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"Because I Like It? No, They Made Me Do It!!" Why Juveniles Engage In Sexting

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“BECAUSE I LIKE IT? NO, THEY MADE ME DO IT!!” WHY JUVENILES ENGAGE IN SEXTING

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Developments in technology have changed the way we do everything; advanced our research capabilities, enhanced our communication abilities and speeds, even the way people commit crimes. It provides perpetrators with a new way to commit traditional crimes as well as new forms of crime. One of the many opportunities involved with increased communication devices is known as sexting. Adolescent sexting has received national and local attention due to possible long-term implications such as registering as a sex offender and even suicide. Sexting, which is considered an antisocial behavior among adolescents, has progressively become implicated in peer pressure as well. Peer pressure causes individuals to commit cruel acts or crimes in which they normally would not do because they are forced, or feel obligated to do so, by their peers. Further study into peer pressure and sexting is needed to discover if peer pressure and opportunity are the reasons why adolescents engage in sexting. To discover this, I surveyed college undergraduate students to determine the causes behind their sexting habits in high school.

DEDICATIONS

To Myself

Do the impossible, because almost everyone has told me my ideas are merely fantasies.
~Howard Hughes

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CHAPTER 1

INTRODUCTION

The Evolution of Technology and Communications

In March of 1876 Alexander Graham Bell was awarded a patent for his invention of the electronic telephone (Brown, 1994). The basic function of the electronic telephone was to send and receive voice communications via a landline telephone (connected together through electrical wiring and confined to the home or business). Sometime between 1943 and 1946 the first electronic computer known as Electronic Numerical Integrator and Computer (ENIAC) was developed and required a large room to house the unit (Richey, 1997). ENIAC was designed to compute algorithms (basic mathematical operations) and store the results locally into the computer's memory. However, over the past several decades there has been a drastic change in this technology.

Computers and telephones are no longer confined to the restraints of the home or office; they are so mobile that they can now fit into your pocket and brought with you wherever you may go. Currently even the most basic computers can send and receive videos, pictures, emails and data from around the world. Telephones that were once restricted to the home to make voice calls are now similar in many ways to the current computer and are known as cellular phones or cellphones. Cellphones not only make voice calls, but also transmit visual communications; this can include emails, videos, pictures and text messages (short message services). Within the past decade there has been a noticeable increase in the popularity of text messages over the other aforementioned cellular communications, along with an increase in photo and video messaging

(Vaccaro, 2011). Photo messaging is another form of text messaging however instead of short written messages of text it contains a photograph taken by the sender.

These developments in technology have changed the way we do everything: it has advanced our research capabilities, has enhanced our communication abilities and speeds, and has even promoted crimes. Technology and the creation of the World Wide Web (Internet) have increased and modernized the various ways in which criminals are able to commit crimes. It provides perpetrators with new opportunities to commit traditional crimes – fraud, identity theft and child pornography – as well as new forms of crime such as credit card forgery, cyber bullying, cyber stalking, and sexting (Clarke, 1993; Netterville, 1998).

Texting to Sexting

One might not think text messaging would be able to produce criminal activity; however, it does provide many opportunities to do so. One of the opportunities involved with increased communication devices is known as *sexting*. Sexting is a form of text message communications in which an individual will send and/or receive sexually explicit (nude) pictures or videos from their cellphone or computer to another person (Corbett, 2009; Jaishankar, 2009; Lenhart, 2009; NCPTUP, 2009; Barkacs and Barkacs, 2010; Mabrey and Perozzi, 2010; Walker and Moak, 2010; Vaccaro, 2011; Moreno and Whitehill, 2012). Prior to this technology driven era that we live in today, sexting might have been in the form of sexual "dirty" phone calls, or sending nude photographs through the mail. While sexting is very common among both teenagers and adults, it is typically considered an antisocial behavior among adolescents because it is not socially desirable of juveniles (Gordon-Messer, el al., 2012; Lenhart, 2009; Temple, et al., 2012). According to the American Psychiatric Association (2000, p. 701), antisocial personality disorder (APD) or antisocial behavior is defined as "a pervasive pattern of disregard for, and

violation of, the rights of others that begins in childhood or early adolescence and continues into adulthood." The American Psychiatric Association also states that individuals with APD exhibit behaviors that fail to conform to social norms with respect to the law (American Psychiatric Association, 2000). Adolescent sexting is consider antisocial because (1) it is currently illegal for juveniles to sext since it require the accusation and dissemination of child pornography, and (2) it has received national and local attention due to the possible long-term implications – such as suicide or having to registering as a sex offender (see below) – that could arise from adolescents engaging in the sexting trend (Maguire, 2010; Richards and Calvert, 2010).

Research Question

Sexting has progressively become implicated in peer pressure. Peer pressure is very common among adolescents as well as adults causing it to become a popular topic for research within the past few years. It causes individuals to commit deviant acts or crimes in which they normally would not do because they are forced to, or feel obligated to, do so by their peers. Many adolescents may experience some form of fear or anxiety if they are unwilling to give into peer pressures such as sexting. Peer pressure, when done via technology, can be coined as cyberbullying or electronic harassment. Landis (2010) explains that peer pressure in the form of electronic harassment can be more damaging than traditional bullying in two ways, (1) it is more permanent, and (2) it can occur anywhere, anytime making it impossible to escape the bombardment of emails, texts, and status updates.

In a qualitative study by Ringrose and colleges (2012), students recounted their fear of exposure in the form of sexting from electronic harassment, whether having performed a sexual act or not. For instance a 13-year-old girl in eighth grade experienced constant threats of exposure when she refused to perform oral sex on a boy from her school. She continued to

explain that even when photos are not available, “boys will make up stories and then they will tell people and people will be like, ‘Yeah I was there’ and then because there is loads of them against that one person they will all believe the whole group.” Therefore, further study into peer pressure and sexting is needed to discover if peer pressure is the reason why adolescents engage in sexting. For this reason, this study proposes to answer the following question: Does peer pressure increase the probability of sexting among high school students? This study will attempt to answer this question using a random sample survey of undergraduate college students at a Midwestern University. College students were selected for surveying in order to discover the reasons for sexting in high school before it became a “big deal” in the media. Additionally, both routine activities theory and differential association theory will be used to look at the effects of peer pressure and opportunity of juveniles.

CHAPTER 2

REVIEW OF RELEVANT LITERATURES

Sexting: Defined, Implications and Legal Ramifications

Sexting is a form of text message communications in which an individual will send and/or receive sexually explicit pictures or videos from their cellphone or computer to another person. While common among both teenagers and adults, sexting appears to have a significant attractiveness between teens (a study by The National Campaign to Prevent Teen and Unplanned Pregnancy and Cosmo Girl found that 20% of teens admit to sexting), which has received national and local attention due to the implications that can arise from adolescents engaging in the sexting trend (NCPTUP, 2009; Maguire, 2010). According to Vaccaro (2001, p. 9) there are currently two classifications of sexting, communicative and aggressive.

> *Communicative Sexting*, can be defined by the exchange of sexually explicit material through means of the technology, to a desired recipient or recipients.
>
> *Aggressive Sexting*, includes the dissemination of explicit material through the use of the technology to any number of unintended recipients; often disseminated by someone other than the creator of the material sometimes, with malicious intent.

