FEMALE ADOLESCENT CYBERBULLYING: EXPLORING STUDENTS' INTENTIONS TO PURSUE A POSTSECONDARY EDUCATION

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Abstract

Does cyberbullying influence female adolescent students' postsecondary decisions in the U.S.? Using routine activities theory, this quantitative study explored if cyberbullying was related to female adolescent students' intentions to attend a college, postsecondary vocational school, and graduate from a 4-year college. Data were gathered from the 2019 National Crime Victimization Survey: School Crime Supplement (NCVS-SCS). The final sample comprised 102 female adolescent students in the U.S. aged 12-18 years old, and the data were analyzed using multinomial logistic regression. Results showed there were no statistically significant relationships overall between cyberbullying and female adolescent students' intentions to attend and graduate from postsecondary institutions. However, cyberbullying had a limited association with female adolescent students' intentions to graduate from a 4-year college if students spread rumors or tried to make others dislike them. Ancillary research is needed to examine this predictor in greater detail. These findings helped contribute to the literature and advance the topic of cyberbullying among female students aged 12-18 years old. Additionally, this study offered intervention strategies, implications for practice, and recommendations for future research.

Acknowledgments

I would like to thank our Heavenly Father for granting me the knowledge, patience, and grit to persevere through this extensive process. However, this dissertation is microscopic compared to eternal insights. It is difficult to illustrate here, but perhaps the third verse from the hymn *How Firm a Foundation* will suffice. I could not have reached this milestone without His assistance.

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To my late father, who passed away shortly after I completed my last doctoral class, thanks for being a great teacher. Teaching should be fun, and our relatives were educators. This is the first Ph.D. in his family, and I am sure he and our progenitors are smiling. I look forward to our family reunion one day.

To the bullies, I will defer judgment, but you can do better. To the victims, establish bulwarks, nurture optimism, and it will eventually work out in this life or the next. Trust me.

To everyone else, I add my humble brick to the infinite wall of knowledge.

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Chapter 1: Introduction

Cyberbullying behaviors among adolescent students are an important topic in today's schools, and this behavior may increase because of the internet, social media, and students' connectivity to the electronic world. Cyberbullying can be a pervasive habit among adolescents, and sometimes these stories invoke outrage with national or international headlines. Through their increased internet and electronic usage, adolescents could become affected by cyberbullying at some point. These adolescents might become perpetrators, victims, or both, through repeated online or electronic attacks from their peers or classmates.

Background

During the early 1970s the bullying phenomenon became a research topic due to the efforts of a Swedish psychology professor named Dan Olweus (Olweus, 1994; Pittaro, 2016). Olweus is often considered a father and pioneer of bullying studies (Pittaro, 2016; Subedi, 2020). Much of the subsequent research regarding bullying can be attributed to his original work in the early 1970s (Greene, 2000).

Smith (2013) indicated bullying research has progressed in phases from 1970-2004. The first phase occurred during the 1970s to 1988 with initial studies in Scandinavia and progressing into the 1980s when Olweus developed a bullying questionnaire for assessment. The second phase occurred during 1989 to the mid-1990s with more books, journal articles, intervention crusades, and bullying research became international in North America and Japan. The third phase occurred during the mid-1990s to 2004 with research about traditional bullying, and bullying presentations at international and European conferences. The last phase occurred from 2004 and beyond with bullying and cyberbullying due to smart phones and social networking providing additional tools for aspiring bullies.

Generally speaking, studies on traditional forms of bullying began in the late 1970s and early 1980s in Sweden, Finland, and Norway, and eventually advanced into the United Kingdom, Australia, and the U.S. (Griffin & Gross, 2004; Olweus, 1994). Traditional forms of bullying appear to be similar across various educational settings and societies, and continue to ascend in the U.S. and around the world (Carney & Merrell, 2001; Griffin & Gross, 2004). However, traditional bullying is exhibited by physical aggression, threats, mocking, social rejection, and body signals (Griffin & Gross, 2004; Olweus, 1993). A proper definition of bullying should be used to define this experience since female students may perceive bullying habits differently or accept it as a standard form of behaving. Researchers may have various definitions for traditional bullying but typically recognize five universal elements (Greene, 2000; Griffin & Gross, 2004):

- bullies intend to inflict fear or harm upon victims
- aggressive behaviors are typically repeated toward victims
- victims do not provoke bully behaviors verbally or physically
- bullying can occur in familiar social factions
- bullies are physically, intellectually, or socially more powerful (or perceived more powerful) than victims

In the past, student bullying often occurred in the following school areas due to a lack of adult supervision: hallways, stairways, bathrooms, cafeterias, playgrounds, and bus zones (Trump, 2011).

