater use (Scott-Sheldon et al., 2007). This was shown in the data in H4 and H5 as participants reported receiving alcohol and marijuana-related content more often on Snapchat than Instagram.

Gratifications

Building off of the work of Dhir et al. (2015) on gratifications from Facebook use, one of the goals of this study was to adapt their 35-item gratifications scale in order to analyze gratifications from Snapchat use. The scale consisted of seven gratification themes that were translated to analyze Snapchat: social influence, peer pressure, entertainment, feel good, social sharing, affection, and convenience.

The results from this study showed that, for alcohol-related content and marijuana-related content combined, social sharing was the most highly rated gratification received from sharing on Snapchat, followed by convenience, entertainment, peer pressure, affection, feel good, and social influence. However, when analyzing the alcohol-related content and marijuana-related content separately, it was found that social sharing was the top-rated gratification from sharing alcohol-related content, while convenience was the most highly rated gratification for sharing marijuana-related content. It is interesting that the most highly rated gratification was different between the two health risk behaviors. This leads the researcher to wonder if gratifications from Snapchat may change based on the behavior shared. For example, as mentioned by Vaterlaus et. al (2016), Snapchat is used by young adults for sexting (i.e., sharing sexual images). It's reasonable to assume that gratifications stemming from sexting would be different than gratifications from sharing photos and/or videos of alcohol and marijuana use. More likely than not, these sexual images are private and the sharing of these images would result in different gratifications than images that could be shared with anyone on Snapchat. Future research could examine gratifications from sharing additional health risk behaviors identified by the Youth Risk

Behavior Surveillance System, such as tobacco use (vaping, smoking, chewing tobacco) and sexual behaviors, to see if there is a pattern among gratifications.

The high rating for the social sharing gratification in relation to alcohol-related content and marijuana-related content isn't surprising, as it is touched on in some of the Snapchat literature (Bayer et al., 2015; Piwek & Joinson, 2016; Vaterlaus et al., 2016). Bayer et al. noted that Snapchat is used to share everyday experiences versus "big moments" or curated photos. Participants in the Bayer et al. study noted that they used Snapchat to share carefree moments, such as pets, outdoor scenery, or other everyday experiences (p. 967). Piwek and Joinson found that, "Snapchat was mainly used to communicate with a single person rather than a group of people, and this person mainly included close friends, partners, and family members" (p. 364).

Vaterlaus et al. (2016), found Snapchat allowed users to communicate within existing relationships by sharing photos, "either directly to one another or sharing it with all of their friends" (p. 598). It was noted that the app is similar to texting except, " 'you can see it visually instead of just text word format' " and as a result, it allowed for a better understanding of the context of the conversation (p. 598). Vaterlaus et al. also noted that Snapchat may make existing friendships stronger because of the interactivity of the platform, such as the ability to share photos and videos with text. Specifically, one participant noted that while their friend was attending a different university, Snapchat allowed them to visually share their experiences with one another—such as places in their town, new friends, and images of what they were doing (p. 599).

The gratifications identified for alcohol-related content and marijuana-related content in this study are also similar to those found by Phua et al. (2016). Phua et al. found that passing time and sharing problems scored high as gratifications from using Snapchat. As shown in Table

4, both entertainment (M = 2.79) and social sharing (M = 2.54) ranked third and first among gratifications for sharing alcohol and marijuana-related content on Snapchat. For this current study, passing time falls into the general category of entertainment and sharing problems falls into the category of social sharing.

The results for these Snapchat gratifications are similar to those of other social media sites. Specifically, entertainment has been identified not only in this present study as a gratification of Snapchat use, but also as a gratification of Facebook (Raacke & Bonds-Raacke, 2008; Papacharissi & Mendelson, 2011; Valenzuela, Park & Kee, 2009) and Twitter (Sundar & Limperos, 2013).

Even with the studies mentioned above, the literature around Snapchat is lacking. Previous studies have focused on the platform from a privacy perspective, as well as a method for sexting; however, there is a lack of literature focusing on Snapchat from a uses and gratifications lens (Roesner, Gill and Kohno, 2014; Vaterlaus et al., 2016). Other social media sites, specifically Facebook, have been studied extensively using uses and gratifications theory. However, in order for social media uses and gratifications literature to be current, it is important to add studies on Snapchat.

Affordances

H1 examined four affordances of Snapchat: temporary/disappearing content, ability to customize who sees snaps (selectivity), geofilters, and lenses. The disappearing content affordance is unique to Snapchat. The researcher was curious if this affordance was a reason for adoption of the platform. As mentioned in the literature review, affordances can lead users to expect certain gratifications (Sundar & Limperos, 2013). Understanding affordances could help future researchers understand why people experience certain gratifications from SNSs. When

thinking about why college students may use Snapchat, the researcher thought that the lack of permanency of messages would be a reason that students chose to use Snapchat over other social media platforms. This could be because there was less perceived risk in sharing content, especially risky health behaviors, if the content disappeared.

This study hypothesized that disappearing content would be the most highly rated reason for using Snapchat. However, the results did not support the prediction. When analyzing the four affordances, temporary content, selectivity, geofilters, and lenses, it was found that selectivity when sharing content with a few friends was the most highly rated reason for using Snapchat.

This result is interesting as it makes the researcher wonder if participants value privacy, which could explain why they would rank the ability to send content to certain friends as more important than the ability to send to all friends. If so, this result is in alignment with a study from Boyle et al. (2016), who found that privacy is a social media affordance that contributes to sharing, specifically of alcohol-related content. A study by Vaterlaus et al. (2016) shows some support for sharing in both contexts, noting that Snapchat allowed users to communicate by sharing photos, "either directly to one another or sharing it with all of their friends" (p. 598). However, Vateralus et. al note that many Snapchat users only snap a small group of select, close friends rather than use the platform as a means for mass communication (p. 598).

