

SOCIAL MEDIA APPS AND RISKY SEXUAL BEHAVIORS: AN EXPLORATORY STUDY

by

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## Introduction

Young adults frequently engage in risky sexual behaviors as they develop mentally and emotionally. These sexual experiences are sporadic and poorly managed (Cooper, 2002). College-aged students (18-24 year olds) are developmentally within *Emerging Adulthood*, a cultural life-stage which is compounded by the added freedoms of college life with more opportunities to manage one's sexuality and growth as an individual (Benson & Furstenberg Jr, 2006; Claxton & van Dulmen, 2013; Fussell & Furstenberg Jr, 2005; Panagakis, 2015). However, these extra opportunities are often associated with drugs and alcohol, sexual violence, STIs, and unplanned pregnancy (Scholly, Katz, & Gascoigne, 2005). Up to 20-25% of college females experience rape or attempted rape during their years at college, 50% of all sexual assaults occur in conjunction with alcohol, half of the 19 million new STIs occurring each year are experienced within college aged adults, and women aged 18-24 have the highest rates of unintended pregnancies; indicating that as this demographic is undergoing mental and emotional maturation, there are a multitude of risks associated as well (Krebs, Lindquist, & Fisher, 2009; Finer & Zolna, 2014). Unfortunately as college students engage in more frequent sexual experiences with multiple partners, the protective aspects of these behaviors are often forgotten. The National College Health Assessment reported that only 18% of college students having sexual activity with a new partner used a condom regularly (American College Health Association, 2010). Considering the rates of risky sexual behavior that this group of individuals is engaging in and the fact that protective measures are being ignored, any additive factor may continue to escalate the already prominent sexual risks for college students.

As technologies have advanced, internet and cell phones have continued to impact the way individuals interact with one another, specifically among college students. According to the *PEW Research Center*, 96% of undergraduate students own a cell phone and over 98% utilize the internet at home or wirelessly on a mobile device (Smith, Rainie, & Zickuhr, 2011). These numbers indicate the overwhelming acceptance of these technologies within college campuses. Social networking websites and applications (apps) on wireless devices have also grown in popularity. With their ability for individuals to connect to almost anyone instantaneously, the appeal of social networking sites and apps is evident with 86% of college students utilizing social networks (Smith et. al, 2011). These apps have a wide range of abilities and intentions for their users, as well as geosocial apps which allow you to connect with individuals who are nearest your immediate location (Rice, et. al, 2012). The instantaneous connection that cell phones now provide, promotes this demographics' ability to engage with new individuals more rapidly than ever before.

At the intersection of social media technology and the developmental stage of *Emerging Adulthood*, we find students may be extending their sexual risk-taking behaviors into the online realm. The purpose of this exploratory study was to investigate the sexual health behaviors associated with the use of social media apps. As college students continue to choose online communication as the main forum for engaging with the opposite sex, individuals are able to be more forthcoming and direct about their sexual intentions, while maintaining the anonymity of an electronic barrier between individuals (Lindgren, Blayney, Schacht, George, & Pantalone, 2009). This combination has created a platform for the mass development of social media apps in recent years that allow individuals to engage with one another on a personal level, often resulting in sexual encounters (Straumsheim, 2015).

Unfortunately, some of the most popular dating apps, such as Tinder and Grindr, have become associated with a national trend indicating an increase for all STIs. Between 2013 and 2014, Rhode Islands' Department of Health reported a 79% increase in syphilis, 30% increase gonorrhea, and 33% increase in HIV/AIDS; which has partially been attributed to the use of social media to arrange casual and often anonymous sexual encounters (Rhode Island Department of Health, 2015). When evaluating the specific group of college aged students and their already documented risky behavior, many of these social media apps may have implications for the rise in drugs and alcohol, sexual violence, STI rates, and unplanned pregnancies. By exploring these behaviors, it creates the potential for improved education when using these technologies and the development of safer sex practices.

## Methods

### *Study Design*

Participants included both female and male, full time undergraduate students, attending East Carolina University. A 31-item electronic survey was developed to assess social media application use, safe-sex practices, rates of sexual partners, STIs, and sexual violence. The survey was reviewed by an expert panel for content validity. Final survey design, contact emails, and methodology was approved by the institution's IRB.

An anonymous online survey link was emailed to a randomly selected sample of 5000 full-time, undergraduate students aged 18-24 years during the Spring 2016 semester. Three email reminders were sent to participants after the initial point of contact to attempt to increase survey response rate. Upon accessing the survey link, participants viewed an informed consent

statement indicating continuance to the survey signified consent. Additionally, key definitions for important terms such as smartphone, app, social media apps, digital sex, oral sex, vaginal sex, anal sex, and sexually transmitted infection (STI) were provided at the beginning of the survey to ensure proper understanding of the survey's terminology. Data were collected between January 2016 and February 2016.