In previous settings, bullying was typically confined within school environments, and these acts usually ended when students returned home (Betts et al., 2017). However, modern technologies and students' connectivity to the internet have transitioned these environments from typical face-to-face conflicts into cyber warfare because adolescents' digital connections are

important for their social identity, networking, friendships, and relationships (Thomas et al., 2017). Cyberbullying is more likely to take place outside of schools than traditional bullying, but it often occurs between classmates (Smith, 2013).

Today's youth spend a significant amount of time utilizing technology, but they risk becoming bullies, victims, or both (Betts et al., 2017). In 2015, a study suggested 92% of U.S. teenagers from approximately 12-17 years of age access the internet on a daily basis (Lenhart, 2015; Thomas et al., 2017). Students may not initially set out to become cyberbullying perpetrators, but somewhere along the way, the behavior is learned (Timm, 2015). Additional literature has also suggested strong emotions of embarrassment are connected with students and cyberbullying (Horner et al., 2015).

Cyberbullying continues to evolve into a modern type of bullying implemented through electronic communications such as texting, Instant Messaging, YouTube, Facebook, and other social media platforms (Sticca & Perren, 2013). Additional forms of cyberbullying consist of obscene comments in chatrooms, blogs, nasty emails, online harassment, cybertrolling, malicious communications via gaming consoles (e.g., Xbox, PlayStation), offensive pictures, videos, spreading lies, secrets, rumors, and threats (Smith et al., 2008; Wright, 2017). Kowalski et al. (2014) noted cyberbullying comprised four elements: (a) intentional, aggressive behavior; (b) repeatedly implemented; (c) the perpetrator and victim have unequal power; and (d) it occurs via electronic means. When victims receive cyber-attacks, it can be nearly impossible to eradicate the electronic playground that affects victims in their homes at any time of the day or night, and in absolute anonymity (Bonanno & Hymel, 2013).

There has been a plethora of social media platforms used over the previous 20 years including: Myspace, Instagram, X (formerly Twitter), Threads, Reddit, Snapchat, WhatsApp,

Telegram, Discord, Twitch, TikTok, message boards, vlogs, and podcasts. This does not include dating websites, vast smartphone applications available to users throughout the world, virtual reality environments (e.g., Metaverse, VRChat), the dark web, and future technologies yet to be invented. Perhaps even artificial intelligence technologies such as ChatGPT, Gemini (formerly Bard), Grok, and Copilot could be used nefariously to spread misinformation or create fake photos and videos. The possibilities appear to be commodious and endless for anyone seeking cyberbullying opportunities.

Some research has suggested cyberbullying is a unique annex to traditional bullying because victims and perpetrators are at an increased risk of depression or suicidal ideation (Bonanno & Hymel, 2013). Cyberbullying distinguishes itself from traditional bullying because adolescents may believe there are larger public audiences, increased anonymity, less feedback (Slonje & Smith, 2008; Sticca & Perren, 2013), and less supervision (Patchin & Hinduja, 2006; Sticca & Perren, 2013). Compared to traditional bullying, cyberbullying has an unlimited audience of viewers and spectators (Kowalski & Limber, 2007). It is through cyberspace that victims believe (or perceive) they have been victimized by an unforeseen, worldwide audience, and these teen victims may have difficulty coping (Bonanno & Hymel, 2013).

Statement of the Problem

There is extensive research concerning adolescent bullying in educational environments. There have been previous gender studies, but female adolescents who cyberbully classmates appeared to be an understudied population within U.S. schools. The opportunity to investigate evolving trends of female aggression through their texting and internet usage might provide additional clarity regarding this phenomenon and address gaps in the literature. Specifically tailoring cyberbullying research to female students in the U.S. between 12 to 18 years of age can

provide an opportunity to address their intentions of pursuing a postsecondary education with colleges or vocational schools. Extant literature may highlight the problems with bullying or cyberbullying, but insufficiently examines intervention solutions to quell the behavior. This study could address these concerns by specifically exploring female cyberbullying activities, suggest intervention strategies, and provide additional research suggestions for career and technical education (CTE) students.