Aggressive sexting involves individuals who did not necessarily want to receive the sext and could potentially receive punishment for possession of the sext. It is important to note that the primary difference between the two definitions is malicious intent; where communicative sexting in conducted in a friendly or romantic manner and aggressive sexting is used to hurt an individuals feelings or reputation. Both classifications can have detrimental outcomes such as psychological distress and even legal consequences (Corbett, 2009; Barkacs & Barkacs, 2010; Landis, 2010; Mabrey & Perozzi, 2010; Richards and Calvert, 2010).

For instance, one widely known case involves Phillip Alpert who was 18 years old when got into an argument with his 16-year-old girlfriend. During the aftermath of the fight he decided to email several of his friends explicit photographs of his now ex-girlfriend who had previously sent the photos to him willingly (Corbett, 2009). Alpert faced a total of 72 felony charges including possession of child pornography and distribution of child pornography because his girlfriend was underage (Mabrey & Perozzi, 2010). Alpert had to register as child sex offender, limiting job and housing opportunities.

Another tragic case involved Jesse Logan who willingly sent nude photos of herself to her boyfriend while they were dating; several months later when they broke up he sent the photos to multiple high school female classmates. The girls in school began harassing, taunting and even throwing objects at her in the hallways. After two months of dealing with this malicious behavior from her classmates Jesse hung herself (Barkacs & Barkacs, 2010).

While these two cases are quite severe, according to Barkacs and Barkacs (2010) the behavior exemplified in these stories are not rare. In fact according to Jaishankar (2009) several studies have been conducted to show how common sexting is becoming in high schools. In a nationally representative survey, Lenhart (2009) found: four percent of teens between the ages of 12-17 who own cellphones have sent sexual images of themselves to another individual. Fifteen percent of teens between the ages of 12-17 who own cellphones have received sexual images of someone they know. Eight percent of 17-year-olds have sent a sexual image while and 30 percent have received a sexual image. The study also discovered that teens who pay their own phone bills are more likely to send "sexts" than those who do not. Another study that was conducted among teens was led by The National Campaign to Prevent Teen and Unplanned Pregnancy (2009). Conducted online, this case study surveyed a total of 1,280 respondents: 653

teens (ages 13-19) and 627 young adults (ages 20-26). The survey asked several questions pertaining to sexting and whether or not those individuals were involved in sexting, how they were involved and ultimately showed that 20 percent of teens overall have been involved in sexting. While these studies may not be representative of the general population on the data collected to discover how common sexting is, none of the studies ask the question of why the sexting occurs.

Peer Pressure, Susceptibility, & Conformity to Sexting

There has been a lot of evidence supporting peer contributions and conformity to peer pressure and sexting. As an adolescent, becoming a member of a peer group during high school helps to create a sense of identity and build interests in specific activities (Steinberg, 1987; Santor et al., 1998). However, in some social, school, or work groups there may be costs involved with becoming a member (Steinberg, 1987; Santor et al., 1998), such as peer pressure to do things the individual may not want to do, some have even considered this the "price of group membership" (Clasen & Brown, 1985). Peer pressure is defined as the force (both physically and mentally) an adolescent or individual receives from their peers to conform by doing "something or to keep from doing something else, no matter if you personally want to or not" (Clasen & Brown, 1985; see also Steinberg, 1987; Ungar, 2000; Pepler, et al., 2010; Cho and Chung, 2012).

According to Ungar (2000) peer pressure among adolescents can lead to the belief that their peer group requires conformity to that group's norms or interests and if the person is unwilling to conform then they are not welcome within the group (see also Steinberg, 1987; Santor et al., 1998; Pepler, et al., 2010; Cho and Chung, 2012). Typically peer pressure involves such behaviors as withdrawing one's opinion to match others, teasing or being cruel to friends or

family, and even deserting friends or family (Steinberg, 1987; Snow, 1988; Pepler, et al., 2010; Cho and Chung, 2012). However, peer pressure among older adolescents can also include drinking, drugs, and sex (Snow, 1988; Santor et al., 1998). If the adolescent is unable or unwilling to follow "the dictums of their peers" (Brown et al., 1986) then the individual may experience some form of apprehension (Steinberg, 1987; Ungar, 2000). The concept of peer pressure can be applied to juvenile sexting since peers can create pressures for others to conform.

Empirically, subsequent studies have looked at the contributions, susceptibilities, and conformities of peers for the study of peer pressure (Pepler, et al., 2010; Cho and Chung, 2012). For instance, Erickson and colleagues (2000), focused on the role of susceptibility of the victim. Susceptibility is described as the vulnerability towards engaging in deviant behaviors when the victim is faced with peer pressure (Erickson, et al., 2000). Furthermore, they argue that when peers present opportunity the victim's susceptibility increases the likelihood of involvement in deviant activities, which in turn creates an additional source of motivation for the offender (Erickson, et al., 2000). Reed and Roundtree (1997) argue that adolescents who experience pressure from friends to commit various deviant acts are influenced by the perceived rewards and consequences of that social group. Consequently, peer pressure conditions students to commit deviant acts, such as sexting, in which they otherwise would not have committed in the absence of peer influence. Additionally, Miller (2010) adds to this by addressing the concept of peer pressure by looking at the situational affect rather than the peer effect. Miller (2010, p. 475) states, "adolescents with delinquent peers are more likely to be deviant because they are more likely to find themselves in social contexts that involve pressures, either overt or covert, to behave in a certain way."

Based on the results of previous studies that argue that peer pressure influences peer conformity, the main assumption of this study is that peer pressure affects juvenile sexting outcomes (i.e. peer conformity to sext). Accordingly, it is hypothesized that peer pressure increases the likelihood of juvenile sexting. Therefore, this study tests peer pressure and pressure to participate in sexting while in high school.

Routine Activities Theory & Sexting

Although there is not a direct test of theory in this study it is important to set forth the possible theoretical paradigms, particularly those from a routine activities perspective, that led to the belief of an empirically supported, positive relationship between sexting and opportunity. Historically, the primary focuses of criminological theories explain the criminal propensities inherent within individuals rather than placing the emphasis on the event of the crime itself. However, the 1979 seminal work of Cohen and Felson's routine activities theory, which traces to Hawley's (1950) theory of social ecology, shifted the focus away from offenders' individual inclinations to commit criminal acts and strived to explain victimization and crime perpetration. More specifically, this theory focused on the situational factors of the crime itself, like the characteristics of the target and the environment. As previously mentioned, routine activities theory requires three elements to converge in time and space for a crime to occur: (1) a motivated offender with criminal intentions and the ability to act on these inclinations, (2) a suitable victim or target, and (3) the absence of a capable guardian prevent the crime from happening, which creates opportunity. Essentially, suitable targets could be items or other people such as students, capable guardians could be police officers or parents, and motivated offenders are considered constant. Cohen and Felson (1979) argue that the lack of guardianship coupled with the presence of opportunity increases criminal motivations. Additionally, they claim that

changes in the routine activities of one or all (targets, capable guardians, or motivated offenders) would change the likelihood of convergence in space and time, ultimately changing the likelihood of a crime occurring. Routine activities theory relates offending to everyday social interaction.

