

VICTIMIZATION, RISKY BEHAVIORS,  
AND THE VIRTUAL WORLD

by

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## ABSTRACT

Social networking sites, such as Facebook and MySpace, have become increasingly popular among teens and young adults because of the availability of the internet. Because these websites promote interpersonal connections and information sharing among individuals around the world, personal information to online "friends" may be shared carelessly. However, little is known about the correlation between engaging in online activities, sharing personal information online, and susceptibility to online victimization and cyberbullying. This study analyzes data from the Parents & Teens 2006 Survey to examine the applicability of Routine Activities Theory as a theoretical framework for understanding cybervictimization and cyberbullying. Online teens and teens on social networking sites (SNS) were examined separately in this study to determine if social networking (SNS) teens were at an increased risk. The results indicated that participating in online activities and sharing personal information increased the risk for receiving a threatening email, instant message or text message. Teens whose parents did not have rules regulating their online activities and behaviors were also at an increased risk for receiving a threatening email, instant message or text message. The logistic regression models show that for social networking (SNS) teens, gender and age increase the odds of receiving a threat, compared to online teens.

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## TABLE OF CONTENTS

|   |     |
|---|-----|
| LIST OF TABLES .....                                      | vii |
| CHAPTER ONE: INTRODUCTION.....                            | 1   |
| CHAPTER TWO: LITERATURE REVIEW .....                      | 3   |
| Social Networking Websites.....                           | 3   |
| General Teen Victimization.....                           | 4   |
| Property Victimization.....                               | 5   |
| Sexual Victimization.....                                 | 5   |
| Physical Victimization .....                              | 7   |
| Cybervictimization.....                                   | 9   |
| Online Sexual Victimization/Solicitation/Harassment ..... | 10  |
| Posting Too Much Information.....                         | 11  |
| Online Communication.....                                 | 11  |
| Cyberbullying .....                                       | 12  |
| Routine Activities Theory.....                            | 13  |
| Gaps in the Research.....                                 | 15  |
| Research Questions.....                                   | 15  |
| CHAPTER THREE: METHODOLOGY .....                          | 17  |
| Data.....   | 17  |
| Measures .....  | 17  |
| Independent Variables .....                               | 17  |
| Dependent Variables.....                                  | 20  |

|                                 |    |
|---------------------------------|----|
| Control Variables .....         | 20 |
| Analytic Strategy .....         | 21 |
| CHAPTER FOUR: RESULTS .....     | 22 |
| Univariate Analyses .....       | 22 |
| Bivariate Analyses .....        | 30 |
| Multivariate Analyses .....     | 39 |
| CHAPTER FIVE: CONCLUSIONS ..... | 46 |
| LIST OF REFERENCES .....        | 52 |

## LIST OF TABLES

|   |    |
|---|----|
| Table 1: Demographic Characteristics of Online and Social Networking (SNS) Teens .....  | 23 |
| Table 2: Frequencies for Independent Variables Measuring Routine Activities Theory (RAT)<br>Concepts.....   | 27 |
| Table 3: Frequencies for Dependent Variable Measuring Cyberbullying Experiences .....   | 30 |
| Table 4: Mean Differences for Online Teens Receiving or Not Receiving a Threatening or<br>Aggressive Email, IM or Text Message (n=886).....                     | 31 |
| Table 5: Bivariate Results for Chi-Square Test of Online Teens Receiving a Threatening or<br>Aggressive Email, IM or Text Message (n=886).....                  | 34 |
| Table 6: Mean Differences for Social Networking (SNS) Teens Receiving or Not Receiving a<br>Threatening or Aggressive Email, IM or Text Message (n=487).....    | 36 |
| Table 7: Bivariate Results for Chi-Square Test of Social Networking (SNS) Teens Receiving a<br>Threatening or Aggressive Email, IM or Text Message (n=487)..... | 38 |
| Table 8: Logistic Regression Models for Online Teens and Social Networking (SNS) Teens<br>Receiving a Threatening or Aggressive Email, IM or Text Message.....  | 42 |

## CHAPTER ONE: INTRODUCTION

It is widely known that young adults experience unprecedented amounts of victimization. According to the Bureau of Justice Statistics, teens and young adults experience the greatest rates of crime, compared to all other age groups (Bureau of Justice Statistics 2009). In 2008, adolescents ages 12 to 15 experienced nonfatal violent crime at a rate of 42.2 per 1,000 people, compared to people aged 65 and older who had a rate of 3.1 per 1,000 people (Bureau of Justice Statistics 2009). Finkelhor, Mitchell and Wolak (2000) estimated that 20 percent of adolescents experienced sexual solicitation online in the previous year; however, not much research exists investigating the relationship between social networking sites (SNS) and cybervictimization. Although researchers are aware of the causal factors of general victimization, little research has been published on the prevalence and causes of cybervictimization. It is important to understand the dynamics of cybervictimization because of the ever increasing number of people that use the internet. Along with the number of people that are using the internet, the number of people using social networking sites is continually growing. The most popular social networking site, Facebook, has over 400 million active users (Facebook 2010).

The ease of finding personal information on the internet suggests that individuals are not aware of the negative consequences that could ensue. Higgins and colleagues (2008) stated, “While it [Facebook] serves as a social networking site, potential hidden dangers are plentiful and are relatively unacknowledged by its users” (231). Because social networking sites promote interpersonal connections and information sharing among individuals around the world, personal information to online “friends” may be shared carelessly. However, little is known about the correlation between cyberbullying and online victimization and engaging in particular online activities and posting personal information online. This study analyzes how the amount of



personal information shared online and engaging in particular online activities is related to online victimization and cyberbullying.

## CHAPTER TWO: LITERATURE REVIEW

This literature review will begin with information concerning the growth of social networking sites, followed by a review of the research regarding general teen victimization. A review of the available research concerning cybervictimization and cyberbullying will follow. Next, will be a discussion of the Routine Activities theoretical framework. Finally, gaps in the research will be explored.

### Social Networking Websites

With the continual growth of the internet, it is no wonder that social networking sites have become increasingly popular. As of February 2008, 65 percent of teens ages 12 through 17 were using social networking sites (Lenhart 2009); there is no doubt that number has dramatically increased since. Social networking sites give individuals the opportunity to stay in contact with friends and keep their friends informed about events going on in their lives. Social networking sites can also be a place for individuals to freely express themselves; whether the person they are portraying is an accurate reflection of them or not.

The most widely known social networking sites are Facebook and MySpace. Although MySpace was created before Facebook, Facebook has more users than any other social networking site. According to Facebook (2010), the website accounts for over 400 million active users. In addition, approximately 200 million users access Facebook at least once a day (Facebook 2010). Whether users are uploading pictures, creating event invitations, or checking in with their friends, they are embracing the social networking lifestyle. Facebook (2010) also reports that over 35 million of their users update their status at least once a day. These status

updates lessen an individual's privacy and increase the chances that a stranger is keeping up with their daily activities.

Facebook (2010) promotes their website by stating that it “helps you connect and share with the people in your life” (<http://www.facebook.com/>). While social networking sites are an easy way to keep in contact with friends and family members, it seems that they are also an easy way for strangers to keep in contact with unknowing individuals. By engaging in this social networking lifestyle and sharing personal information, are teens putting themselves at an increased risk for victimization? Is this risk of victimization greater for social networking teens than their counterparts who are simply online sending emails and web browsing?

#### General Teen Victimization

As stated previously, the Bureau of Justice Statistics has indicated that teens and young adults experience the greatest amounts of crime in comparison to all other age groups (Bureau of Justice Statistics 2009). People between the ages of 12 to 24 have the highest rates of victimization in all categories of crime measured by the National Crime Victimization Survey (NCVS) (Rand 2009). According to Snyder and Sickmund (2006), 12 to 17 year olds were more than twice as likely to be the victim of a “nonfatal violent crime” (27). A “nonfatal violent crime” includes: rape, sexual assault, robbery, aggravated assault, and simple assault (Snyder and Sickmund 2006:27). This section of the literature review focuses on general victimization for teens. General victimization includes property crimes, sexual victimization, and physical victimization.

### *Property Victimization*

Finkelhor et al (2005) indicated that over 25 percent of children and adolescents have been the victim of a property crime. Research has suggested that Routine Activities Theory can explain being the victim of a property crime because particular activities or lifestyles increase one's chances of being a victim. The proximity to motivated offenders, the target suitability of the victim's property, and if their property is guarded or not will determine one's risk for victimization (Mustaine and Tewksbury 1998). For example, activities that increase one's chances of being the victim of larceny were activities in the public domain, like frequently dining out and frequently leaving the house (Mustaine and Tewksbury 1998). Mustaine and Tewksbury (1998) also found that women were more likely to be the victim of minor larceny compared to men. As Routine Activities Theory suggests, research has found that particular lifestyles and activities increase one's chances of being the victim of larceny.

