WHAT SCHOOLS CAN DO: AN EXPLORATION OF PERSONAL AND SCHOOL
FACTORS IN YOUTH SEXTING BEHAVIORS AND RELATED ATTITUDES

A Dissertation
Submitted to
The Temple University Graduate Board

In Partial Fulfillment
of the Requirements for the Degree
DOCTOR OF PHILOSOPHY

---

by
Joshua M. Boden
August 2017

Examining Committee Members:

Frank F. Farley, Advisory Chair, Psychological Studies in Education
Joseph Ducette, Psychological Studies in Education
Meredith Weber, Psychological Studies in Education
Steven Jay Gross, External Member, Policy, Organizational, & Leadership Studies

ABSTRACT

As social technologies become more integrated into students' lives, new means of communication have emerged, along with novel problem behaviors with significant consequences for students' well-being. One of these is the sending of sexualized images via cell phone, referred to as "sexting". An understanding of how and why some students choose to sext is important for schools to appropriately prepare for sexting-related incidents. This study explored some of the personal and environmental correlates of the behavior, including gender, thrill-seeking, impulsivity, perceived school experience, and related attitudes about the normalcy and risk of the behavior. Participants were college undergraduates from a large urban university, retrospectively reporting about their high school experience. Results indicated that the majority of students did not send sexts in high school. However, of those who did, students who sexted exclusively with romantic partners had significantly more positive engagement in school. Students with lower feelings of connectedness, academic motivation, and social belonging in high school tended to sext in riskier ways.

Additionally, recent high school graduates were asked if and how schools should effectively educate students about the risks of sexting. These perspectives were assessed through survey questions and a focus group discussion session. Results suggested that students do recognize the potential consequences of the behavior, regardless of what teachers tell them. They feel that, rather than using "scare tactics", school personnel should try to understand the social and relational context in which the behavior occurs. Limitations of this research are discussed, along with implications and recommendations for practice and future research.

ACKNOWLEDGMENTS

No one person arrives at a destination like this without help from countless others. My many thanks go to all of those who have walked this road with me, for semesters, years, or just brief moments in time. I have been inspired in my work and challenged in my thinking through innumerable conversations with scholars and educators and students young and old. To my undergraduate professors, who first sparked an interest in understanding who we are as people and why we do what we do, thank you for your instruction and feedback. To my many professors at Temple who have pushed me beyond my comfort zones, thank you for pushing me – growth requires discomfort. Special thanks also to all of the adjunct professors who toiled to translate their real-world know-how into relevant night-class lessons, illuminating what textbooks say with stories of their own triumphs and failures.

To my dissertation committee, Dr. Meredith Weber, Dr. Joseph Ducette, and Dr. Steven Gross, thank you for your guidance and patient feedback. Perhaps more than anything, thank you for approving what I've done – for recognizing the potential amidst this study's limitations, and for promoting me to a place where I can continue to learn, to try, to ask questions and to seek answers. To Dr. Frank Farley, my advisor, thank you for your continual encouragement in reaching goals academic and personal, and for getting me to this place.

To my family, thank you for your unwavering support from day one. Mom & Dad, you've always pushed me to reach the top and modeled the hard work required to get there. To Chrissy, my darling wife, thank you endlessly for your patience and encouragement through this long journey, and for giving me the kick I needed to keep

working when my feet were starting to drag. The final stages of this project were completed as we welcomed our baby girl into the world, and this never could have been finished without your flexibility and understanding. We made it!

Finally, I dedicate this project to all children growing up in our digital age, my own daughter included. May we as adults continue to think critically about how we engage with technologies and how we model that engagement for our kids and students. I dedicate this work and my career to making our schools places where all students are connected and motivated to learn, that students would not need to endanger themselves to feel belonging. In order to do that, we as educators and researchers need to understand adolescent worlds and, as much as possible, listen before we speak.

TABLE OF CONTENTS

CHAPTER

APPENDIX

LIST OF TABLES

What Schools Can Do: An Exploration of Personal and School Factors in Youth Sexting
Behaviors and Related Attitudes

CHAPTER 1

INTRODUCTION

The Internet age has introduced endless innovations, from the chain e-mail to the profile

page to the invisible and infinite data Cloud, and some thousands of viral videos along the way.

Many of these advances have changed human communication in indelible ways; the Internet,

after all, is the ultimate canvas for human expression. Nowhere else can information or images

be produced privately and shared publicly in the same instant. What we put online in the midst of

our proudest moments or our deepest despairs is there to stay.

It is in this context, then, that so many millions of adolescents are growing up. They grow

up connected – to ideas and friends and far-off places – in a way that no other generation has

been before. They grow and learn and thrive and create in a global online world that fosters

dynamic communities that support and encourage. But they also grow up in a world where the

impulsivity of teenage life collides with the stolid permanence of the internet through which they

live, where the "vicissitudes of adolescent relationships" are so easily posted, and shared, and

saved for any audience – including the wrong one – to see (Judge, 2012).

In recent years, this collision in the lives of adolescent students has presented one

particularly troubling consequence for parents and educators – sexualized pictures of teenagers,

often taken by the teens themselves, have emerged in various forms of digital media. Typically

these pictures are sent to committed, or potential, romantic partners. Yet what begins in the

throes of amorous experimentation can rapidly become published and public. Research has noted

that people of many ages engage in "sexting", as this novel behavior is known (Parker,

Blackburn, Perry, & Hawks, 2013), but as the potential consequences for youth sexting are more severe, it is adolescent sexting behaviors that are particularly worthy of study.

This happens every day with teenagers and young adults across the world (Klettke, Hallford, & Mellor, 2014). Most of the time, the situation ends before anything problematic begins: one teenager simply has pictures of another. But on some occasions, it goes further. Perhaps a student tries to impress his friends by forwarding pictures on to them. Before the night is over, dozens of students are in possession of a picture and the picture's subject – often female – is humiliated. She is derided by the girls and teased by the boys, and refuses to return to school the next morning. Suddenly, school professionals are drawn into the situation and forced to make sense of what has happened.

Schools can be influential in promoting positive outcomes in students' lives, both through direct intervention and the more indirect effects of a positive school climate (Hinduja & Patchin, 2012). Yet how schools can best respond to incidents like these, and how they can work to prevent them from happening in the first place, is not clearly understood. Schools that have worked to proactively instruct their students in safe Internet and social media usage have done so in varying ways (Klettke, Hallford, & Mellor, 2014), and to varying degrees of success (Doring, 2014). Some researchers have asserted then, that a carefully cultivated school climate may be the most important factor in protecting students from negative consequences of youth sexting (Hinduja & Patchin, 2012).

Whether they attempt abstinence-focused risk education or focus more on teaching online safety, there is often a difference between what schools think about online risk and what students think themselves (Doring, 2014). These behaviors do not occur heedlessly and in isolation – there is a relational context to what students do online that includes all the shifting social

pressures of adolescent life (Albury & Crawford, 2013). A critical perspective, then, in the assessment of school influence on sexting behaviors can be provided from high school students themselves. Recent high school graduates can provide valuable information about their own high school experiences and youth sexting behaviors (Strohmaier, Murphy, & DeMatteo, 2014; Strassberg, Rullo, & Mackaronis, 2014), thus illuminating the links between school experience, sexting behaviors and attitudes, and predictive personality traits.

The purpose of the current study is to further explore the nature of youth sexting behavior and attitudes, and the related effects of school experience and risk-taking personality characteristics. The study builds on the work of Hinduja & Patchin (2012) and others, who have suggested that positive school climate can be a strong protective factor for increasing students' online safety and limiting risky sexting behaviors. Some research has also indicated a significant link between psychological attributes and youth sexting, and the assessment of thrill-seeking and impulsive personality traits allows for an examination of whether individual factors or school experience better predict youth sexting behavior and attitudes.

Additionally, the study will assess the perspectives of these recent high school graduates on the role of schools in shaping student sexting behavior. The views of high school students themselves contribute significantly to the broader conversation about sexting in modern adolescent life (Walker, Sanci, & Temple-Smith, et al, 2013), and their views can also be useful for appraising the efficacy of school attempts to address the behavior. The use of open-ended questions and a guided focus group discussion allows for supplementary analysis of student perspectives on youth sexting risks and related factors, based on an inductive rather than deductive framework.

Several broad questions are raised, including: how effective have schools been in influencing student sexting behavior? How effective can they be, based on the experiences and perspectives of recent high school graduates? What other variables, beyond the best efforts of a school, might affect the sexting behaviors of students? The ultimate goal of the research is to help inform school practices in this area. There can be no complete instruction manual for something as diffuse and complex as youth sexting, but it is hoped that the study's findings can provide broad recommendations for helping educators thoughtfully prepare.

Research Questions & Hypotheses

Although primarily exploratory in nature, this study sets out the following general hypotheses. First, the prevalence of youth sexting behavior is expected to be less than the majority but close to 50% (1a), based on data reported in a similar study (Strassberg, Rullo, & Mackaronis, 2014) and a review of prevalence in other reports (Klettke, Hallford, & Mellor, 2014). Of those, more may report ever receiving than ever sending, and only a small number will likely report forwarding pictures of someone else (1b). More males than females may report receiving, but more females than males may report sending (1c). Of those who ever sent a sext, most will likely report sending to a boyfriend/girlfriend (1d).

Regarding attitudes towards youth sexting and school intervention, it is thought that student responses will be mixed. Students who report perceiving risk around the behavior may not report it also as being normal for teens today (2a). Students who report ever having sexted may also report more favorable youth sexting attitudes (higher acceptability; lower perceived risk) than those who never sexted (2b) (Strassberg, McKinnon, Sustaita, & Rullo, 2013; Weisskirch & Delevi, 2012).

Perceived high school experience will also be analyzed in this study as an assessment of overall school climate. Students who report higher overall school experience may report less favorable attitudes toward youth sexting (3a), less sexting behavior overall (Hinduja & Patchin, 2012) (3b), and more favorable views on sexting education (3c).

Students who are higher in self-reported thrill-seeking traits and impulsivity may report more sexting behavior (4a), more favorable attitudes toward sexting (4b), and changes in thrill-seeking may relate to differences in perceived school experience (4c). Of those who report ever sexting, lower thrill-seekers may be more likely to send only to boyfriend/girlfriends and higher thrill-seekers may send to other groups (4d)

The final objective of this study is to understand students' views on "sexting education", or formal interventions by teachers and school staff designed to keep high school students safe. This information will be collected through a 4-item scale on the topic, an open-ended question, and a discussion session with a small group of students. It is expected that most students will feel that school intervention is necessary, though it will not be widely perceived as effective (5a). When asked about what schools should do, students will likely criticize what their own schools did (5b) and suggest ways of recognizing the behavior from within the context of teenage lives (5c) (Klettke, Hallford, & Mellor, 2014).

CHAPTER 2

LITERATURE REVIEW

Sexting is a recent phenomenon and, as such, research on the behavior is an emerging field. Studies of the behavior and related attitudes and risk factors have appeared in journals from a variety of disciplines over the past decade, but there is still much to be explored. A review of current literature from the fields of human development, child psychiatry, sociology, criminal justice, education, psychology, and computer science can provide a range of valuable perspectives on sexting, its predictors, and its consequences. This discussion will review sources from all of these disciplines to explore the development of sexting behaviors and attitudes in adolescents, and the roles that schools have attempted to play in the shaping of those things.

To establish a foundation for this study, the current review of the literature will explore four major themes. First, we will look broadly at the impact of modern communication technologies on adolescent life. In the past decade, social media has moved from a novelty to a cornerstone of adolescent social life and communication, and some general effects of these technological advances will be discussed. Second, we will operationally define sexting behavior and examine how it fits within the social landscape of teenage life, including estimates of prevalence. Third, trends in the scholarship surrounding sexting behaviors and related attitudes will be examined. Much research has been conducted on the topic across various disciplines, and though some questions have been answered many more remain. Finally, the impact of the school will be considered, both through direct interventions and the indirect effects of school climate and perceived school experience.

Adolescent Development in the Social Media Age

Those who did not grow up in the "digital age" may consider mobile technologies as convenient tools to simplify and streamline modern life – for improved communication, organization, and access to information. Yet for children and adolescents who have grown up in this digital age, mobile technologies are so much more than mere accessories to life. Instead, they become the very centerpieces around which their social worlds converge (Judge, 2012).

Statistics from the Pew Research Internet Project (Madden, et. al, 2013) estimate that 95% of teenagers aged 12 – 17 are online, and about three in four teens access the Internet on cell phones, tablets or other mobile devices. A 2014 study (Edison Research, 2014) of the top social networking sites used by people aged 12-24 found that 53% have an Instagram account, 80% have a Facebook profile, and 46% of respondents have ever used the picture messaging app Snapchat. Twenty-eight percent of respondents of all ages reported checking their preferred social networks "several times per day" (Edison Research, 2014).

However, in a rapidly changing media landscape, survey-based statistics can quickly become outdated. The specific networks and programs that teens and young adults use to connect online may change from year-to-year, but from all of this shifting data the message is the same: virtually all young people are using social media. They use sites and mobile apps to connect with friends, to seek out new relationships, to express themselves creatively, to share information and pictures, and to learn and gossip and just talk with their friends. Many adults have incorporated these activities into their pre-existing social lives, but children and adolescents today grow up with these technologies already a part of their lives and thus create their social worlds *using* new and emerging forms of social technology. The instant access to information changes when, how,

and what teenagers learn about themselves, their peers, and the world; unfortunately, these

changes may not be entirely positive (Valkenburg & Peter, 2011).

The Impact of Social Media on Adolescent Life

The American Academy of Pediatrics (AAP) published a guide for medical practitioners

about the leading benefits and risks associated with social media use in their adolescent patients

(O-Keefe & Clarke-Pearson, 2011). The document serves as a broad introduction to the major

advantages and concerns identified by researchers and practitioners in the field of adolescent

development. Adolescents' heightened connectivity, according to the AAP, brings many

benefits, include rapid communication, socialization and identity development, growth and

sharing of ideas, expression of personal creativity, enhanced learning, and increased access to

health information. These are all central facets to healthy adolescent development and

innovations to support these should be encouraged (O'Keefe & Clarke-Pearson, 2011).

Nevertheless, the pace and prevalence of this digital connectivity can also lead to

problems. "Because of their limited capacity for self-regulation and susceptibility to peer

pressure, children and adolescents are at some risk as they navigate and experiment with social

media" (O'Keefe & Clarke-Pearson, p. 800, 2011). The risk areas highlighted by the American

Academy of Pediatrics include cyberbullying, or when teens use digital media to communicate

false or harmful information to disparage an individual. Related to this is sexting, which the AAP

defines as the sending of sexually explicit messages. Beyond the legal ramifications for minors

caught with sexual images of other minors, the authors also refer to the emotional distress and

educational risks for teens who sext and for victims of malicious sexting. But not everything is

so grim; the AAP ends their discussion of sexting with an optimistic caveat, that in most

circumstances a sext does not get shared beyond a small peer group and may not cause any emotional distress to those involved (O'Keefe & Clarke-Pearson, p. 800, 2011).

The AAP paper presents the consensus of pediatricians on the impacts of social media – it has many benefits, but should be used with caution in some areas. Researchers in psychology and human behavior are also interested in the risks and benefits of social media for developing adolescents. Much of the research focuses on the same core questions: how has all of this technology changed teenage life and development? The conclusions are mixed, and tend to skew either toward positive or negative outlooks.