In this sense, this study theorizes that juveniles participate in sexting behaviors in the absence of a parent or capable guardian. According to Ingram and colleagues (2007) adolescents whose parents are actively monitoring their behavior are both less likely to associate with delinquent peers as well as not participate in delinquent behavior themselves (Jensen, 1972). Likewise, a juvenile who participates in sexting is the motivated offender, and whomever the juvenile sends a sext to or requests/demands a sext from would be the victim or target. However, this study does not test this conceptualization by determining these variables individually; rather it is a partial test of routine activities theory in that it simply tested the opportunity a student had to participate in sexting in high school through the use of technology.

Expanding routine activities theory to apply at the micro-level, Osgood and colleagues (1996) proposed that the more time an individual spends in unsupervised (in the absence of authority figures), unstructured socialization with peers the more opportunity for delinquency is presented (Osgood, et al., 1996). Drawing upon Briar and Piliavin's 1965 situational inducement idea, Osgood et al. (1996) argued that the motivation to commit deviant acts lies within the situational factors surrounding the opportunities created by routine activities. They reasoned that (1) a lack of an authority figure drastically reduces social control to deviant behaviors, (2) deviant acts are easier and offer higher rewards when committed in the presence of, or along with, fellow peers, and (3) a loose structure allows time available for the deviant behaviors to occur (Osgood, et al., 1996; Haynie & Osgood, 2005). Using national longitudinal data gathered

in five waves from over 1700 young adults they were able to support this extension of routine activities theory. They discovered that participation in unstructured, unsupervised socialization was associated with criminal activity and other analogous behaviors (Osgood, et al., 1996; Haynie & Osgood, 2005).

Haynie and Osgood (2005) added to the studies of peers and delinquency by discussing an opportunity perspective. The opportunity perspective maintains the idea that since interpersonal relationships are "important for structuring everyday life" interpersonal relationships also thereby shape opportunities for behavior (Haynie & Osgood, 2005). When considering the applicability of routine activities theory in relation to cyberdeviance and juvenile sexting, it is also important to consider opportunity in relation to the victim's proximity to the motivated offender. More specifically, it is important to consider what daily computer activities will place the victim in close proximity to the motivated offender (Bossler & Holt, 2009). According to Bossler and Holt (2009) this is similar to how we conceptualization a victims physical daily activities which place them in close proximity to motivated offenders. However, the major difference between physical and virtual crime is "the removal of physical distance between the motivated offender and a suitable target" (Bossler & Holt, 2009; p. 403).

These theoretical concepts of routine activity theory can be applied to the measurement of online victimization. However, few studies have explored the relationship between routine activities theory and the hypothesis that increased exposure to risk results in a higher likelihood of victimization, and even fewer when incorporating cyber harassment and/or sexting (see related studies of Bossler and Holt, 2009; Marcum et al., 2010; and Reyns, et al., 2013). For example, Marcum et al. (2010) focused on the effects of electronic and online behaviors on online victimization risks. The study examined three types of cybervictimization and identified

the associated risk factors (1) receipt of sexually explicit materials, (2) harassment, and (3) sexual solicitation (Marcum et al., 2010). The authors reported that online behaviors (such as time spent online for E-mail, chatrooms, and instant messaging) increased not only their exposure to motivated offenders but also their suitability as a target, which significantly increased their victimization risk (Marcum et al., 2010).

Similar to results reported by Marcum et al. (2010), Bossler and Holt (2009) examined the effects of online lifestyle-routine activities theory to determine if it can account for experiences with on-line harassment a form of cybercrime victimization (Bossler & Holt, 2009). They found a positive relationship between increased online behaviors (electronic communications such as E-mail and chatrooms) and increased risks for harassment online (Bossler & Holt, 2009). Bossler and Holt also explored the relationship (and confirmed a positive correlation) between involvement in cyberdeviance (such as harassment, cyber stalking, or computer hacking) and online victimization (Bossler & Holt, 2009). Another study by Reyns and colleagues (2011) used cybercrime routine activities theory to examine the potential effects of cybervictimization from online lifestyles and sexting. They reported that individuals who engage in sexting increased their likelihood of cybervictimization when compared to those who did not sext (Reyns, et al., 2013). However, regardless of recent evidence to the contrary, their findings also reported that the individuals' time spent online did not contribute significantly to the increased victimization (Reyns, et al., 2013).

Consequently, these studies suggest that exposure to motivated offenders increases when an individual spends more time online and is more likely to be victim to such things as harassment and pressure to commit deviant acts like sexting. Furthermore, the more activities performed virtually (online or by cellphone), the more opportunity the individual creates for the

possibility of online victimization. For instance, sexting is an electronic behavior that can expose participants to motivated offenders and generate increased contact, whether desired or not (such as cyberstalking or harassment when the message is forwarded to unintended recipients from the intended recipient). Subsequently, the probability of harassment could increase not only from the parties it was forwarded to, but also potentially by the intended recipient. Ultimately, utilization of parental guardianships over juvenile sexting could potentially decrease the harassment and victimization ability of a motivated offender. Therefore, this study theorizes that an increase in sexting opportunities through cellphone and online routine activities increases juvenile sexting activities. Although this study tests the opportunity to participate in sexting while in high school it does not directly test variables of routine activities.

CHAPTER 3

METHODOLOGY

Sample

The sample for this research included college students to order to discover the reasons for sexting in high school before it became a "big deal" in the media. This is due to the media having a potential cause and effect scenario on juvenile sexting. For instance, media typically generates a great deal of hype on a topic such as juvenile sexting and in turn there could be a potential increase in juvenile sexting caused by the media attention. Using a single Midwestern University, classes with an enrollment of at least ten or more students were selected using a random sample, and the overall sampling frame included an undergraduate population of 15,000. The universities' on-line course scheduler was used to randomly select fourteen classes per researcher to survey; for a total of 154 classes with an average class size between twenty and forty students per class. From this list of classes, the instructors were emailed to request access to their students to complete the survey. Although there was confidence that most instructors would allow surveying of their students, some did not respond, or scheduling conflicts prevented us from surveying that class. In such instances, another course was selected by simply moving down the list of selected classes. Once an agreement from the instructor was received allowing their students to participate in the study surveys were distributed. As a result of this, the final sample size was reduced to approximately eight classes.

Since the surveys were distributed over the course of several weeks, on two different days of the weeks, and during several different times slots throughout the day, assurance of a representative selection of students was achieved. The survey took approximately 15 to 20

minutes to complete and was issued in a paper format. At the end of data collection, 268 students had participated in the survey, totaling of 1.79 percent of the entire undergraduate population. However, the final sample size was reduced to 169 students after the removal of missing responses, for an overall response rate of 63.06 percent of the sampled students.

Operationalization

This survey had three goals. First, was to determine the prevalence of sexting when the individual was in high school. Sexting was broken into two categories: (1) senders (sent but never received a sext), and (2) receivers (received but never sent a sext). Second, the survey looked at the amount of opportunity the participant had to participate in sexting while in high school. Finally, the surveys determined whether participants had experienced peer pressure in high school, and to what level (see Appendix A for the full survey). To assess the prevalence of peer pressure and opportunity to sext in high school the following questions were asked.