Relationship Between Content Sent and Received on Snapchat Versus Instagram

Hypotheses 2 through 5 predicted that participants would be more likely to share and receive alcohol and/or marijuana content on Snapchat than they would on Instagram. While H3 could not be tested, H2, H4, and H5 were supported; results indicated that participants sent alcohol-related content and received both alcohol-related and marijuana-related content more

often on Snapchat than Instagram. While the survey did not ask questions as to why Snapchat was used more often than Instagram to share alcohol-related content, it may be that affordances that allow for greater privacy, such as selectivity and disappearing content, create a level of privacy which is what makes Snapchat the more attractive platform to send and receive risky health behavior content. As noted in Vaterlaus et al. (2016), the element of privacy is expected to allow for more self-disclosure and intimate communication (p. 595). This would also support findings from Boyle et al. (2016) who found that privacy contributes to sharing on social media, specifically of alcohol-related content. When users of Snapchat choose to use the app to share their content, it is a given that the content will disappear. However, they actively have to choose which friends they send their content to. By actively choosing who to send content to, this may create a sense of privacy for the user. Since Snapchat users can be so selective in who they send health risk behavior content to, the risk when they share this content is less. As shown in H1, what is more important to the user is who sees the content, not how long it lasts. However, when selectivity is combined with disappearing content, there is an increased level of privacy as users do not have to worry about there being any record their risky behaviors.

While the author is unaware of previous studies that have examined sharing and receiving marijuana-related content on Snapchat, the current study supports findings from Boyle et al. (2016) who found that Snapchat was the more probable platform than Instagram for sharing heavy drinking. Future research comparing Snapchat and Instagram could delve more deeply into the affordances of each platform and why one platform may be chosen over the other to send and receive specific types of content.

Relationship Between Age and Sharing Risky Health Behaviors

Since Snapchat may provide a sense of privacy through the selectivity and disappearing content affordances, the author thought there may be a relationship between a person's age (legal age or underage) and the sharing of risky health behaviors. Therefore, hypotheses 6 through 9 predicted that there would be a relationship between age and sending and receiving snaps that exhibited alcohol and marijuana use. While no relationship was found between age and sending alcohol-related content and marijuana-related content, there was a relationship between age and receiving alcohol-related content and marijuana-related content. Specifically, underage participants were more likely than legal-aged participants to have snaps shared with them that exhibited both alcohol and marijuana use.

This result is interesting in the sense that underage participants may have been fearful of admitting to sending alcohol and/or marijuana-related content on Snapchat. Although the survey was anonymous, a concern about admitting to participating in illegal behavior may have contributed to why participants were more likely to say they received versus sent alcohol and marijuana-related content. There are numerous consequences for college students choosing to consume alcohol and marijuana. In addition to legal consequences, students may have consequences from the university (e.g., attending mandated drugs and alcohol classes or being written up for having alcohol or marijuana in the residence halls) and from their parents/guardians. For some students, these consequences may be enough to discourage alcohol and marijuana consumption. For those students who choose to participate in these behaviors, admitting to showing these behaviors on social media may have felt too risky. Being fearful of sharing this type of behavior has also been shown in the literature. Moreno, Briner, Williams, Walker, and Christakis (2009) used focus groups to study adolescents' alcohol references on

social networking sites (SNS). Of themes identified in the focus groups, one theme pertained to risks associated with publicly displaying alcohol use on SNS. The risks identified included: punishment, blackmail, and promotion of alcohol use among peers. Therefore, it's possible the underage students who participated in this study may have felt it was less risky to say they received alcohol and marijuana-related content than to admit to sending that content.

In addition, underage students may have experienced some social desirability bias when completing the survey. Underage students may have been more likely to say they had not shared alcohol and marijuana-related content because this felt like the more socially acceptable answer than their actual answer. This is because for underage students, answering "no" to sharing this content may be viewed as the correct or "good" form of behavior. If so, there may be an over-reporting of students saying they had not shared alcohol- and marijuana-related content on Snapchat.

Social Media Use Generating Risky Health Behaviors

It is also important to mention that social media use itself may generate risky health behaviors. Studies have found that more time spent on social media is correlated with a greater likelihood of drinking among young adults (Sampasa-Kanyinga & Chaput, 2016; Brunborg, Andreas, and Kvaavik, 2017; Gutierrez & Cooper, 2016; Ohannessian et al., 2017; LaBrie et al., 2021). Ohannessian et al.(2017) examined time spent on social media in a national sample of 18- to 24-year-olds and found that social media use was significantly associated with substance use and abuse; "specifically social media use was positively associated with alcohol consumption, problematic drinking, and more frequent drug use" (p. 368). LaBrie et al. (2021) found similar results. They examined the amount of time incoming freshmen spent on Facebook, Twitter, Instagram, and Snapchat during the transition to college to see if it predicted later

drinking.   LaBrie et al. found that time spent on social media during August and September, before they started college as first-year students, was a significant predictor of drinking in male students by the end of their first year in college.   Specifically, "a 30-minute increase in Snapchat use by a man during the transition to college corresponded to…a one drink increase in weekly drinks by the male participant at the end of their first year" (p. 344).   Brunborg et al. (2017) also found a positive correlation between the time that adolescents spent on social media platforms and their alcohol consumption (Brunborg, Andreas, and Kvaavik, 2017).   As noted by the researchers, "exposure to alcohol-related content on social media, and the desire to mimic the behavior of others, is what may explain the association between time spent on social media and alcohol consumption among adolescents" (p. 484).

Personal Identity Management on Social Media

Social media may also drive risky behavior because of the idea of personal identity expression.   Personal identity can be thought of as an individual's beliefs, attributes, and desires that allow them to distinguish themselves in relevant ways (Ge, 2019). Authentic expression of personal identity allows users to affirm their sense of self, which can lead to an increase in self-esteem and feelings of belonging (Bailey et al., 2020).   In this study, these phenomena could explain why social sharing was rated highly as a gratification for Snapchat.   It is known that computer-mediated communication (CMC) allows for more private disclosure and self-expression (Joinson, 2001).   As Choi and Sung (2018) note, social networking sites encourage authenticity, and CMC specifically "enables individuals to express otherwise private, but important aspects of their sense of self" (p. 2290).   As shown in this study, the most highly rated affordance of Snapchat was the ability to share content with a select group of friends.   This was also documented in the literature, as Piwek and Joinson (2016), and Bayer et al. (2016) both

found Snapchat is used to communicate with close ties. The literature supports the assertion that individuals are more comfortable sharing personal information and revealing certain aspects of themselves when they trust others (McKenna et al., 2002). It is reasonable to assume that these close ties could also be considered people of trust.