On the one hand, some researchers argue that the basic drives of adolescents haven't changed despite all of this technological change (Novotney, 2012). The need to belong and understand one's identity (Erikson, 1968) that so often looks like rebellion and conformity has not changed; it is only the methods by which these drives are executed that have changed. Additionally, some consider the digitization of communication to actually benefit social functioning for all teens, especially those who are marginalized in traditional contexts; those who have struggled to connect in the physical world can find community online. A 2010 Australian study explored the relationship between online communication and adolescents' social anxiety (Bonetti, Campbell, & Gilmore, 2010) and found that children who identified as being lonely spent more time communicating online about personal topics than socially anxious or typical teens. These young people said that when communicating online they did not feel as shy, could talk more comfortably, and dared to say more. The authors concluded the Internet provided safety for lonely adolescents to communicate in an environment "in which they can better express their inner selves and find conversation more satisfying than they do offline" (Bonetti, Campbell, & Gilmore, 2010).

On the other side of this debate, some have concluded that the digital age has caused a fundamental shift in human communication and relationship formation. In a hyper-connected world, people may actually be more alone than ever before, as traditional human interaction is now conducted via (or frequently interrupted by) ubiquitous screens (Turkle, 2012). Psychologist and author Sherry Turkle argues that in the era of digital communication and online friendships, "We're losing our sense of the human voice and what it means – the inflections, hesitations and the proof that someone isn't just giving you stock answers" (Novotney, 2012). These shifts are significant for human functioning at all stages, but a growing body of research explores how changes in communication technologies may adversely affect teenagers. For examples, studies have explored how technology usage affects teenage body image and insecurities (Tiggeman & Slater, 2014); how heightened social comparisons through social media lead to impressions that all *other* kids are happier (Chou & Edge, 2012); and how greater investment in social media profiles may lead to lower self-esteem and higher depressed mood (Neira & Barber, 2014).

Adolescent Social Behavior and Identity Development Online

Research has demonstrated that, in many ways, communicating online is different than communicating in-person. For one, individuals who interact online do so with less reliance on social status and nonverbal cues (Bonetti, Campbell & Gilmore, 2010). Furthermore, online communication is generally more anonymous, which may motivate the sharing of more intimate or personal information than someone would share face-to-face with a stranger (McKenna, Green, & Gleason, 2002). Computer-mediated communication reduces the reliance on nonverbal cues involved in face-to-face communication (High & Caplan, 2009). This may also reduce some of the stress-inducing ambiguity that socially anxious individuals feel in traditional

communication, which is particularly pertinent for the socially stressful world of teenagers (Pierce, 2009).

These differences are relevant for the social development of teenagers, who are enabled online to interact in new ways – both safer and riskier – as they navigate the social world of adolescence. It has been argued that the pace and anonymity of online communication allows for misrepresentation and even falsification of identities (Cyr, Berman, & Smith, 2014). In other words, teenagers can be whoever they want to be online, altering their personas and experimenting with relationships and communication from the relative safety of digital media.

In a study of online consumer behavior of adolescents, Drenten (2012) examined how adolescent identity development is shaped by the social world teens inhabit online. Teenagers have often sought to define themselves through their associations with peers. They experiment with different tastes and attitudes and behaviors as means of exploring their identities. The feedback they receive through the process of social comparison is critical in shaping the form the identities take. Previously, that feedback was only delivered directly by peers in personal, face-to-face settings. Now, the feedback loop continues throughout the day, allowing for social comparisons across time zones and social groups, transcending any physical barrier (Drenten, 2012).

Closely related to this is the rapid proliferation of image sharing technologies. Many teens use image-sharing applications on their smartphones on a daily basis (Edison Research, 2014). Pictures are shared as a primary form of communication, both with close friends and with large groups. Yet it is important to recognize that mobile photo sharing is not a candid camera. The self-image that teenagers project online has been referred to as "edited self-presentation"

(Drenten, 2012, p. 12). The images are carefully produced and do not happen incidentally. Teenagers are aware of the power of an image to convey messages, moods, and ideas.

Problems of Technology in Adolescent Life

Unfortunately, teenagers can also harness the power of images to harm others. Although this study will not focus on bullying behaviors online, the emergence of cyberbullying behaviors illustrates the novel risks inherent in digital communication, and the potential consequences adolescents face in the new online world. And yet, can we blame technology itself for these problems? With the prevalence of serious problems like cyberbullying and malicious sexting, it is easy to blame technology for so much of what harms students. But technology itself is not to blame for these problems, any more than cars are to blame for the thousands of teenage deaths each year in automobile accidents (Hinduja & Patchin, 2012). Although mobile technologies have incredible power in the lives of adolescents and there are definite risks to their misuse, it is critical to remember that most teens do use these technologies responsibly (Hinduja & Patchin, 2012).

It is within that ever-evolving technological backdrop that youth sexting behaviors have emerged. The nature and prevalence of sexting behaviors have caused them to be scrutinized and studied widely. However, conclusions from the growing literature base on the subject are varied, due in large part to variability in how sexts and sexting are defined and then measured (Lounsbury, Mitchell, & Finkelhor, 2011). It benefits the present study to establish a clear definition for analysis.

Sexting: Definitions and Prevalence

Sexting has been variously defined throughout the past decade. Some researchers have defined it as the transmission of sexualized digital information, including written e-mails or texts

that proposition sexual activity but may not be sexually explicit in nature. For instance, some research operationally defines a sext as the digital transmission of sexually themed information, be it pictures or just suggestive text (Weisskirch & Delevi, 2011). Others have deliberately excluded sexually themed communication and focused more specifically on photos or videos, perceived to be riskier (Crimmins & Seigfried-Spellar, 2014). Though all studies offer their own definition, one meta-analysis of the literature sums up the differences with a definition that is general but useful. Most broadly, sexting refers to "the interpersonal exchange of self-produced sexualized texts and above all images (photos, videos) via cell phone or the internet" (Doring, 2014, p.1).

Perhaps unsurprisingly, the estimated prevalence of sexting behavior varies widely depending on the objectives of the study, the sorts of questions asked by researchers, and how they have defined the behavior. Additionally, not only must one rely on self-report for estimations of this illicit behavior, but with the rapid expansion of digital access among teens, figures are constantly changing. Early reports that up to 20% of teens engage in sexting have been cited in studies that produce a more modest estimate in the single digits (Mitchell, Finkelhor, Jones, & Wolak, 2012). This has led some researchers to suggest that concerns about teenage sexting behavior may be exaggerated (Lounsbury, Mitchell, & Finkelhor, 2011).

In a recent meta-analysis on the subject of sexting, Klettke, Hallford, and Mellor (2014), reviewed 25 studies that had measured the prevalence of sexting behaviors for either young adults or teenagers. One study of college students reported findings that up to 50% had sent sexts (Hudson, 2011), while another reported that less than 30% (Temple, et. al, 2012). Evidently a wide range in prevalence was observed across the 25 studies, and the authors concluded that establishing accurate estimates is difficult due to the variance in definitions and sampling

techniques used in studying sexting. Despite this, some general trends were noted: sending and receiving sexts was more prevalent amongst adults than adolescents; receiving is reported more frequently than sending; and studies with convenience or self-selected samples tend to return higher estimates of prevalence (Klettke, Hallford, & Mellor, 2014).

<div align="center">Scholarship on Sexting: Findings and Future Directions</div>

Research on sexting behaviors, attitudes, and related variables began around the time that adolescent sexting incidents began to draw national attention. Because of a few high profile sexting scandals in American schools, including teenage suicides (Burleigh, 2013) and criminal investigations involving minors (Rosin, 2015), the risks of sexting have been publicly documented. Some early studies (i.e. Calvert, 2009) reviewed the legal implications of sexting for adolescents, particularly as teenagers around the country were being prosecuted under child pornography laws for sending and receiving sexualized images of themselves and peers (Judge, 2012). Beyond the legal complexities of this novel behavior, the psychological correlates and predicting variables also drew interest from researchers (e.g. Weisskirch & Delevi, 2011; Crimmins & Seigfried-Spellar, 2014). Why do teens engage in this risky behavior? What variables predict sexting behaviors and related attitudes? What can be done to limit the consequences of sexting for students?

Some scholars have worked from the assumption that sexting is a manifestation of risk-taking or attention-seeking tendencies, or an expression of inappropriate sexuality. But some scholarship has argued that there is no evidence for significant associations between sexting and psychological problems (Englander, 2012). Indeed, it may be futile to study how psychological well-being predicts sexting, as findings from copious research on the topic remains inconclusive (Strohmaier, Murphy, & DeMatteo, 2014).

Additionally, many studies have explored the link between sexting and other risky behaviors. Once again, findings have been mixed, with the preponderance of studies pointing to a positive correlation between sexting behavior and casual and unprotected sex (Dake, Prince, Mazriaz, & Ward, 2012). Higher reported use of alcohol and drugs has also been linked to sexting behavior (Benotsch, Snipes, Martin, & Bull, 2013). Another study found that higher sexting frequency was related to impulsive behaviors (Dir, Cyders, & Coskunipinar, 2013). Yet none of these links are causal, and some research has contested the link between sexting and risky behavior, including other sexual risk-taking (Gordon-Messer, Bauermeister, Grodzinski, & Zimmerman, 2013).

For this reason, Strassberg, McKinnon, Sustaita, & Rullo (2013) have argued that knowing about sexting prevalence and related attitudes and behaviors – including risk-taking – is not enough to fully understand the behavior. Researchers, and the educators who want to help students, need to understand how sexting functions within the world of adolescents. In other words, the positive consequences of the behavior are as worthy of study as the negative ones (Strassberg, et. al, 2013). This is not to encourage a behavior with well-documented risks, but to re-frame the discussion to see it as teenagers do: not as a risky and deviant activity, but one that is attempted for the sake of intimacy within relational contexts.

Doring (2014) discussed the emergence of two discourses in sexting research – a deviance discourse (i.e. sexting is always risky) and a normalcy discourse (i.e. sexting is normal intimate communication). The deviance discourse observes that sexting is often linked to sexual objectification, risky sexual behavior, bullying and criminal prosecution. The normalcy discourse, on the other hand, interprets sexting as "normal intimate communication within

romantic and sexual relationships, both among adults and adolescents who are exploring and growing into adult relationships" (Doring, 2014, pp. 1).

Although most research naturally falls between these two extremes, there is a growing research base to counter the assumption that sexting is always associated with psychological problems or risky sexual behavior in the real world (Gordon-Messer, et. al, 2013). Indeed, in one recent study (Strohmaier, Murphy, & DeMatteo, 2014), very few negative consequences were experienced by participants who reported sexting as minors. The authors of this study took this as an encouraging sign, that:

> ... although negative legal and psychological consequences of youth sexting are real phenomena, the majority of sexting activity that occurs among youth in the USA does not result in tragic instances of bullying, suicide, and over-zealous prosecution so often portrayed in the media (Strohmaier, Murphy, & DeMatteo, 2014, pp. 252).

So what do we know about sexting, consensual or otherwise, and what are the next steps for research in the field? Several studies have been conducted on attitudes toward sexting and, unsurprisingly, attitudes toward sexting were more positive among those who reported engaging in the behavior (Klettke, Hallford, & Mellor, 2014). Individuals who report sexting previously do not appear to perceive greater risk for the behavior than those who have not sexted, and external factors (i.e. peer pressure, relational expectations) are a strong motivating factor for engaging in sexting (Klettke, Hallford, & Mellor, 2014; Weisskirch & Delevi, 2011). Knowledge of the legal consequences of sexting may act as a deterrent to sexting for many minors, but would not deter all youth from sexting (Strohmaier, Murphy, & DeMatteo, 2014). Consequently, any educational and legal initiative to address youth sexting should incorporate more than just risk-education and instruction in legal deterrents.

The Role of Schools

Direct Intervention

American schools have been at the center of many high profile sexting incidents (e.g.

Burleigh, 2013; Rosin, 2015). As such, many educators have wondered: what can be done to stop

sexting? How can we prevent the behavior from leading to bullying and student crises? The

following statement from the Texas School Safety Center (2015) illustrates the concern that

educators feel, and echoes the call to action heard in many places:

> Sexting among youth has become a concern as methods of communication become more
> common through an electronic platform. Therefore, it is the responsibility of adults to
> educate youth on appropriate communication between peers as well as with other adults.
> In order to implement effective prevention strategies, it is imperative that educators,
> parents, law enforcement, and legislators understand the motivations surrounding sexting
> behaviors. Further, youth must be comprehensively educated regarding the multitude of
> consequences that can arise from sexting, including the legal, social, emotional, and
> future educational/career ramifications of engaging in this type of behavior. (Texas
> School Safety Center, 2015).

The above statement argues that comprehensive education can inform students about the risks of

sexting and thereby limit the impacts of the behavior on the lives of students and school

communities. Many groups have a role in this process, including educators, parents, law

enforcement and government officials, but the role of schools may be particularly crucial.

Hinduja and Patchin (2012) invoke the mandates of Title IX of the Educational Amendments of

1972, wherein schools are required to prevent sexual harassment in any form, in order to provide

all students safe spaces for learning. The digital world, along with behaviors related to

cyberbullying and sexting, has increased the potential for sexual harassment, and many educators

hope to do something before a crisis arrives at their school (Hinduja & Patchin, 2012).

Education can be a powerful force for shaping students' attitudes and values, but is it

effective for changing students' sexting behaviors? It may be important to try, as some have

argued that sexting can have a negative impact on school climate as it relates to peer and psychosocial problems for students; as such, schools should prepare for it, despite the lack of research about effective sexting prevention or intervention measures (Van Ouystel, Walrave, & Van Gool, 2014).

There are some sexting-related education tools available for educators, even if their efficacy has not been evaluated. Doring (2014) reviewed six widely utilized sexting education campaigns targeted to youth and found that all six promoted a message of "sexting abstinence". Yet since research has failed to demonstrate a consistent link between sexting and other psychological, social, or sexual problems (e.g. Gordon-Messer, et al, 2013), it has been argued that these "sexting abstinence" messages are at odds with adolescents' actual lives, which often involve "safe sexting" within the confines of intimate personal relationships (Albury & Crawford, 2013). These abstinence-only campaigns tell teens (particularly young women) that they can't trust their partners, when in fact many teenagers send these messages as signs of trust and intimacy (Doring, 2014). And although many teens do recognize the potential consequences of sexting, Strohmaier and colleagues (2014) found that knowledge of legal and personal risks related to sexting does not necessarily reduce frequency of sexting behavior. Furthermore, research has shown that "scared straight" programs do not consistently achieve their goals of changing teen behavior (Strohmaier, Murphy, & DeMatteo, 2014).

Walker, Sanci, and Temple-Smith (2013) studied teenagers' own perspectives on sexting, and concluded that social and relational pressures play a significant role in if and how teens sext. They participate in the behavior within relational contexts, sometimes safely and sometimes recklessly, but the decision is not made based on a careful appraisal of legal implications (Walker, Sanci, & Temple-Smith, 2013). Interestingly, in one survey of recent high school

graduates, close to 30% supported educational programs as the sole appropriate sanction for

students involved in sexting (Strohmaier, Murphy, & DeMatteo, 2014). More than legal action or

more punitive measures, teens may support educational initiatives to deal with inappropriate or

exploitative sexting.

So if sexting is not perceived as deviant behavior to many adolescents, but educational

initiatives are still supported for addressing the behavior, "the answer is not in education about

the seriousness of legal implications" (Walker, Sanci, & Temple-Smith, et al, 2013, p 700).

Educators should recognize that teenagers do use developing moral values to guide their

decision-making. Recognizing what is happening in the world of teenage students and

encouraging safe behavior, may be the most effective means of reducing serious consequences

(Doring, 2014). This may mean thinking beyond traditional classroom lectures and looking more

broadly at other school characteristics that can influence student behavior.

Positive School Climate & Experience

Of all of the many school-related variables that have been found to affect student success

and prevent student problems, school climate is one of the most significant (Hinduja & Patchin,

2012). School climate can be difficult to define, though it is felt profoundly by those who work

within a school system. School climate reflects "the physical and psychological aspects of the

school that are more susceptible to change and that provide the preconditions necessary for

teaching and learning to take place" (Tableman, 2004, p. 2). This concept should not be confused

with school culture, or the shared ideas and values that give a school its identity. Put simply,

school climate is how students *feel*.