### *Sexual Victimization*

Snyder and Sickmund (2006) stated that "sexual assaults accounted for just over half of the juvenile victims of violent crime known to law enforcement" (31). An overwhelming amount of the literature reviewed analyzes sexual victimization among young adults, and more specifically, alcohol use and sexual victimization. Previous research has found "a clear pattern of increased risk of sexual victimization associated with substance use" (Champion et al 2004:326). More specifically, research has found a significant relationship between adolescent females' alcohol use and sexual victimization (Champion et al 2004). Brecklin and Ullman (2002) also reported that "the risk of sexual assault may be greater when one or both persons involved are drinking" (57). One specific study found that of the female respondents that had experienced sexual assault, 93 percent involved drugs or alcohol (Messman-Moore, Ward and

Brown 2009). Additionally, these results indicated that 80 percent of the female respondents could not consent to sex because they were impaired by drugs or alcohol (Messman-Moore, Ward and Brown 2009). Research has found that it is not simply consuming alcohol that can lead to higher risks of victimization but more specifically, excessive drinking (Benson, Gohm and Gross 2007; Buddie and Testa 2005).

Research has also found a correlation between drug use and sexual victimization. A small amount of literature in this area of research examines the relationship between marijuana use and victimization. One specific study concluded that there is an increase in sexual victimization among individuals who use marijuana (Champion et al 2004). Other research has also determined that women who used drugs in public were at an increased risk of experiencing sexual assault than women who did not use drugs in public or used no drugs at all (Mustaine and Tewksbury 2002). Additionally, Messman-Moore, Ward and Brown's (2009) findings indicated that in 93 percent of prior assaults, the victim used drugs or alcohol. As one can conclude from the review of the literature, drug or alcohol use contributes to a significant increase in rates of victimization.

Risky sexual behavior is another lifestyle researchers have found that leads to sexual victimization (Champion et al 2004). Research has also found that sexual activity, not necessarily risky, leads to a higher risk of sexual victimization (Messman-Moore, Ward and Brown 2009). In other words, the more sexual partners an individual has, the more likely they are going to encounter an aggressive partner.

Research indicates that women who do not live with their parents are at an increased risk of sexual aggression (Buddie and Testa 2005). More specifically, female college students who do not live with their parents have higher rates of alcohol consumption than females who are not

in college (Buddie and Testa 2005). In other words, the college lifestyle promotes alcohol consumption and in turn, alcohol consumption increases the risk for sexual aggression and victimization. It can be concluded from this relationship that women living with their parents are more likely to stay in at night, rather than going out to bars or clubs. Mustaine and Tewksbury (2002) found evidence of that relationship; women who “frequently went out at night for leisure” (116) were at a higher risk for a serious sexual assault than their counterparts who were not out as often. In essence, it seems plausible to conclude that women who live with their parents are less likely to attend bars or clubs, therefore, not consuming as much alcohol, which in turn lowers their chances of sexual victimization.

In sum, engaging in specific activities, such as alcohol and drug use, increases one’s risk for experiencing sexual victimization. Research has concluded that risky sexual behavior also increases this risk. Particular lifestyles, for example, not living with one’s parents and attending bars and clubs, can also increase one’s risk for sexual victimization. This research provides evidence that Routine Activities Theory can be applied to sexual victimization.

### *Physical Victimization*

General teen victimization also includes physical assault, in which victims are controlled through physical violence. According to the Bureau of Justice Statistics (2009), in 2008, “...for every violent crime measured by the NCVS [National Crime Victimization Survey] persons ages 12 to 24 had the highest rates of victimization...”

(<http://bjs.ojp.usdoj.gov/index.cfm?ty=tp&tid=921>). Additionally, in 1997, adolescents and young adults accounted for almost half of the victims of serious violent crimes (Perkins 1997). Finkelhor and colleagues (2005) found that 53 percent of children and adolescents have experienced a physical assault within the year prior to their study. Research has indicated that

drug use increased the risk for physical assault (Acierno et al 1999). Research has also found that engaging in a lifestyle in which one purchases drugs can increase the risk for physical assault (Acierno et al 1999). The Routine Activities Theory can be applied to physical victimization because particular lifestyles increase one's risk for this type of victimization.

Stalking is another crime that is included in physical victimization. The National Crime Victimization Survey defines stalking as "a course of conduct directed at a specific person that would cause a reasonable person to feel fear" (Baum et al 2009:1). General victimization occurs because individuals cannot control who has access to them. Stalkers are motivated by exerting control over their victims, therefore, instilling fear in them (Tjaden and Thoennes 1998). This fear is instilled through unwanted phone calls, harassing messages or destruction of the victim's property (Baum et al 2009; Tjaden and Thoennes 1998). Waiting in various locations for the victim and spying on the victim are also common behaviors of stalkers (Baum et al 2009).

There are a variety of risk factors that can increase one's chances of being stalked. Females are at a greater risk of being stalked, compared to males (Baum et al 2009; Tjaden and Thoennes 1998). According to the National Crime Victimization Survey, females experience stalking at a rate doubled that of males (Baum et al 2009). Another risk factor that increases one's chances of being stalked is age. Stalking is not particularly prevalent for adolescents; the greatest rates of stalking occur during the late teenage years and early adulthood, ages 18 to 20 (Baum et al 2009). Marital status also contributes to the prevalence of stalking. As a result, divorced or separated people have higher risks of stalking, compared to those never married (Baum et al 2009). Females are more likely to be stalked by former intimate partners and even current intimate partners (Tjaden and Thoennes 1998). This power differential between couples

is a common form of intimate partner violence and usually occurs after a female is trying to leave the relationship (Tjaden and Thoennes 1998).

An article by Mustaine and Tewksbury (1999) applies a Routine Activities framework to stalking victimization. The authors discuss being in the public domain and its increased risk for being the victim of a crime. Therefore, they conclude that individuals are more likely to be stalked while out of their house because their exposure to potential offenders increases. The study found evidence to conclude that Routine Activities Theory is an explanation for being the victim of stalking (Mustaine and Tewksbury 1999).

In conclusion, evidence from empirical research suggests that in accordance with the Routine Activities Theory, specific risky activities and lifestyles can increase one's chances of being victimized. The use of alcohol and drugs, risky sexual behaviors, and an individual's living situation are all present in the research and support this claim. However, little is known about the lifestyles and activities that increase one's risk of being a victim of cybervictimization and cyberbullying. This study aims to examine this relationship and provide further exploration in this area.

### Cybervictimization

With the recent popularity of the internet and social networking sites, it is important to investigate the relationship between these technological outlets and online victimization among teenagers, considering they are the primary targets for victimization (Finkelhor, Mitchell and Wolak 2000). Within this area of research, Ybarra and her colleagues (2007) found that more than half of young people who are considered "Internet-friendly" have used the internet to share personal information. This sharing of personal information is likely to lead to unwanted advances and victimization in the virtual world, as 20 percent of these "Internet-friendly"



adolescents reported experiencing unwanted online victimization in the past year (Ybarra et al 2007). Cybervictimization includes online sexual victimization, solicitation, and harassment. In addition, posting too much personal information and online communication will be included in this section of the literature review.

### *Online Sexual Victimization/Solicitation/Harassment*

One important area of cybervictimization is sexual victimization, solicitation or harassment while being online, participating in online activities or using social networking sites. Wolak, Mitchell and Finkelhor (2007) found that nine percent of online teens had experienced online harassment in the past year. Another study found that approximately 20 percent of adolescents on the internet had received an unwanted sexual solicitation in the previous year (Snyder and Sickmund 2006). Therefore, there is an increased risk of victimization by simply being online, not necessarily participating in online activities or using a social networking site (SNS).

One study found evidence that sex offenders are likely to use personal information victims shared through online blogs to commit their crimes (Mitchell, Wolak and Finkelhor 2008). Because one in three teens have created a blog (Jones and Fox 2009), it is important to realize that teens sharing information on blogs may be increasing their risk for receiving unwanted sexual victimization.

Adolescents and teens are also being sexual victimized through social networking sites. Ybarra and Mitchell (2008) discovered 15 percent of youth had experienced unwanted sexual solicitation through a social networking site. With regard to gender, research has indicated that females are more likely to experience sexual solicitation and harassment on social networking sites than males (Ybarra and Mitchell 2008). It is clear from the research that these

technological outlets are an environment conducive to unwanted online sexual victimization for a number of reasons.

### *Posting Too Much Information*

Researchers have suggested that posting too much personal information online for strangers to access is likely to increase an individual's risk for victimization (Ybarra et al 2007). By sharing personal information online, individuals are placing themselves in the public domain of the internet and increasing their risk of becoming a suitable target. By increasing their target suitability, the opportunity of encountering a potential offender increases. This ultimately leads to an increased risk of being victimized. However, research by Mitchell and colleagues (2008) concluded that the personal information youth were posting online did not increase their risk for being harassed, instead it was interacting with people online that increased the risk. The current study will contribute to the research in this area in order to get a better understanding of posting personal information and the risk for online victimization and cyberbullying.

### *Online Communication*

Researchers have shown that contact with strangers leads to an increased risk in online victimization (Mitchell, Wolak and Finkelhor 2008). Mitchell, Wolak and Finkelhor (2008) indicated that of the adolescents who interacted with strangers online, 14 percent experienced online sexual solicitation or harassment. Adolescents who communicated with strangers also had the greatest risk of experiencing an aggressive sexual solicitation from these strangers (Mitchell, Wolak and Finkelhor 2008).