Choi et al. (2020) mention affordances offer users the ability to carefully construct their self-presentation. Specifically, the affordances provided by Snapchat may facilitate self-disclosure, which could also explain why social sharing was a highly rated gratification of Snapchat in the current study. Participants in the current study may have felt more comfortable disclosing information on Snapchat compared to other social media platforms. Choi et al. mention that the ephemerality of Snapchat "reduces privacy and self-presentation concerns, allowing people to let their guards down and be more authentic" (p. 8). Since Snapchat has been shown to be a platform where users communicate with close ties, it makes sense that it is also a way for users to express their true self[12] (Choi & Sung, 2018). In addition, Snapchat was designed so users can express how they are feeling and what they are doing in any given moment.   This authenticity of Snapchat contributes to less editing of images and videos, which allows for more true self-expression when sending content (Waddell, 2016).

Limitations, Practical Applications, and Future Research

Limitations

While the current study has theoretical and practical implications, it is important to note it has some limitations. First, the participants were college students at a university in northern

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[12] The term "true self" can be defined as, "the hidden qualities of the self that are rarely open to the public (Choi & Sung, 2018, p. 2295).

Colorado who were enrolled in a selection of undergraduate JMC classes. Because of this convenience sample, the results are limited in their generalizability.

Even though this study was conducted in a state where recreational marijuana is legal, the number of participants who indicated sharing marijuana-related content on Snapchat and Instagram was small (n = 3). Because of the small sample size for H3, this hypothesis could not be tested. Therefore, the relationship between sharing marijuana-related content on Snapchat versus Instagram needs to be tested in more studies with a larger sample. Future researchers should consider recruiting from other universities in Colorado or at universities in states where recreational use of marijuana is also legal.

The time of year the study was conducted may also have impacted the results. Because this data is a snapshot in time, it may have captured more use than is typical. This study was conducted at the start of the fall semester, which is well-known as a time period where students are more likely to participate in risky health behaviors. At Colorado State University, the start of the semester, as well as specific holidays and school breaks, such as Halloween or spring break, have been shown to have higher levels of risky health behaviors among students. The CSU Health Network typically increases messaging around health risk behaviors at these key risky times. Because this study was conducted during the start of the fall semester, the timing could have contributed to a larger level of alcohol and/or marijuana-related content being sent and therefore received. The novelty of participating in these behaviors, specifically for underage students at the beginning of the semester, could have also contributed to a larger level of content being sent and received. Being away from their families may give them a sense of freedom to make their own decisions for the first time. Young adults may also feel pressured by their peers to engage in risky health behaviors. Underage students entering college may feel the need to fit

in and engaging in risky health behaviors may help them achieve that sense of belonging (Litt, Stock, & Lewis, 2012).

Another limitation of this study is how some of the variables were measured. If the researcher could conduct this study again, there would be a few changes to how H1 was tested. First, the researcher would create scales for each affordance. Second, the researcher would more thoroughly pilot test the questions to ensure participants are accurately interpreting what each question is asking, including operationalizing the term "friends" and making the open-ended questions clearer. There were issues with participants' answers to the open-ended questions being either off topic, too vague, or uninterpretable, which suggests that the questions were not worded effectively. It appears that respondents did not fully understand what the open-ended question were asking; therefore, the answers to these questions were not analyzed. However, the close-ended questions may have provided additional clarity to participants and therefore they were better able to accurately answer the close-ended questions. Because of this additional clarity, the researcher felt the answers to the close-ended questions were accurate; therefore, the close-ended data was analyzed. If this study is repeated, researchers should spend time developing and testing better open-ended questions. One option could include conducting focus groups prior to survey distribution to help ensure participants are understanding the questions being asked. Future research could repeat this study using these changes. Researchers could also consider using the MAIN model, as mentioned above, to analyze of Snapchat affordances. Specifically, researchers can take the four categories of affordances as outlined in the model, modality, agency, interactivity and navigability, and see if there is a difference in the ranking of categories of affordances based on the behavior shared on Snapchat.

The current study examined research questions and hypotheses of Snapchat and Instagram that were focused on disappearing content; therefore some features were not included in the survey. Specifically, stories[13] were not directly examined on either platform. This is because the researcher wanted to narrow the scope of the study to focus specifically on short-term disappearing content, which is what Snapchat is known for, while stories last for 24 hours. However, future research on the disappearing content affordance of Snapchat and/or Instagram should examine stories.

Changes in Social Media Post-Data Collection

Since data collection, the social media landscape has changed. Specifically, some newer social media platforms, such as TikTok, have become popular. TikTok is an app for making and sharing short videos. Popular types of videos include lip-synching and dancing to short music clips. In addition, TikTok users can utilize filters, video effects, and a built-in music library when creating their videos (Su et al., 2020). The COVID-19 pandemic may have contributed to the changes in social media usage, specifically the popularity of TikTok. The app's usership during the pandemic grew at a dramatic rate. From 2018 to 2020, the number of TikTok's users grew 800%, to a total of 100 million in the United States (Sherman, 2020). The nature of TikTok videos may have provided a source of comfort and entertainment during pandemic lock down and social distancing (Su et al., 2020). This may be because openness and authenticity have become themes of social media content since the pandemic began in early 2020. TikTok provided an authentic way to connect with others, and it also was more distracting and positive than other social media sites, such as Facebook (Molla, 2021).