It is important that educators address school climate, as research has shown that

perceptions of school climate are linked to positive academic, social, and behavioral outcomes

and a decrease in general problem behaviors among students (Gage, Larson & Chafouleas, 2016). School staff may feel they have cultivated a positive school climate, but if students feel unsafe or restricted or unheard, then there may be issues with climate (Hinduja & Patchin, 2012). School climate can occasionally be influenced by factors beyond the control of school staff, but there is much that can be done to ensure students feel safe and supported.

The maintenance of a positive school climate can have a dramatic impact on the academic success of students, but it may also have positive effects across other aspects of life. Positive school experience may lead to a reduction in student participation in inappropriate behaviors, such as cyberbullying and sexting. Hinduja and Patchin (2012) found that students were less likely to engage in cyberbullying and sexting if they attended schools with more positive school climate, as rated by students. This is a correlational finding, to be sure, but it illustrates how the perception of positive school climate may act as a protective factor in other areas of teenage behavior. Furthermore, it builds on Doring's (2014) argument for the recognition of contextual factors in school efforts to address sexting among students. Schools may not be able to limit sexting solely through abstinence education, but by promoting a positive school climate where students feel connected and valued, they may be able to affect positive change in student behavior.

CHAPTER 3

METHODOLOGY

Participants

Survey

Participants were undergraduates from a large urban university in the northeastern United States. Students were sampled from general education courses typically taken by first- and second-year students; in this way, participants were ensured to be recent high school graduates. Participants who reported graduating in 2012 or sooner were excluded from the study. Several others skipped too many items to provide sufficient data. The remaining sample included 91 participants. Of the 91, 68% were female, 64% were age 19 or younger, and 57% graduated from high school in 2016. The gender ratio is similar to the current national estimates of the male-female undergraduate population, approximately 40% male to 60% female (Fuller, 2010). By this particular characteristic, the current sample is nearly representative of the gender ratio for the general population of undergraduate students. Another specific objective of this study was to assess behaviors and attitudes of recent high school graduates, and these demographic data support that aim. Demographics of the survey sample population are presented in Table 3.1 and Table 3.2.

Collecting data from college students about their high school sexting experiences has been done previously (e.g. Strassberg, Rullo, & Mackaronis, 2014). This use of "retrospective reports" may even lead to increased honesty, especially as minors may be influenced by social desirability when asked about current behaviors (Strohmaier, Murphy, & DeMatteo, 2014). The voices of recent high school graduates are valuable to the ongoing discussion of how to educate students about safer sexting. These students have recently been through high school with its

pressures and expectations, and they can look back and offer a valuable perspective on how risky the behavior is for today's youth, and what schools can do to more effectively protect their students.

Table 3.1 *Age of Online Survey Participants*

	N	*Min*	*Max*	*Mean*	*SD*
Age	91	18	22	19.12	1.20

Table 3.2. *Frequencies for Participants' Gender and Year of High School Graduation*

	N	*%*
Gender		
Male	29	31.9
Female	62	68.1
Year of Graduation		
2016	52	57.1
2015	17	18.7
2014	9	9.9
2013	13	13.2
2012	1	1.1

Focus Group

A separate group of first- and second-year students was recruited for participation in a focus group discussion about topics related to this study. An honors section of a general

education course was selected, and students opted in to participate in the discussion during class time ($N = 15$). To preserve the anonymity of these discussion participants, no demographic information was collected.

<center>Measures</center>

<center>*Demographics*</center>

Participants reported their gender, age, and year of high school graduation. These data are reported in Table 3.1 and 3.2 above.

<center>*Youth Sexting Behaviors – Retrospective Reporting*</center>

Strassberg, Rullo, & Mackaronis (2014) designed a brief assessment of high school students' sexting behavior, designed for retrospective reporting by college students. It was used in the current study with permission. Although the authors did not report reliability data, they noted convergent validity when compared to prevalence rates noted in previous frequency studies. "The consistency of these findings leads us to believe that they are likely valid estimates of the prevalence of these behaviors" (Strassberg, Rullo, & Mackaronis, 2014, p. 180). The authors found significant differences in sexting behaviors (e.g. rates of sending; rates of receiving) across the sample: significantly more people reported having received than having sent a sext; significantly more males reported receiving a picture than females (Strassberg, Rullo, & Mackaronis, 2014, p. 180). These frequency statistics were tested for the current study.

<center>*Sexting Attitudes Scale*</center>

This is based on a scale originally created by Wesskirch and Delevi (2011) to study the link between sexting attitudes and romantic attachment. The authors conducted a principal components analysis with Varimax rotation to yield three factors – Perceived Risk, Relational Expectations, Fun and Carefree – accounting for 56.76 % of the variance. Boden and Pendergast

<center>23</center>

(2015) adapted the scale to an abbreviated version including 10-items, five from the Perceived Risk and Relational Expectations subscales. In that study, confirmatory analysis supported the two-factor solution, with a Cronbach's alpha greater than .8. The four items from the Perceived Risk subscale, and six items of the original Fun and Carefree subscale (Weisskirch & Delevi, 2011) were re-introduced into the measure for the current study.

The final version of the Sexting Attitudes Scale, as used in this study, included 10 items that are expected to load onto two factors, related to perceived risk and perceived normalcy of the behavior. See preliminary analysis section for more on the structural validity of this scale. Exploratory factor analysis was conducted to explore factor loadings and determine if an overall attitudes score is valid for interpretation. Finally, to adapt the scale for use in the current study, wording for all items were revised to reflect attitudes towards *teenage* sexting (e.g. sending sexts is risky *for teenagers;* sexting is just part of *teenage* flirting).

Perceived School Experiences Survey

This is a brief measure of student perceptions of school climate, developed by Anderson-Butcher, Amorose, Iachini, and Ball (2012).The full survey is 14-items that load onto three factors: Academic Press (4), Academic Motivation (6), and School Connectedness (4) and an overall score. Participants rate their responses on a 5-point Likert scale (1=Strongly Disagree; 5=Strongly Agree).

Internal Validity: Exploratory & confirmatory factor analyses were conducted on an original 16-item scale. Two items were removed as part of confirmatory analyses, to create a valid 14-item model. All items significantly (p < .05) loaded on their respective latent factors. Additionally, an Overall PSES score was also identified as a valid score for interpretation. Regarding reliability, the study authors examined the internal consistency estimates for the three

factors using Cronbach's alpha coefficients. Each factor demonstrated adequate reliability (.87 for Academic Press, .86 for Academic Motivation, and .88 for School Connectedness). Test-retest reliability correlations for all four factors (including Overall PSES) all fell above .83. The four-factors were examined for predictive validity by correlating the factors with previously linked variables, including validated scales for self-reported sense of belonging and perceptions of social competence, and positive and significant results were found (Anderson-Butcher, Amorose, Iachini, & Ball, 2012). The PSES factor structure was tested for this sample, and results of this confirmatory analysis are included in Chapter 4.

Views on Sexting Education

A brief measure was created for the current study related to respondents' beliefs about the role of school staff in addressing youth sexting. The scale contains four items created by this researcher. There is literature on the relationship between schools and teenage sexting that argues for the necessity of school intervention (Hinduja & Patchin, 2012), as well as research that questions the efficacy of such interventions (Van Ouystel, Walrave, & Van Gool, 2014). As such, it was thought that a scale designed to address students' beliefs about the role of educators in addressing youth sexting should include items related to both *effectiveness* and *necessity*. Exploratory analyses of the structural validity of this scale is included along with other preliminary analyses. Additionally, an optional open-ended question was included, asking participants to explain how they would address sexting behavior among their students if they were a school administrator. This item provided valuable qualitative information on the perspectives of recent high school graduates on the role of high school staff in addressing this issue.

Type T Personality Scale

To assess thrill-seeking personality traits, the seven-item Type T personality scale was used (Farley, 2016, personal communication). This measure is used to assess a person's thrill-seeking traits. It uses a 4-point Likert scale (1 = does not apply at all; 4 = applies very strongly) and yields an overall score to indicate levels of risk-taking (i.e. a big T suggests high levels of risk-taking). Hellmuth (2016) investigated the reliability of the scale, noting previous research (Jennings, 2012, as cited in Hellmuth, 2016) had reported a Chronbach's alpha of 0.81 for the seven-item scale. A principal components analysis revealed two factors explaining 66.2% of the total variance; the two-factor solution was retained, termed T-General (5 items) and T-Mental (2 items) (Hellmuth, 2016).

For this study, an additional single item was added to the Type-T scale in consultation with the author, Dr. Frank Farley. This item was intended to assess for self-identified impulsivity: "I often act impulsively". This item was grouped with the other Type-T items, and analysis of structural validity, included in preliminary analyses, indicates how it interacts with the overall validity of the scale. The type T personality scale was used in this study to explore a possible relationship between thrill-seeking traits and sexting behavior and attitudes.

Procedures

Online Survey

An original questionnaire was designed for the current study, containing items from the measures discussed above. The online survey consisted of 45 items, and was created and administered using Survey Monkey. The full survey is presented in Appendix A. Participants were sampled from general education courses, and they were invited to participate through a

direct link emailed to them from their professors. The survey was open and received responses between January 16 and February 27, 2017, with most responses received in late January. Most participants took between 3 and 8 minutes to complete the survey.

Once the link was clicked on, a page with informed consent was presented, including detailed information about the purpose of the study, the anonymity and confidentiality of responses, contact information for the researcher, and directions for the study. Students were informed that by clicking on "Begin Survey" they were providing their informed consent to participate. Participants were permitted to skip items and could exit at any time. After demographics, they provided responses to the Perceived School Experience Scale, youth sexting behaviors, youth sexting attitudes, sexting education beliefs, and the Type T personality inventory.

To incentivize participation, participants were informed they were eligible to win one of two $50 Amazon gift cards. At the end of the online survey a link was displayed for an external web page for collecting email addresses; this ensured that no identifying information was linked to survey data. The two winners were randomly selected and informed separately in March 2017 that they had won the gift cards.

Focus Group

To supplement the data collected through the online survey, a focus group discussion was held in March 2017 to explore, in a more informal dialogue format, topics relevant to the current study. One honors section of a general education course was selected for participation, and the discussion was conducted for 30 minutes one day at the end of regularly scheduled class time. Students were informed several days prior to the event that they would be asked, though not required, to participate in a discussion about youth sexting behavior among high school students

today. On the scheduled date, the examiner arrived in the classroom as the course instructor was leaving. The purpose of the study was explained, informed consent and opt-in paperwork was distributed, and students were clearly told they were not required to stay. All who did stay were eligible for one of three $20 gift cards for participating, and active participation in the discussion was not a requirement to be eligible. Email addresses were collected on the opt-in forms; these were collected and stored securely. No identifying information was collected. The course instructor was not present in the room and was not aware of who participated in the discussion.

Fifteen students were present for the discussion, with about two-thirds of the group actively participating. The discussion proceeded as an open dialogue built around six questions that were based on objectives of this study. These questions and the students' responses are discussed in further detail in Chapter 4. Each of the six questions were discussed for approximately 4 minutes. No recordings were taken, so analyses of findings are based on notes taken on a laptop by the examiner during the discussion. Findings from the focus group contributed valuable qualitative information to support the conclusions of this study.

CHAPTER 4

RESULTS

Frequency of Youth Sexting Behavior

The frequency and nature of youth sexting behaviors, as retrospectively reported by the current sample, are presented in Table 4.1. Forty-four percent of the students in this sample reported that, while in high school, they had ever sent a sext, defined as a picture containing personal nudity. A much higher percentage, close to 65%, reported ever receiving a sext while in high school. The behaviors that most often lead to severe personal and legal repercussions – sending or forwarding pictures that are not your own – were reported to happen infrequently. This refers to when someone receives an image of someone else, either in confidence or not, and forwards it on to other unintended viewers. This is the sexting behavior through which most teens are adversely affected, and the means through which cyberbullying and other exploitation most often occur. In the Strassburg and colleagues (2014) study, only about 8% of the sample reported forwarding a sext. In this study, close to 7% (N = 6) reported ever forwarding, and only about 6% (N = 5) reported ever sending a picture they'd taken of someone else.

These frequency data are presented in Table 4.1.

Table 4.1. *Frequencies for Participants' Self-reported Youth Sexting Behavior*

	YES *n* (% of sample)	NO *n* (% of sample)
During high school, did you ever SEND a picture of your genitals (or breasts, if female) to someone else's cell phone?	*40* (44)	*51* (56)
During high school, did you ever SEND a picture you took of <u>someone else's</u> genitals (or breasts if they were female) to a third person's cell phone?	*5* (5.6)	*85* (94.4)
During high school, did you ever RECEIVE a picture of someone else's genitals (or breasts, if they were female) on your cell phone?	*58* (64.4)	*32* (35.6)
During high school, did you ever FORWARD a picture you received of someone else's genitals (or breasts, if they were female) to a third person's cell phone?	*6* (6.7)	*84* (93.3)

In the current sample, more students reported ever receiving a sext than sending. Of those who received sexts in high school (N= 58), 56.9% reporting also sending; of those who did *not* receive a sext in high school (N = 32), only 25% sent. Chi-square analysis in Table 4.2 indicates a significant relationship between these two conditions; in other words, those who ever received were significantly more likely than those who never received to report sending a sext while in high school: χ^2 (2, N = 91) = 9.304, *p* = .01.

Table 4.2. *Crosstabulation of sending and receiving sexts in high school*

| | Ever Received | | |
Ever Sent	NO	YES	χ^2
NO	24	25	9.304*
YES	8	33	
=p < .01			

As a summative overview of all sexting behavior in this sample, the frequency of participants who reported *any* sexting behavior at all was calculated and is presented in Table 4.3. This was determined by identifying all respondents who reported "NO" to all sexting behavior categories, including sending, receiving, and forwarding. About 26% of the sample had no direct exposure to sexting, meaning that about three-quarters of the sample were exposed to the behavior in some way while in high school.

Table 4.3 displays the number of respondents who reported any sexting behavior at all, combining sending or receiving; the inverse of this is also presented representing the quarter of the sample who had no exposure to sexting behavior in high school.

Table 4.3 *Frequency of <u>any</u> youth sexting behavior*

	YES *n* (% of sample)	NO *n* (% of sample)
Any sexting behavior (i.e. send, receive, forward)	*67* (73.6)	*24* (26.4)

Table 4.4 shows how frequently students reported sending these pictures in high school, and Table 4.5 shows who they sent them to. For those who responded "YES" to either sending or forwarding, they were asked to whom they had sent the pictures. Several respondents under

each condition selected "other" and wrote in responses. These were grouped with the category

they most closely linked to. For instance, "I sent to both strangers and sometimes to people I

wanted to hook up with", was coded as "Someone I wanted to date or 'hook up' with".

"Someone I met online" was coded as "acquaintance or someone I just met".

Table 4.4. *Frequency of high school sexting behavior*

	How frequently did you send these pictures of yourself in high school?	**How frequently did you forward pictures of someone else in high school?**
	n **(% of sample)**	*n* **(% of sample)**
More than 5 times	*19* (47.5)	0
More than once, less than 5 times	*18* (45)	*3* (60)
Only one time	*3* (7.5)	*2* (40)

Of those who ever sent a sext in high school, the vast majority (92.5%) reported sending

more than once, with 47.5 % of those who ever sent reporting that they had sent more than five

times. Only 7.5 % of those who sent, did so only one time in their high school career.

Sexting destination frequency (i.e. "to whom did you send?") is presented in Table 4.5.