At the conclusion of the survey, participants were informed of local sexual health, alcohol, and mental health resources. Participants were then directed to an exit page, completely separate from the survey, for participation in a random drawing for thirty, \$25 gift cards to Target by entering in their first and last name, phone number, and student email address. Only students who chose to include their email address were included in the incentive drawing. A random sample of 30 students were selected and contacted for the incentives.

## ***Measures***

### *Participant Characteristics*

Basic demographic characteristics such as age, gender, race/ethnicity, year in school (i.e. freshmen, sophomore, junior, and senior) and sexual orientation (heterosexual, homosexual, and bisexual) were measured by the survey instrument.

### *Social Media App Use*

Social Media App use was examined via five yes/no items, which assessed participants on whether they: (1) owned a smartphone, tablet, an electronic book, or similar device, (2) downloaded, purchased, or used apps on those devices, (3) downloaded any of the specific social media apps in question, (4) used any of the specific social media apps in question, (5) used

Tinder, Grindr, Snapchat, Facebook, Twitter, Instagram, Yik Yak, or Yeti on a smartphone, tablet, or electronic book.

### *Sexual Behavior*

Sexual encounters in reference to the social media apps were assessed via four questions. Participants were initially asked if a face-to-face encounter ever occurred after originally meeting someone through one of the social media apps (yes/no response). If the participant responded that a face-to-face encounter had occurred, they were directed to a subsequent question that asked how many times an encounter occurred and responses were quantified in categories: 0 times, 1-2 times, 3-5 times, 6-8 times, 9-10 times, and 10+ times. If a participant responded with any answer stating one or more times, the participant was directed to answer if a sexual encounter occurred during those face-to-face meetings (yes/no response). If a sexual encounter did occur, the participant was able to choose from which sexual activities were participated in during that encounter: digital sex, oral sex, vaginal sex, and anal sex.

### *Sexual Risks*

Participant's risky sexual behavior associated with these specific social media apps was assessed by use or disuse of protective measures (condoms/barrier methods and hormonal contraceptives), likelihood of using protective measures (Likert four point scale), notification of ever contracting a STI (chlamydia, syphilis, gonorrhea, HIV/AIDS, genital herpes, genital warts, HPV, trichomoniasis), whether or not those STIs arose from these specific sexual encounters (yes/no/unsure response), likelihood of getting tested for an STI after a sexual encounter (Likert

four point scale), and whether or not the participant or participant's partner has ever become pregnant through these specific sexual encounters (yes/no/unsure response).

Participants were assessed on whether or not they have ever experienced sexual violence with someone they previously met through these specific social media apps (yes/no/unsure response), whether or not they were sexually touched without their consent (yes/no response), whether or not sexual penetration was *attempted* without their consent (yes/no response), whether or not sexual penetration occurred without their consent (yes/no response), and likelihood of reporting that sexual violence (Likert four point scale).

Participants were also assessed on whether or not they have ever used drugs/alcohol during a sexual encounter with someone they previously met through these specific social media apps (yes/no response), whether they had unprotected digital, oral, vaginal, or anal sex while using drugs/alcohol (yes/no response), whether they had experienced digital, oral, vaginal, or anal sex without *giving* consent to their partner while using drugs/alcohol (yes/no response), whether they had experienced digital, oral, vaginal, or anal sex without *getting* consent from their partner while using drugs/alcohol (yes/no response).