Sexting

Several questions were used to determine what form of sexting the student participated in during high school, if any. Using an ordinal level of measurement scale of [0 times, 1 to 5 times, 6 to 10 times, 11 to 15 times, more than 16 times] the following questions were asked: How often in high school did you do any of the following?: (1) Sent a sexually suggestive text/picture/video message intended for the person you sent it to? (2) Received a sexually suggestive text/picture/video message intended only for you from the original sender? (3) Received a sexually suggestive text/picture/video message not intended for you from someone else, “third-party” message? (4) Forwarded a sexually suggestive text/picture/video message to someone it was not intended for, “third-party” message? Ultimately this variable was aggregated

into a binary scale (no sexting 0, sexting 1) where an answer of zero (sent or received) translated into no sexting, and an answer of anything exceeding one (sent or received) translated to sexting.

Opportunity

Next, what technology was available to the student in order to measure the level of opportunity of participation in sexting each student had while in high school was determined. Using a dichotomous level of measurement the following questions were asked: Did you have any of the following when you were in high school?: (1) A computer with internet capabilities? (2) A cellphone with text messaging capabilities? (3) A cellphone with video messaging capabilities? (4) A cellphone with internet capabilities? (5) An email account? (6) A social-networking site account (like Facebook or Myspace)? (7) A dating site account (like eHarmony or OKcupid)? Based on the results of a principle component analysis this variable was also aggregated into a binary scale (minimal opportunity 0, maximum opportunity 1) where a score of two or less translated to minimal opportunity, and a score of three and above translated to maximum opportunity. This was to discover individuals who exhibited higher rates of exposure to communication opportunities.

Peer Pressure

The last set of questions was asked to measure the students' history of peer pressure to commit the aforementioned antisocial behaviors throughout high school. The following questions were asked: On a scale of 1 (no pressure) to 10 (a lot of pressure) how much peer pressure have you felt to do the following in high school?: (1) Felt pressure to try cigarettes? (2) Felt pressure to try marijuana/illegal drugs? (3) Felt pressure to drink alcohol? (4) Felt pressure to hurt someone badly enough for medical attention? (5) Felt pressure steal from a store? (6) Felt pressure to skip school w/out parental permission? (7) Feel pressure to stay out all night w/out

parental permission? Based on the results of a principle component analysis this variable was also aggregated into a binary scale (minimal peer pressure 0, maximum peer pressure 1) where an answer of zero translated into no peer pressure, and an answer of anything exceeding one translated to peer pressure. This was to discover whether or not the individual experienced peer pressure in high school.

Control Variables

Previous research has identified demographic characteristics as important in accounting for cyber deviance such as sexting (e.g., Reyns et al. 2011). Thus, gender a dichotomous level of measurement (male 0, female 1) and race an ordinal level of measurement (white 0, black 1, other 2) were included as control variables in the bivariate analysis. However, race is an important variable in this research because it is assumed that minorities are less likely to have access to technology and therefore less likely to offend or be victimized with regards to sexting, this is a concept known as the "digital divide." According to Hoffman, Novak and Schlosser (2001) a possible major contributor to this divide is the lack of funding in schools to provide computer and internet usage for blacks; this is also evident for home and work computers. Therefore, this research will look specifically at blacks and minorities to determine if there is significant difference in sexting activity than that of whites.

Hypotheses

This study is meant to provide an insight on the reasons behind high school sexting. Therefore, the following are my hypotheses:

H1. Increased overall peer pressure increases the likelihood of sexting in high school.

H2. Increased communication opportunity increases the likelihood of sexting in high school.

Analysis Plan

For this study two categories of analyses are to be conducted, (1) exploratory analysis to determine if variables for opportunity and peer pressure measured a single underlying factor, and (2) logistic regression analysis. Due to the aggregation of variables into binary measurements and the prediction of a dichotomous outcome, logistic regression was chosen for this study. In order to determine the relationship between the aforementioned variables, several logistic regression models are estimated. The following analysis will proceed in a number of sequential steps. Since several variables were used in an attempt to measure peer pressure (as well as opportunity), the analysis will begin by presenting a confirmatory analysis to determine if the variables for opportunity and peer pressure measured a single underlying factor. Several questions were asked for each factor (peer pressure and opportunity) to ensure the reliability of the variable. Therefore, a factor analysis will be run to determine the questions ability to measure the same latent concept and the possibility for data reduction to simplify regression analysis. The Cronbach's alpha reliability coefficient was used to determine the consistency of the combined variables. Cronbach's alpha normally ranges between 0 and 1; however, there is actually no lower limit to the coefficient. The closer Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale. George and Mallery (2003, p. 231) provide the following rules of thumb: "_ > .9 – Excellent, _ > .8 – Good, _ > .7 – Acceptable, _ > .6 – Fair, _ > .5 – Poor, and _ < .5 – Unacceptable."

Next, logistic regression models will explore the effects of peers pressure as well as opportunity on sexting (sent and received). After observing the effects of both variables on sexting, the binary regressions were run again this time controlling for race only specifically looking at blacks and other minorities and leaving out whites. Disaggregating the sample in this way allows for a more thorough inspection and understanding of the effects of opportunity and

the susceptibility to peer influences to sext in high school. Moreover, it allows for an inspection of the "digital divide effect" assuming minorities are less likely to have access to technology and therefore less likely to offend or be victimized with regards to sexting. To evaluate the overall fit of the models the pseudo R2 was used. According to Hu, et al. (2006), the pseudo R2 was created to provide a statistic to summarize the overall strength of a binary model using a range from zero (no predictive value) to one (perfect fit). In other words, the pseudo R2 measures the strength of association between the predictor (e.g. peer pressure and opportunity) and the outcome (e.g. sexting). In the social sciences the Cox's and Snell pseudo R2 (which will be used in this research) is based on "likelihood" but it's maximum typically fails to reach one, and it's only an approximation explaining something similar to R-square, therefore making it difficult to interpret (see also Burns & Burns, 2008).

Because the pseudo R2 is generally hard to interpret to predict a perfect fit, the receiver operating characteristic (ROC) curve will be used to measure discrimination, that is, the ability of the test to correctly classify those who sext and those who do not sext. The accuracy of the test depends on how well the test separates the sample group into those who sext and those who do not. Accuracy is measured by the area under the ROC curve (AUC), where a perfect diagnostic instrument would achieve an area of .90 to 1.00 and an area under .60 represents a worthless test. If we were to rely on pure chance to distinguish those subjects with sexting versus those without, the resulting ROC curve would fall along the diagonal line, which is referred to as the chance diagonal. It is better to rely on a diagnostic test with an AUC value of 0.5 than it is to rely on pure chance alone. There is at least some ability to discriminate between subjects with and without sexting. Furthermore, the area measures discrimination, that is, the ability of the test to correctly classify those who sext and those who do not. Consider the situation in which students

are already correctly classified into two groups. You randomly pick on from the sexting group and one from the non-sexting group and do the test on both. The students with more sexting should be the one from the sexting group. The AUC is the percentage of randomly drawn pairs for which this is true (that is, the test correctly classifies the two students in the random pair).