Engaging in particular activities and sharing information online has been found to increase the risk of being victimized (Mesch 2009). Research has indicated that spending a

substantial amount of time engaging in online activities, such as chat rooms and instant messaging, increased the risk for victimization (Holt and Bossler 2009). In addition to visiting chat rooms, Holt and Bossler (2009) concluded that instant messaging significantly increased the risk for victimization.

There is evidence to conclude that sharing information online and communicating online can increase the risk for victimization. Marcum (2008) found that teens who shared various kinds of information online with individuals were at an increased risk of receiving unwanted sexual solicitation. Researchers also suggest that interacting online increases one's chances of being victimized (Mitchell, Wolak and Finkelhor 2008). Mitchell, Wolak and Finkelhor (2008) found that adolescents who reported blogging and communicating with people online were more likely to experience harassment than adolescents who did not blog or communicate. There is evidence these particular behaviors helped mold teens into more suitable targets which increased their risk for victimization.

Consistent with Routine Activities Theory, the literature suggests that engaging in particular activities online increases one's chances of experiencing cybervictimization. By engaging in these online activities, teens are becoming more suitable targets and increasing their exposure to motivated offenders.

### Cyberbullying

According to Patchin and Hinduja (2006), cyberbullying is defined as “willful and repeated harm inflicted through the medium of electronic text” (152). Electronic mediums include computers and cell phones. One study found that over 10 percent of students were the victim of cyberbullying (Slonje and Smith 2008), while another study found that almost one in three adolescents in the sample experienced cyberbullying (Patchin and Hinduja 2006). In this

study, cyberbullying included being “ignored, disrespected, called names, threatened, picked on, or made fun of or having had rumors spread by others” (162).

Characteristics of cyberbullying can make it more harmful for victims. Because of the nature of cyberbullying, it can be impossible to identify the bully and stop the harassment. One research study found that almost 40 percent of victims did not know the perpetrator of the cyberbullying (Dehue, Bolman and Vollink 2008). Another characteristic of cyberbullying is a lack of capable guardianship which makes it easier for bullies to harass their victims. Many adults, including parents, are not always monitoring the online activities of their teen.

### Routine Activities Theory

Cohen and Felson’s (1979) Routine Activities Theory sets the stage for understanding the relationship between online behaviors and cybervictimization and cyberbullying. Mustaine and Tewksbury (2002) have argued that individuals act in ways that support their culture’s norms and values; currently, our culture relies heavily upon the internet and its technological features that make an individual’s life easier. More recently, social networking sites have become increasingly popular and a crucial element to the online culture. Some lifestyles that are associated with particular cultures are more likely to make individuals susceptible to victimization (Mustaine and Tewksbury 2002). As a result of technological advances in our society, social networking sites have grown in popularity and have become an everyday part of many people’s lives. The nature of social networking sites is for users to post personal information online. But could this personal information be ultimately used to victimize users?

Routine Activities Theory states that crimes are not random acts of victimization; instead they are based on an individual’s lifestyle and activities (Cohen and Felson 1979; Tewksbury and Mustaine 2003). An individual’s activities are based on routine “settings, contexts, and

interactions, which may either increase or decrease the possibility of their victimization” (Mustaine and Tewksbury 2002:92). The goal of Routine Activities Theory is to understand and identify these specific lifestyles and activities that contribute to victimization (Mustaine and Tewksbury 2002).

Cohen and Felson (1979) specify three concepts central to the theory: motivated offenders, suitable targets, and the absence of capable guardians against a violation (589). When taking into account the topic of the present research study, Routine Activities Theory can be easily applied. First, online predators and bullies constitute motivated offenders as a crucial first step in the theory. Second, adolescents increasing their exposure on the internet, by participating in particular online activities and revealing personal information, are increasing their chances of being a suitable target. Finally, parents who do not supervise their adolescents’ online behaviors contribute to the absence of capable guardianship. With the “convergence in space and time of the three minimal elements,” (Cohen and Felson 1979:589) individuals are at a greater risk of being in contact with a possible offender and therefore, becoming the victim of a crime.

An important aspect of this theoretical framework is the idea of public domain versus private domain. The public domain is simply not being in one’s home (Mustaine and Tewksbury 1999). People who are in the public domain have an increased risk of victimization because of their increased exposure to motivated offenders (Mustaine and Tewksbury 1998). In the present study, this public domain is the internet. People on the internet who share personal information and participate in online activities (e.g., chat rooms and social networking sites) are increasing their exposure and making themselves more publicized. Marcum (2008) found that teens that used chat rooms for an hour or more each week were twice as likely to experience victimization

compared to their counterparts that did not use chat rooms. Therefore, this exposure increases the risk of encountering potential offenders which can lead to victimization.

As a result of relatively little research on cybervictimization and cyberbullying, there have not been many theories that have tried to understand this unique relationship. Therefore, one of the purposes of this study will be to see if the Routine Activities Theory is successful in explaining this type of victimization.

### Gaps in the Research

Because of the recent popularity of the internet, there is limited research involving the types of online behaviors and sharing of personal information that can lead to cybervictimization and online bullying. In addition, research has not explored the differences between online teens and social networking (SNS) teens with regard to experiencing online bullying and cybervictimization. Further research in these areas needs to be conducted in order to fully understand these relationships.

### Research Questions

The first goal of this exploratory research study is to determine if a relationship exists between online teens' online activities and information posted online and receiving threatening or aggressive emails, IMs or text messages. The second goal of this study is to determine what increases the victimization risk for teens that are using social networking sites. This study uses a Routine Activities theoretical approach to understand how an individual's online activities and online exposure increase their risks for receiving the threat. Given the research suggesting that Routine Activities Theory might be a viable explanatory framework, this study includes variables that measure the theory's concepts and their potential victimization by analyzing the

relationships between variables that increase one's exposure on the internet. Variables that measure the absence of capable guardianship concept are also incorporated in order to determine if the lack of parental involvement increases teens' chances of receiving a threatening or aggressive email, IM or text message.

## CHAPTER THREE: METHODOLOGY

### Data

Data from the Parents & Teens 2006 Survey, funded by the Pew Internet & American Life Project, were used in this study. The Parents & Teens 2006 Survey was administered to a nationally representative sample of 935 adolescents and their parents from October 23 through November 19, 2006. The adolescents were between the ages of 12 and 17 and lived in the United States. The purpose of this telephone survey was to collect information regarding adolescents' use of the internet, the information they shared online, and their online experiences. Parents were surveyed regarding supervision of their adolescents' internet use. A copy of this study can be found at the Pew Internet & American Life Project's website (<http://pewinternet.org/Shared-Content/Data-Sets/2006/November-2006--Parents-and-Teens.aspx>).

### Measures

#### *Independent Variables*

The independent variables in this study are predictors of victimization and exposure to Routine Activities Theory concepts. The variables that will be included as predictors of victimization for online and social networking teens are: using email, how often the internet is used, teens' online activities, the information teens are sharing offline at parties or social events, if photos and/or videos are uploaded online, and if restrictions are placed on who can view photos and/or videos. The question asked to determine if teens are using email is "Do you send or receive email, at least occasionally?" Answer responses are (1) yes and (0) no. Respondents were asked the following question regarding frequency of internet use: "Overall, how often do



you use the internet?” Response options included: (1) several times a day, (2) about once a day, (3) 3-5 days a week, (4) 1-2 days a week, (5) every few weeks, and (6) less often. Teens were also asked about the types of online activities they participated in. Responses were coded 1 for yes and 0 for no. Sending or receiving instant messages, using an online social networking site (like Facebook and MySpace), and visiting an online chat room were included in the analyses. Teens were also asked “When you meet someone new at a party or social gathering, you might share information about yourself as part of getting to know someone...please tell me if you think it is OKAY or NOT OKAY to share this with someone you just met.” The information teens could share offline at a party were their last name, school name, cell phone number, home phone number, IM screen name, email address, blog or a link to their blog, city or town in which they live, and the state in which they live. Information that teens reported was okay to share with someone new at a party or social event was coded 1 and information that was not okay to share was coded 0. Teen respondents were asked “Have you ever uploaded photos online where others can see them?” Possible answers were (1) yes and (0) no. Teens were also asked “Have you ever uploaded a video file online where others can watch it?” Teens that indicated they did upload videos were coded as 1 and teens that did not upload videos were coded as 0. Respondents were asked “Thinking about the site you post photos to most often...how often, if ever, do you restrict who has access to those photos? Do you do this...?” The respondents’ choices were (1) most of the time, (2) only sometimes, and (3) never. Teens were also asked “Thinking about the site you upload video files to most often...how often, if ever, do you restrict who has access to those videos? Do you do this...?” Response options included: (1) most of the time, (2) only sometimes, and (3) never. These variables measured the Routine Activities Theory concept of target suitability and one’s exposure on the internet.