### *Data Analysis*

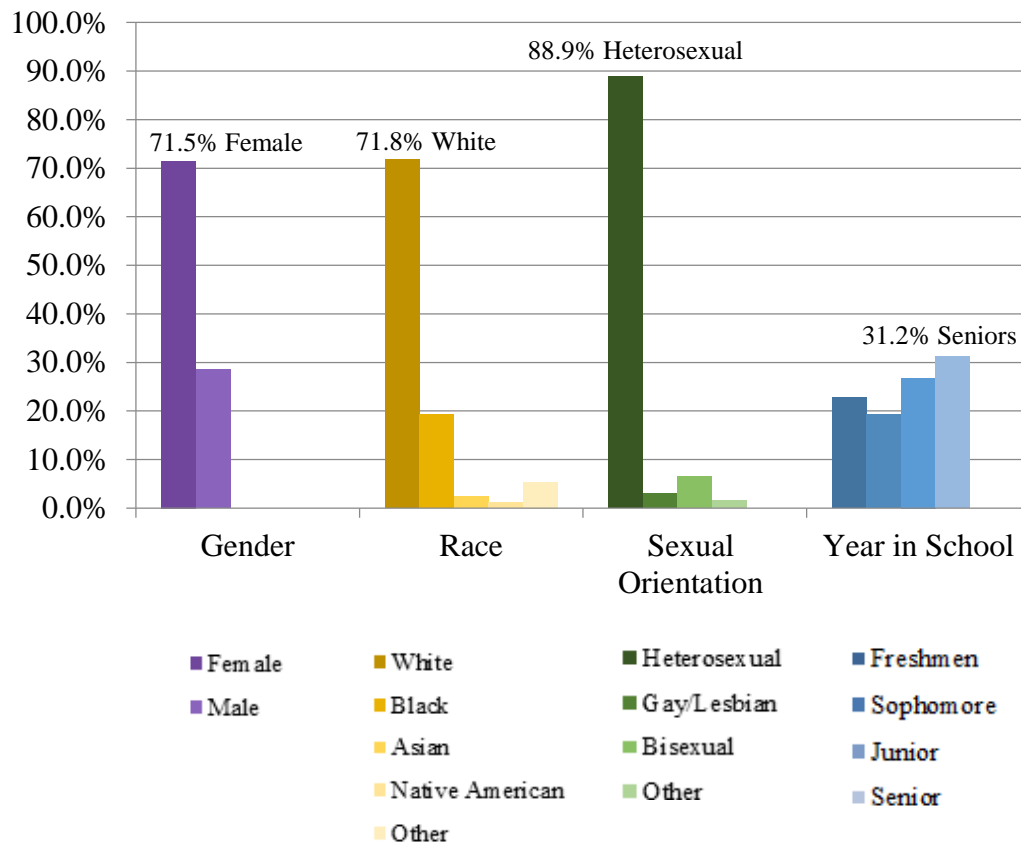
Data was analyzed using SPSS® (2011) statistical analysis software for descriptive statistics. With several variables being tested and multiple questions attributed to each variable, it was unclear as to how to choose which questions to analyze. Ultimately, by evaluating the initial results, questions were hand-picked for further analysis.

### **Results**

*Participant characteristics*

Of the 5000 students invited to participate, 814 completed surveys, but only 786 contained usable data due to missing data (16.28% response rate & 96.56% completion rate). The majority of the participants were female (71.5%), white (71.8%), not Hispanic/Latino (88.0%), heterosexual (88.9%), and between the ages 18 and 21 years old (68.3%) (Table 1). In terms of year of study, there was a higher percentage of upperclassman as compared to underclassman (59.5% of junior and seniors).

Table 1: Demographic Information





### *Social Media App Use*

The majority of students reported owning a smartphone (98.0%) and a tablet (56.4%), while only 26.5% owned an electronic book. When asked whether the participant has ever used any of the social media apps in question, 90.1% reported utilizing these apps on their smartphone, tablet, or electronic book. Of those 90.1% utilizing these apps, 47.7% reported having a face-to-face encounter with someone they originally met through social media apps.

### *Sexual Behavior*

Of the 375 students that reported having a face-to-face encounter occur resulting from a social media app (52.8%), 162 had a sexual encounter arise (43.9%). Within those that have reported sexual encounters, 12.7% engaged in digital sex, 16.4% engaged in oral sex, and 16.4% engaged in vaginal sex.