CHAPTER 4

RESULTS

As previously mentioned, participants were asked to provide their race and gender for use as control variables in the bivariate analysis. Accordingly, 58% of the surveyed population was male (42% female), while 76.3 % of the population was white, 13.6% was black, and 10.1% was categorized as other race. According to the university's quick facts website there were 15,000 undergraduate students in the fall of 2010. Of that 15,000 students, 42.3% were male (33.2% female), while 65.45 % of the population was white, 21.62% was black, and 12.92% were categorized as other race. Based on these similar percentages, there was not a significant difference between the sample population and the entire undergraduate population. Opportunity has a minimum response value of 5 and a maximum of 10, the mean is value is 8.98 with a standard deviation of 1.14. Peer pressure has a minimum response value of 10 and a maximum of 100, the mean is value is 16.36 with a standard deviation of 12.17. A conceivable reason for the low average of peer pressure could be to a possible bias in the interpretation of the word "pressure." For instance, the student might have interpreted pressure to be only direct pressure rather than including indirect pressure when responding (e.g. "four of my five friends are sexting I guess I should sext too"). The descriptive statistics for these variables are provided in (Table 1 through 3). Furthermore, two categories of analyses were conducted, (1) exploratory analysis to determine if variables for opportunity and peer pressure measured a single underlying factor, and (2) logistic regression analysis. Of the 169 students who participated, 71% of the respondents in the present study reported that they had receiving nude or semi-nude pictures from someone electronically, whereas 51.5% indicated that they had sent such images.

TABLE 1: Descriptive Statistics of the Sampled Students

N = 169	*Percent of Sample*
Gender	
Male	58.0%
Female	42.0%
Race	
White	76.3%
Black	13.6%
Other	10.1%
Sexting	
Sent/Received	71.0%
Sent Sext	51.5%
Received Sext	71.0%

TABLE 2: Descriptive Statistics of the Undergraduate Population

N = 15,000	*Percent of Population*
Gender	
Male	42.3%
Female	33.2%
Race	
White	65.45%
Black	21.62%
Other	12.92%

TABLE 3: Descriptive Statistics of Peer Pressure and Opportunity

	Min	*Max*	*Mean*	*Std. Dev.*
Peer Pressure*	10	100	16.36	12.17
Opportunity**	5	10	8.98	1.14

*Note. *Peer Pressure scale 1-10; **Opportunity scale 1-5*

Among males in the sample, 43.19% disclosed that they had received sext messages, and 32.54% had sent sexts. Among females, these percentages are 27.81 and 18.93%, respectively. The percentage of students who had sent or received sexts did not differ by race, $c^2(1, N = 169) = 2.01$, $p = .15$ for sent sexts and $c^2(1, N = 169) = 1.38$, $p = .24$ for received sexts. Regarding race, 51.48% of whites reported that they had received sexts, while 39.05% indicated that they had sent sexts. Among blacks, these percentages are 11.24 and 8.28%, respectively. Among other races, these percentages are 8.28 and 5.92%, respectively. Again, the percentage of students who had sent or received sexts did not differ by race, $c^2(2, N = 169) = 1.54$, $p = .46$ for sent sexts and $c^2(2, N = 169) = 3.36$, $p = .18$ for received sexts (see Tables 4 and 5).

TABLE 4: Pearsons Chi Square of the Dependent Variable Sexting and Independent Variables Peer Pressure and Opportunity (Race)

	Chi-square	*DF**	*p*
Sent Sexts	1.54	2	0.463
Recieved Sexts	3.36	2	0.186

*Note. *DF, degree of freedom*

TABLE 5: Pearsons Chi Square of the Dependent Variable Sexting and Independent Variables Peer Pressure and Opportunity (Gender)

	Chi-square	*DF**	*p*
Sent Sexts	2.01	1	0.156
Recieved Sexts	1.38	1	0.241

*Note. *DF, degree of freedom*

Exploratory Analyses

The study began by presenting a confirmatory analysis to determine if variables for opportunity and peer pressure measured a single underlying factor for each. Because many of the measures within each category (communication opportunity, peer pressure, and sexting) were conceptually similar, the components of each variable were combined using principal components factor analysis because the measures are capturing a single latent concept. First, sexting opportunity increases as a juvenile's available communication opportunity increases. In this study there were five questions asked to determine what communication devices juveniles had while the individual was in high school (computer internet, email account, social networking, cellphone text messaging, and cellphone internet). A principle component analysis (PCA) was run to determine whether these five variables load on fewer latent factors within this dataset. The PCA determined that all five measures defined a single concept. The communication opportunity variables were found to be acceptable (5 items; $\alpha = .670$). The exploratory analyses for these variables are provided in Tables 6 and 7.

TABLE 6: Principle Component Analysis - Eigenvalues of the Communication Opportunities of Juveniles

Communication Device	*Total*	*% of Variance*	*Cumulative %*
Computer with internet capabilities?	2.432	48.671	48.671
Cellphone with text/video messaging capabilities?	0.985	19.697	68.368
Cellphone with internet capabilities?	0.629	12.572	80.939
Email Account?	0.556	11.115	92.054
Social-networking site account (like Facebook or Myspace)?	0.397	7.946	100.000

TABLE 7: Principle Component Analysis - Component Matrix

Communication Device	*Opportunity*
Computer with internet capabilities?	0.647
Cellphone with text/video messaging capabilities?	0.764
Cellphone with internet capabilities?	0.471
Email Account?	0.819
Social-networking site account (like Facebook or Myspace)?	0.734

Note. *Rotation Method: Principle Component Analysis*
Chronbach's Alpha = 0.670

Second, there were seven questions asked to determine the level of peer pressure juveniles experienced while the individual was in high school (try cigarettes, try marijuana/illegal drugs, drink alcohol, hurt someone, take something from the store without paying, skipping school, and staying out all night). Again, the PCA was run to determine whether these six variables load on fewer latent factors within this dataset. The PCA determined that all seven measures defined a single concept. The peer pressure variables were found to be highly reliable (6 items; $\alpha = .860$). The exploratory analyses for these variables are provided in Tables 8 and 9. Finally, in this study there were four questions asked to determine participation in sexting while the individual was in high school. Another PCA was run to determine whether these four variables load on fewer latent factors within this dataset, which determined that all four factors defined the concept of sexting participation. The sexting variables were found to be reliable (4 items; $\alpha = .772$). The exploratory analyses for these variables are provided in Tables 10 and 11.