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[13] Stories serve similar functions on both Snapchat and Instagram. They are a collection of photos and videos that live for 24 hours and can be viewed an unlimited number of times during that period. The stories expire after 24 hours and can no longer be viewed.

Even though TikTok grew in popularity during 2020 and 2021, Instagram and Snapchat remained more popular with the 18 to 24 age group; 76% reported using Instagram, 75% reported using Snapchat, and 55% reported using TikTok (Auxier & Anderson, 2021). If the researcher were conducting a similar study during the height of the pandemic, the researcher would still choose to study Snapchat and Instagram. This is because, as mentioned above, both platforms still have higher usership among the college student population. However, if the study were to be completed during the pandemic, there would be a larger focus on the affordances of Snapchat and Instagram, specifically stories. The researcher would want to explore whether the affordance of stories would draw users to share their day-to-day lives on the platform during such an isolating time. The author would also focus on alcohol as a risky health behavior versus examining both alcohol and marijuana. This is because alcohol consumption during the pandemic increased (Grossman, Benjamin-Neelon, & Sonnerschein, 2020). Reasons for increased alcohol consumption included stress, increased alcohol availability, and boredom (Grossman, et al., (ADD YEAR). Because of this, it may be reasonable to assume that more alcohol-related content may have been shared on social media because social media and alcohol usage both increased. In addition, the researcher would want to re-examine gratifications of social media use. In the current study, social sharing was identified as the top-rated gratification. There may be even a larger difference among ranked gratifications as reasons for social media use may have changed because of the pandemic.

One of the reasons gratifications may have changed is because of the higher stress that people were experiencing because of the pandemic. First, young adults were turning so social media to connect, especially during the isolation of the pandemic (Fullerton, 2021). COVID-19 created limited in-person interaction and, therefore, people turned to social media to connect and

share parts of their daily lives (Fullerton, 2021). However, social media use during the pandemic was also impacted by COVID-19 information overload (Liu, Liu, Yoganathan, & Osburg, 2021). It was found that the information overload surrounding COVID-19 had a negative impact on Gen-Z social media users, specifically it heightened social media fatigue and fear of COVID-19 which caused users to turn away from social media. This discontinuance of social media may have also impacted their gratifications from Snapchat and Instagram use.

Practical Applications

Understanding Snapchat from a uses and gratifications perspective may help inform communication practices, specifically in public health. For example, a benefit of using social media as part of a public health communication strategy is the ability to target an audience. Brands and businesses have been known to utilize Snapchat geofilters (photo/video overlays based on location) to target specific audiences.

The results of this study can be applied to geofilter utilization, specifically for young adults making choices around risky health behaviors. For example, in the author's role as Communications Coordinator at CSU Health Network, they have created geofilters to reach CSU students who may be participating in risky health behaviors, such as alcohol consumption during tailgating parties. By creating a geofilter to run in parking lots during tailgating, the hope was that students would use the geofilter and consider the choices they were making around alcohol.

As Instagram has grown in popularity, the Health Network has moved away from using Snapchat as a marketing tool. However, the results of this study apply to others considering geofilter utilization. As shown in this study, geofilters were not one of the more highly rated affordances of Snapchat. Therefore, it is possible that geofilters are not useful from a targeted

messaging standpoint. However, because the sample used in this research wasn't representative, geofilter use for targeted messaging is still something that should be looked at further.

Health communicators should also stay up-to-date on new affordances added within existing social media platforms. As platforms evolve, new affordances may be added which could allow for additional interactivity with users. This interactivity may allow health communicators to better target their audience and receive feedback from followers. This feedback could then be used to tailor future social media content to enhance a brand's connection with their target audience.

Last, public health practitioners who work with the college student population should monitor emerging social media platforms. As new social media platforms become popular, they could become avenues for sharing risky health behaviors. As mentioned previously, affordances can lead users to expect certain gratifications (Sundar & Limperos, 2013) from using particular platforms. If the affordances available on new platforms are known to encourage the sharing of risky health behaviors, then public health practitioners could monitor these platforms to determine whether they are, in fact, being used in this way.

Future Research

Because of the everchanging nature of social media, it seems as though the enduring social media platforms are the ones that can shift with public interest, be on the cutting edge of technology, and find ways to distinguish themselves from other social media platforms. While Instagram stories provide different affordances than Snapchat stories, such as captioning, polling, and quizzing, they both still live for 24 hours. However, the differentiating affordances of Instagram may be a contributing factor as to how it became the more preferred social media platform for college students, currently having surpassed Snapchat (Jaschik, 2019). Instagram

stories have also become quite popular, with over 500 million users on stories daily (Bojkov, 2020). Future research should consider examining Snapchat and Instagram stories, as well as any other social media platforms that have added stories as a feature. It would be interesting to replicate this study using stories as an affordance and examine if there are any differences between the two platforms, or other platforms that have stories, in how students share health risk behaviors.

As mentioned earlier in the discussion section, studying social media platforms from the perspective of affordances allows researchers to understand why users gravitate to certain platforms, i.e., a platform's affordances help determine the gratifications users receive. As the COVID-19 pandemic has shifted the social media landscape, this study should be replicated to see if the gratifications from using Snapchat have shifted. As Nabity-Grover, Cheung, and Thatcher (2020) mention, the COVID-19 pandemic may have shifted how and what users disclose on social media. They note that stay-at-home orders and social distancing may have caused individuals to spend more time online because, "individuals are compensating for reduced access to their usual support networks…to connect and engage with others" (Nabity-Grover et al., 2020, p. 1). Therefore, during the pandemic, there could be an increase of Snapchat users who report social sharing as their top-rated gratification. In addition, it is also reasonable to assume that the entertainment gratification may have been more highly rated during the peak of the pandemic. The stay-at-home orders almost eliminated some of the traditional forms of entertainment, such as movie theatres, causing individuals to resort to other forms of entertainment like social media (Navity-Grover, et al., 2020).