Table 4.5. *Destination of sexts sent by high school students*

	To whom did you SEND the picture of yourself?	To whom did you FORWARD the picture of someone else?
	n (% of sample)	*n* (% of sample)
A boyfriend/girlfriend (someone you were romantically involved with)	*22* (55)	*0*
Someone I wanted to date or "hook up" with	*13* (32.5)	*0*
A friend (not your boyfriend/girlfriend)	*3* (7.5)	*5* (100)
An acquaintance or someone I just met	*2* (5)	*0*

Regarding the destination of the sexts, the majority (55%) reported sending to someone they were romantically involved with. Closely following this, 32.5 % sent to someone they liked or wanted to "hook" up with. About 12.5 % sent to someone they were not romantically or sexually involved with. A small number, only 5% of the sending sample and only two participants in total, said that they ever sent a sext to someone they did not know or had just met. One of these wrote-in saying it was someone met online.

Two groups from each of these categories were created for further analyses. In this sample, 48% of participants sent more than 5 times, and 52% sent less than five times, leading to two groups: *more than 5 times* and *less than 5 times*. Slightly more than half, 55%, sent pictures to a romantic partner (i.e. boyfriend or girlfriend), and 45% sent pictures to anyone else, and resultant groupings were: *sent to partner* and *sent to other*. Differences among these groups are explored later in this chapter.

Gender Differences

Another hypothesis of this study was that, consistent with other recent prevalence data, there would be no significant difference between male and female sexting frequency. Of all female participants, 46.8 % reported ever *sending* a sext; of all male participants, 41.4 % reported ever sending. This difference is non-significant: χ^2 (1, N = 91) = .232, *p* = .63. Regarding those who reported ever *receiving* sexts, gender differences between females (64.5%) and males (62.1%) were also non-significant: χ^2 (2, N = 91) = .579, *p* = .75. Though only a few participants comprised the category of those who reported ever *forwarding* a sext, there was no observed significant gender difference χ^2 (2, N = 91) = 4.399, *p* =.11.

Table 4.6 *Breakdown of Youth Sexting Behavior by Gender*

	Male	Female
	n (% of sample)	*n* (% of sample)
Ever sent a sext	*12* (41.4)	*29* (46.8)
Ever received a sext	*18* (62.1)	*40* (64.5)
Ever forwarded a sext	*4* (13.8)	*2* (3.5)

As noted earlier, 26.4 % of the sample never sexted at all, either sending, forwarding, or receiving. This included 24 % of male participants and 27 % of females, and numbers are displayed in Table 4.7. This was also a non-significant difference χ^2 (1, N = 91) = .110, *p* =.741. Overall, there were no observable differences in sexting behavior by gender.

Table 4.7 *Crosstabulation of any sexting behavior (ever sent or ever received) and gender*

Ever Sext	Gender		χ^2
	Female	Male	
YES	45	22	.110
NO	17	7	

Based on all data collected about youth sexting behavior, several groups were isolated for analyses: those who ever sent versus those who did not; those who ever sexted (i.e. sent or received) versus those who never; those who sent more than five times versus less than five; those who sent to romantic partners versus those who sent to others. These groups are analyzed along with discussions of other variables.

<div style="text-align:center">Attitudes towards Youth Sexting</div>

The sexting attitudes scale was based on a scale originally developed by Weisskirch and Delevi (2011) and some structural changes were suggested by Boden and Pendergast (2015). The current iteration of the scale was based on two discrete factors, one isolated in the former study and one in the latter. Since all items were revised for use in a study about *high school student* sexting behavior, the structural validity of the scale needed analysis. It was expected that two separate and negatively correlated variables would emerge.

Data were analyzed using exploratory factor analysis (principal component analysis, Varimax rotation) and a visual scree test. The initial principal components analysis suggested a two factor solution, and a visual scree test also appeared to suggest two components. The first factor accounted for 35.27 % of the variance, and the second another 20.8 %; in total the two factors retained accounted for 56.07 % of the variance. All items had factor loadings greater than .4, with no observed cross-loadings. The factor structures are presented in Table 4.8.

Table 4.8 *Factor structure of sexting attitudes*

Attitude Statement	Factor 1 Perceived Normalcy	Factor 2 Perceived Risk	Communalities
Sexting improves teenage romantic relationships.	**.844**	.199	.753
Teenage sexting is fun.	**.820**	.247	.733
Sexting is just part of teenage flirting.	**.749**	.227	.613
Teenage sexting is exciting.	**.748**	.322	.664
Sexting is a normal part of teenage relationships nowadays.	**.534**	.366	.419
Sexting is not a big deal for teenagers.	**.481**	-.440	.425
Sending sexts is risky for teenagers.	-.176	**.711**	.536
Students have to be careful about sexting.	-.421	**.609**	.548
Sending sexts leaves teens vulnerable.	-.212	**.598**	.403
I think sexting could cause problems for teens.	-.502	**.513**	.515

Note. Factor loadings >.40 are in boldface.

The two factors were saved as *perceived normalcy* (6 items) and *perceived risk* (4 items). Internal consistency reliability for each factor was assessed using Cronbach's alpha: perceived normalcy ($\alpha = .82$) and perceived risk ($\alpha = .67$). These two factors negatively correlate with each other $r = -.213$, suggesting they assess different and even opposing constructs. Students who score higher on the *perceived normalcy* factor are likely to score lower on *perceived risk.* In other words, students who see sexting behavior as a normal part of teenage life are less likely to report it as being risky and in need of caution.

Perceived School Experience

In a previous study, the Perceived School Experience Survey (PSES) yielded three subscales and an overall score (Anderson-Butcher, Amorose, Iachini, & Ball, 2012). For the current survey, the scale was modified for retrospective reporting, so participants responded to items about their recollected school experience. Since this is a different sampling method, the structural validity of the scale for the current sample was examined.

Factor analysis appears to be appropriate in this sample, based on a significant ($p < .01$) Bartlett's test of Sphericity and a Kaiser-Meyer-Olkin Measure (KMO) value of .86. Exploratory factor analysis (principal components analysis, Varimax rotation) yielded a three factor structure accounting for 65.7 % of the variance. However, cross-loadings were noted for several items above .400. The third factor also contained only three items, one of which also cross-loaded onto the first factor. In examining the items from the first and third factor, it was felt that they represented a more unitary construct related to a student's investment in their school and their own learning.

A two-factor solution was forced (principal components analysis, Varimax rotation) and the rotated solution accounted for 56% of the variance. These two factors were named for what they most closely represented. *Student engagement* represents students' academic motivation, engagement in learning, and enjoyment of school. *Teacher investment* represents the inverse of this – school and teacher investment in their students' learning and the relationships formed between teachers and students. Item factor loadings are presented in Table 4.9. Cronbach's alphas for the nine student engagement and five school investment items were .89 and .81, respectively, indicating sufficient internal consistency reliability for each scale.

Table 4.9. *Factor structure of school experience scale*

	Factor 1 Student Engagement	Factor 2 School/Teacher Investment	Communalities
I enjoyed my high school experience	**.753**	.328	.675
In high school, I liked the challenges of learning new things	**.746**		.565
I was proud to be a student at my high school	**.728**	.339	.645
I felt like I belonged to my high school	**.716**	.351	.636
I enjoyed going to my high school	**.712**	.381	.652
I had a positive attitude towards school	**.684**	.112	.481
I felt I made the most of my high school experience	**.667**	.260	.512
I was confident in my ability to manage my schoolwork	**.582**		.340
I felt my high school experience prepared me well for adulthood	**.577**	.279	.411
My high school valued students' learning	.174	**.854**	.760
My teachers monitored whether students were learning on a regular basis		**.826**	.684
My teachers provided helpful feedback to students about their academic performance	.342	**.664**	.558
Decisions at my high school always focused on what was best for learning	.172	**.648**	.449
I had meaningful relationships with teachers at my high school	.313	**.601**	.459

Note. Factor loadings >.40 are in boldface. Factor loadings <.10 are suppressed.

Overall scores were also calculated, based on the mean of responses. The sample's

overall school experience score ($M = 3.80$, SD = .66) suggested that participants in general

viewed their high school experiences positively. The scale midpoint was 3, on a 5-point Likert

scale. On the original Anderson-Butcher and colleagues scale (2012), the average similarly

skewed positive ($M = 3.55$, SD = .77). A one-sample t-test comparing the current sample with

the 2012 study suggests a significant difference between the two samples, $t(90) = 3.63$, $p < .01$.

This would indicate that the current sample's perceived high school experience was significantly more positive than a general survey of high school students. This is expected, as this study assessed college students' retrospective perspective toward high school. Presumably, students who are currently enrolled in college were more connected and academically motivated than a general population of students, many of whom may not be college-bound.

Some preliminary demographic differences were considered for the two school experience factors, with scores saved as *T* values. There was no difference for perceived *teacher investment* between male ($M = 51.35$, SD = 8.7) and female ($M= 49.39$, SD = 10.5) students; t(85) = -.843, $p = .40$. There was, however, a significant difference in *student engagement*, with male students ($M = 52.9$, SD = 7.78) reporting significantly higher belonging and engagement in learning than female students ($M = 48.58$, SD = 10.65), $t(85) = -2.08$, $p < .05$. A possible explanation for this difference could be priming effects, as participants were aware the study was partially about high school sexting experiences while answering questions about their school experience. Female students, who tend to have more negative experiences related to youth sexting, may have been reflecting on those experiences when answering questions about high school.

<div align="center">Views on Sexting Education</div>

A scale for students' views on sexting education was created for this study. This was designed to assess how recent high school graduates perceive the role of school systems and school personnel in shaping sexting behavior among students. The scale contains four items, two about the necessity of educational efforts and two about the effectiveness of such interventions. Responses were rated for agreement along a 4-item scale. Scores were averaged for each group

of items, and the overall sample mean fell above the midpoint (M = 2.88, SD = .69). Participants

appeared to rate sexting education efforts as more necessary (M = 3.16, SD = .7) than effective

(M = 2.60, SD = .81). Results are presented in Table 4.10.

Table 4.10. *Frequencies for Views on Sexting Education*

	1- Strongly Disagree *n* (%)	2- Disagree *n* (%)	3 - Agree *n* (%)	4 - Strongly Agree *n* (%)	*Sample Mean (SD)*
High schools have a responsibility to teach students about the risks of sexting.	*2* (2.3)	*10* (11.6)	*42* (48.8)	*32* (37.2)	**3.21 (.74)**
High school students need their teachers and principals to teach them about how to be safe online.	*3* (3.3)	*15* (17.4)	*38* (44.2)	*30* (34.9)	**3.10 (.81)**
Lessons taught by teachers or school counselors are the best way to help students learn safe sexting behaviors	*7* (8.1)	*35* (40.7)	*28* (32.6)	*16* (18.6)	**2.62 (.88)**
High school staff can have a significant impact on student sexting behavior.	9 (10.6)	31 (36.5)	32 (37.6)	13 (15.3)	**2.56 (.88)**

This scale was designed to assess two separate but related constructs, and exploratory

analysis of the resultant structure was conducted. The Kaiser-Meyer-Olkin measure of sampling

adequacy was .76, suggesting the scale was appropriate for factor analysis. An initial exploratory

factor analysis (principal components analysis) suggested that the four items load on a single

factor, accounting for 64% of the variance. A visual scree examination also suggested this as the best interpretation. The single factor was termed *views of sexting education* and a composite score was created using means of participant responses. The internal consistency reliability of this composite is strong, based on Cronbach's alpha (α = .81).

The overall sample mean for the scale fell slightly above the mid-point for the 4-point scale (M = 2.88, SD = .66). Students overall appear to moderately agree with the notion of sexting education as necessary and effective, though there is some variance. Sexting education attitudes did not appear to differ by gender (male: M = 2.81, SD = .62; female: 2.91, SD = .68), $t(84)$ = -.67, p = .51. Those who had never sent or received a sext (M = 2.93, SD = .61) perceived sexting education to be slightly more important than those who had sexted in high school (M = 2.86, SD = .69) though the difference is non-significant, $t(84)$ = -.45, p = .65. In other words, students, regardless of their sexting behaviors in high school, feel that schools have a limited role in shaping what students do.

Type-T/Impulsivity

The seven-item Type T personality scale (Farley, 2016, personal communication) was included as an assessment of internal variables predictive of online behaviors. Previous research has been mixed regarding the link between sexting and other risk-taking traits (Klettke, Hallford, & Mellor, 2014), but the predictive power of impulsivity and thrill-seeking was included in this study to be compared with the predictive power of other variables, including overall school experience. The reliability of the Type-T scale was strong, Cronbach's α = .86. Data were deemed factorizable, as the Kaiser-Meyer-Olkin measure of sampling adequacy was adequate, at .78, and Bartlett's Test of Sphericity was significant ($p < .001$). Principal component analysis initially suggested a two-factor solution, accounting for 69.5% of the variance. This is consistent

with Hellmuth's (2016) findings, wherein these two factors were termed T-General (5 items) and

T-Mental (2 items). However, in the current study only a single item primarily loaded on the

second factor ("I like to have discussions with people who have ideas that are different or

opposite to mine.") and that item also cross-loaded on the first factor. A single factor solution

was forced (principal components analysis), accounting for 54.5% of the variance. All items

loaded on this single factor with loadings above .40. Total scores were calculated for the Type T

scale (max: 28, min: 7) and are presented by youth sexting behavior categories in Table 4.11.

Table 4.11. *Type T personality total scores by youth sexting behavior category*

	YES	NO
	M (SD)	*M* (SD)
Ever *sent* a sext in high school	*20.6* (4.9)	*20.7* (3.2)
Ever sexted (sent, received or forwarded) in high school	20.7 (4.4)	20.6 (3.0)
Ever *forwarded* a picture of someone else to a third party	*21.2* (2.3)	*20.6* (4.2)
If ever sent, sent more than 5 times	*19.9* (5.5)	*21.3* (4.5)
If ever sent, sent to romantic partner only	*20.9* (3.9)	*20.3* (6.1)

The overall sample mean for the scale fell above the midpoint ($M = 20.1$, SD $= 4.1$).

There was no significant difference in mean Type T ratings between male ($M = 21.0$, SD $= 4.3$)

and female ($M = 20.5$, SD $= 4.0$) students, $t(84) = -.56$, $p = .55$. Interestingly, there were no

statistically significant differences in Type T between any of the categories of sexting behavior presented in Table 4.11. Those who ever sexted had similar self-reported thrill-seeking to those who never sexted. Those who sent outside of romantic relationships and those who sent more frequently had similar Type T personality to those who sexted more conservatively (i.e. to romantic partners and less than 5 times in high school).

An additional item, "I often act impulsively" was also added. Responses on this item correlated positively and significantly with the Type T ($r = .43$, $p < .01$). Similar to the Type T results, a student's impulsivity did not appear to differ between those who sent a sext in high school ($M = 2.15$, SD = 1.31) and those who did not ($M = 2.13$, SD = 1.26) $t(84) = .09$, $p = .92$. There were also no statistically significant differences in impulsivity between those who sexted more than five times ($M = 2.3$, SD = 1.3) and less than five times ($M = 2.0$, SD = 1.3) $t(37) = -.749$, $p = .46$; nor between those who sexted to romantic partners ($M = 1.9$, SD = 1.3) or outside of romantic relationships ($M = 2.4$, SD = 1.3) $t(37) = -1.04$, $p = .31$.

Major Research Questions

What Is Different about High School Students Who Sext?

A major guiding question of this study is to explore what predicts differences among students as grouped by their sexting behaviors among high school students. A multivariate analysis of variance (MANOVA) was performed to explore the effects of gender, age, Type T, school experiences, sexting attitudes, and views of sexting education on the likelihood that participants sexted as high school students – either sent or did not send. Results are presented in Table 4.12.