Other suitable target independent variables were only applicable to teens who reported (1) yes to creating a profile on a social networking site, like Facebook or MySpace. Respondents indicated if their profile was visible to (1) anyone or (0) just friends. Teens were also asked “We’d like to know if the following kinds of information are posted to your profile, or not... a photo of yourself, a photo of your friends, your first name, your last name, your school name, your cell phone number, your IM screen name, your email address, your blog or link to your blog, the city or town where you live, streaming audio or MP3 files, and videos.” If the information was posted to their online profile, the response was coded as 1. If the information was not posted to their online profile, the response was coded as 0. Teens were also asked “Are any of your friends on your social networking site people you have NEVER met in person?” Yes was coded as 1 and no was coded as 0. Respondents also indicated how often they visited social networking sites. Possible responses include: (1) several times a day, (2) about once a day, (3) 3 to 5 days a week, (4) 1 to 2 days a week, (5) every few weeks, and (6) less often.

The independent variables also measure guardianship by assessing the rules set by parents regarding their teen’s online activities. Parents were asked “In your household, do you happen to have any rules about any of the following things?” Parents of online teens were asked if they had rules regarding “internet sites your child can or cannot visit.” Parents with rules were coded as 1 and parents without rules were coded as 0. Parents of online teens were also asked if they had rules regarding “the kinds of personal information your child can share with people they talk to on the internet.” Parents with rules were coded as 1 and parents without rules were coded as 0. Parents of online teens were asked if they had rules regarding “how much time your child can spend online.” If the parents had rules, responses were coded as 1. If they did not have rules, responses were coded as 0. In addition, parents of online teens were asked “After your [AGE]-

year old [boy/girl] has been on the internet, do you ever check to see what web sites (he/she) went to, or don't you ever do that?" Responses for parents who checked the websites were coded as 1 and responses for parents who did not check websites were coded as 0. These variables measured the absence of capable guardianship concept within Routine Activities Theory.

### *Dependent Variables*

The dependent variable in this study is online victimization and cyberbullying. This variable was measured by the question, "Have you, personally, ever experienced any of the following things online?" Response options included the following: "someone spreading a rumor about you online; someone posting an embarrassing picture of you online without your permission; someone sending you a threatening or aggressive email, instant message or text message; and someone taking a private email, IM or text message you sent them and forwarding it to someone else or posting it where others could see it." The only response that was included in the analysis was "someone sending you a threatening or aggressive email, instant message or text message" because it was the only clear threat to victims and an act of cyberbullying.

### *Control Variables*

Age and gender were used as control variables in this study. Parents were asked to provide information about the children in their household so the researchers could screen for 12 to 17 year olds. Households with no children in that age range were screened out. Parents were asked the "gender of the child selected." Girls were coded as 1 and boys were coded as 0. "Age of child selected" was used to code the child's age. Ages of teens included in the sample ranged from 12 to 17.

### Analytic Strategy

Analyses of the online and SNS teens' suitable target variables and absence of capable guardianship variables were conducted at the univariate, bivariate, and multivariate levels. Frequency distributions are presented for the control variables of gender and age. Frequency analyses are also provided for the independent variables measuring the Routine Activities Theory concepts. A final frequency distribution is presented for the dependent variable, experiencing cyberbullying behaviors. Independent samples t-tests were used to look at the relationship between mean age, frequency of internet use, and receiving a threatening or aggressive email, IM or text message. A separate independent samples t-test was conducted to examine the relationship between mean age, frequency of internet use, mean social networking site visits, and receiving a threatening or aggressive email, IM or text message. Chi-square tests were conducted to look at the relationship between the independent variables and receiving a threatening or aggressive email, IM or text message for online teens. Chi-square tests were also conducted to examine this relationship for social networking (SNS) teens. Logistic regression models are used in order to predict the odds of receiving a threatening or aggressive email, IM or text message using the suitable target and absence of capable guardianship variables.

## CHAPTER FOUR: RESULTS

### Univariate Analyses

The data in the Parents & Teens 2006 Survey were weighted in order to reflect national demographics of parents and teens. For more information on how the weighted data were obtained, see the original survey on the Pew Internet & American Life Project's website. The weighted demographic variables for teens include gender and age. None of the weighted parental demographics were applicable to the present study.

Frequency distributions for the demographic characteristics of online teens and social networking (SNS) teens are presented in Table 1. Out of the 935 teens surveyed in the Parents & Teens 2006 Survey, 886 (95%) reported being online and 487 (52%) teens reported that they had created an online profile on a social networking site. The gender distribution of online teens is nearly equal with 50.3 percent female and 49.7 percent male. Table 1 shows that 53.7 percent of SNS teens are female and 46.3 percent are male. The mean age for online teens and SNS teens is 14 years of age.

Table 1: Demographic Characteristics of Online and Social Networking (SNS) Teens

|                   | Online Teens <sup>a</sup><br>(n=886) | SNS Teens <sup>b</sup><br>(n=487) |
|-------------------|--------------------------------------|-----------------------------------|
| Control Variables |                                      |                                   |
| % Female          | 50.3                                 | 53.7                              |
| % Male            | 49.7                                 | 46.3                              |
| % Age             |                                      |                                   |
| 12                | 15.4                                 | 8.4                               |
| 13                | 15.7                                 | 12.7                              |
| 14                | 17.1                                 | 18.8                              |
| 15                | 18.1                                 | 20.4                              |
| 16                | 16.2                                 | 17.8                              |
| 17                | 17.5                                 | 21.9                              |
| Mean age          | 14.6                                 | 14.9                              |

Note: the data here are weighted by gender and age.

<sup>a</sup> Online teens are respondents that reported yes when asked “Do you use the internet, at least occasionally?”

<sup>b</sup> SNS (social networking site) teens are respondents that reported yes when asked “Have you ever created your own profile online that others can see, like on a social networking site like MySpace or Facebook?”

Table 2 presents the frequencies of the independent variables that are measuring the Routine Activities Theory (RAT) concepts. The first group of independent variables measures the suitable target concept within Routine Activities Theory. Three quarters of online teens are using email while a greater percentage of SNS teens (86.7%) are using email. Mean internet usage for online teens was between once a day and 3-5 days a week and for SNS teens it was once a day. Almost half (47.9%) of online teens are uploading photos to the internet and 40 percent of teens that are uploading photos are restricting who has access to these photos most of the time. About three quarters of SNS teens are uploading photos and 40 percent of SNS teens have restrictions most of the time on who can view these photos. Approximately 14 percent of online teens are uploading videos to the internet while 22.4 percent of SNS teens are uploading videos. The percentages of online and SNS teens uploading videos to the internet that have

restrictions most of the time on who can view these videos are 18.2 percent and 21.3 percent respectively. Teens were also asked their opinion on how much information was okay to share with someone new offline at a party or social event. Less than half (44%) of online teens found it okay to share their last name with someone new offline while only 40.1 percent of SNS teens found it okay. Nearly the same percentages of online and SNS teens said it was okay to share their school name with someone new (70.4% and 69% respectively). Less than one-third (29.1%) of online teens said it was okay to share their cell phone number while 33.7 percent of SNS teens said it was okay to share this information. Approximately one-fifth of online teens (19%) and 15 percent of SNS teens said it was okay to share their home phone number. A little over half of online teens (52.1%) found it okay to share their IM (instant message) screen name and 44 percent found it okay to share their email address with someone new. Of SNS teens, 65.3 percent said it was okay to share their IM screen name with someone new and half (50.6%) said it was okay to share their email address. About one-third (31.9%) of online teens said it was okay to share their blog or a link to their blog while slightly more (43%) SNS teens found this okay. Over half of online and SNS teens said it was okay to share the city/town they lived in (52.5% and 52.1% respectively). Nearly the same percentages of online and SNS teens said it was okay to share the state in which they lived with someone new (80.8% and 80.6% respectively). The percentages of online teens engaging in specific online activities are presented in Table 2. Nearly seven in ten (68%) online teens send and/or receive instant messages, 55.3 percent of online teens have used social networking sites, and 17.6 percent of online teens are visiting online chat rooms. Compared with online teens, SNS teens were more likely to engage in online activities. Approximately 82 percent of SNS teens send and/or receive IMs, 91.9 percent are visiting social networking sites, and 22.6 percent are visiting chat rooms.

Categories in Table 2 unique to SNS teens include the information posted on an online profile, profile visibility, mean SNS visits, and having friends that are strangers. More than half (54.9%) of online teens have created an online profile on a social networking site. Nearly eight in ten (79.1%) of SNS teens have posted a photo of themselves to their profile and 65.7 percent have posted a photo of their friends. The majority (81.7%) of SNS teens have their first name on their profile while only 28.9 percent have their last name on their profile. Almost half (49.5%) of SNS teens have their school name on their profile and only 2.1 percent have posted their cell phone number. Approximately 40 percent have posted their IM screen name and nearly 30 percent have posted their email address. Almost two-thirds (61.2%) of SNS teens have posted the city or town they live in and two-fifths (39.7%) have their blog or a link to their blog posted on their profile. Less than half (40.8%) of SNS teens have streaming audio or MP3 files on their profile while 29.2 percent have videos on their profile. Approximately 40 percent of SNS teens have their profiles visible to anyone. The mean for visiting social networking sites is between once a day and 3 to 5 days a week. Almost one-third (31.9%) of SNS teens have online friends that are strangers.