The Department of Education and the Centers for Disease Control and Prevention (CDC) list bullying as a substantial health concern (Horner et al., 2015). The U.S. government has also dedicated a website to disseminate bullying and cyberbullying topics (https://www.stopbullying.gov). Cyberbullying habits could have significant consequences for students breaking the law and disregarding another student's safety. Sometimes bullying habits are so egregious and pernicious it can lead to civil lawsuits or criminal prosecution in juvenile courts if students are under 18 years of age. If adults are involved, the civil and criminal penalties could be significantly worse. Across the U.S. there are various laws regarding bullying and they differ within each state. In Nevada, the *Nevada Revised Statutes* (NRS) 388.122 and 388.123 define bullying and cyberbullying, and NRS 388.135 prohibits these behaviors (https://www.leg.state.nv.us/nrs). Additionally, NRS 200.900 provides a list of cyberbullying penalties and the number of violations for minors less than 18 years of age. It should come as no surprise, bullying in any form, traditional or cyber, can become a legal or public safety issue for all those involved.

Purpose of the Study

The tenets of CTE comprise 16 career clusters, and cyberbullying falls under the cluster of law and public safety (Advance CTE, n.d.-a). This study has CTE implications because it may

help students identify, prepare, and train themselves and various stakeholders against cyberbullying tactics. This research study may provide a better understanding of female adolescent cyberbullying behaviors and provide additional options for students, guardians, teachers, and school administrators to counteract female cyberbullying behaviors through intervention and prevention. Moreover, this study might help future investigations and observations involving female cyberbullying characteristics, female violence, and females attending vocational schools, and colleges.

The primary tenet behind this quantitative study is to explore cyberbullying among female adolescent students within a K-12 educational system in the U.S. using the 2019 National Crime Victimization Survey: School Crime Supplement (NCVS-SCS). This study will help examine some female adolescent student's demographics, and explore if cyberbullying is related to their intentions to attend a college, postsecondary vocational school, or graduate from a 4-year college.

Research Questions

This study will be guided by the following quantitative research questions:

1. What were some selected demographics of female adolescent students' experiencing cyberbullying in 2019 (e.g., age, race, ethnicity, grade level, public or private school, school location)?
2. Are different cyberbullying behaviors related to female adolescent students' who have been victims of cyberbullying and their intentions to attend a college or postsecondary vocational school (e.g., Automotive Mechanic Training, Beauty School, Computer Programs)?

3. Are different cyberbullying behaviors related to female adolescent students' who have been victims of cyberbullying and their intentions to graduate from a 4-year college?

Theoretical Framework

Numerous theories have been proposed by researchers over the years in their pursuit to understand the complexities of cyberbullying. A theoretical framework called bioecological theory was initially a possibility for this study. However, correctly applying Urie Bronfenbrenner's bioecological theory (previously called ecological systems theory) should be longitudinal and could not be accomplished in the present study (Tudge et al., 2016). Nevertheless, Lowry et al. (2016) and Aivazpour (2020) identified studies from 2005-2018 with several theories and models regarding cyberbullying: social cognitive theory, general learning model, social dominance theory, social ranking theory, theory of reasoned actions, theory of planned behavior, general strain theory, general aggression model, social learning theory, attachment theory, theories of aggression, social structure and social learning, control balance theory, and routine activities theory.