Future research could also expand on the relationship between affordances and expected gratifications. As mentioned in the literature review and discussion sections, the MAIN model

proposes that users should be able to expect certain gratifications based on affordances of a platform. H1 found the most highly rated affordance of using Snapchat, in general, and RQ1 rated gratifications from sharing risky health behaviors on Snapchat. According to the MAIN model there should be a link between these affordances and gratifications (Sundar & Limperos, 2013). However, because the questions asked participants to rate their use of the platform from two different perspectives, in general and when sharing risky health behaviors, the author is unable to make a clear connection between the results of RQ1 and H1. With that said, the data in this study do suggest there could be a relationship there. The selectivity affordance found in H1 falls under the agency category of the MAIN model. The gratifications that can be expected for affordances that give users agency include social sharing, which was found to be the most highly rated gratification from sharing health risk behaviors. Future research should be done examining both affordances and gratifications from a risky health behavior perspective to see if there is a link from the identified affordance to the expected gratification.

In addition, this study asked in general about affordances of Snapchat. Future research could examine the effectiveness of affordances, such as geofilters, for promoting or discouraging certain health behaviors, as they may prove to be useful in some situations and not in others. As mentioned previously, CSU Health Network used geofilters during tailgating to discourage heavy drinking among college students. However, geofilters could be examined from a lens of promotion, such as a geofilter promoting the use of sunscreen to decrease skin cancer risk. This route encourages Snapchat geofilter users to partake in a protective behavior versus encouraging them to reduce or stop behaviors that they may already be doing.

To this researcher's knowledge, this study was also the first to take a uses and gratifications perspective to examine health risk behaviors on Snapchat. Future research can

replicate this study at other colleges and universities where marijuana is also legal. Research can also include populations outside of colleges and universities, such as high schoolers or other age groups. Another option is to examine additional risky health behaviors on Snapchat and Instagram, such as e-cigarette use; the National Institutes of Health has found a historic rise in adoption of this behavior in college-aged students (National Institutes of Health, 2020). Last, researchers should consider examining gratifications from sharing different types of health behaviors as gratifications may differ among behaviors.

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Thesis survey

Q1 Dear Participant, My name is Abby Ross and I am a researcher from Colorado State University in the Journalism and Media Communications department. We are conducting a research study on how college students use Snapchat to share their health behavior with their friends. The title of our project is Sharing Health Behaviors on Social Media. The Principal Investigator is Marilee Long, Ph.D., Journalism and Media Communications and I am the Co-Principal Investigator. We would like you to take an online survey. Participation will take approximately 15-20 minutes. Your participation in this research is voluntary. If you decide to participate in the study, you may withdraw your consent and stop participation at any time without penalty. While there are no direct benefits to you, we hope to gain more knowledge on what health behaviors college students share on Snapchat. We will not collect your name or personal identifiers. When we report and share the data with others, we will combine the data from all participants.   If you have any questions about the research, please contact Abby Ross at abby.ross@colostate.edu. If you have any questions about your rights as a volunteer in this research, contact the CSU IRB at: RICRO_IRB@mail.colostate.edu; 970-491-1553.
Marilee Long, Ph.D.   Abby Ross
Faculty, Journalism and Media Communication   M.S. Candidate

Q2 I agree to participate in the following survey.

○ Yes (1)

○ No (2)

Skip To: End of Survey If I agree to participate in the following survey. = No

---

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Q3 In order to participate in the survey, you must be 18 years of age or older. Are you 18 or older?

○ Yes (1)

○ No (3)

Q4 What is your gender?

○ Male (1)

○ Female (2)

○ Other (3)

○ Prefer not to answer (4)

Q5 What is your year in school?

○ First Year (1)

○ Second Year (2)

○ Third Year (3)

○ Fourth Year (4)

○ Other (5)

Q6 What is your race and/or ethnicity (select all that apply)?

☐ American Indian or Alaskan Native (1)

☐ Asian (2)

☐ Black or African America (3)

☐ Hispanic or Latino (4)

☐ Native Hawaiian or Other Pacific Islander (5)

☐ Native American (6)

☐ White (7)

☐ Other (8)

☐ Prefer not to answer (9)

Q7 What is your age in years?

○ Click to write your age in years (1)

_____

Q8 In what month were you born?

○ January (1)

○ February (2)

○ March (3)

○ April (4)

○ May (5)

○ June (6)

○ July (7)

○ August (8)

○ September (9)

○ October (10)

○ November (11)

○ December (12)

Q9 Have you ever used alcohol?

○ Yes (1)

○ No (2)

Skip To: Q11 If Have you ever used alcohol? = No

Q10 In the last two weeks, how often have you consumed alcohol?

○ None (1)

○ Once (2)

○ Twice (3)

○ 3-5 times (4)

○ 6-9 times (5)

○ 10 or more times (6)

Q11 Have you ever consumed marijuana? Includes edibles and smoking.

○ Yes (1)

○ No (2)

Q12 In the last 30 days, how often have you consumed marijuana?

○ None (1)

○ Once (5)

○ Twice (2)

○ 3-5 times (3)

○ 6-9 times (4)

○ 10 or more times (6)

End of Block: Basic Questions

Q13 The next two questions will ask about your social media usage.

Q14 Do you have a Snapchat account?

○ Yes (1)

○ No (2)

Q15 Do you have an Instagram account?

○ Yes (1)

○ No (2)

End of Block: Social Media Usage

Start of Block: General Snapchat/Instagram Use

Display This Question:

If Do you have a Snapchat account? = Yes

Q16 The next few questions are about your **Snapchat use**.

Display This Question:

If Do you have a Snapchat account? = Yes

Q17 Approximately how long have you been using Snapchat?

○ Less than 1 month (1)

○ 1-6 months (2)

○ 7-12 months (3)

○ More than 1 year but less than two years (4)

○ Two or more years (5)

Q18 How often do you typically use Snapchat?

○ I've had an account before but I no longer use it (1)

○ Only used it a few times (2)

○ A few times a month (3)

○ A few times a week (4)

○ A few times a day (5)

○ Many times a day (6)

Q19 When you send a Snap, in general, how many people do you send it to?