Table 4.12 *Differences in variables by whether sexts were sent or not*

Variables	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Age	3.227	1	3.227	2.210	.141	.027
Graduation Year	.946	1	.946	.705	.404	.009
Type T	.692	1	.692	.040	.842	.000
Impulsivity	.006	1	.006	.004	.951	.000
Views on Sexting Education	.029	1	.029	.069	.794	.001
SA: Perceived Normalcy	945.830	1	945.830	11.650	**.001***	.126
SA: Perceived Risk	17.672	1	17.672	.181	.671	.002
SE: Student Engagement	25.174	1	25.174	.267	.607	.003
SE: Teacher Investment	69.801	1	69.801	.681	.412	.008

*$p<.01$

In the model above, students who sexted and didn't were only significantly different by one measure: perceived normalcy. Perhaps unsurprisingly those who reported feeling that sexting is a more normal part of teenage life today are also the ones who were more likely to have done it in high school. Equally significant are the variables that do not appear to predict sending of sexts. Students' self-reported thrill-seeking, impulsivity, and school experience all were non-significantly associated with whether or not students sexted in high school.

What are the Associations with <u>How</u> Students Sext?

Respondents who indicated sending sexts in high school further specified who they sent to and how often, as outlined in Table 4.4 and Table 4.5. It was hypothesized that there would be

differences in personal characteristics and sexting attitudes between those who sext within

romantic relationships and those who sext to friends and strangers. Likewise, it was thought that

sending more often (i.e. more than 5 times) would be associated with differences in thrill-seeking

and school experience.

Variables Associated with Sexting Destination

This sample was nearly evenly split between those who sent to a romantic partner (55%)

and those who sent to a friend or stranger (45%). Chi-square tests showed that this difference

was not significant by gender, χ^2 (2, N = 91) = .374, p = .83, meaning male and female students

sent sexts to people outside romantic relationships with the same frequency. Initial analyses,

including independent samples t-tests, indicated there was no difference between these groups in

regards to thrill-seeking, attitudes towards the behavior, or views on sexting education.

However, those who sent to a romantic partner reported significantly more positive school

experience overall (M = 4.09, SD = .45) than those who sent to others (M = 3.43, .72), t(39) =

3.60, p < .01. High school students who sent sexts of themselves to someone outside the context

of a romantic relationship tend to be students who had less positive school experience. These

variables are explored together in the MANOVA in Table 4.13.

Table 4.13 *Differences by sexting destination: to romantic partner or others.*

Variables	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Age	2.991	1	2.991	2.528	.120	.064
Graduation Year	2.659	1	2.659	2.508	.122	.063
Type T	3.253	1	3.253	.129	.722	.003
Impulsivity	1.847	1	1.847	1.081	.305	.028
Views on Sexting Education	.007	1	.007	.018	.895	.000
SA: Perceived Normalcy	141.464	1	141.464	2.176	.149	.056
SA: Perceived Risk	48.910	1	48.910	.600	.443	.016
SE: Student Engagement	481.387	1	481.387	5.541	**.024***	.130
SE: Teacher Investment	299.420	1	299.420	2.866	.099	.072

*p<.05

Although preliminary analyses suggested some unique differences among the subgroup of sexting high school students who sent within and beyond romantic relationships, the MANOVA presented in Table 4.13 indicates mostly non-significant variables. Whether or not a student sexted to a partner or a stranger or friend did not appear related to a student's impulsivity or thrill-seeking or even attitudes towards the behavior itself. Interestingly, what *did* predict these differences was students' school engagement, including their academic motivation and connectedness to their school. Students who were *lower* in their personal school engagement were more likely to have engaged in the riskier behavior of sexting someone other than a romantic partner.

Sexting Frequency

Regarding frequency, of those who ever sexted the sample was divided between those who sent pictures more than five times (47.5%) and those who sent less than five times (52.5%). There was no significant difference by frequency of sexting between male and female students χ^2 (2, N = 91) = 1.578, p = .45. Other variables are laid out in the MANOVA in Table 4.14.

Table 4.14 *Differences by <u>how often</u> sexts were sent: more than 5 times vs. less than 5 times*

Variables	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Age	1.230	1	1.230	.999	.324	.026
Graduation Year	1.158	1	1.158	1.052	.312	.028
Type T	17.896	1	17.896	.719	.402	.019
Impulsivity	.972	1	.972	.561	.459	.015
Views on Sexting Education	.562	1	.562	1.369	.249	.036
SA: Perceived Normalcy	467.282	1	467.282	8.314	**.007***	.183
SA: Perceived Risk	7.019	1	7.019	.085	.772	.002
SE: Student Engagement	344.422	1	344.422	3.803	.059	.093
SE: Teacher Investment	54.185	1	54.185	.488	.489	.013

*p<.05

It was expected that those who sent more frequently might be more impulsive or higher thrill-seekers, but that was not the case. It was also thought that, given earlier findings for other categories of youth sexting behavior, differences in school experience would also predict whether one sent more or less often. However, the only significant predictor, as displayed in Table 4.14, was a student's perceived normalcy of sexting. This significant relationship is

perhaps unsurprising, as those who sexted more in high school are also more likely to think of it as a more normal behavior for teenagers today.

Interaction between sexting destination and frequency

This relationship between sexting frequency and sexting destination was examined with chi-square analysis and is presented in Table 4.15. There was a statistically significant association between sexting destination and sexting frequency, χ^2 (1, N = 41) = 6.942, $p < .01$. Students who sexted to romantic partners tended to do so less often than students who sexted outside of romantic relationships. This would suggest another layer of distinction between these two groups. Students who sext within romantic relationships tend to be more conservative in how often they send, while those who send to acquaintances, interests, and even strangers are doing so more frequently.

Table 4.15. *Crosstabulation of sexting destination and sexting frequency*

	Frequency		
Destination	**Less than 5 times**	**More than 5 times**	**χ^2**
Partner	16	6	
			6.942*
Other	6	13	
*=p < .01			

What Predicts Differences in Sexting Attitudes?

The current study, and several previous, would seem to suggest that youth sexting behavior is not something easily predicted by personal characteristics or even external factors. If this is the case, then it would seem that high school students' attitudes towards the behavior are different than what many educators and researchers might expect. Understanding students' attitudes, then, becomes an important step for educators interested in trying to alter the views of students.

With the factor structure of the sexting attitudes scale reduced to two discrete factors, differences among participants' perceived risk and perceived normalcy were analyzed. Regarding perceived risk, the sample average fell above 3 (M = 3.59, SD = .40) which, on a 4-point Likert scale, suggests that most of the sample perceives risk related to sexting behavior. The average score for perceived normalcy of sexting behavior was lower overall (M = 2.49, *SD* = .55), suggesting overall perceptions fell at right about the midpoint between agreement and disagreement with sexting as a normal teen behavior.

It was expected that students who had ever sent a sext would have higher perceived normalcy scores, and lower perceived risk. Independent samples t-test indicated no difference in the *perceived risk* of sexting behavior between those who sent sexts in high school (M = 3.62, SD = .35) and those who didn't (M = 3.56, SD = .44) $t(86)$ = .755, p = .45. However, there was a significant difference in perceived *normalcy* for those who sexted (M = 2.68, SD = .41) and didn't (M = 2.34, SD = .61) $t(86)$ = 3.03, p < .01. In other words, both sexters and non-sexters see youth sexting as a behavior with potential risks, but those who have actually done it are much more likely to perceive it as just a normal part of teenage life.

The subgroup of participants who had never sexted, comprising about a quarter of the sample, perceived the risk of sexting at the same level as those who had ever sexted but perceived significantly *less* normalcy (M = 2.17, SD = .63) than those who had ever sexted (M = 2.61, SD = .48) $t(86)$ = .024, p < .05. This is a significant, if unsurprising, finding – that high school students with any exposure to sexting behaviors are more likely to see the behavior as a normal part of teenage life than those who never experienced it in any form.

When analyzed by gender, female students report significantly higher perceived risk (M = 3.65, SD = .39) than males (M = 3.45, SD = .41) $t(86)$ = -2.25, p < .05. The inverse of this is true

for perceived normalcy, with male students scoring significantly higher ($M = 2.69$, SD $= .48$) than female students ($M = 2.39$, SD $= .56$) $t(86) = 2.24$, $p < .05$. In other words, both groups see sexting behavior as risky overall, but, on average, female students perceive the risk to be greater, along with the need for greater caution. This is understandable, as female students are perhaps more aware of the risks of sexual exploitation.

To determine what else relates to perceived risk and perceived normalcy, Pearson bivariate correlations were conducted. These are presented in Table 4.16.

Table 4.16. *Correlations of perceived risk and perceived normalcy with views on sexting education, high school experience, and Type T personality.*

	Views on sexting education	**School Experience – student engagement**	**School Experience – teacher investment**	**Type T Personality**
Sexting Attitudes – Perceived Risk	**.324****	.039	-.009	.144
Sexting Attitudes – Perceived Normalcy	-.011	-.138	-.042	.155

** $p < .01$

There was a significant correlation between perceived risk and attitudes towards sexting education, $p < .01$. Students who perceive sexting to be riskier are more likely to endorse formal school efforts to intervene as being necessary and effective. No other significant associations were found, despite the expectation that students with more positive school experience and connectedness might be more likely to see the behavior as risky.

What Does School Experience Predict?

Students' high school experience, particularly as it pertains to overall school climate and academic motivation, has been found to be a predictor of positive outcomes in other areas

(Anderson-Butcher, Amorose, Iachini, & Ball, 2012). A major question of this study was how students would report their own school experiences, and what differences in behaviors and attitudes would be predicted by positive student engagement in school and teacher investment in students.

Student Engagement in School

A linear regression was run to predict school experience student engagement in high school from sexting destination, sexting frequency, Type T personality, impulsivity, perceived normalcy, and perceived risk. This model appeared to explain a significant proportion of the variance in school engagement scores for high school students, $F(6, 32) = 2.812$, $p < .05$.

Table 4.17. *Predictors of school experience – student engagement*

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	60.274	12.143		4.964	.000
Impulsivity	-1.986	1.318	-.264	-1.507	.142
Type T	-.663	2.479	-.047	-.268	.791
Sext Destination	-5.822	3.176	-.298	-1.833	.076
Sext Frequency	-.396	3.507	-.020	-.113	.911
SA: Perceived Normalcy	-.314	.208	-.261	-1.515	.140
SA: Perceived Risk	.422	.177	.384	2.385	**.023***
R-square	.345				
Adjusted R-square	.222				

*$p < .05$

In the model above, the only significant predicting variable for high school student engagement is the sexting-related attitude of perceived risk. It appears that higher perceived risk (e.g. "high school students need to be careful about sexting") is the strongest predictor of school engagement in this model. Although no significant Pearson value was indicated in a direct

correlation of the two variables (see Table 4.16), in this model perceived risk does explain a significant proportion of the variance left over. Reporting higher levels of school engagement is partially predicted by also reporting higher perceived risk for sexting behavior. Students who feel sexting is riskier for high school students today may have also been more positively engaged as high school students.

Teacher Investment in Students

Identical regression analyses were run to predict teacher investment in students, by the same variables. This time, the model did not appear to significantly predict teacher investment, $F(6, 32) = 1.265$, $p = .301$. Despite the non-significance of the model, a lone variable appeared significant in this model: sexting destination, or the difference between students who sexted only to romantic partners and those who sexted to others.

Table 4.18 *School experience predictors – teacher investment*

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	51.507	14.322		3.596	.001
Impulsivity	1.188	1.554	.148	.764	.450
Type T	-2.837	2.924	-.190	-.970	.339
Sext Destination	-8.784	3.746	-.424	-2.345	**.025***
Sext Frequency	3.366	4.136	.163	.814	.422
SA: Perceived Normalcy	.262	.245	.205	1.070	.293
SA: Perceived Risk	-.020	.209	-.017	-.098	.923
R-square	.192				
Adjusted R-square	.040				

*$p < .05$

The overall predictive power of school experience is worth exploring further. In this study, however, it appears that a student's perception of how teachers invested in the lives and learning of students did not significantly impact their attitudes or behaviors in other areas. A

student's own engagement in their school community and their own learning, however, did appear more significant to their attitudes and behaviors.

Exploratory Correlations

As a final step in exploring the interconnections between these variables, inter-item correlations were examined between the types of sexting behavior (ever sent, sending destination, sending frequency, and students who never sent/received) and all items in the survey. Results did not initially indicate any findings novel to those previously discussed. However, a single item from the Perceived School Experience Scale correlated significantly with each kind of sexting behavior. Those correlations are presented below in Table 4.19.

Table 4.19 *Correlations between academic confidence and sexting behaviors.*

	Ever sent a sext in high school.	Sent sexts to people outside romantic relationship	Sent sexts more than five times	Ever sexted (either sent or received)
In high school, I was confident in my ability to manage my schoolwork	-.220**	-.431**	-.009	-.263**

** $p < .05$

As students rated their academic abilities more highly, they were less likely to be students who had sexted at all in high school and, if they had, significantly less likely to have sexted to someone other than a romantic partner. There was no significance for the frequency of sexting. There was a significant correlation for any participation in sexting behavior – students who were more confident with their academics were less likely to have had any exposure to the behavior.

Of all the items on the school experience scale, this was the lone item that predicted all three conditions of sexting behavior. Although this item loads strongly on the *student engagement* factor, analysis of the wording suggests it may be accessing something different than a student's general feeling of engagement in their learning and school community. Rather,

53

students who endorse this item are endorsing a positive self-concept including a strong sense of self-efficacy. This is about who they felt they were, and not just about what they felt about school. The potential implications here are numerous: that students who feel more academically capable, better at managing stress, and have more self-confidence overall may be less likely to sext.

If They Were in Charge, What Would Students Do?

In order to help inform this study's conclusions, qualitative, open-ended information was collected from participants through the online survey and an in-person focus group discussion. A single open-ended question was included in the study to directly assess what recent high school graduates feel they would do about sexting: "If I were a principal in charge of a program to deal with high school student sexting, I would: ____".

The usefulness of such-open ended questions varies, and it is important that questions are asked thoughtfully and responses are analyzed critically into structured summaries (O'Cathain & Thomas, 2004). The wording of this question was designed to put recent high school graduates in the position of a school decision-maker, rather than asking them what they think administrators should do. If it were *their* problem to solve, how would they address it? Answers were analyzed for patterns and coded into several categories.

A smaller group of participants (N = 28) answered this question. Responses ranged widely, from suggestions for brief discussions in health class to school-wide discussions with guest speakers. Some participants suggested doing nothing at all, and even felt offended by the question. It is important to note that of all the students who answered survey questions about their views on sexting education (N = 91), the group that answered this question represented only 31% of the total sample. Table 4.10 shows that most students endorsed their agreement with

school responsibility to address sexting among students, though the sample was divided as to the efficacy of these interventions. Since only about one-third of the sample answered this open-ended question it might be assumed that the remaining two-thirds are unsure of what strategy they would use; maybe they feel no strategy is effective and so they did not try to explain one. Those who did provide a program strategy tended to suggest formal intervention efforts.

Responses were analyzed by core content. Though some answers were several sentences long, and others were only a few words, each answer seemed to focus on a core theme or suggestion. A careful analyses of each response revealed a consistent pattern. Responses were grouped into one of four suggestion categories: Discussion, Risk Education, Guest Speakers, and Nothing. Frequency of these are presented in Table 4.20.

Table 4.20. *Response frequencies for "If I were a principal in charge of a program to deal with high school sexting, I would:"*

	Response Categories			
	Risk-education	**Guest Speakers**	**Discussion**	**Do Nothing**
N (%)	15 (54%)	5 (18%)	4 (14%)	4 (14%)

Risk-education

More than half of respondents (N = 15) indicated some form of risk-education as the strategy they would select if they were in charge of a program for high school student sexting. Of these, only two specifically mentioned a classroom-based lesson. Others spoke more broadly about informing students about potential personal, social, emotional, and legal ramifications of sexting. One specifically mentioned future consequences of pictures no longer being in your

possession, and one talked about the real dangers of sending to strangers. Nearly half of risk-education suggestions (N = 6) spoke about teaching kids to sext *safely*. Sexting is normal nowadays and can never really be prevented, several students said, so the most important task is to teach kids how to do it responsibly rather than "shaming them for it". One student made the direct comparison to sex education, wherein schools focus on "protection, not prevention". One response captures the tone of these suggestions:

> "Present the different situations in which the act of sexting would come about and inform students about the risk of sexting. Sexting is nowadays normal, so rather than saying don't do it, I'd make sure the program made sure students were thinking before they were acting and at least sexting with someone they trusted."