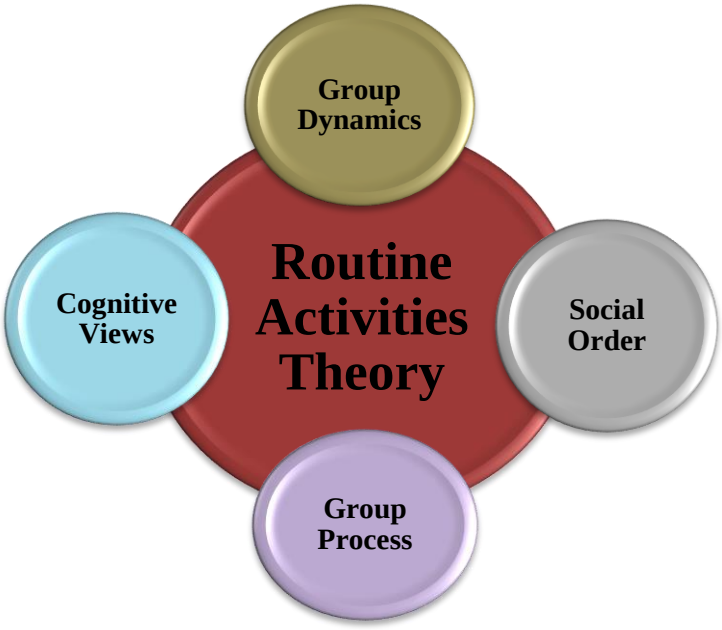
For this study, Cohen and Felson's (1979) routine activities theory (RAT) will be used and suggests predatory crimes occur when three elements are present: 1) motivated offenders, 2) suitable targets, and 3) absent capable guardians. RAT provides a singular framework linking illegal and legal activities as they become manifested during the routines of our daily lives (Cohen & Felson, 1979). RAT is a reliable theory for analyzing cybercrimes because its essential element consists of motivated offenders and belies capable guardians (Navarro & Jasinski, 2012). The internet is a commodity many female adolescent students utilize and is generally synonymous with the daily activities of their lives—good or bad. If students are motivated to act,

find suitable targets online or offline, and react outside their parents' purview, they might initiate bullying behaviors, become victims, or both. To illustrate, motivated offenders might be jealous, angry, controlling, or seeking power over potential victims they discover at school or online. These offenders might target vulnerable students who text or post information online, consider themselves unpopular, have low self-esteem, or view their race, religion, ethnicity, disability, sexual orientation, and physical appearance negatively. Even if these vulnerable students view their circumstances positively and proudly relay this information to others in person or electronically, offenders may become motivated to react. When offenders cyberbully these students via texts or online activities, guardians are typically absent. This could occur outside school grounds, away from administrators, teachers, adults, friends, parents, relatives, siblings, and bystanders who could all function as capable guardians and assist potential victims. Applying the three elements of RAT aligned with the 2019 NCVS-SCS because it asked students if they were cyberbullied due to their race, religion, ethnicity, disability, sexual orientation, or physical appearance (suitable targets), and if they notified teachers or adults (capable guardians) about it (Bureau of Justice Statistics [BJS], 2021). These victimized students might become motivated offenders by reacting, seeking revenge, or locating new targets, and the elements of RAT may be repeated (e.g., motivated offenders, suitable targets, absent capable guardians).

Conversely, one theory may not be enough to decipher the complexities behind female bullying or cyberbullying. Some researchers have suggested employing multiple theories to thoroughly explicate and comprehend the nuances of bullying (Evans & Smokowski, 2016; Subedi, 2020). Within this context, Jan and Husain (2015) discussed bullying could be related to four additional perspectives: 1) group dynamics, 2) social order, 3) group process, and 4) cognitive views. Figure 1 shows the integration of these four theories with RAT.

Figure 1

Theoretical Framework



Group dynamics involve obtaining valuable goals for the benefit of all group members, and if children cannot achieve these goals they are victimized and isolated from the group (Jan & Husain, 2015). For example, children face being excluded from their circle of friends when they cannot perform and adjust to the group's demands. These excluded children essentially undermine the groups integrity when they collaborate to obtain their specific objectives (Jan & Husain, 2015).

Social order postulates individuals have assorted roles and influential power within societal constructs and exhibit their power through aggressive behaviors that are reinforced and valued by the group and society (Cadigan, 2002; Hawker & Boulton, 2000; Jan & Husain, 2015; Teräsahjo & Salmivalli, 2003). Children play the role of directing their friends and show their power through aggressive behaviors. This power and aggression can be strengthened and

respected within their groups and school environments (Jan & Husain, 2015). These roles and aggressive behaviors may also extend to cyber playgrounds on the World Wide Web.

Group process suggests students belong to social groups, promote feelings of belonging within their group hierarchy, and each member is assigned distinctive roles in bullying (Jan & Husain, 2015; Salmivalli, 2001; Salmivalli et al., 1997). For example, students might be given the opportunity to bully, assist, enforce, protect, victimize, or spectate, and through these interactions, bonds are formed. These group organizations have leaders that target victims, helpers assist their leaders through peer engagement, and the groups enforcers support the leadership by providing feedback regarding their activities (Jan & Husain, 2015; Salmivalli et al., 1996). The internet, texting, mobile phones, tablets, and social media platforms can equip female group leaders with unlimited resources to cyberbully. Using these electronic systems can generate a chain of command for female cyberbullies to organize and pass along orders within their hierarchical networks.