○ I publish it to my story (1)

○ I send it to a select group of friends (2)

○ I send it to only one person (3)

Q20 Do you send photos, videos, or both using Snapchat?

○ Only photos (1)

○ Mostly photos but some videos (2)

○ Both photos and videos equally (3)

○ Mostly videos but some photos (4)

○ Only videos (5)

Q21 The following questions ask you about **why you use Snapcha**t.

Q22 What are the reasons you use Snapchat?

_____

Q23 I use Snapchat because:

	Strongly agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)
It is a way to show off to friends (1)	○	○	○	○	○
My friends use it (2)	○	○	○	○	○
It is entertaining (3)	○	○	○	○	○
It makes me feel good (4)	○	○	○	○	○
It is a way to share my experiences with others (5)	○	○	○	○	○
It allows me to share my happy moments with others (6)	○	○	○	○	○
It helps me bond with my friends (7)	○	○	○	○	○
It makes me feel cool (8)	○	○	○	○	○
It allows me to share my likes with others (9)	○	○	○	○	○
It allows me to remember a moment in time (10)	○	○	○	○	○
It makes me feel important (11)	○	○	○	○	○

It is more convenient than Instagram (12)	○	○	○	○	○
Others like it (13)	○	○	○	○	○
It is fun (14)	○	○	○	○	○
It makes me feel happy (15)	○	○	○	○	○
It is a way for me to share my interests with others (16)	○	○	○	○	○
My friends appreciate it (17)	○	○	○	○	○
It is enjoyable (18)	○	○	○	○	○
It is easier to use than Instagram (19)	○	○	○	○	○

End of Block: General Snapchat/Instagram Use

Start of Block: Snapchat Content

Display This Question:

If Do you have a Snapchat account? = Yes

Q24 Snapchat allows people to share all sorts of content. Sometimes this content shows alcohol and marijuana use. The next set of questions will ask you about **your behavior on Snapchat**.

Q25 On Snapchat, have you ever shared photos or videos that show alcohol, such as pictures of drinks, or depict alcohol use?

  ○ Yes (1)

  ○ No (2)

Q26 On Snapchat, how often do you share photos or videos of alcohol?

  ○ Very frequently (1)

  ○ Frequently (2)

  ○ Occasionally (3)

  ○ Rarely (4)

  ○ Very rarely (5)

Q27 With your Snapchat use in mind, please indicate the extent to which you agree with the following:

	Strongly agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)
I snap people drinking at parties (1)	○	○	○	○	○
I send snaps of people playing drinking games (2)	○	○	○	○	○
I send snaps of alcoholic drinks (3)	○	○	○	○	○
I rarely send snaps of people who are drunk (4)	○	○	○	○	○

Display This Question:

If Do you have a Snapchat account? = Yes

Q28 On Snapchat, have you ever shared photos or videos of marijuana (for example, people at a party/bar using marijuana, friends or yourself using marijuana, pictures of marijuana/bong/blunt/joint/etc.)?

○ Yes (1)

○ No (2)

Skip To: End of Block If On Snapchat, have you ever shared photos or videos of marijuana (for example, people at a party/b... = No

Display This Question:

If On Snapchat, have you ever shared photos or videos of marijuana (for example, people at a party/b... = Yes

And Do you have a Snapchat account? = Yes

Q29 On Snapchat, how often do you share photos or videos of marijuana?

○ Very frequently (1)

○ Frequently (2)

○ Occasionally (3)

○ Rarely (4)

○ Very rarely (5)

Q30 With your Snapchat use in mind, please indicate the extent to which you agree with the following:

	Strongly agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)
I send snaps of people consuming marijuana (1)	○	○	○	○	○
I send snaps of people high on marijuana (2)	○	○	○	○	○
I send snaps where there is clearly marijuana in the photo/video (3)	○	○	○	○	○
I rarely send snaps of people high at parties (4)	○	○	○	○	○

Start of Block: Why Snapchat

Display This Question:

    If On Snapchat, have you ever shared photos or videos that show alcohol, such as pictures of drinks,... = Yes

    And Do you have a Snapchat account? = Yes

Q31 The following statements will ask you about **why you choose to share alcohol-related content on Snapchat**.

Display This Question:

    If On Snapchat, have you ever shared photos or videos that show alcohol, such as pictures of drinks,... = Yes

    And Do you have a Snapchat account? = Yes

Q32 What are reasons you share alcohol-related content on Snapchat?

_____

Display This Question:

    If On Snapchat, have you ever shared photos or videos that show alcohol, such as pictures of drinks,... = Yes

    And Do you have a Snapchat account? = Yes

Q33 I share alcohol-related content with my friends on Snapchat because:

	Strongly agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)
It is a way to show off to friends (1)	○	○	○	○	○
My friends do it (2)	○	○	○	○	○
It is entertaining (3)	○	○	○	○	○
It makes me feel good (4)	○	○	○	○	○
It is a way to share my experiences with others (5)	○	○	○	○	○
It allows me to share my happy moments with others (6)	○	○	○	○	○
It helps me bond with my friends (7)	○	○	○	○	○
It is a way for me to appear cool in front of others (8)	○	○	○	○	○
My friends do it (9)	○	○	○	○	○
It is cool (10)	○	○	○	○	○
It allows me to share my likes with others (11)	○	○	○	○	○

It allows me to remember a moment in time (12)	○	○	○	○	○
It makes me feel important (13)	○	○	○	○	○
It is more convenient than Instagram (14)	○	○	○	○	○
Others like it (15)	○	○	○	○	○
It is fun (16)	○	○	○	○	○
It makes me feel happy (17)	○	○	○	○	○
It is a way for me to share my interests with others (18)	○	○	○	○	○
My friends appreciate it (19)	○	○	○	○	○
It is enjoyable (20)	○	○	○	○	○
It is easier to use than Instagram (21)	○	○	○	○	○

Q34 The following questions will ask you about why you choose to share **marijuana-related content on Snapcha**t. Please indicate how much you agree with the statements.