TABLE 8: Principle Component Analysis - Eigenvalues for Peer Pressure

Peer Pressure	*Total*	*% of Variance*	*Cumulative %*
Felt pressure to try cigarettes?	3.902	55.742	55.742
Felt pressure to try marijuana/illegal drugs?	1.085	15.495	71.237
Felt pressure to drink alcohol?	0.620	8.861	80.098
Felt pressure to hurt someone badly enough for medical attention?	0.490	7.006	87.104
Felt pressure to take something of value from a store-without paying for it?	0.368	5.252	92.356
Felt pressure to skip school w/out parental permission?	0.286	4.079	96.435
Felt pressure to stay out all night w/out parental permission?	0.250	3.565	100.000

TABLE 9: Principle Component Analysis - Component Matrix

Pressure to…	*Peer Pressure*
Felt pressure to try cigarettes?	0.727
Felt pressure to try marijuana/illegal drugs?	0.786
Felt pressure to drink alcohol?	0.746
Felt pressure to hurt someone badly enough for medical attention?	0.687
Felt pressure to take something of value from a store-without paying for it?	0.728
Felt pressure to skip school w/out parental permission?	0.765
Felt pressure to stay out all night w/out parental permission?	0.783

Note. *Rotation Method: Principle Component Analysis*
Chronbach's Alpha = 0.860

TABLE 10: Principle Component Analysis - Eigenvalues Juvenile Sexting

Participation in Sexting	*Total*	*% of Variance*	*Cumulative %*
Sent a sexually suggestive text/picture/video message intended for the person you sent it to?	2.441	61.036	61.036
Received a sexually suggestive text/picture/video message intended only for you from the original sender?	0.974	24.344	85.38
Received a sexually suggestive text/picture/video message not intended for you from someone else, "third-party" message?	0.365	9.126	94.506
Forwarded a sexually suggestive text/picture/video message to someone it was not intended for, "third-party" message?	0.22	5.494	100

TABLE 11: Principle Component Analysis - Component Matrix

Communication Device	*Basic Communications*
Sent a sexually suggestive text/picture/video message intended for the person you sent it to?	0.766
Received a sexually suggestive text/picture/video message intended only for you from the original sender?	0.852
Received a sexually suggestive text/picture/video message not intended for you from someone else, "third-party" message?	0.746
Forwarded a sexually suggestive text/picture/video message to someone it was not intended for, "third-party" message?	0.752

Note. *Rotation Method: Principle Component Analysis*
Chronbach's Alpha = 0.772

Logistic Regression

The results presented below are arranged according to the two primary research objectives of this analysis: (1) to determine whether increased peer pressure is related to higher levels of sexting in high school, and (2) to determine the prevalence of communication opportunities and its association with higher levels of sexting in high school. Both objectives are addressed using logistic regression models and ROC curve analyses to explore the effects of peers pressure as well as opportunity on sending a sext and receiving a sext.

Sexting (Sent). Tables 12 and 13 presents the results of the logistic regressions in which the empirical relations between opportunity, peer pressure, demographics, and sent sexts were estimated. The results showed that these predictors are significantly and positively related to sending sexts as expected; that is, an increase in peer pressure or opportunity is associated with juveniles sending sext messages in high school. Specifically, an increase in peer pressure is associated with a 4% increase in the odds of participating in sexting (Exp(B) = 1.04, S.E. = 0.02, p = .04), while an increase in opportunity is associated with a 46% increase in the odds of participating in sexting (Exp(B) = 1.46, S.E. = 0.18, p = .03).

An increase in opportunity or peer pressure is associated with a 52% increase in the odds of females participating in sexting (Exp(B) = .52, S.E. = 0.38, p = 0.08). Similarly, compared to white students, blacks are 36% less likely to participate in sexting (Exp(B) = 0.36, S.E. = .68, p = .13), and all other races are 92% less likely to participate in sexting (Exp(B) = .92, S.E. = .86, p = not statistically significant). The pseudo R2 index, as defined by Cox and Snell, for this analysis was (R2=.104). Because of the difficulty to predict a perfect fit using a pseudo R2, a ROC curve analysis was used to examine the effectiveness with which the logistic regression discriminated between students who sext and those who do not sext. The AUC was 0.634 with a

standard error of 0.047, indicating a fair job of classifying cases on the dependent variable. Thus, based on the results of the logistic regression and the ROC analysis, an increase in either opportunity or peer pressure significantly and positively related to sexting.

TABLE 12: Logistic Regression: Sent Sext (n=169)

	B	***S.E.***	***Exp(B)***
Gender (Male)			
Female	0.66~	0.38	0.52
Race (White)			
Black	-1.03	0.68	0.36
Other	-0.09	0.86	0.92
Opportunity	0.38*	0.18	1.46
Pressure	0.03*	0.02	1.04
Constant	-2.06	1.70	0.13

Cox & Snell R Square = 0.104 *p < 0.05, **p < 0.01, ***p < 0.001, ~ p < 0.1

TABLE 13: ROC Curve: Sent Sext (n=169)

Area Under Curve	***Std. Error***	***Asymptotic 95% Confidence Interval***	
		Lower Bound	***Upper Bound***
0.634	0.047	0.542	0.727

Sexting (Received). Tables 14 and 15 presents the results of the logistic regressions in which the empirical relations between opportunity, peer pressure, demographics (race and gender), and sexting (both sent and received) were estimated. The results showed that these predictors are significantly and positively related to sexting as expected; that is, an increase in peer pressure or opportunity is associated with juvenile sexting in high school. Specifically, an increase in peer pressure is associated with a 10% increase in the odds of participating in sexting (Exp(B) = 1.10, S.E. = 0.03, p = .002), while students with higher rates of opportunity are two times more likely to participate in sexting (Exp(B) = 2.27, S.E. = 0.22, p = .00).

Females are two times more likely to participate in sexing with an increase in either opportunity or peer pressure (Exp(B) = 2.26, S.E. = 0.45, p = 0.07). Similarly, compared to white students, blacks are only 5% less likely to participate in sexting (Exp(B) = 0.05, S.E. = 1.44, p = .04), and all other races are 26% less likely to participate in sexting (Exp(B) = .26, S.E. = 1.62, p = .41). The pseudo R2 index, as defined by Cox and Snell, for this analysis was (R2=.222). Additionally, a ROC curve analysis was used to examine the effectiveness with which the logistic regression discriminated between students who sext and those who do not sext. The AUC was 0.680 with a standard error of 0.056, indicating a fair job of classifying cases on the dependent variable. The AUC was 0.500 with a standard error of 0.178, indicating a poor job of classifying cases on the dependent variable. Thus, based on the results of the logistic regression and the ROC analysis, an increase in either opportunity or peer pressure significantly and positively related to sexting.

TABLE 14: Logistic Regression: Received Sext (n=169)

	B	***S.E.***	***Exp(B)***
Gender (Male)			
Female	0.81~	0.45	2.26
Race (White)			
Black	-3.03*	1.44	0.05
Other	-1.35	1.62	0.26
Opportunity	0.82***	0.22	2.27
Pressure	0.09**	0.03	1.10
Constant	-3.71~	2.17	0.02

Cox & Snell R Square = 0.222 *p < 0.05, **p < 0.01, ***p < 0.001, ~ p < 0.1

TABLE 15: ROC Curve: Received Sext (n=169)

Area Under Curve	***Std. Error***	***Asymptotic 95% Confidence Interval***	
		Lower Bound	***Upper Bound***
0.680	0.056	0.571	0.789

Logistic Regression Based on Race

Based on the regression results, this study also attempted to determine if there was a significant relationship between black students and opportunity. This was accomplished by multiplying the variable black by the variable opportunity to create a new variable "black times opportunity" Due to a likely possibility that the aforementioned findings could be due to a "digital divide effect" among black students the regressions were run again this time leaving out white students and including the "black opportunity" variable. The results indicated no statistical significance between an increased the opportunity and black interaction for the participation in sexting (p = .435).