Table 2 also presents frequency distributions for the independent variables used to measure the absence of capable guardianship concept within Routine Activities Theory. Parents were asked if they had any rules for their teens regarding internet sites they could visit, personal information they could share with people online, and how much time they spent online. The majority of online teens' parents and SNS teens' parents had rules about the internet sites their child can or cannot visit (85.7% and 86.8% respectively). The majority of online teens' parents and SNS teens' parents had set rules regarding the personal information their child can share with people they meet online (86.5% and 90.1% respectively). Similar percentages of online



teens' parents and SNS teens' parents had set rules regarding the amount of time their child could spend online (69.2% and 68.1% respectively). Nearly similar percentages of online teens' parents and SNS teens' parents check the websites their child visits (66% and 67.6% respectively).

Table 2: Frequencies for Independent Variables Measuring Routine Activities Theory (RAT)

Concepts

|   | Online Teens<br>(n=886) | SNS Teens<br>(n=487) |
|---|-------------------------|----------------------|
| <b>Suitable Target Variables</b>              |                         |                      |
| % Using email                                 | 75.1                    | 86.7                 |
| Modal internet use <sup>a</sup>               | 1.0                     | 1.0                  |
| Mean internet use <sup>a</sup>                | 2.4                     | 2.0                  |
| % Upload photos                               | 47.9                    | 73.0                 |
| % Photo access restrictions                   |                         |                      |
| Most of the time                              | 40.0                    | 40.7                 |
| Only sometimes                                | 39.0                    | 39.1                 |
| Never   | 20.9                    | 20.1                 |
| % Upload videos                               | 14.2                    | 22.4                 |
| % Video access restrictions                   |                         |                      |
| Most of the time                              | 18.2                    | 21.3                 |
| Only sometimes                                | 35.6                    | 31.8                 |
| Never   | 46.2                    | 46.9                 |
| % Teens with an online profile                | 54.9                    |                      |
| % Info. posted to online profile <sup>b</sup> |                         |                      |
| Photo of yourself                             |                         | 79.1                 |
| Photo of your friends                         |                         | 65.7                 |
| Your first name                               |                         | 81.7                 |
| Your last name                                |                         | 28.9                 |
| Your school name                              |                         | 49.5                 |
| Your cell phone number                        |                         | 2.1                  |
| Your IM screen name                           |                         | 40.6                 |
| Your email address                            |                         | 29.2                 |
| Your blog or link to blog                     |                         | 39.7                 |
| The city/town you live in                     |                         | 61.2                 |
| Streaming audio/MP3 files                     |                         | 40.8                 |

|   | Online Teens<br>(n=886) | SNS Teens<br>(n=487) |
|---|-------------------------|----------------------|
| Videos  |                         | 29.2                 |
| % Info. shared offline <sup>c</sup>                   |                         |                      |
| Your last name  | 44.0                    | 40.1                 |
| Your school name                                      | 70.4                    | 69.0                 |
| Your cell phone number                                | 29.1                    | 33.7                 |
| Your home phone number                                | 19.0                    | 15.0                 |
| Your IM screen name                                   | 52.1                    | 65.3                 |
| Your email address                                    | 44.1                    | 50.6                 |
| Your blog or link to blog                             | 31.9                    | 43.0                 |
| The city/town you live in                             | 52.5                    | 52.1                 |
| The state where you live                              | 80.8                    | 80.6                 |
| % of teens engaging in online activities              |                         |                      |
| Send/receive IMs                                      | 68.0                    | 81.8                 |
| Using social networking sites (SNS)                   | 55.3                    | 91.9                 |
| Visiting chat rooms                                   | 17.6                    | 22.6                 |
| % of SNS profiles visible to anyone <sup>b</sup>      |                         | 40.7                 |
| Mean SNS visits <sup>bd</sup>                         |                         | 2.8                  |
| % Friends with strangers <sup>b</sup>                 |                         | 31.9                 |
| Absence of Capable Guardianship Variables             |                         |                      |
| % of parents that have rules regarding the following: |                         |                      |
| Internet sites teen can/cannot visit                  | 85.7                    | 86.8                 |
| Personal info. teen can share with people online      | 86.5                    | 90.1                 |
| How much time teen can be online                      | 69.2                    | 68.1                 |
| % of Parents that check websites teen visits          | 66.0                    | 67.6                 |

<sup>a</sup> To measure teens' internet use, respondents reported (1) "several times a day," (2) "about once a day," (3) "3-5 days a week," (4) "1-2 days a week," (5) "every few weeks," and (6) "less often."

<sup>b</sup> This question is only applicable to respondents who reported "yes" when asked if they had an online profile.

<sup>c</sup> Information shared offline is information given to someone new the teen meets at a party or social event. Respondents were asked whether they thought this information was "okay to share" or "not okay to share."

<sup>d</sup> To measure frequency of visiting social networking sites (SNS), respondents reported (1) "several times a day," (2) "about once a day," (3) "3 to 5 days a week," (4) "1 to 2 days a week," (5) "every few weeks," or (6) "less often."

Table 3 presents the frequencies for the dependent variable which measures teens' experiences with different aspects of cyberbullying. Approximately 12 percent of online teens and 15.7 percent of SNS teens have had a rumor spread about them online. About one in twenty online teens and 8.6 percent of SNS teens have had someone post an embarrassing photo of them online without their permission. Less than 15 percent of online teens have had someone take a private email, instant message or text message and forward it to others or post it online without permission while 16.5 percent of SNS teens had experienced this. Approximately 12 percent of online teens and 16 percent of SNS teens have been sent a threatening or aggressive email, instant message or text message. This is the only variable that will be included in further analyses in this study because of the clear threat and cyberbullying behavior; however, all of the possible response choices were included in Table 3 to get a clear picture of the distribution. In each of the four categories, SNS teens experienced more cyberbullying behaviors than online teens.

Table 3: Frequencies for Dependent Variable Measuring Cyberbullying Experiences

|   | Online Teens<br>(n=886) | SNS Teens<br>(n=487) |
|---|-------------------------|----------------------|
| % Experienced cyberbullying behaviors         |                         |                      |
| Spread rumor online                           | 12.6                    | 15.7                 |
| Post embarrassing photo                       | 5.8                     | 8.6                  |
| Send threatening/aggressive email, IM or text | 12.3                    | 16.3                 |
| Forwarding private email, IM or text          | 14.8                    | 16.5                 |

#### Bivariate Analyses

Table 4 presents the mean differences for online teens receiving or not receiving a threatening or aggressive email, IM or text message. Online teens who received a threatening or aggressive email, instant message or text message were significantly older than those who did not receive the threat. Table 4 also presents the mean differences for frequency of internet use for receiving and not receiving a threatening or aggressive email, IM or text message among online teens. Online teens who received a threatening or aggressive email, IM or text message are using the internet significantly less than online teens who did not receive a threat. The frequency of internet use for online teens who received a threat was 2.1 while the frequency of internet use for online teens who did not receive a threat was 2.4. These values fall between the categories of using the internet (2) “about once a day” and (3) “3-5 days a week.”

Table 4: Mean Differences for Online Teens Receiving or Not Receiving a Threatening or Aggressive Email, IM or Text Message (n=886)

| Suitable Target Variables      | Received Threat | Did Not Receive Threat |
|--------------------------------|-----------------|------------------------|
| Mean age                       | 15.0            | 14.5***                |
| Mean internet use <sup>a</sup> | 2.1             | 2.4***                 |

<sup>a</sup> To measure teens' internet use, respondents reported (1) "several times a day," (2) "about once a day," (3) "3-5 days a week," (4) "1-2 days a week," (5) "every few weeks," and (6) "less often."

\* =  $p < .05$ , \*\* =  $p < .01$ , \*\*\* =  $p < .001$

Table 5 presents the bivariate results for a chi-square test for receiving a threatening or aggressive email, IM or text message dependent on whether or not they engaged in particular online activities or sharing of information among online teens. Online teens that sent emails were 2.7 times more likely to receive a threatening or aggressive email, IM or text message compared to online teens that did not send emails. Using email significantly increased the chances of receiving a threat. Online teens that created an online profile were significantly more likely to receive a threatening or aggressive email, IM or text message compared to online teens that did not create an online profile. Female online teens had a significantly higher percentage of receiving a threatening or aggressive email, IM or text message compared to male online teens (14.7% and 10% respectively). Of online teens that uploaded photos online, 17.6 percent had received a threatening or aggressive email, IM or text message while 7.5 percent of online teens that did not upload photos online received the threat. Online teens uploading photos were significantly more likely to receive threatening or aggressive emails, IMs or text messages than those that did not upload photos. Online teens uploading videos were significantly more likely to receive a threat compared to teens that did not upload videos online. Online teens that believed it

was okay to share their last name, school name, IM screen name, email address, blog or link to their blog, and state where they live with a stranger offline were more likely to receive a threat compared to teens that believed it was not okay to share this information. Online teens who did not believe it was okay to share cell phone numbers, home phone numbers, and the city/town they live in with a stranger offline were significantly more likely to receive threatening or aggressive emails, IMs or text messages compared to online teens who believed it was okay to share this information offline with someone new. Table 5 also presents the percentages of online teens engaging in online activities. Online teens that send and receive instant messages (IM) were significantly more likely to receive a threatening or aggressive email, IM or text message in comparison to online teens that did not send or receive instant messages. Online teens that visit social networking sites were significantly more likely to receive a threatening or aggressive email, IM or text message compared to their counterparts that do not visit social networking sites. Online teens visiting chat rooms received significantly more threats than online teens not visiting chat rooms.