Cognitive views suggest bullying is difficult to reduce and capture because bullies may acquire additional skills and confidence when they display aggression towards their classmates (Jan & Husain, 2015). For example, bullies may analyze and determine how much retribution they will receive from victims, parents, or teachers if they continue bullying. However, if a bully resorts to spreading lies and rumors about their peers, then their goals are accomplished with little risk and punishment (Jan & Husain, 2015). Additional risks are also mitigated when cyberbullies have limited parental oversight, absent guardians, and cautiously exploit others via texts, the internet, and social media. These electronic playgrounds could provide females with propitious opportunities to accomplish their goals in digital secrecy.

Ultimately, integrating RAT and these four perspectives provided a theoretical lens to illustrate the nature of cyberbullying behaviors for this study and suggests why females cyberbully if they become motivated offenders, find suitable targets, and act without oversight from capable guardians.

Significance of the Study

This study could provide supplemental blueprints to build and improve upon extant cyberbullying research and address female gender gaps within the literature. This study could assist subsequent research by discussing how cyberbullying behaviors may or may not persuade female adolescents from attending or graduating from colleges or postsecondary vocational schools. Exploring cyberbullying and its possible effects on female adolescent students' aspirations for a postsecondary education appears to be under-represented in cyberbullying and this study could identify patterns to counteract and promote additional advancements within this paradigm. It could better equip anti-bullying trainers, anti-bullying campaigns, intervention and prevention strategies, provide implications for CTE or vocational students, parents, teachers, and administrators in the U.S and worldwide.

Findings from this study could inform female adolescent students about anti-cyberbullying initiatives, reform school policies, and further cyberbullying research within educational settings and beyond. These institutions could provide additional professional development associated with the negative effects of cyberbullying.

This study could add to present and future investigative studies associated with gender, positive female relationships, female aggression, and female group dynamics.

Cyberbullying has been extensively researched, but the internet, educational, and digital technologies continue to evolve throughout the world. Studying the evolution of female

cyberbullying is no different, as this study seeks to investigate if it is related to female adolescent students' inclinations toward postsecondary institutions.

Definition of Terms

- **Bullying:** Aggressive behavior or intentional harm that is repeatedly carried out over time in interpersonal relationships with an imbalance of power (Olweus, 1994; Olweus & Limber, 2018).
- **Career and Technical Education (CTE):** Provides learners of any age with academic knowledge, training, and technical skills needed for future careers by exposing them to workplace environments, and providing hands-on experiences. (Advance CTE, n.d.-b).
- **Cyberbullying:** Bullying performed through electronic means such as cell phones or the internet (Olweus, 2012).
- **Postsecondary:** An education past high school (Dictionary.com, n.d.).
- **Vocational School:** A school where people learn how to do a job requiring special skills (Merriam-Webster, n.d.).

Limitations

As with any study, there are usually limitations, and this research study is not immune. For example, the NCVS-SCS is usually administered in the U.S. every two years. However, due to the COVID-19 pandemic with in-person learning, the 2021 NCVS-SCS was postponed until 2022 (Office of Management and Budget [OMB], 2021b). When this dissertation began in January 2023, the raw data from the 2022 survey were still unavailable to the public, and this researcher could only access the latest NCVS-SCS data from 2019.

Regardless, the present study will use secondary data analysis. This study is limited to female adolescent students in the U.S and might not reflect behaviors exhibited in other U.S. schools or throughout the world. Transferability of this study to other school districts in the U.S. or throughout the world remains with the reader. This study used non-probability sampling due to cost and time restrictions. This study is not longitudinal but cross-sectional, and limited to students at one point in time during their educational years between middle school and high school. It is expected that some students could provide different information about their lives or experiences associated with cyberbullying. For example, some students may rationalize or embellish their cyberbullying experiences, either directly or indirectly, and leave out pertinent information. Fear and retaliation could also influence their responses, especially if perpetrators, relatives, guardians, or teachers discover any questionable activity and confiscate their electronic devices.