ROC Curve Comparison

Finally, this study also ran a ROC curve comparison using the methods from Hanley and McNeil's 1982 study. Using the results of all four analyses (sent sext, received sext, minority sent sext, and minority received sext) the comparisons calculated the standard error of the AUC and the difference between two AUCs. As previously mentioned, the AUC for sent sext was 0.634 with a standard error of 0.047, and the AUC for received sext was 0.680 with a standard error of 0.056. The comparison between sent sext versus received sext showed that the two AUCs are not significantly different (z = 0.629, p = 0.529).

CHAPTER 5

DISCUSSION

The findings on the prevalence of sexting among high school students suggest that the distributions vary between two contributing factors, with peer pressure being most prevalent and followed by opportunity. These two predictors of sexting were empirically examined. One reflected an individual's increased access to computers and cell phones. While the other captured the level of peer pressure in which the student endured to participate in sexting. Both of which were significantly related to increased juvenile sexting.

Over the past few years technology has enhanced the ways we perform our daily activities, increased productivity and knowledge. However, in the process technology has also changed the way we communicate with others, and without a doubt it has begun to directly influence our attitudes and decisions. Technological advances (e.g., social sties, e-mail, and image messaging) now provide a venue through which sexting among youth can occur. Before these advances, adolescents had to think twice before they made a comment or gave a nude picture to their boyfriend or girlfriend, whereas behind the computer or phone many juveniles feel a veil protection. For many juveniles, part of the allure of the Internet for teens, tweens, and twenty-something's is that they believe it to be ephemeral, thus whatever they post will soon disappear. Unfortunately, what happens in the virtual world can be even more damaging than what happens in the physical world because everything you send does not dissolve, rather it leaves what is known as a digital trail, thus becoming permanent since the Internet records everything and forgets nothing. For instance, according to Rosen (2010) Facebook, is currently the largest social-networking site with nearly 500 million members (618 million daily active

users as of December 2012). Of these users, more than 25 billion pieces of content are shared each month (such as news stories and photos). Therefore, when a juvenile posts a nude photo to their page, and it gets shared over and over, the photo will become a permanent addition to the virtual world regardless of whether the juvenile deletes the original post. To that end, this study first explored the negative consequences of technology-based communications in association with juvenile sexting. The hypothesis was that engaging in sexting increases among juveniles with increased communication opportunity. The results of the bivariate analyses found that just over 71% of the college students sampled admitted to either sending or receiving a sext message, where students with increased communication opportunity were 46% more likely to participate in sending sext and two times more likely to receive sexts than students with minimal or no technological communication opportunities.

In addition to examining the scope of sexting opportunity, the second purpose of this research was to explore the possibility of peer pressure to engage in sexting. While studies examining sexting in general are very limited, the scope generally involving whether or not juveniles sext, studies attempting to empirically analyze the reasons contributing to such behavior are even rarer. With this study, I attempted to determine if peer pressure increased one's likelihood of participation in sexting, as either a sender or receiver. The hypothesis was that students who experience peer pressure are more likely to participate in sexting. The results of the bivariate analyses indicated that peer pressure is significantly associated with sexting in that students with higher rates of peer pressure were 4% more likely to participate in sending sext and 10% more likely to receive sexts than students with minimal or no peer pressure. Additionally, significant bivariate relationships were observed between two demographic variables, opportunity, peer pressure, and sexting (sent versus received). More specifically,

whites are more likely to both send and receive sexually explicit messages than any other race. This could be attributed to a higher social economic status of the juveniles' family. Furthermore, although males were more likely than females to sext, females were more likely to sext due to peer pressure or increase opportunity. This could possibly be attributed to the social norm of our culture for males to be sexually brazen than females.

Limitations and Future Research

These findings provide empirical evidence for the argument that peer pressure and communication opportunities contribute significantly to the prevalence of sexting among high school students. Due to the relatively new nature of sexting, few studies have examined the causes of juvenile sexting aside from its prevalence among juveniles. Thus, certain limitations should be noted. First, due to the paucity of empirical research, there are very empirical studies to draw conclusions from for surveying students. Because the survey has not previously been empirically tested, the student might interpret the survey questions differently than what was intend, therefore producing an invalid response from the individual. Second, the study utilizes data drawn from college students rather than high school students. Indeed surveying college students was a limitation in that some students are non-traditional (e.g. returning to school after working for a variable time period) which could create issues with recollection of high school events as well as recollection in general, regardless of age and time frame.

Third, this study theorized that juveniles participated in sexting behaviors in the absence of a parent or capable guardian, a juvenile who participated in sexting is the motivated offender, and whomever the juvenile sends a sext to or requests/demands a sext from would be the victim or target. However, this study did not test these conceptualized variables individually; rather it was a partial test of routine activities theory in that it simply tested the opportunity a student had

to participate in sexting in high school through the use of technology. Fourth, there is a possible spuriousness in friend networks which could explain either peer pressure, sexting, or both. For instance, dependent upon the friend network the student associates with they might not experience either direct or indirect peer pressure which could reduce the likelihood of sexting in that friend network even if the opportunity was present. Alternatively, the student might experience either direct, indirect or both forms of peer pressure, which in turn could increase the likelihood of sexting in that friend network even if the opportunity was present.

Finally, being the first study of its kind to examine the relationship between sexting, peer pressure, and opportunity, and therefore in a sense an exploratory study, the current study did remove the generalization of the survey questions related to sexting participation. For instance, a composite measure indicating a general participation in sexting (as sender, receiver, or both) was utilized rather than limiting that participation with individuals the student personally knew. Instead, narrowing the survey question from, "Have you ever sent/received a sexually suggestive text/picture/video message?" to "Have you ever sent/received a sexually suggestive text/picture/video message of another student you knew personally?" could possibly alter the results. This change in question format would likely reduce the number of "yes" responses by removing what could potentially be a false positive (e.g. "I received a Photoshopped image of a nude super star, so yes, I guess I participated in sexting"). Further theoretically grounded research is needed to both identify and explain additional predictors of sexting. Since this study only captured college-aged students, future research should direct efforts at surveying a wider age range of individuals to better assess this phenomenon. Policy and program implications directed at reducing probable negative consequences of sexting may be more responsive when age and maturity are taken into consideration.

Policy Implications

Currently most states do not have laws specifically tailored to sexting; as a result states will typically charge juveniles under their current child pornography laws. However, some states are beginning to amend their laws to account for juvenile sexting cases. Several states such as Vermont, Utah, Illinois, New Jersey and Ohio laws offer legislative alternatives. For instance, in Vermont, teenagers who are caught and charged with sexting are processed through family court as a juvenile delinquency case giving a "free pass" to juveniles; any succeeding charges from the same offender results in prosecution under Vermont's sexual exploitation of children laws (Corbett, 2009). A key reason for this change is due to the realization that sexting among juveniles is a far stretch from adult possession of child pornography. Therefore legislators are beginning to address the issue in a different manner than they would a traditional child pornography case (Walker & Moab, 2010).