Table 5 also presents the variables regarding the absence of capable guardianship concept. Teens that lived in households with no rules regarding the internet sites they could/could not visit were significantly more likely to receive a threatening or aggressive email, IM or text message compared to teens that lived in households with these rules (22.9% and 12.1% respectively). Teens with parents that have rules about the personal information the teen can share with people online receive significantly less threatening or aggressive emails, IM or text messages, while teens with parents that do not have these rules receive more threats (12.9% and 21.3% respectively). More than 10 percent of online teens whose parents do not have rules about how much time their teen can spend on the internet, receive a threatening or aggressive email, IM or

text message. Approximately 13 percent of online teens that live in households in which the parents do not monitor how much time they spend on the internet receive a threatening or aggressive email, IM or text message. Online teens living in households in which their parents are not checking the websites they visit receive significantly more threatening or aggressive emails, IMs or text messages.



Table 5: Bivariate Results for Chi-Square Test of Online Teens Receiving a Threatening or Aggressive Email, IM or Text Message (n=886)

| Suitable Target Variables                | Percent Who Received Threat |                     |
|--|-----------------------------|---------------------|
| Using email                              | 14.7 <sup>***</sup>         |                     |
| Not using email                          | 5.4                         |                     |
| Teens with an online profile             | 16.3 <sup>***</sup>         |                     |
| Teens without an online profile          | 7.6                         |                     |
| Gender                                   |                             |                     |
| Male                                     | 10.0 <sup>***</sup>         |                     |
| Female                                   | 14.7                        |                     |
| Uploading photos                         | 17.6 <sup>***</sup>         |                     |
| Not uploading photos                     | 7.5                         |                     |
| Uploading videos                         | 15.9 <sup>*</sup>           |                     |
| Not uploading videos                     | 11.8                        |                     |
| Info. okay to share offline <sup>a</sup> | Yes                         | No                  |
| Your last name                           | 12.9                        | 11.5                |
| Your school name                         | 12.6                        | 11.7                |
| Your cell phone number                   | 11.4                        | 12.2 <sup>**</sup>  |
| Your home phone number                   | 9.5                         | 12.8 <sup>*</sup>   |
| Your IM screen name                      | 15.1                        | 10.2 <sup>***</sup> |
| Your email address                       | 13.1                        | 12.4 <sup>**</sup>  |
| Your blog or link to blog                | 13.7                        | 11.6                |
| The city/town you live in                | 11.8                        | 13.2 <sup>*</sup>   |
| The state where you live                 | 12.6                        | 12.1                |
| Teens engaging in online activities      | Yes                         | No                  |
| Send/receive IMs                         | 15.9                        | 4.8 <sup>***</sup>  |
| Using social networking sites            | 16.5                        | 7.3 <sup>***</sup>  |
| Visiting chat rooms                      | 17.6                        | 11.2 <sup>***</sup> |

| Absence of Capable Guardianship Variables                          | Percent Who Received Threat |         |
|--|-----------------------------|---------|
|  | Yes                         | No      |
| Parents have rules in household about the following <sup>b</sup> : |                             |         |
| Internet sites teen can/cannot visit                               | 12.1                        | 22.9*** |
| Personal info. teen can share with people online                   | 12.9                        | 21.3*** |
| How much time teen can be online                                   | 13.5                        | 11.8    |
| Parents check websites teen visits                                 | 11.7                        | 16.4**  |

<sup>a</sup> Information respondents believe is okay to share offline (at a party or social event) with a stranger is in the “yes” column.

Information respondents believe is not okay to share offline (at a party or social event) with a stranger is in the “no” column.

<sup>b</sup> If parents have rules in their household about the following categories then it is coded as “yes.” If parents do not have rules in their household about the following categories then it is coded as “no.”

\* =  $p < .05$ , \*\* =  $p < .01$ , \*\*\* =  $p < .001$

Table 6 presents the mean differences for age, frequency of internet use, and social networking site (SNS) visits and receiving or not receiving a threatening or aggressive email, IM or text message among social networking (SNS) teens. Social networking (SNS) teens who received a threatening or aggressive email, IM or text message were significantly older than SNS teens who did not receive a threat. The mean internet use for SNS teens that received a threatening or aggressive email, IM or text message is about once a day. The mean internet use for SNS teens that did not receive a threatening or aggressive email, IM or text message is also about once a day. For teens that have received and not received a threatening or aggressive email, IM or text message, the mean SNS visits are between once a day and 3 to 5 days a week.

Table 6: Mean Differences for Social Networking (SNS) Teens Receiving or Not Receiving a Threatening or Aggressive Email, IM or Text Message (n=487)

| Suitable Target Variables      | Received Threat | Did Not Receive Threat |
|--------------------------------|-----------------|------------------------|
| Mean age                       | 15.4            | 14.8 ***               |
| Mean internet use <sup>a</sup> | 2.0             | 2.1                    |
| Mean SNS visits <sup>b</sup>   | 2.7             | 2.9                    |

<sup>a</sup> To measure teens' internet use, respondents reported (1) "several times a day," (2) "about once a day," (3) "3-5 days a week," (4) "1-2 days a week," (5) "every few weeks," and (6) "less often."

<sup>b</sup> To measure frequency of visiting social networking sites, respondents reported (1) "several times a day," (2) "about once a day," (3) "3 to 5 days a week," (4) "1 to 2 days a week," (5) "every few weeks," or (6) "less often."

\* =  $p < .05$ , \*\* =  $p < .01$ , \*\*\* =  $p < .001$

Table 7 presents the bivariate results for a chi-square test looking at the relationship between receiving a threatening or aggressive email, IM or text message and participation in online activities or shared personal information among social networking (SNS) teens. SNS teens that sent emails were significantly more likely than SNS teens that did not send emails to receive a threatening or aggressive email, IM or text message. Almost one fifth of female SNS teens received a threat and they received significantly more threats than males. SNS teens that uploaded photos online received significantly more threats compared to SNS teens that did not upload photos online. In addition, more threatening or aggressive emails, IM or text messages were received by SNS teens that uploaded videos. SNS teens that posted a photo of themselves, a photo of their friends, school name, cell phone number, IM screen name, and email address had significantly more threats compared to their counterparts that did not post this information to their online profiles. SNS teens that had their profiles visible to anyone were more likely to receive a threat compared to SNS teens that had their profiles visible to just their friends. SNS

teens that were friends with strangers had significantly more threats than SNS teens not friends with strangers. SNS teens that believed it was okay to share their last name, school name, IM screen name, and the city/town they lived in with strangers offline (at a party or social event) received more threatening or aggressive emails, IM or text messages in comparison to SNS teens that believed it was not okay to share this information with a stranger offline. SNS teens that believed it was not okay to share their cell phone number, home phone number, email address, blog or link to their blog, and the state they live in with a stranger offline were more likely to receive a threat in comparison to teens who believed it was okay to share this information offline. SNS teens that send and receive instant messages (IM) have received significantly more threats than SNS teens that do not send and receive instant messages. SNS teens using social networking sites and visiting chat rooms received more threats than teens not engaging in these online activities.

Table 7 also presents the variables for the absence of capable guardianship concept within Routine Activities Theory. In households in which parents have no rules about the internet sites their teen can/cannot visit and how much personal information their teen can share online, SNS teens received more threats compared to households in which parents had rules. SNS teens that lived in households in which parents do not have rules regarding the personal information they can share online are more likely to receive a threat compared to SNS teens living in households in which their parents have rules about sharing information online. SNS teens that have parents who do not check the websites they visit received significantly more threatening or aggressive emails, IMs or text messages.