Q35 What are the reasons you share marijuana-related content on Snapchat?

_____

Q36 I share marijuana-related content with my friends on Snapchat because:

	Strongly agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)
It is a way to show off (1)	○	○	○	○	○
My friends do it (2)	○	○	○	○	○
It is entertaining (3)	○	○	○	○	○
It makes me feel good (4)	○	○	○	○	○
It is a way to share my experiences with others (5)	○	○	○	○	○
It allows me to share my happy moments with others (6)	○	○	○	○	○
It helps me bond with my friends (7)	○	○	○	○	○
It is a way for me to appear cool in front of others (8)	○	○	○	○	○
Because my friends do it (9)	○	○	○	○	○
Because it is cool (10)	○	○	○	○	○
It allows me to share my likes with others (11)	○	○	○	○	○

It allows me to remember a moment in time (12)	○	○	○	○	○
It makes me feel important (13)	○	○	○	○	○
It makes me feel good (14)	○	○	○	○	○
It is more convenient than Instagram (15)	○	○	○	○	○
Others like it (16)	○	○	○	○	○
It is fun (17)	○	○	○	○	○
It makes me feel happy (18)	○	○	○	○	○
It is a way for me to share my interests with others (19)	○	○	○	○	○
My friends appreciate it (20)	○	○	○	○	○
It is enjoyable (21)	○	○	○	○	○
It is easier to use than Instagram (22)	○	○	○	○	○

Q37 What features of Snapchat have influenced your use of Snapchat for alcohol-or marijuana-related content?

_____

Q38 Think about when you have used Snapchat to share photos or videos of alcohol or marijuana. To what extent have the following features influenced your use of Snapchat for alcohol- or marijuana-related content.

	Extremely influential (1)	Very Influential (2)	Somewhat Influential (3)	Slightly Influential (4)	Not at all influential (5)
The length of time a photo or video is available (1)	○	○	○	○	○
The level of permanency of Snapchat content (2)	○	○	○	○	○
The ability to choose how long people can see a photo or video I send (3)	○	○	○	○	○
The ability to share my location using Geofilters (location-based filters that come across your photo/video when you swipe across the screen) (4)	○	○	○	○	○
The ability to use lenses (e.g. filters that make you look like a dog) (5)	○	○	○	○	○
My ability to send photos/videos to a select number of Snapchat friends (6)	○	○	○	○	○

| My ability to send photo or videos to all my Snapchat friends (7) | ○ | ○ | ○ | ○ | ○ |

Display This Question:

   If Do you have a Snapchat account? = Yes

Q39 The next set of questions asks about **other people's behavior** on Snapchat.

Display This Question:

   If Do you have a Snapchat account? = Yes

Q40 On Snapchat, have you ever been sent photos or videos of alcohol or alcohol use?

○ Yes (1)

○ No (2)

Display This Question:

   If Do you have a Snapchat account? = Yes

Q41 On Snapchat, have you ever been sent photos or videos of marijuana, marijuana paraphernalia, or marijuana consumption?

○ Yes (1)

○ No (2)

Q42 With the type of content you see on Snapchat in mind, please indicate the extent you agree with the following statement :

Q43 My friends send me:

	Strongly agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)
Snaps of people drinking at parties (1)	○	○	○	○	○
Snaps of drinking games (2)	○	○	○	○	○
Snaps of alcoholic drinks (3)	○	○	○	○	○
Drunken snaps (4)	○	○	○	○	○

Q44 My friends send me:

	Strongly agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)
Snaps of people smoking a blunt (1)	○	○	○	○	○
Snaps of people consuming marijuana edibles (2)	○	○	○	○	○
Snaps of people taking a hit from a bong (3)	○	○	○	○	○
Snaps where people are clearly high (4)	○	○	○	○	○

Display This Question:

    If Do you have an Instagram account? = Yes

Q45 The **next few questions** will ask you about your **Instagram use**.

Display This Question:

    If Do you have an Instagram account? = Yes

Q46 Approximately how long have you been using Instagram?

○ Less than 1 month (1)

○ 1-6 months (2)

○ 7-12 months (3)

○ More than 1 year but less than two years (4)

○ Two or more years (5)

Q47 How often do you typically use Instagram? This includes scrolling through your feed as well as posting to your feed/story.

○ I've had an account before but I no longer use it (1)

○ Only used it a few times (2)

○ A few times a month (3)

○ A few times a week (4)

○ A few times a day (5)

○ Many times a day (6)

Q48 Do you post photos, videos, or both using Instagram?

○ Only photos (1)

○ Mostly photos but some videos (2)

○ Both photos and videos equally (3)

○ Mostly videos but some photos (4)

○ Only videos (5)

End of Block: General IG Use

Start of Block: Personal Instagram Behavior

Display This Question:
    If Do you have an Instagram account? = Yes

Q49 Instagram allows people to share all sorts of content. Sometimes this content shows alcohol and marijuana use. The next set of questions asks about **your behavior on Instagram**.

Display This Question:
    If Do you have an Instagram account? = Yes

Q50 On Instagram, have you ever shared photos or videos of alcohol (for example, people at a party/bar consuming alcohol, friends or yourself playing drinking games, pictures of alcoholic drinks, etc.)?

○ Yes (1)

○ No (2)

*Skip To: Q51 If On Instagram, have you ever shared photos or videos of alcohol (for example, people at a party/ba...
= Yes*
*Skip To: Q52 If On Instagram, have you ever shared photos or videos of alcohol (for example, people at a party/ba...
= No*

Q51 On Instagram, how often do you share photos or videos of alcohol?

○ Very frequently (1)

○ Frequently (2)

○ Occasionally (3)

○ Rarely (4)

○ Very rarely (5)

Q52 On Instagram, have you ever shared photos or videos of marijuana (for example, people at a party/bar using marijuana, friends or yourself using marijuana, pictures of marijuana/bong/blunt/joint/etc.)?