Guest Speakers

The next most frequent suggestion related to presentations involving guest speakers (N = 5). Respondents saw this as an opportunity to have speakers share "personal anecdotes" and help teens understand the issue from a "personal perspective". These speakers could be people who "got themselves in a lot of trouble" with sexting. One student suggested this could be presented by a group that normally does high school assemblies about safe sex, talking instead about safe sexting. One student suggested this could be conducted as a large group assembly with all students. There is a distinct advantage to an outside speaker delivering this message instead of school staff:

> "Bring in speakers who may have suffered as a result of teen sexting so that students may not tune them out as they might with faculty."

Discussion

Four respondents spoke generally about discussing the topic with students. This could be conducted one-on-one as long as school staff try to "treat students like adults" in an open-conversation format. Alternatively, it might be arranged as a small group activity, the advantage

of which is to give students the chance to "see from another peer's point of view." The most significant influence, according to one student, takes place on a more personal level:

> "Try to relate with the students on a personal level and influence them to make the right decisions. Sexting isn't worth it."

Do Nothing

A small number (N = 4) of participants said that they would not implement a program for students at all. Three of these specifically mentioned that the knowledge of how to be safe in the digital world should "be cultivated at home" and is "not the state's responsibility". Parents should take responsibility for educating their kids proactively, but the school can support them by having consequences for spreading of sexts, which is a form of cyberbullying that affects students. One student said that high schoolers don't want to listen to teachers telling them what to do or not do online, but they might listen to their parents. However, considering "not everyone has a well-structured family, I'd also provide assistance for whoever *wants* to learn about the risks of sexting".

Although the "do-nothing" approach was a small cluster of responses, it represents a compelling point-of-view that is likely held by more students. In the survey, 20% of students indicated disagreement with the notion that high school students need their teachers to teach them how to be safe online, and over 40% said they disagreed that high school staff can have an impact on student sexting behavior. Based on those data, it would appear that nearly half of students find school efforts to be limited in their effectiveness.

In most of these models, the school has a significant role to play even if they play a secondary role in supporting families. One student, however, felt strongly about this, and seemed offended by the reductive nature of the question. It is a complicated issue, worthy of more

nuanced understanding, and the detached stance of researchers and educators may miss the real

human toll. That student's response is re-printed in full:

> "Don't talk about teachers helping sexting because 95% of the time they do it themselves
> so it's hypocritical. Also, you're leaving out a lot of the basic facts there. One of my
> younger sister's friends killed herself 2 months into their freshman year, three years ago
> because nude photos of her leaked onto the internet. So it's not just one factor here.
> There's much more than just teens making this choices. Peer pressure and social norms
> also play a key part in this. I mean, look at the Kardashians who are considered these
> kids' role models. They're naked or almost naked all the time. When kids see this, they
> think it's okay. Some girls even think it's impowering [sic] not realizing it's degrading and
> making them a target. We all make mistakes. It's how we deal with those in the long run
> that you should be more worried about. You need to heal the broken hearts of these kids
> instead of judging us."

<center>Results of Focus Group Discussion</center>

Data collected through the online survey indicate that behaviors and attitudes around

sexting are mixed and, it would seem, difficult to predict. To support the external validity of this

study and to contribute to the accuracy of its findings, the focus group participants (N = 15)

discussed some of the core research questions.

Question 1: *Talk about how common sexting was in your high school, among the general
population of students. Did it ever cause problems for staff or student safety? How was it
addressed by school staff?*

In total, nine students offered answers to this question. All of them said that sexting

occurred in their high school, and five specifically stated that it "wasn't a big deal" or it just

"happened all the time". Four of these students (44%) said there were serious sexting-related

incidents in their schools, one leading to school suspension and the other three leading to police

involvement. Regarding school intervention, four students said that they were given some form

of presentation about the topic, usually under the umbrella of "cyber safety". In one student's

high school, students were subjected to a lecture by a police officer following an incident, which

this student termed as a "scare tactic". One student said their school's intervention actually made

<center>58</center>

the situation worse, and that the female students who had sent pictures felt "slut-shamed" by administration.

Question 2: *How do high school students today perceive the behavior? To what extent do they see it as risky?*

Six students answered this question. These responses also supported the notion that sexting between students "happened often" and hearing about it "was never a big surprise". For the sake of analysis, responses are organized along a spectrum from perceptions as entirely normal (e.g. "no one cared") to a source of harassment.

Two students indicated that sexting was perceived by students at their high schools as "not a big deal at all" and that "no one really cared". Another said, "At my high school it happened often. It was never a big surprise; no one was ever shocked." Still, there was a sense that feelings were mixed among many students, as one said that although it "generally seen as no big deal" there were a lot of "sketchy situations". The issue, according to this student, was that people weren't "really aware of consequences of it." Context is everything according to others. Generally sexting happened from "person-to-person" implying a sense of trust. At one high school, "some thought it was horrible, but some thought it was ok." It's when people share the images with other people, one student said, "That was crossing a line and was a much bigger deal". Most student nodded their agreement to this suggestion. In another school, many girls experienced harassment through sexting, mainly in receiving unsolicited pictures from male students.

Question 3: *Do you think most students see sexting as a normal part of teenage relationships?*

This was a follow-up question to question 2 above, and student responses contributed several new insights. Initially, about half of the class nodded their affirmative response to the question as it was posed. Most seemed to agree that for many teenagers in romantic

relationships, sexting was seen as normal. Two students then offered unique but similar perspectives about the role of technology within family structures. One female student said that some families "try to control how much their kids can date or see a person they are involved with", so technology offers a way for teenagers to still feel connected and, at times, intimate with their partners. A second student built on this and said that at her private school when parents were too controlling of their teenage kids, using phones for sexting allowed for "acts of defiance"; as a result, some students were "pushed into online stuff" including sexting.

Question 4: *Discuss the characteristics of a student who sexts frequently. Are they risk-takers? Are they popular or unpopular? High-achieving or low-achieving? Or, are there no consistent characteristics?*

This was a difficult question for students to answer, especially as they had just established that sexting was fairly common among their peers and was not seen as deviant or even "a big deal" at all. Still, several students were able to discuss the characteristics of students who engaged in more deviant forms of the behavior. One student shared that he knew someone who kept a folder of pictures that were sent to him. Several other students laughed knowingly, seeming to imply that this was the kind of student others were aware of. Another added that there were guys who liked to show the pictures they had, and thought it was cool. Regarding the question of personal popularity, one said that in his high school "it was really more common with the popular kids, but it existed in both circles." Another said she "heard about it a lot more with popular people." There was even a female student in another high school who was known, and not positively, as being a person who sent a lot of pictures.

Finally, a critical distinction was made and met with agreement around the room. There is a significant difference between those who were in relationships – seen as more typical -- and those who "would just send pics for the sake of it".

60

Question 5: *Do you feel there is any connection between a positive school climate where students feel connected and high school students' likelihood of sexting?*

When asked directly to answer one of the core research questions guiding this study, most students said they did not perceive any direct correlation between the school experience and sexting. Four students in total answered this question. One said, "I don't think people were doing it to be rebellious", supporting the survey finding that a majority of teens seem to see the behavior as a normal part of teenage romance. "It doesn't have anything to do with how connected you are," another added. This position seemed unanimous across the small sample. One student said their high school class valedictorian had sent sexts in high school which showed that even connected and motivated students did it. This position was summarized well by one, "I don't think it matters about how connected you are. It just varied from honors students to the bottom of all students. It depended on the person you are."

Question 6: *Finally, we hope to understand what schools can do to be more effective in addressing this behavior, and perhaps if it is even necessary that they try. So, if you were a principal or counselor at a high school, what would you do?*

This final question was asked close to the end of the focus group time, and six students provided responses. Four students shared their opinions that confrontational "scare tactics" are not a good strategy. Frightening presentations from law enforcement are not going to convince kids. As one student said, when teens "send pictures to each other they don't see themselves as being sex offenders." There is a context to the behavior that schools and officials need to understand, according to these students. "You need to make sure you're not shaming people if you don't know the whole situation," a student said. The problems come from "when someone sends without that person wanting it, or sharing pictures that aren't theirs. Students could be educated more directly on what can happen." If guest speakers come in, they can share stories of potential consequences for certain types of picture sharing, which could offer "real perspectives,

rather than someone yelling at them about being a sex offender". Students need to hear real stories of how it can affect students' lives.

Beyond formal lectures and speakers, a few students mentioned strategies that are more informal. One student said that in their school, teachers were helpful guides with cyber safety in two ways. First, they did not shy away from the topic and weren't afraid to talk to kids about what they did online and the associated pressures. Second, teachers weren't confrontational about issues or things they didn't agree with. They would "just say it's a dumb thing to do" but wouldn't shame students; they would try to understand.

CHAPTER 5

DISCUSSION

What is the prevalence and nature of sexting behavior among high school students? What differences are there between those who report sexting and those who do not? What role can a school play in influencing those behaviors? Do the characteristics of students affect what they share online? These questions and others were at the foundation of this exploratory study of youth sexting behavior among recent high school graduates. Other variables examined were gender, sexting-related attitudes, thrill-seeking and impulsive personality traits, and the impact of high school experience – including student engagement in school, and teacher investment in students. Additionally, the perceived necessity and efficacy of school interventions were explored through survey items, open-ended questions and a focus group discussion. Findings from the focus group session are discussed first, to provide a bridge between this study's results and broader conclusions for application.

Focus Group Conclusions

The 15 undergraduates who participated in the focus group depicted a reality in which youth sexting is perceived, in many circumstances, as a normal behavior. Several said they knew it happened but didn't know of any specific incidents, while others implied that it was common practice among their friends. Interestingly, about half of the students were aware of significant disciplinary action in their schools, including police involvement in response to sexting. At first glance that seems at odds with the perception of sexting as just a "normal" behavior, but it also seems to illustrate the differences between students' attitudes and the attitudes they feel their teachers have. Recent high school graduates seem to want to clarify that for many of teens this

really is normal and "not a big deal", since they recognize that so many school staff and authorities are concerned.

The overall impression from these answers presents something of a paradox, noted throughout the focus group and in the rest of this study. The majority of students seem to feel that the behavior is not risky, while also noting there are some real risks to it. Yet what participants shared also reveals an important nuance in the behavior. Most high school students feel like sexting happens often and is not a big deal between partners, but in sharing pictures that are supposed to be private, or in sending pictures no one asked for, teens are crossing a line. This distinction was made by a few students: there is a significant difference between those who sext to romantic partners, within the context of relationships, and those who send pictures to acquaintances, strangers, and friends, often unsolicited.

With that distinction established, it was difficult for students to answer broad questions about how those who sext and those who do not are different, as these do not appear to be clearly defined categories for them. Several students suggested this parallel so it is worth considering: it would be similarly difficult to define characteristics of those who are sexually active in high school and those who are not, or even those who drink underage and those who do not. Students from all groups and backgrounds engaged in those behaviors, and did so regardless of personal traits. More often, the behavior is shaped by other shifting variables – social pressure, access and opportunity, emotional states – and cannot be reliably predicted, even by high school students themselves.

But regardless of how and why it happened, one consistent theme was that the behavior of students and the severity of incidents did not seem mediated by school intervention. About half of students' schools formally addressed sexting either directly or within a broader discussion

of digital safety, but these presentations often appeared reactionary, and the ones that were proactive did not seem to necessarily prevent major incidents. It was particularly evident how schools can do this wrong; the notion of implicated students feeling singled out or "slut-shamed" for their participation was met with agreement from several students. Formal efforts to educate students about risky behaviors are notoriously ineffectual (Steinberg, 2008), and may overlook the individual and cognitive components of how teens think about risk (Reyna & Farley, 2006). It appears these students felt that appropriate intervention in this area requires more than a lecture. Several students wanted their school staff to trust students and not immediately assume they were reckless or endangering themselves when sexting. Understanding the context of sexting behavior, and being authentic in conversations about risk may help teachers be more effective in their communication and efforts to protect their students.

Summary of Hypotheses and Results

Hypothesis 1 – Nature of Youth Sexting Behavior

Although primarily exploratory in nature, several hypotheses were outlined based on previous literature on this topic. Hypothesis 1 posited that prevalence of youth sexting behavior would be under 50%, based on previous research. It was thought that more students would report receiving than sending (1b) and only a small number would report forwarding pictures of someone else (1c). Each of these hypotheses were supported. In the current sample, 44% reported ever sending a sext when in high school, and 64% reported ever receiving such a picture. A very small number, about 7% of the current sample (N = 6), reporting ever forwarding a picture they'd received on to a third party. An interesting subgroup was those who never sexted in any form, either sending or receiving. This group comprised about 26% of the sample,

65

suggesting that only a quarter of participants had not been directly exposed to the behavior at all in high school. It is important here to note that studies of sexting behavior that utilize self-selecting samples, such as this one, tend to report higher prevalence rates (Klettke, Hallford, & Mellor, 2014). It is possible that this high number of a volunteer sample fails to represent the frequency across the entire population.

Hypothesis 1d suggested that of those who ever sexted in high school, most would report sending to a boyfriend or girlfriend, as found by Strassberg and colleagues (2014). However, in this study, there was a nearly even split between those who sent to romantic partners (55%) and those who sent to other groups (e.g. acquaintances, friends, someone to "hook up" with). Although a slight majority of respondents seem to have sexted within the context of committed relationships, the even split was surprising. It has been argued, by researchers and indeed teens themselves (Doring, 2014), that youth sexting might be viewed as a sign of trust and intimacy within committed relationships, yet it appears that a large percentage of the current sample did so beyond the protected context of a relationship. This would seem to put the sender at more personal risk.

The frequency of sexting was also examined. Of those who ever sexted in high school, close to 93% reported sending more than one time, and about half reported sending more than five times. It was felt that students sexting to partners might do so more frequently, since they could do so in the relatively safer and more intimate context of a committed relationship, but this was not the case. Students who sexted to relationship partners tended to sext *less* often than those who sexted outside of relationships.

A combination of multivariate analyses and correlations explored the inter-connections of the variables, including what predicted youth sexting behavior. There were also no observable

66

differences by gender across any of the domains of sexting behavior, including type, frequency, and destination. Students who received sexts in high school were more likely to have also sent, but beyond that, the only variable that significantly predicted whether or not students sent sexts in high school was the attitude of *perceived normalcy*. Unsurprisingly, students who sexted were more likely than those who did not to report the behavior as more normal for teenage life today. This means that there were no significant effects by thrill-seeking, impulsivity, or school experience.

Evidently sexting behavior is difficult to predict as a dichotomous construct (i.e. did send or did not send), so the behavior was also analyzed for sexting destination and sexting frequency. Although the sample was nearly split in half between those who sent more than or less than five times in high school, nothing predicted that difference other than *perceived normalcy*. Sexting destination, however, emerged as a more valuable distinction, and the current sample was nearly evenly split between those who sent sexts exclusively to a romantic partner and those who sent to others (e.g. friends, "someone I just met", "someone I wanted to hook up with"). There was no difference by gender between these groups; nor was sexting destination predicted by age, thrill-seeking, or sexting-related attitudes. Yet, students with higher *student engagement* were significantly more likely to sext within romantic relationships.