Previous cyberbullying studies have typically employed quantitative methodologies with a limited number of qualitative studies (Bryce & Fraser, 2013; Pittaro, 2016). Perhaps researchers believed mixed methods designs and methodologies would be inconvenient, time-intensive, costly, and tedious. However, if researchers applied mixed methodologies with quantitative and qualitative techniques, perhaps they could discover greater associations between cyberbullying variables. If any researcher wishes to accurately comprehend the female cyberbullying phenomenon, incorporating robust integration using these three methodologies may provide additional transparency, generalizability, and validity. Analyzing data from questionnaires may provide correlational inferences, but likely cannot establish causality between the variables of cyberbullying and postsecondary intentions. It is imperative for

researchers to triangulate and capture a holistic view of female cyberbullying by articulating appropriate research methods for unique opportunities, insights, and enriched data analyses.

Delimitations

This study was delimited to female students in the U.S. between the ages of 12 and 18 years old, and from 6th grade to 12th grade. The public and private schools were dispersed throughout the U.S. in the following regions: Northeast, South, Midwest, and West. Access to these students was obtained through telephonic interviews or personal visits.

This researcher utilized purposive sampling to only include female students. This researcher posits that male adolescent students and their cyberbullying behaviors have been researched extensively. There is also an inference that males are typically more aggressive than females and gender differences with cyberbullying are slightly inconsequential. However, specifically focusing on female adolescent students could assuage gender inferences, offer unique insights into their cyberbullying activities, and provide inimitable data associated with their texting or online behaviors.

Summary

This chapter provided a brief introduction and background, statement of the problem, the purpose behind the study, research questions, theoretical framework, significance of the study, definition of terms, limitations, delimitations, and prepared readers to learn more about extant literature. Chapter 2 will provide a review of this literature in greater detail.

Chapter 2: Literature Review

Extant literature was examined for traditional forms of bullying versus cyberbullying, statistics, prevalence, types of cyberbullying, individual factors, psychological effects, gender differences, and intervention strategies. This study will attempt to address gaps in the literature, help advance cyberbullying studies among female adolescent students, and explore how this phenomenon may be related to their desire to attend a college, postsecondary vocational school, or graduate from a 4-year college.

Traditional Bullying vs. Cyberbullying

Before the internet became public during the 1990s, traditional bullying was usually committed at various locations on school grounds and concluded at the end of the school day (Betts et al., 2017). Traditional bullies may have started with teasing, verbal threats, name calling, or physical violence. These in-person encounters may have been conducted one-on-one, or with a group of peers watching and assisting. School grounds provided opportunities for students to exert their will and control over other students. Cyberbullying, however, poses unique challenges to victims because the perpetrators can hide under cloaks of anonymity the internet readily proffers today (Navarro & Jasinski, 2012).

Aboujaoude et al. (2015) noted cyberbullying has become a 21st century public health concern that differs from traditional forms of bullying due to internet usage, rising mobile technologies, the arrival of social media, reliance on connectivity, tolerating negative effects instead of being disconnected, and increased online disinhibitions associated with anonymity. This anonymity allows cyberbullying to be more diverse than traditional forms of bullying through prompt communications, and because there are no space and time restraints (Song et al., 2019).

According to Ioannou et al. (2018), in traditional and cyberbullying settings, there are typically three main actors: the predator (or cyberbully), the real-life victim (or cyber victim), and bystanders (observers who do not take action). However, as adolescents age, there appears to be a progressive shift away from traditional bullying acts (e.g., physical or verbal harm, spreading rumors) into cyberbullying acts (Ioannou et al., 2018). It is no secret that technology has changed how students communicate and has evolved from face-to-face interactions into online exchanges (Brochado et al., 2017). Despite these changes, Pelfrey and Weber (2014) have suggested traditional bullying and cyberbullying are inevitably linked to each other because teens are no longer restricted by in-person school days or landlines subjecting them to adult monitoring. Instead, greater ownership of electronics and mobile phones has increased their points of access to social media and provided youth with connections to their peers around the clock. These researchers indicated that while technology has many benefits, unsupervised cyberspaces could provide opportunities for cyberbullying and bring retaliatory acts back upon school grounds. After school hours, technological connections via cell phones, texts, instant messages, and social media have closed physical distances between schools and students that were implausible in previous years (Pelfrey & Weber, 2014). In previous times, traditional bullying was face-to-face confrontations, limited to bystanders, and bullies could view the reactions of these bystanders and victims. However, cyberbullying occurs behind screens, has a greater audience to share the matter in seconds, and is more difficult for perpetrators to empathize with victims because they do not fully grasp the impact of their behaviors (Camelford & Ebrahim, 2016).