○ Yes (1)

○ No (2)

Q53 On Instagram, how often do you share photos or videos of marijuana?

○ Very frequently (1)

○ Frequently (2)

○ Occasionally (3)

○ Rarely (4)

○ Very rarely (5)

End of Block: Personal Instagram Behavior

Start of Block: Instagram Content

Display This Question:

> *If On Instagram, have you ever shared photos or videos of alcohol (for example, people at a party/ba... = Yes*
>
> *And Do you have an Instagram account? = Yes*

Q54 With your Instagram use in mind, please indicate the extent to which you agree with the following:

	Strongly agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)
I post photos/videos of people drinking at parties (1)	○	○	○	○	○
I post photos/videos of people playing drinking games (2)	○	○	○	○	○
I post photos/videos of alcoholic drinks (3)	○	○	○	○	○
I rarely post photos/videos of people who are drunk (4)	○	○	○	○	○

Display This Question:

If On Instagram, have you ever shared photos or videos of marijuana (for example, people at a party/... = Yes

And Do you have an Instagram account? = Yes

Q55 With your Instagram use in mind, please indicate the extent to which you agree with the following:

	Strongly agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)
I post photos/videos of people consuming marijuana (1)	○	○	○	○	○
I post photos/videos of people high on marijuana (2)	○	○	○	○	○
I rarely post photos/videos where there is clearly marijuana in the photo/video (3)	○	○	○	○	○

Display This Question:

If On Instagram, have you ever shared photos or videos of alcohol (for example, people at a party/ba... = Yes

Or On Instagram, have you ever shared photos or videos of marijuana (for example, people at a party/... = Yes

And Do you have an Instagram account? = Yes

Q56 Think about when you have used Instagram to share photos/videos of alcohol and/or marijuana. To what extent have the following features influenced your use of Instagram for alcohol/marijuana-related content:

	Extremely influential (1)	Very Influential (2)	Somewhat influential (3)	Slightly Influential (4)	Not at all influential (5)
The length of time a photo or video is available on Instagram (1)	○	○	○	○	○
The level of permanency of Instagram content (2)	○	○	○	○	○
The ability to tag your location (3)	○	○	○	○	○
All your friends can see everything you post (4)	○	○	○	○	○

End of Block: Instagram Content

Start of Block: Behavior of others on Instagram

Q57 Instagram allows people to share all sorts of content. Sometimes this content shows alcohol and marijuana use. The next set of questions asks about **other people's behavior on Instagram**.

Q58 On Instagram, have you ever seen photos or videos of alcohol or alcohol use?

○ Yes (1)

○ No (2)

Display This Question:

If Do you have an Instagram account? = Yes

And On Instagram, have you ever seen photos or videos of alcohol or alcohol use? = Yes

Q59 With the type of content you see on Instagram in mind, please indicate the extent to which you agree with the following statements.

Display This Question:

If On Instagram, have you ever seen photos or videos of alcohol or alcohol use? = Yes

And Do you have an Instagram account? = Yes

Q60 My friends post:

	Strongly agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)
Photos/videos of people drinking at parties (1)	○	○	○	○	○
Photos/videos of drinking games (2)	○	○	○	○	○
Photos/videos of alcoholic drinks (3)	○	○	○	○	○
Photos/videos of people who are drunk (4)	○	○	○	○	○

Q61 Have you ever seen photos or videos of marijuana, marijuana paraphernalia, or marijuana consumption on Instagram?

○ Yes (1)

○ No (2)

Q62 With the type of content you see on Instagram in mind, please indicate the extent to which you agree about the following statements:

Q63 My friends post:

	Strongly agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly disagree (5)
Photos/videos of someone smoking a blunt (1)	○	○	○	○	○
Photos/videos of someone consuming an edible (2)	○	○	○	○	○
Photos/videos of someone taking a hit from a bong (3)	○	○	○	○	○
Photos/videos where someone is clearly high (4)	○	○	○	○	○

End of Block: Behavior of others on Instagram

APPENDIX B – INFORMED CONSENT STATEMENT

Dear Participant:

My name is Abby Ross and I am a researcher from Colorado State University in the Journalism and Media Communication Department. We are conducting a research study on how college students use Snapchat and Instagram to share their behavior with their friends. The title of our project is Sharing Health Behaviors on Social Media. The Principal Investigator is Marilee Long, Ph.D., a professor in the department, and I am the Co-Principal Investigator.

We would like you to take an online survey. Participation will take approximately 10-15 minutes. Your participation in this research is voluntary. If you decide to participate in the study, you may withdraw your consent and stop participation at any time without penalty. While there are no direct benefits to you, we hope to gain more knowledge on what behaviors college students share on Snapchat.

We will not collect your name or personal identifiers. When we report and share the data with others, we will combine the data from all participants.

If you have any questions about the research, please contact Abby Ross at abby.ross@colostate.edu. If you have any questions about your rights as a volunteer in this research, contact the CSU IRB at: RICRO_IRB@mail.colostate.edu; 970-491-1553.

Marilee Long, Ph.D.   Abby Ross
Faculty, Journalism and Media Communication   M.S. Candidate

APPENDIX C – IN-PERSON RECRUITMENT SCRIPT

My name is Abby Ross and I am a researcher from Colorado State University in the Journalism and Media Communications department. I am conducting a research study on how college students use Snapchat and Instagram to share their health behavior with their friends. The title of my project is Sharing Health Behaviors on Social Media.

I would like you to take an anonymous online survey. Participation will take approximately 10-15 minutes. Your participation in this research is voluntary. If you decide to participate in the study, you may withdraw your consent and stop participation at any time without penalty. By choosing to take a survey on SONA, you will receive extra credit for this course. You will see that this survey is one of many you can choose from in order to receive this extra credit.

I will be passing out a piece of paper with the study name listed so you can find the survey on SONA. My contact information is also listed in case you have any further questions. Thank you for your help.