Hypothesis 2 – Predictors of Attitudes towards Youth Sexting

Hypothesis 2 posited that attitudes towards youth sexting would be mixed. Results of exploratory factor analysis for the sexting attitudes scale indicated two discrete and inversely correlated factors, supporting Hypothesis 2a – as *perceived risk* of sexting increases, *perceived normalcy* of the behavior tends to decrease. Most teens see the behavior as carrying some risk and need for caution, and there was no difference in perceived *risk* between teens who sexted

and those who did not. There was a significant difference, however, in perceived *normalcy* between those who sexted and those who did not, partially supporting hypothesis 2b. As one might expect, students with less exposure to the behavior rated it as more unusual.

Some interesting demographic predictors of sexting-related attitudes emerged. Female students reported significantly higher perceived risk, while male students reported significantly higher perceived normalcy. Female students see sexting as riskier and in need of greater caution, which is at least partially explained by the greater risk of victimization female students can experience from distributed images. Male students feel the behavior is more of a "normal part" of teenage life today, though this was not necessarily because they did it more frequently or received more images.

A significant association was also found between students' perceived risk for sexting and their views on sexting education. Students who feel that sexting is risker are more likely to endorse formal school efforts to intervene. However, no other significant associations with sexting-related attitudes were found, despite the expectation that students with more positive school experience and connectedness might be more likely to see the behavior as risky. Though non-significant, this is an interesting result, as it suggests that students' experience of their school climate and their own academic capabilities have little to do with what they feel about sexting. Good students or bad, well-connected or isolated, motivated or indifferent – they all feel similarly about sexting among high school students today.

Hypothesis 3 – Effects of School Experience

Hypothesis 3 explored the impact of perceived school experience, as an indicator of high school climate, on students' sexting behavior and related attitudes. It was thought that students

68

who reported more positive school climate overall would report less favorable attitudes towards the behavior, less personal sexting behavior, and more favorable views on sexting education.

The two-factor solution revealed by exploratory analyses indicated two discrete components of school experience. *Student engagement* represented variables internal to a student including academic motivation, feelings of belonging, and enjoyment of school; t*eacher investment* represented the characteristics of schools and school personnel, including teacher relationships with students and the perception of how schools cared for students' success. These two subscales were analyzed separately. Regression analyses revealed that neither of these constructs were significantly predicted by what had been expected.

Perceived *teacher investment* was not significant to students' behaviors or attitudes in other areas. Yet *student engagement* was found to be a more significant predictor of certain aspects of how students behave. Students who reported higher student engagement were significantly less likely to sext outside of romantic relationships. Of all the students who ever sent a sext in high school, the ones who were more connected in school, felt more belonging to their school communities, and enjoyed the challenges of learning were more likely to be more selective in who they sexted with.

Hypothesis 4 – Thrill-Seeking (Type T) Personality

Hypothesis 4 related to thrill-seeking traits, assessed through the Type T personality scale (Farley, 2016). Results indicated that Type T personality did not significantly relate to changes in any aspect of sexting behavior, sexting attitudes, or views on sexting education. Furthermore, a student's impulsivity, assessed through a single item ("I often act impulsively") was added to the survey and similarly did not predict changes in sexting attitudes or behaviors. High school students with both Big T and Little T personality types reported similar sexting behaviors and

attitudes. Other research on the links between sexting and risk-taking tendencies has been largely mixed, and some have questioned the assumed association between the two (Van Ouytsel, Walrave, Ponnet, & Heirman, 2015). These findings would suggest that the connection is a spurious one. How students rate their own thrill-seeking nature does not seem to relate to how they sext, or even what they think about sexting among students today.

Hypothesis 5 – View on School-based Sexting Education

High school students' views on sexting education were assessed as part of Hypothesis 5. One of the primary purposes of this study was to help inform school-based practices for addressing sexting among students. A critical perspective in all of the discussion about what teenagers think and what they need comes from teenage students themselves. The 4-item scale of views on sexting education indicated that students overall feel that school staff have a role in helping students be safe online.

The sample mean was 2.88 (SD = .69), which on a 4-point scale suggests general agreement towards the need for schools to intervene. It was interesting, however, that students appeared to rate the overall *necessity* of school intervention more highly than the *effectiveness* of doing so. Two items pertaining to the responsibility of schools to help were skewed more positively than items about how effective school-based lessons might be. It might seem, then, that students want their teachers to at least try to help, even if doing so may not lead to substantial changes in student behavior. There was no significant difference in view on sexting education between those who sexted and did not; recent high school students, regardless of their youth sexting behaviors, all felt that schools have a limited role in shaping what students do.

What would recent high school graduates do about sexting in their schools?

Recent high school graduates were asked directly what *they* would do if in charge of a program to deal with student sexting. These responses, collected through the online survey, were grouped into four categories. The majority opted for some form of risk-education, while the remainder of responses were evenly divided between guest speakers, open and informal discussions with students, and the suggestion that nothing could be effective. However, most students, regardless of their categorized response, advocated for thoughtful responding and programming; they seemed unanimously opposed to "scare tactics" or shaming of students for sexting. Rather, a more effective and holistic response would include trusting that most students can make responsible decisions, which is easier when trying "to relate with students on a personal level".

The notion of school staff protecting students by building trusting relationships with them is nothing new. Students in this study were quick to disregard the lectures of teachers and school staff. These often seem out-of-touch and tend to over-generalize from a deviance framework (e.g. "all sexting is bad and if you do it you'll get in trouble") (Doring, 2014). Rather, responses seem to indicate the best method for educating students, ironically, would be to not to try educating them at all, but rather to attempt to connect with students on a personal level and understand the unique pressures of their social and highly digitalized worlds.

Major Findings

Nuanced Understanding of How Students Sext

Though each of the results discussed above carry their own significance, three major findings are highlighted. The first of these is the recognition that sexting behavior is

71

multifaceted, and an understanding of the characteristics and predictors of the behavior requires nuanced consideration of the different ways that sexting exists in adolescent life. This study hypothesized that the greatest differences would be found between students who sexted and those who did not, but that proved to be an oversimplified construct that failed to predict any significant differences in other variables, including risk-taking, school experience, impulsivity, or related attitudes. Greater significance was found by analyzing the different ways that student sent sexts – in particular, who they sent them to.

The sample was nearly evenly split between those who sexted with romantic partners and those with others (e.g. friends, "someone I just met", "someone I wanted to hook up with"). It was also noted that those who sent primarily to romantic partners sexted far less frequently overall. This would suggest an important layer of distinction between these two groups: students who sext within romantic relationships tend to be more conservative in how often they send, while those who send to acquaintances, interests, and even strangers did so more liberally. This is significant as the greatest risk for sexting – legally, socially, emotionally – is in the distribution of images. Once an image is sent to another it automatically leaves one's control, and since digital images can be spread widely and stored permanently in seconds, who a picture is sent to matters all the more.

As to the significance of sharing within relationships, previous research has found the relational context of sexting is critical, for the behavior occurs not just under the influence of teenage impulse, but occupies a role within relationship development (Walker, Sanci, & Temple-Smith, et al, 2013). Be it right or wrong, safe or dangerous, the behavior needs to be understood within a relational context and not merely as a deviant exercise (Doring, 2014). As a recent meta-analysis on the topic concluded, a recognition of the "multiplicity of personal, lifestyle and

72

socio-cultural factors influencing sexting behaviors will not only enhance existing knowledge but ultimately lead to more appropriate and relevant ways of educating parents and professionals working with young people." (Cooper, Quayle, Jonsson, & Svedin, 2016, pp. 714)

The Effects of Positive Student Engagement in High School

The second major finding was the significant effect of school experience on the sexting behavior of teens. Of all the variables included for analysis, only one consistently predicted who students were more likely to sext with. Students who reported higher *student engagement* were significantly more likely to sext within the relative safety of romantic relationships. These are students who overall felt positively about the schools they attended and their own capacities as learners: they felt proud about their schools, they enjoyed going and appreciated the challenges of learning new things. And although they sexted at the same rate as other students, they did so more safely.

A single item from this scale is illustrative, and was the only item found to significantly correlate with multiple categories of sexting behavior: "*in high school, I was confident in my ability to manage my schoolwork*". Students who endorsed this item were significantly less likely to have any sexting experience in high school (i.e. send, receive, or forward) or, if they did, to have sent outside of romantic relationships. This was a compelling finding, as students who endorsed this item were stating a positive academic self-concept including a strong sense of self-efficacy; this is about who they felt they were, and not just about what they felt about school. Academic self-concept and broad school experience are closely linked, and a positive self-concept is related to numerous positive outcomes for students (Appleton, Christenson, Kim, & Reschly, 2006).

Yet these findings are only pertinent for school personnel if they can directly influence that sense of school engagement among their students. Otherwise we are left with the helpful but seemingly intuitive conclusion that more responsible students are also more responsible in their digital interactions. Although the role of teachers in shaping student engagement is a well-researched topic well-beyond the scope of this paper, suffice it to say that, yes, teachers can help to make their students more engaged (Raufelder, Sahabandu, Sanchez Martinez, & Escobar, 2015).

The Role of Schools, As Seen by Students

Thirdly, and finally, this study sought to understand what high school students think should be done about youth sexting. Perhaps unsurprisingly, students have mixed feelings about this. The general impression was that, yes, schools should try to do something, but there was no obvious consensus on what might actually be done. Some suggested formal risk-education, some suggested "safe sexting" lessons, and a few argued that nothing would work at all. Yet underlying all responses to these questions was an appeal to be *understood.*

Nearly every student who answered a question about sexting education asserted some variation of, "It's not a big deal." However, they did not mean by this that sexting is not risky or that a leaked sext could not destroy a student's reputation – many had stories of instances just like that. Rather, they seemed to be implying that sexting is not as dangerous nor as widespread as the adults in their lives have continually told them.

These responses confirmed what other research has asserted, that educating on risks and criminal consequences will not be enough to change behaviors. Most students are acutely aware of how sexting can go wrong, and that is why the majority do not do it, regardless of what they learned in school. In the minds of many students, the most important step for educators would be

to try to understand how the behavior fits into their social worlds. As an example of this, rather than lecturing students on legal implications, educators could facilitate opportunities for teenage students to discuss and challenge power dynamics in intimate relationships (Walker, Sanci, & Temple-Smith, et al, 2013).

Limitations

Before any attempt to translate these conclusions to a broader scope of social and behavioral significance, it is worth noting some critical methodological limitations. The current study was conducted under certain conditions of convenience that, while conducive to the expedience of graduate research, do compromise the generalizability of its findings. The first and most significant of these was the sampling techniques employed. A convenience sample was selected, and participants were exclusively first- and second-year students enrolled in general education courses from one large urban university. Students were recruited via email and volunteered to participate for the chance to win a gift card. This self-selected sample may represent students with certain characteristics not representative of all their peers.

The extent to which college student responses can be generalized to represent an entire population of adolescents is unclear. Attitudes are always subject to change, and the correlation of current attitudes and past behaviors should be interpreted with caution. It is worth noting, however, that one benefit of studying a construct like high school experience in an undergraduate sample is the heterogeneity of experiences. It may be safely assumed that of the more than 100 participants in this study, dozens of high schools across the region and the state were represented. Assessing school experience of students from a single high school would not provide such a range of perspectives.

The perseverance of personal traits and attitudes was assumed for this study, but also represents a potential limitation. For example, an 18-year old student who rated herself as a low Type T thrill-seeker today may actually have been a higher thrill-seeker when age 16 and sending sexts to strangers. The natural maturation of student thoughts, attitudes, and decision-making abilities must be taken into account when drawing conclusions from this sample. Relatedly, this study also sought to explore the impact of perceived high school experience on youth sexting behaviors, but a sample of college students will, presumably, have experienced higher academic motivation and school connectedness than a general population of high school students.

Statistically speaking, the small sample size limits the overall generalizability of findings. Low statistical power was observed for certain significant effects, particularly for small group analyses such as those who sexted beyond romantic relationships (N = 18). As a result, findings might overestimate the true effect of students' school engagement on who students choose to sext with. In terms of measurement, the scales included in this study were primarily adapted versions of previously studied instruments, revised for retrospective reporting. The validity of these scales may be affected by these revision, particularly in the accuracy of self-reported sexting behaviors. For example, discrete groups were created based on frequency of youth sexting behavior (i.e. more than 5 times and less than 5 times), but those self-reported numbers may relate more to the kind of person a student recalls himself being rather than a precise number of events.

The qualitative components of this study, particularly the focus group discussion, were subject to considerable social desirability effects. Although no names or demographic information were collected, students participated amongst a group of classmates seen regularly. The perceptions of peers could have influenced how participants responded and created a false

homogeneity of attitudes. Most questions were answered by several students in the same way, and the open format of the discussion may have muted dissenting views or alternative perspectives. What appeared to be consensus opinion among a sample of recent high school graduates may not have reflected the full spectrum of opinions on the topic.

Implications and Recommendations

This study partially supports the argument (Hinduja & Patchin, 2012) that a positive school climate can help prevent incidents of sexting among high school students. The reality of high school student sexting is much more complex than the difference between those who do and don't, and responses to the behavior require an equal level of nuanced understanding. What has been illustrated in this study is that simply trying to understand the difference between students who sext and students who do not may ignore the important relational contexts in which adolescent behaviors occur. Youth sexting, and indeed all adolescent behaviors, occur in the midst of emerging identities and shifting social pressures, and while those factors do not qualify a behavior as right or wrong, they do help explain why the innate traits of young students do not reliably predict how they will behave.

Initial hypotheses, that a broad construct of positive school climate would predict significant decreases in overall sexting behavior, were partially supported. The study found that high school students who tended to be more academically motivated and to feel more belonging in their school were *less* likely to sext in riskier ways. These students sent pictures more often to romantic partners than strangers or friends, which represents a more responsible and seemingly safer means of engaging in the behavior.

This finding highlights the link between school engagement and safer sexting, and the point has been made elsewhere that teacher support can help build more positive engagement among students. Yet for all practical purposes, building resilience is less an immediate task for school staff than the daily work of identifying students at-risk. Therefore the inverse of this finding may be helpful: students who are less connected and engaged may be more at-risk for riskier sexting. Typically, school personnel will not know about sexting issues until they become problems for multiple students at once, but when preventative work is possible, it is always important to try. At the same time, recognizing another of this study's findings might be helpful: listen first and hear students' stories before making assumptions and expecting the worst.

So a final question looms over all of this work: what are school personnel to do about youth sexting? As with all adolescent issues in educational settings there is no single answer, but some broad recommendations are possible. First, recognize that most students are *not* sexting, and the minority who are sexting are mostly doing so within the relative safety of a committed romantic relationship. Second, it is still important to recognize the real dangers of any student possessing and sharing a compromising image of another minor. Although most students who do this may be responsible, there is potential for exploitation and abuse, and these consequences must not be ignored. Third, think beyond stand-and-deliver speeches for educating students on the risks of sexting; consider discussion about relationship pressures over lectures on legal implications. Although some of your efforts to protect your students might be initially dismissed by students as ineffectual, it is still important to try. Teachers and staff who care about topics as touchy as sexting can play an important role in helping students feel heard. Fourth, helping at-risk students feel understood regarding the online social pressures they experience may help to

build greater engagement and belonging, which in turn can lead to resilience and perhaps a decrease in risker sexting behavior.

Future Directions

Future research on this topic should examine the components of school engagement (e.g. academic motivation, social belonging) that are most relevant to online behaviors, and the external factors (e.g. teacher support) that might mediate that relationship. Additionally, it would be worthwhile to replicate these findings in a sample of current high school students. A larger sample may also allow for greater statistical power, along with more variation in group comparisons, such as the differences in school belonging by those who sent to friends or to people met online. The inverse of the positive school experience constructs may be explored, examining how sexting-related risk-factors can be mediated by teachers for those students with high levels of "school helplessness" (Raufelder, Sahabandu, Sanchez Martinez, & Escobar, 2015).