Law enforcement should also keep in mind that it might be helpful to get the community and local media involved in this issue, not just rely on law enforcement. Additionally, there are several alternative prevention techniques to reduce juvenile sexting and their becoming convicted offenders. These techniques also specifically target peer pressure, and devices equipped with enhanced communications. First, juveniles cannot enter into a legal contract to acquire a cellphone without parental consent. Therefore, parents play a major role in the prevention of juvenile sexting they can restrict access to certain features on the cellphone; or not allow their child to have a cellphone at all (Corbett, 2009). Also, take away the ability to use cellphones in school. Cellphones are not required in school and the purpose for allowing them is for emergency use. However, the use of cellphones in school is far removed from "emergencies only." Subsequently, schools should reinstate their previous cellphone ban not allowing

cellphones to be used on school property during school hours. In cases of emergency, calls should be directed to the main office.

Second, enforce parental controls on computers at home. This is the same concept as the aforementioned parental restriction of cellphone use. Parents pay for the internet at home and typically purchase the computer that the juvenile uses. Therefore, parents can again play a major role in the prevention of juvenile sexting by restricting access to certain features on the computer or not allowing their child to have a computer at all. Enforcing the school's "parental" controls on computers in schools will also decrease opportunity. Computers are a typical addition to schools to enhance learning and research. However, schools possess the right to restrict access to certain features on their computers and this should always be enforced. In addition to limiting juvenile use of technology, parents and guardians could play a more active role in their children's daily lives. For instance, talking to their children or getting involved in daily or weekly activities. Finally, create an awareness of the implications of sexting for juveniles and parents. Insure that juveniles and parents know what could happen to them – legally and emotionally – in your community if they are caught sexting. This can be accomplished through school events or courses, fliers mailed to the juveniles home, television and paper news, put on a play or show a movie, etc. get creative to catch and maintain attention.

It is also fundamental to address peer pressure, not only in general, but also specifically related to sexting. Peer pressure plays a major role in juvenile sexting since peer pressure and peer conformity are both strong predictors of risk behavior (Santor, Messervey & Kusumakar, 2000). As previously mentioned peer pressure among adolescents can lead to the belief that their peer group requires conformity to that group's norms or interests and if the person is unwilling to conform then they are not welcome within the group. Thus, the probability of juveniles

participating in sexting would likely decrease if their peers were not sexting and/or pressuring them to sext. According to Willard (2011) a major challenge to control sexting pressure in schools is that the majority of these interactions occur when students are off-campus or using their personal technological devices at school, which is hard to discover. Unfortunately, the impact of these interactions becomes evident when students are physically together at school when the electronic communication creates an environment in which students are unable to focus effectively on their studies. This could be due to the pressures they receive from their peers and a feeling of an unsafe learning environment.

In their study on school bullying as a creator of pupil peer pressure, Hamarusa & Kaikkonen (2008) state that in terms of policy implications, the target problem (in this case, peer pressure) must be fully understood for successful prevention and intervention as well as the concept of a secure learning environment at school should include the aspect of feeling secure socially. Although this study did not examine parents' or guardians' understanding of sexting peer pressure, it does have implications for future research. However, the findings of this study have brought the nature of sexting peer pressure to light and provides a basis from which prevention and intervention programs could be developed. Therefore, more research is needed in order to gain more extensive understanding of this relatively new phenomenon to develop effective counter-measures against juvenile peer pressure to participate in sexting. Thus, the implementation of awareness programs in middle schools and high schools could potentially prevent juvenile sexting and help decrease the peer pressure to participate.

Conclusion

The present study highlighted common predictors of sexting, including peer pressure and communication opportunity. Despite the aforementioned limitations, the goal of the current study

was to contribute to the small body of knowledge regarding juvenile sexting predictors by generating empirical evidence of relationships that have thus far gone overlooked. While this work provides some answers, it also introduces even more questions, such as 'what role does the parent or capable guardian, and victim or target, play in the prevention of juvenile sexting?' and 'what preventive interventions can impact juvenile sexting?' Thus, technology victimization, such as juvenile sexting, will continue to be of growing importance for future research.

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APPENDICES

APPENDIX A

Peer Pressure & Sexting Survey

How often in high school did you do any of the following?

1. Ever smoked cigarettes

    - 0
    - 1 - 5
    - 6 - 10
    - 11 - 15
    - > 16

2. Ever drank alcohol—more than a sip

    - 0
    - 1 - 5
    - 6 - 10
    - 11 - 15
    - > 16

3. Ever used marijuana/illegal drugs

    - 0
    - 1 - 5
    - 6 - 10
    - 11 - 15
    - > 16

4. Hurt someone badly enough for medical attention

    - 0
    - 1 - 5
    - 6 - 10
    - 11 - 15
    - > 16

5. Taken something from a store without paying for it

    - 0
    - 1 - 5
    - 6 - 10
    - 11 - 15
    - > 16

6. Skipped a full day of school w/out parental permission

   - 0
   - 1 - 5
   - 6 - 10
   - 11 - 15
   - > 16

7. Stayed out all night w/out parental permission

   - 0
   - 1 - 5
   - 6 - 10
   - 11 - 15
   - > 16

On a scale of 1 (no pressure) to 10 (a lot of pressure) how much peer pressure have you felt to do the following in high school?

8. Felt pressure to try cigarettes

1	2	3	4	5	6	7	8	9	10
O	O	O	O	O	O	O	O	O	O

9. Felt pressure to try marijuana/illegal drugs

1	2	3	4	5	6	7	8	9	10
O	O	O	O	O	O	O	O	O	O

10. Felt pressure to drink alcohol

1	2	3	4	5	6	7	8	9	10
O	O	O	O	O	O	O	O	O	O

11. Felt pressure to hurt someone badly enough for medical attention

1	2	3	4	5	6	7	8	9	10
O	O	O	O	O	O	O	O	O	O

12. Felt pressure to take something of value from a store without paying for it

1	2	3	4	5	6	7	8	9	10
O	O	O	O	O	O	O	O	O	O

13. Felt pressure to skip school w/out parental permission

1	2	3	4	5	6	7	8	9	10
O	O	O	O	O	O	O	O	O	O

14. Feel pressure to stay out all night w/out parental permission

1	2	3	4	5	6	7	8	9	10
O	O	O	O	O	O	O	O	O	O

Did you have any of the following when you were in high school?

15. A computer with internet capabilities [Yes / No]
16. A cellphone with text messaging capabilities [Yes / No]
17. A cellphone with video messaging capabilities [Yes / No]
18. A cellphone with internet capabilities [Yes / No]
19. An email account [Yes / No]
20. A social-networking site account (like Facebook or Myspace) [Yes / No]
21. A dating site account (like eHarmony or OKcupid) [Yes / No]

How often in high school did you do any of the following?

22. Sent a sexually suggestive text/picture/video message intended for the person you sent it to?

    - o 0
    - o 1 - 25
    - o 26 - 50
    - o 51 - 75
    - o 75 <

23. Received a sexually suggestive text/picture/video message intended only for you from the original sender?

    - o 0
    - o 1 - 5
    - o 6 - 10
    - o 11 - 15
    - o > 16

24. Received a sexually suggestive text/picture/video message not intended for you from someone else, “third-party” message?

    - o 0
    - o 1 - 5
    - o 6 - 10
    - o 11 - 15

- > 16

25. Forwarded a sexually suggestive text/picture/video message to someone it was not intended for, “third-party” message?

    - 0
    - 1 - 5
    - 6 - 10
    - 11 - 15
    - > 16

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