Table 7: Bivariate Results for Chi-Square Test of Social Networking (SNS) Teens Receiving a Threatening or Aggressive Email, IM or Text Message (n=487)

| Suitable Target Variables           | Percent Who Received Threat |         |
|-------------------------------------|-----------------------------|---------|
| Using email                         | 17.5**                      |         |
| Not using email                     | 8.3                         |         |
| Gender                              |                             |         |
| Male                                | 12.4***                     |         |
| Female                              | 19.6                        |         |
| Uploading photos                    | 18.0**                      |         |
| Not uploading photos                | 11.5                        |         |
| Uploading videos                    | 16.8                        |         |
| Not uploading videos                | 16.1                        |         |
| Info. posted to online profile      | Yes                         | No      |
| Photo of yourself                   | 17.8                        | 10.7*   |
| Photo of your friends               | 18.3                        | 12.4**  |
| Your first name                     | 17.1                        | 12.4    |
| Your last name                      | 13.8                        | 17.4    |
| Your school name                    | 21.4                        | 10.7*** |
| Your cell phone number              | 17.2                        | 15.9*   |
| Your IM screen name                 | 19.5                        | 14.0*   |
| Your email address                  | 22.0                        | 14.0**  |
| Your blog or link to blog           | 18.0                        | 15.0    |
| The city/town you live in           | 17.9                        | 13.9    |
| Streaming audio/MP3 files           | 14.4                        | 17.9*   |
| Videos                              | 15.9                        | 16.1    |
| SNS profile visible to anyone       | 18.6                        |         |
| SNS profile visible to just friends | 18.3                        |         |
| Friends with strangers on SNS       | 21.6**                      |         |
| Not friends with strangers on SNS   | 14.5                        |         |

|  | Percent Who Received Threat |        |
|--|-----------------------------|--------|
|  | Yes                         | No     |
| Info. okay to share offline <sup>a</sup>                           |                             |        |
| Your last name   | 17.4                        | 16.2*  |
| Your school name   | 17.2                        | 13.8   |
| Your cell phone number   | 15.1                        | 16.1   |
| Your home phone number   | 11.8                        | 17.0   |
| Your IM screen name  | 17.0                        | 15.8   |
| Your email address   | 14.8                        | 18.6   |
| Your blog or link to blog  | 15.0                        | 16.3   |
| The city/town you live in  | 16.9                        | 16.2   |
| The state where you live   | 15.9                        | 18.5   |
| Teens engaging in online activities                                | Yes                         | No     |
| Send/receive IMs   | 18.5                        | 6.0*** |
| Using social networking sites                                      | 16.7                        | 11.8   |
| Visiting chat rooms  | 17.3                        | 16.0   |
| Absence of Capable Guardianship Variables                          |                             |        |
| Parents have rules in household about the following <sup>b</sup> : | Yes                         | No     |
| Internet sites teen can/cannot visit                               | 15.7                        | 22.7*  |
| Personal info. teen can share with people online                   | 16.0                        | 21.5   |
| How much time teen can be online                                   | 17.0                        | 13.5   |
| Parents check websites teen visits                                 | 14.7                        | 20.2*  |

<sup>a</sup> Information respondents believe is okay to share offline (at a party or social event) with a stranger is in the “yes” column. Information respondents believe is not okay to share offline (at a party or social event) with a stranger is in the “no” column.

<sup>b</sup> If parents have rules in their household about the following categories then it is coded as “yes.” If parents do not have rules in their household about the following categories then it is coded as “no.”

\* =  $p < .05$ , \*\* =  $p < .01$ , \*\*\* =  $p < .001$

### Multivariate Analyses

Table 8 presents the logistic regression models for online teens and social networking (SNS) teens receiving a threatening or aggressive email, IM or text message. Prior to the analyses, a check for multicollinearity was conducted and all the tolerance levels were acceptable. Age and gender were used as control variables in all the models. Model 1 predicts the odds of

online teens receiving a threatening or aggressive email, IM or text message with the following independent variables: using email, frequency of internet use, teens with an online profile, uploading photos, uploading videos, information okay to share offline, and teens engaging in online activities. Parents having rules regarding the internet sites their teen can/cannot visit, parents having rules regarding the personal information their teen can share with people online, parents having rules regarding how much time their teen can be online, and parents checking/not checking the websites their teen visits were also included as independent variables in this model. The chi-square value was 105.94 and was significant ( $p < .001$ ) in Model 1. The Cox & Snell pseudo  $R^2$  value in Model 3 was .06. The odds of receiving a threatening or aggressive email, IM or text message significantly increased for online teens that use email compared to those who do not use email (odds ratio = 1.94). Uploading photos and videos online also significantly increased online teens' chances of receiving a threat (odds ratio = 1.78 and 1.51 respectively). With information okay to share offline, only teens' cell phone number, home phone number, IM screen name, email address, and the city/town they live in were included. These variables were included because they were significant in Table 5. Only sharing the city/town one lives in significantly increased the odds of receiving a threat for information that was okay to share offline. Engaging in the online activity of sending/receiving instant messages had a significant impact on whether an individual receives a threat. Parents who do not have rules regarding the personal information their teens can share with people online was significant in Model 1. Teens with parents that do not have rules regarding the amount of time their teen can spend online are significantly more likely to receive a threatening or aggressive email, IM or text message. Parents not checking the websites their teen visits was also significant in Model 1.

Model 2 predicts the odds of the suitable target and absence of capable guardianship variables and receiving a threatening or aggressive email, IM or text message among social networking (SNS) teens. The chi-square value in Model 2 was 67.47 and was significant at the .001 level. In Model 2, the Cox & Snell pseudo  $R^2$  value was .07. All of the variables incorporated in Model 2 are comparable to the variables in Model 1. Older teens and females were significantly more likely to increase teens' odds of receiving a threat. For information that was okay to share offline, the city/town you live in was the only variable that significantly increased the odds of receiving a threat. Comparable to Model 1, Model 2 shows that sending/receiving instant messages significantly increased the odds of receiving a threat. Parents who do not check the websites their teen visits was also significant in Model 2.

Model 3 predicts the odds of variables specific to social networking teens and receiving a threatening or aggressive email, IM or text message. This model also incorporates variables that were significant in Model 2. The chi-square value in this model was 40.59 and was significant at the .01 level. The Cox & Snell pseudo  $R^2$  value in Model 3 was .05. As in Models 1 and 2, sending/receiving instant messages significantly increased SNS teens' odds of receiving a threatening or aggressive email, IM or text message.



Table 8: Logistic Regression Models for Online Teens and Social Networking (SNS) Teens  
 Receiving a Threatening or Aggressive Email, IM or Text Message

|                                    | Model 1<br>(Online Teens)<br>n=886 | Model 2<br>(SNS Teens)<br>n=487 | Model 3<br>(SNS Teens)<br>n=487 |
|------------------------------------|------------------------------------|---------------------------------|---------------------------------|
| <b>Suitable Target Variables</b>   |                                    |                                 |                                 |
| Using email                        | .67/1.94*<br>(.30)                 | .31/1.36<br>(.38)               | ---                             |
| Frequency of internet use          | -.04/.96<br>(.07)                  | -.17/.85<br>(.10)               | ---                             |
| Teens with an online profile       | -.01/.99<br>(.30)                  | ---                             | ---                             |
| Female                             | .27/1.32<br>(.17)                  | .46/1.58*<br>(.22)              | .25/1.29<br>(.22)               |
| Age                                | .04/1.04<br>(.05)                  | .15/1.16*<br>(.07)              | .11/1.12<br>(.07)               |
| Uploading photos                   | .57/1.78**<br>(.22)                | .50/1.65<br>(.29)               | ---                             |
| Uploading videos                   | .41/1.51*<br>(.21)                 | .28/1.32<br>(.24)               | ---                             |
| <b>Info. okay to share offline</b> |                                    |                                 |                                 |
| Your last name                     | ---                                | -.02/.98<br>(.22)               | ---                             |
| Your school name                   | ---                                | -.19/.83<br>(.24)               | ---                             |
| Your cell phone number             | -.24/.79<br>(.18)                  | -.17/.84<br>(.22)               | ---                             |
| Your home phone number             | -.13/.88<br>(.23)                  | -.00/.10<br>(.30)               | ---                             |
| Your IM screen name                | .05/1.05<br>(.18)                  | -.19/.83<br>(.24)               | ---                             |

|                                     | Model 1<br>(Online Teens)<br>n=886 | Model 2<br>(SNS Teens)<br>n=487 | Model 3<br>(SNS Teens)<br>n=487 |
|-------------------------------------|------------------------------------|---------------------------------|---------------------------------|
| Your email address                  | -.22/.80<br>(.17)                  | -.36/.70<br>(.23)               | ---                             |
| Your blog or link to blog           | ---                                | -.07/.94<br>(.24)               | ---                             |
| The city/town you live in           | .32/1.38*<br>(.16)                 | .75/2.11**<br>(.24)             | .02/1.02<br>(.23)               |
| The state you live in               | ---                                | -.53/.59<br>(.29)               | ---                             |
| Teens engaging in online activities |                                    |                                 |                                 |
| Send/receive IMs                    | .88/2.40**<br>(.28)                | 1.14/3.12*<br>(.54)             | 1.03/2.81*<br>(.44)             |
| Using SNS                           | -.14/.87<br>(.30)                  | ---                             | ---                             |
| Visiting chat rooms                 | .17/1.18<br>(.18)                  | .00/1.00<br>(.22)               | ---                             |
| Info. posted to online profile      |                                    |                                 |                                 |
| Photo of yourself                   | ---                                | ---                             | -.29/.75<br>(.38)               |
| Photo of your friends               | ---                                | ---                             | .26/1.30<br>(.28)               |
| Your first name                     | ---                                | ---                             | -.11/.89<br>(.28)               |
| Your last name                      | ---                                | ---                             | -.45/.64<br>(.26)               |
| Your school name                    | ---                                | ---                             | .32/1.37<br>(.24)               |
| Your cell phone number              | ---                                | ---                             | -.57/.56<br>(.87)               |
| Your IM screen name                 | ---                                | ---                             | .13/1.13<br>(.21)               |