At the same time, research alone cannot provide sufficient answers to these complex problems, and any real progress in comprehending and predicting these behaviors will come with thoughtful collaboration with educators, families, and students themselves. Future research on this topic should incorporate the voices of students, perhaps using more robust means of quantitative analysis to give full credit to the range of student perspectives.

The digital worlds our students inhabit are continually shifting, and digital advancement often progresses more rapidly than the publication cycles of our most timely research. Rather than gaze upon these frightful realms from a safe distance, educators should engage with students about the promise and perils of these technologies, understanding more thoroughly in

79

order to inform more practically. It should be remembered that, in as much as the digital era has witnessed tremendous advancement in how we live and communicate, what it means to be a young person – to seek purpose and form identity and build community – has not changed. We engage with students on this issue not as with deviants seeking trouble, but as young people seeking belonging. How students do that, in their highly connected and frequently turbulent adolescent worlds, is well worth our most thoughtful and thorough support.

REFERENCES CITED

Anderson-Butcher, D., Amorose, A., Iachini, A, & Ball, A. (2012). The development of the

Perceived School Experiences Scale. *Research on Social Work Practice, 22*(2), 186-194.

Benotsch, E.G., Snipes, D.J, Martin, A.M., & Bull, S. S. (2013). Sexting, substance use, and

sexual risk behavior in young adults. *Journal of Adolescent Health, 52,* 307-313.

Bonetti, L., Campbell, M. A., & Gilmore, L. (2010) The relationship of loneliness and social

anxiety with children's and adolescents' online communication. *Cyberpsychology,*

Behavior, and Social Networking, 13(3), 279-285. doi:10.1089/cyber.2009.0215.

Burleigh, N. (2013). Sexting, shame & suicide. *Rolling Stone,* (1192), 48-55. Retrieved from

http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=90265468&site=ehost

-live&scope=site

Calvert, C. (2009). Sex, cell phones, privacy, and the first amendment: When children become

child pornographers and the Lolita effect undermines the law. *CommLaw Conspectus,*

18(1), 1-65.

Cooper, K, Quayle, E, Jonsson, L, & Svedin, C.G. (2016). Adolescents and self-taken sexual

images: A review of the literature. *Computers in Human Behavior, 55,* 706-716.

Corey, J. Blomfield, Neira, Bonnie L. Barber. 2014. Social networking site use: Linked to

adolescents' social self-concept, self- esteem, and depressed mood. *Australian Journal of*

Psychology [SEP]

Chou, H.T. G., & Edge, N. (2012). 'They are happier and having better lives than I am': The

impact of using Facebook on perceptions of others' lives. *Cyberpsychology, Behavior,*

and Social Networking, *15*, 117–121. doi: 10.1089/cyber.2011.0324.

81

Cyr, B., Berman, S. L., & Smith, M. L. (2014). The role of communication technology in adolescent relationships and identity development. *Child Youth Care Forum.* doi: 10.1007/s10566-014-9271-0

Dake, J.A., Price, D.H., Mazriaz, L. & Ward, B. (2012). Prevalence and correlates of sexting behavior in adolescents. *American Journal of Sexuality Education, 7,* 1-15.

Dir, A. L., Cyders, M.A., & Coskupinar, A. (2013). From the bar to the bed via mobile phone: A first test of the role of problematic alcohol use, sexting and impulsivity-related traits in sexual hookups. *Computers in Human Behaviour, 28,* 444-449.

Doring, N. (2014). Consensual sexting among adolescents: Risk prevention through abstinence education or safer sexting? *Journal of Psychosocial Research on Cyberspace, 8*(1), doi: 10.5817/CP2014-1-9

Englander, E. (2012). Low risk associated with most teenage sexting: A study of 617 18-year-olds. Retrieved from Bridgewater State University website: http://vc.bridgew.edu/ cgi/viewcontent.cgi?article=1003&context=marc_reports. Accessed 15 May, 2014.

Erikson, E. H. (1968). *Identity, youth and crisis*. New York: Norton.

Farley, F. (2016). The Seven Item Type T Scale. Personal Communication.

Fuller, A. (2010, January 26). Female undergraduates continue to outnumber men, but gap holds steady. Retrieved from http://www.chronicle.com/article/Female-Undergraduates-Continue/63726/

Gage, N.A., Larson, A., & Chafouleas, S.M. (2016) The Meriden School Climate Survey – Student Version: Preliminary evidence of reliability and validity. *Assessment for Effective Intervention, 41*(2), 67-78.

Hellmuth, J. L. (2016) *Attitudes, Identification, Decisions to Report, and Bystander Factors among College Freshman Regarding Sexual Assault* (Doctoral dissertation). Retrieved from Temple University Electronic Theses and Dissertations.

Hinduja, S., & Patchin, J. W. (2012). *School climate 2.0: Preventing cyberbullying and sexting one classroom at a time*. Thousand Oaks, CA US: Corwin Press.

High, A. C. & Caplan, S. E. (2009). Social anxiety and computer-mediated communication during initial interactions: Implications for the hyperpersonal perspective. *Computers in Human Behavior, 25*(2). doi:10.1016/j.chb.2008.10.011

Judge, A. M. (2012). 'Sexting' among U.S. adolescents: Psychological and legal perspectives. *Harvard Review of Psychiatry, 20*(2), 86-96. doi:10.3109/10673229.2012.677360

Keith, S., & Martin, M. E. (2005). Cyber-bullying: Creating a culture of respect in a cyber world. *Reclaiming Children and Youth, 13*(4), 224–228.

Klettke, B., Hallford, D. J., & Mellor, D. J. (2014). Sexting prevalence and correlates: A systematic literature review. *Clinical Psychology Review*, *34*(1), 44-53. doi:10.1016/j.cpr.2013.10.007

Lenhart, A. (2009, December). *Teens and sexting: How and why minor teens are sending sexually suggestive nude or nearly nude images via text messaging.* Retrieved from http://www.pewinternet.org/Reports/2009/Teens-and-Sexting.aspx

Lounsbury, K., Mitchell, K.J. & Finkelhor, D. (2011) *The true prevalence of "sexting"*. Retrieved from http://cola.unh.edu/ccrc/true-prevalence-sexting%E2%80%9D

Mason, K. L. (2008). Cyberbullying: A preliminary assessment for school personnel. *Psychology in the Schools*, *45*(4), 323-348. doi:10.1002/pits.20301

McKenna KYA, Green AS, Gleason MEJ. Relationship formation on the Internet: What's the big

attraction? *Journal of Social Issues* 2002; 58:9–31.

Mitchell, K. J., Finkelhor, D., Jones, L. M., & Wolak, J. (2012). Prevalence and characteristics of youth sexting: A national study. *Pediatrics*, *129*, 13-20. doi:10.1542/peds.2011-1730

Morgan, H. (2013). Malicious Use of Technology: What Schools, Parents, and Teachers Can Do to Prevent Cyberbullying. *Childhood Education*, *89*(3), 146-151.

Muir-Herzig, R. G. (2004). Technology and Its Impact in the Classroom. *Computers and Education*, *42*(2), 111-131.

O'Cathain, A., & Thomas, K. J. (2004). "Any other comments?" Open questions on questionnaires – a bane or a bonus to research? *BMC Medical Research Methodology*, *4*, 25. http://doi.org/10.1186/1471-2288-4-25

O'Keefe, G. S., Clark-Pearson, K., & Council on Communications and Media. (2011). The impact of social media on children, adolescents, and families. *Pediatrics, 127,* doi: 10.1542/peds.2011-0054

Parker, T. S., Blackburn, K. M., Perry, M. S., & Hawks, J. M. (2013). Sexting as an intervention: Relationship satisfaction and motivation considerations. *The American Journal of Family Therapy*, *41*(1), 1–12.

Pascoe, C. J. (2011). Resource and risk: Youth sexuality and new media use. *Sexuality Research & Social Policy,* 8, 5-17.

Raufelder, D., Sahabandu, D., Martínez, G. S., & Escobar, V. (2015). The mediating role of social relationships in the association of adolescents' individual school self-concept and their school engagement, belonging and helplessness in school. *Educational Psychology*, *35*(2), 137-157. doi:10.1080/01443410.2013.849327

Rosin, H. (2014, November). Why kids sext. *The Atlantic, 314*(4). 65-77.

Reyna V.F & Farley F. (2006) Risk and rationality in adolescent decision-making: Implications for theory, practice, and public policy. *Psychological Science in the Public Interest, 7*, 1–44.

Shalom, J. G., Israeli, H., Markovitzky, O., & Lipsitz, J. D. (2014). Social anxiety and physiological arousal during computer mediated vs. face to face communication. *Computers in Human Behavior, 44,* 202-208. doi:10.1016/j.chb.2014.11.056

Steinberg, L. (2008). A Social Neuroscience Perspective on Adolescent Risk-Taking. *Developmental Review : DR*, *28*(1), 78–106. http://doi.org/10.1016/j.dr.2007.08.002

Strohmaier, H., Murphy, M., & DeMatteo, D. (2014). Youth sexting: Prevalence rates, driving motivations, and the deterrent effect of legal consequences. *Sexuality Research & Social Policy: A Journal Of The NSRC*, *11*(3), 245-255. doi:10.1007/s13178-014-0162-9

Strassberg, D. S., Rullo, J. E., & Mackaronis, J. E. (2014). The sending and receiving of sexually explicit cell phone photos ('Sexting') while in high school: One college's students' retrospective reports. *Computers in Human Behavior*, *41*177-183. doi:10.1016/j.chb.2014.09.008

Strassberg, D. S., McKinnon, R. K., Sustaíta, M. A., & Rullo, J. (2013). Sexting by high school students: An exploratory and descriptive study. *Archives of Sexual Behavior*, *42*(1), 15-21. doi:10.1007/s10508-012-9969-8

Tableman, E. (2004) School climate and learning. *Michigan State University: Best Practice Briefs, 31.* Retrieved from: http://outreach.msu.edu/bpbriefs/issues/brief31.pdf

Turkle, S. (2012, February) Sherry Turkle: Connected but alone [Video File] Retrieved from https://www.ted.com/talks/sherry_turkle_alone_together?language=en

Valkenburg, P. M., & Peter, J. (2011). Online communication among adolescents: An integrated

model of its attraction, opportunities, and risks. Journal of Adolescent Health, 48, 121–127.

Van Ouytsel, J., Walrave, M., Ponnet, K., & Heirman, W. (2015). The association between adolescent sexting, psychosocial difficulties, and risk behavior: Integrative review. *The Journal of School Nursing*, *31*(1), 54-69. doi:10.1177/1059840514541964

Van Ouytsel, J., Walrave, M., & Van Gool, E. (2014). Sexting: Between Thrill and Fear—How Schools Can Respond. *Clearing House*, *87*(5), 204-212. doi:10.1080/00098655.2014.918532

Walker, S., Sanci, L., & Temple-Smith, M. (2013). Sexting: Young women's and men's views on its nature and origins. *Journal of Adolescent Health*, *52*(6), 697-701. doi:10.1016/j.jadohealth.2013.01.026

Weisskirch, R. S., & Delevi, R. (2011). "Sexting" and adult romantic attachment. *Computers in Human Behavior, 27,* 1697-1701.

APPENDIX: SURVEY INSTRUMENT

Demographics	1. What is your age?
	    a. <18
	    b. 18
	    c. 19
	    d. 20
	    e. >20
	2. What is your gender?
	    a. Male
	    b. Female
	    c. Other: _____
	3. When did you graduate from High School?
	    a. 2016
	    b. 2015
	    c. 2014
	    d. Other: ____

Perceived School Experience Survey Anderson-Butcher, Amorose, Iachini, and Ball (2012)	Indicate the extent to which you agree with the following statements: **1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree** Academic Motivation: 1. My teachers provided helpful feedback to students about their academic performance. 2. Decisions at my high school always focused on what was best for learning. 3. My teachers monitored whether students were learning on a regular basis. 4. My high school valued students' learning. 5. I was confident in my ability to manage my schoolwork 6. I felt my high school experience prepared me well for adulthood 7. I enjoyed my high school experience 8. I had a positive attitude toward school 9. In high school, I liked the challenges of learning new things 10. I felt I made the most of my high school experience 11. I was proud to be a student at my high school 12. I felt like I belonged to my high school 13. I enjoyed going to my high school 14. I had meaningful relationships with teachers at my high school

Youth Sexting Behaviors
 	
(Strassberg, Rullo, & Mackaronis, 2014)
	During high school, did you:
	
	1. Ever send a picture of your genitals (or breasts, if you are female) to someone else's cell phone? A-YES B-NO
	    a. If YES, to whom did you send the picture of yourself?
	        i. A boyfriend/girlfriend (someone you're romantically involved with)

Retrospective High School Sexting Scale	ii. A friend (not your boyfriend/girlfriend)
	       iii. Someone I wanted to date or hook up with
	       iv. An acquaintance or someone I just met
	        v. Other: _____
	    b. If YES, indicate the frequency with which you sent these pictures in high school:
	        i. More than five times
	       ii. More than once, less than five
	       iii. Only one time
	2. Ever send a picture you took of someone else's genitals (or breasts, if they were female) to a third person's cell phone? A-YES B-NO
	3. Ever receive a picture of someone else's genitals (or breasts, if they were female) on your cell phone? A-YES B-NO
	4. Ever forward a picture you received of someone else's genitals (or breasts, if they were female) to a third person's cell phone? A-YES B-NO
	    a. If you answered YES to the above question, to whom did you forward the picture as a high school student?
	        i. A boyfriend/girlfriend (someone you're romantically involved with)
	       ii. A friend (not your boyfriend/girlfriend)
	       iii. Someone I wanted to date or hook up with
	       iv. An acquaintance or someone I just met
	        v. Other: _____
	    b. If YES, indicate the frequency with which you sent these pictures in high school:
	        i. More than five times
	       ii. More than once, less than five times
	       iii. Only one time

Youth Sexting Attitudes Sexting Attitudes (revised after Boden & Pendergast, 2015 – updated content)	Indicate the extent to which you agree with the following statements: **1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree** 1. I think sexting could cause problems for teens 2. Sending sexts is risky for teenagers 3. Sending sexts leaves teens vulnerable 4. Students have to be careful about sexting 5. *Sexting improves teenage romantic relationships* 6. *Sexting is a normal part of teenage relationships nowadays* 7. *Sexting is just part of teenage flirting* 8. *There is no harm in teenagers sexting each other* 9. *Teenage sexting is fun* 10. *Teenage sexting is exciting* 11. *Sexting is not a big deal for teens*

Sexting Education Attitudes	Indicate the extent to which you agree with the following statements:
	1 = Not at all true, 2 = rarely true, 3 = somewhat true, 4 = frequently true
	
	Necessary
	    1. High schools have a responsibility to teach students about the risks of sexting.
	    2. High school students need their teachers and principals to teach them about how to be safe online.
	
	Effective
	    1. Lessons taught by teachers or school counselors are the best way to help students learn safe sexting behaviors.
	    2. High school staff can have a significant impact on student sexting behavior.
	
	Open-Ended:
	
	1. If I were a principal in charge of a program to deal with student sexting, I would: _____

Type-T Risk-Taking Survey
(Farley, 2016)
	This last set of questions relates to risk-taking behaviors. Please rate your answers as follows: 1 – does not apply at all; 2 – applies slightly; 3 – applies somewhat; 4 – applies very strongly.
	
	    1. I would like to have as many exciting experiences in my life as possible
	    2. I am an excitement-seeker/thrill-seeker.
	    3. My friends would call me a thrill-seeker.
	    4. I am a risk-taker.
	    5. I enjoy taking mental chances or risks (e.g. I share a new idea when I am not sure how other people will take it.)
	    6. I enjoy taking physical chances or risks.
	    7. I like to have discussions with people who have ideas that are different or opposite to mine.
	
	    8. I often act impulsively