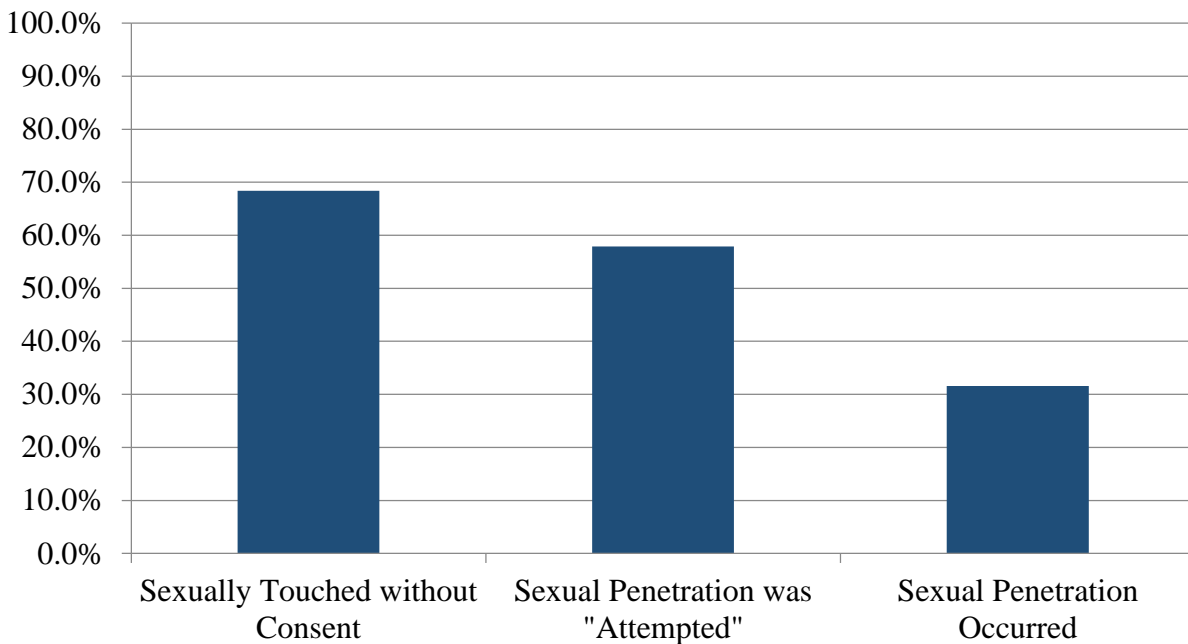
### *Sexual Risks*

When engaging with sexual partners from social media apps, 32.9% reported they did not use a condom with a new sexual partner. Within these sexual encounters, 11.9% reported contracting Chlamydia, 6.3% reported contracting the Human Papilloma Virus, and 5.0% reported contracting both Gonorrhea and Trichomoniasis. Additionally, more than a third of participants (35.6%) stated it was either unlikely or very unlikely that they would choose to get tested for STIs following a sexual encounter from a social media app.

During these sexual encounters from social media apps, 11.9% stated that sexual violence occurred. Within that group, 68.4% reported they were sexually touched without their consent, 57.9% reported sexual penetration was “attempted” without their consent, and 31.6% reported

sexual penetration occurred without their consent (Table 2). Of those that reported having a sexual encounter with someone off of a social media app, 56.3% used drugs or alcohol during that encounter. Within that 56.3% using drugs or alcohol, 62.9% reported having unprotected digital, oral, vaginal, or anal sex.

Table 2: Reports of Sexual Violence



\*\*Among the 11.9% that reported experiencing sexual violence from social media apps

**Conclusions**

This study was able to evaluate associations between sexual behaviors with a specific group of social media apps. This set of data came from primarily white, females. Most participants identified as heterosexual and were primarily classified as juniors and seniors. When identifying higher risk groups among college students, underclassmen are new to college and the added freedoms. This group is likely to engaging in more risky sexual behavior. As this data set

is predominately from upperclassmen, many of the statistics may in fact be disproportionately low by not having a conclusive sample. Additionally, this study would be more conclusive by including more males in the evaluation.

This data indicates that more than half of the participants are choosing to utilize social media apps to engage with the opposite sex and a large proportion are engaging in sexual activity during those encounters. While many are already reporting not using protective barriers, such as condoms, this number is likely to be much lower than reported. Often participants choose the more favorable answer choice during surveys or recall information from a specific occurrence incorrectly. When taking into account both of those issues, and the fact this data is missing the riskier population group among college students, condom usage may be even lower than what this data currently indicates. Additionally, with more than a third of participants stating they are unlikely or very unlikely to get tested following a sexual encounter stemming from a social media app, using protective measures when engaging with new partners is even more important. College students are choosing to engage in sexual encounters with multiple, random partners from social media apps and often times forgetting the necessary protective behaviors associated with safe sex.

As college students frequently engage in drinking and drug use, sexual violence among this demographic is prominent. Current research shows one in four women will fall victim to sexual assault. Additionally, 50% of all assaults are occurring in conjunction with alcohol (Krebs, Lindquist, & Fisher, 2009). This data can be compared to those statistics, as 11.9% reported experiencing sexual violence and 56.3% used drugs or alcohol when engaging in sexual encounters resulting social media apps. The nature of these social media apps are promoting

anonymous encounters, frequently while under the influence. This demographic is placing themselves at heightened risks by using drugs and alcohol, engaging with anonymous partners, and not reporting violence when meeting partners off of social media apps.

Further research can continue to expand upon a newly developed area of risks for college students. Including a more conclusive sample from all undergraduate students and sexes, more implications from these social media apps may be discovered. By acknowledging that social media apps promote risky sexual behavior among college students, interventions to promote safer sex practices can take place.

### *Limitations*

Study results should be interpreted with caution due to several limitations. Although response rate was low, with 16.28% response, our sample was fairly representative of the larger East Carolina University population. East Carolina University Office of Institutional Planning, Assessment, and Research (IPAR) provided this study with a random sample of 5000 undergraduate student emails. Data obtained from this study is self-reported and participants may have recall issues when thinking back to particular behavioral occurrences. While data regarding sexual behavior is most frequently obtained through self-reports, length of interval between the assessment and the behavioral occurrence sometimes creates inaccuracy (Schroder, Carey, Vanable, 2003). Another limitation is generalizability, such that this study was conducted specifically at East Carolina University and not within all undergraduate institutions within the U.S. This study can also only evaluate the variables that were tested, which unfortunately did not include event-level data. Thus specific correlations between variables cannot be made.

Relationships and sexual behavior among college students is constantly changing and results should be interpreted accordingly.

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