|   | Model 1<br>(Online Teens)<br>n=886 | Model 2<br>(SNS Teens)<br>n=487 | Model 3<br>(SNS Teens)<br>n=487 |
|---|------------------------------------|---------------------------------|---------------------------------|
| Your email address  | ---                                | ---                             | .07/1.07<br>(.24)               |
| Your blog or link to blog                                   | ---                                | ---                             | .00/1.01<br>(.20)               |
| The city/town you live in                                   | ---                                | ---                             | .49/1.63<br>(.26)               |
| Streaming audio/MP3 files                                   | ---                                | ---                             | -.11/.90<br>(.22)               |
| Videos  | ---                                | ---                             | -.23/.79<br>(.25)               |
| SNS profile visible to anyone                               | ---                                | ---                             | -.01/.99<br>(.22)               |
| Friends with strangers on SNS                               | ---                                | ---                             | .36/1.43<br>(.21)               |
| How often visit SNS   | ---                                | ---                             | -.07/.93<br>(.07)               |
| Absence of Capable Guardianship Variables                   |                                    |                                 |                                 |
| Parents do not have rules in household about the following: |                                    |                                 |                                 |
| Internet sites teen can/cannot visit                        | -.36/.70<br>(.23)                  | .67/1.96<br>(.36)               | ---                             |
| Personal info. teen can share with people online            | -.51/.60*<br>(.25)                 | -.59/.55<br>(.32)               | ---                             |
| How much time teen can be online                            | .54/1.72**<br>(.19)                | .29/1.34<br>(.23)               | ---                             |
| Parents do not check websites teen visits                   | -.47/.63**<br>(.16)                | -.44/.64*<br>(.21)              | .03/1.03<br>(.21)               |
| N   | 617                                | 352                             | 281                             |

|                                   | Model 1<br>(Online Teens)<br>n=886 | Model 2<br>(SNS Teens)<br>n=487 | Model 3<br>(SNS Teens)<br>n=487 |
|-----------------------------------|------------------------------------|---------------------------------|---------------------------------|
| Cox & Snell pseudo R <sup>2</sup> | .06                                | .07                             | .05                             |
| -2 Log likelihood                 | 1205.24                            | 747.42                          | 711.21                          |

Note: Cell entries are given as logistic regression coefficient/odds ratio with the standard error given in parentheses.

\* = p < .05, \*\* = p < .01, \*\*\* = p < .001

## CHAPTER FIVE: CONCLUSIONS

The goal of this exploratory research study was to examine if Routine Activities Theory could be used as an applicable theoretical framework to understanding cybervictimization and cyberbullying among online teens. This study used variables that were placed into the categories of being a suitable target and having an absence of capable guardianship through one's exposure on the internet. This research study also set out to determine if there was an increased risk of being the victim of cyberbullying for teens on social networking sites.

Overall, social networking (SNS) teens are participating in more activities on the internet compared to online teens. The univariate analyses showed that SNS teens are using email more often, uploading more photos, sending and receiving more instant messages, and visiting chat rooms more often. However, parents of social networking teens are more likely to have rules regarding their teens' online activities compared to their online teen counterparts. With regard to cyberbullying experiences, social networking teens are more often victims than teens that are not a part of social networking sites.

Online teens that were engaging in online activities and sharing personal information offline at a party or social event were more likely to receive a threat in virtually all of the categories, according to the bivariate analyses. By engaging in these activities and sharing personal information they were part of the public domain and increased their target suitability. Threats were also greater for teens that lived in households with no parental rules regarding internet sites they could/could not visit and personal information they could share with people online. The absence of capable guardianship along with a greater exposure to motivated offenders resulted in receiving a threatening or aggressive email, IM or text message.

For social networking teens, the results were similar to those of online teens. A greater exposure online by engaging in activities and sharing personal information significantly increased the chances of receiving a threatening or aggressive email, IM or text message. The majority of information posted to their online profiles increased their risk for receiving a threat. Social networking teens that had their profile visible to anyone and who were friends with strangers were more likely to receive a threat. Parents with no rules regarding their teens' online behaviors increased the likelihood that their teen would receive a threat. Once again, a lack of capable guardianship increased the risk for social networking teens receiving a threat.

The multivariate analyses showed one consistently significant variable throughout all of the models: sending and receiving instant messages. This online activity significantly increased the odds that online teens and social networking teens received a threatening or aggressive email, IM or text message. For online and social networking teens, believing it was okay to share the city/town you live in with a stranger offline significantly increased the chances of receiving a threat. Uploading photos and videos significantly increased online teens' chances of receiving a threat. Being female and an older teen significantly increased social networking teens' chances of receiving a threat. This was one of the only significant differences between online and social networking teens. In the logistic regression models, the absence of capable guardianship variables did not have much influence on teens' receiving a threat.

In essence, social networking teens are engaging in more online activities and sharing of personal information online. Therefore, their rates of receiving a threatening or aggressive email, IM or text message are greater than online teens as shown by the chi-square tests.

Cohen and Felson's Routine Activities Theory explains crime by saying it is not a random act but that it is based on an individual's lifestyle and activities (1979). Based on the

results of this study, it appears that crimes occurring in the virtual world can also be explained using this theory. Victims are more likely to be exposed to motivated offenders outside of their homes in the public domain. It seems logical that online victims are also more likely to be exposed to motivated offenders if they engage in activities and sharing personal information. These behaviors and activities make people more vulnerable to be approached by a motivated offender. This along with a lack of parental supervision, or capable guardianship, increases the opportunities for motivated offenders to commit crimes online.

The goal of this research study was to use a Routine Activities approach to understand how an individual's online activities and online exposure increase their risk for receiving a threatening or aggressive email, IM or text message. It is apparent from the univariate and bivariate analyses that the more exposure online, the more likely teens are to receive a threat. The univariate and bivariate analyses also show that a lack of parental rules about online activities and behaviors increases the likelihood of teens receiving a threat. These results enhance the applicability of the Routine Activities Theory in this study. Teens are becoming suitable targets by participating in online activities and sharing personal information, which increases their exposure in the online public domain. Parents not regulating teens' behaviors and activities online are contributing to an absence of capable guardianship which increases teens' risk for victimization.

On the other hand, the multivariate analyses do not hold true with this theoretical framework and the research questions presented in this study. Only a minimal number of suitable target variables significantly increase the odds of receiving a threat. In addition, not having rules about how much time teens can be online is the only absence of capable guardianship variable that significantly increases the risk for threat.

The Parents & Teens 2006 Survey appeared to be thorough in the questions asked regarding teens' online behaviors and activities. A variety of questions were asked specifically to social networking teens in order to understand the amount and type of information they were posting on their profiles. The questions and answers were sufficient in order to gauge their online exposure and target suitability that was required by the Routine Activities Theory.

However, there were a few limitations that arose while analyzing this data set. These issues were regarding the time frame and various cyberbullying experiences. Because this data set was completed in 2006 it is important to note that the number of teens using social networking sites has dramatically increased since that time. As a result of more teens on social networking sites, it is logical to conclude that more teens are engaging in online activities and posting personal information online. Another limitation of the Parents & Teens 2006 Survey was the measures of teens' cyberbullying experiences. One question in the survey asked teens about their experiences with this specific type of bullying. Additional questions addressing the frequency of cyberbullying experiences would be beneficial to the current literature. Surveys measuring whether the perpetrators were friends or strangers to the victim would also be helpful in future research. Determining whether the cyberbullying perpetrators are known to the victim or a stranger are important to the future of research in this area. As well as questions regarding cybervictimization in general, not just cyberbullying, to gauge the various types of victimization teens are experiencing online.

The survey also asked a variety of questions to the parents of the teens. This section of questions was more limited in scope, although it was adequate enough to determine if an absence of capable guardianship existed. Additional questions that could have contributed to this research study include parental supervision of teens' personal computers and cell phones. Teens



using computers in their bedrooms or another place that is not easily supervised is important to understand when looking at guardianship. Parents may not be aware of the information their teen is posting online or the activities they are participating in. Furthermore, whether teens have internet access via cell phones is important when determining parental supervision of online activities. Parents that regulate their teen's online activities at home are not necessarily regulating their teen's cell phone activities. The instant access teens have to social networking sites and other online activities may put teens at an increased risk for victimization.

It is essential to look at the policy implications when contributing empirical research in the social sciences. With regard to this study, the foremost question seems to be: how do we educate teens regarding cybervictimization and cyberbullying? However, it appears that teens are a difficult population to educate because of their belief in invincibility. Many teens feel invincible with regard to being injured and experiencing victimization; these beliefs increase their chances of engaging in risky behaviors. As a result, it might prove more useful when designing policies regarding teens to target their parents. Educating parents about the increased victimization risk for their teen because of online activities their teen participates in, the personal information they share online, and a lack of parental guardianship might prove more effective in reducing this victimization. As a result, parents might be more likely to supervise their teen's online activities and behaviors. This awareness regarding online dangers is an important step in addressing and helping to decrease the amount of cybervictimization and cyberbullying.

The internet and social networking sites have become an integral part of our technological culture and can keep users in contact with friends all over the world. The sharing of personal information has dramatically increased since the birth of these websites. However, there is a danger when accessing these websites because of the increased opportunities for

victimization. Understanding what contributes to victimization and increasing one's risk is an important step in decreasing this type of online victimization.

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