Steer et al. (2020) regarded cyberspace as a unique environment that does not display an individual's facial expressions, nonverbal ques, and even their voice tone. Because of this,

misinterpretations can occur when adolescents engage in online teasing that may integrate humor with aggression. Furthermore, they proposed humor and banter have greater roles within cyberbullying perpetration than traditional forms of bullying due to humor being ambiguous and misinterpreted in cyberspace (Steer et al., 2020).

Aboujaoude et al. (2015) indicated playgrounds, school buses, and school days were once considered risks for traditional bullying, but hyperconnectivity via smartphones and social media accompany potential cyberbullying victims and facilitate greater access to their lives. They noted interventions to protect students used to be catered to these traditional settings, but now there are no places to hide and find safety because online anonymity exacerbates cyberbullying and makes it easier to attack victims. Pelfrey and Weber (2014) observed that the bullying phenomenon can be cyclical if by occurring online, reverting back within school hallways, and rotating back to cyberspace. This reciprocity can progress from incendiary remarks that may conclude into violence. However, their study indicated students typically spread rumors and gossip through electronic technologies and when they spend time together with friends at school. Still, these students did not consider rumors and gossip as bullying because they were daily occurrences that were part of socializing (Pelfrey & Weber, 2014). There are pros and cons to socializing, but students will always have conflicts associated with relationships, perceived disparages, misinterpreted humor, and power struggles at school that could eventually transfer into cyberbullying activities (Pelfrey & Weber, 2014).

Connell et al. (2014) contrasted traditional bullying versus cyberbullying with the following information. Unlike traditional schoolyard bullying, a cyberbully can victimize others through email, texts, instant messaging, personal websites, and social media networks. Further, the scope of potential victims and perpetrators continues to expand because the internet's

anonymity can flatten the playing fields and provide traditional victims an opportunity to cyberbully themselves (Connell et al., 2014).

Connell et al. (2014) indicated physically separating traditional bullies from their victims in schoolyards does not mean their behavior stops because virtual bullying continues in cyber spaces well after school is over and potentially lasts significantly longer. These researchers asserted online postings can be quickly disseminated and remain for greater lengths of time because bullies have less restrictions but greater anonymity which escalates the situation well beyond face-to-face conflicts. Moreover, virtual landscapes have limited adult figures such as school administrators, teachers, or parents to quickly step in and end these confrontations (Connell et al., 2014).

Shin and Kim (2023) posited adolescents who bully in real-life situations can influence their phone usage because they might have a greater tendency to communicate aggressively and commit delinquent acts within cyberspace. They suggested traditional bullying may facilitate aggressive traits and moral disengagement for adolescents to commit cyberbullying acts using their cell phones, and problematic mobile phone users and real-life victims are more likely to exhibit aggressive cyberspace behaviors. Navarro and Jasinski (2012) inferred some of these behaviors may include visiting informational websites focused on pop culture (including social media) with forums that have turned into popular venues for cyber harassing activities. Further, these risky behaviors could also include chat room participation and browsing adult websites (Navarro & Jasinski, 2012).

Ioannou et al. (2018) stated cyberbullying is more damaging than traditional forms of bullying due to the frequency and flexibility of using technology that can be implemented anytime or anywhere. Certainly, having anonymity adds a completely new dimension to

traditional bullying tactics, but predators might be reticent to attack victims if social media platforms exposed their online activities in the real-world.

To summarize, the information in Table 1 describes how traditional bullying differs from cyberbullying and was adapted from Aivazpour (2020).

Table 1

Traditional Bullying vs. Cyberbullying

Traditional Bullying	Cyberbullying
No anonymity, usually direct, less diverse	Is usually anonymous, indirect, more diverse
Typically occurs on or around school grounds	Independent of any location
The bully regularly harasses the victim(s)	Cyberbullies share negative information electronically or online, which can be reposted or sent by others, difficult to erase
The bully is typically one person, bystanders might assist or function as sentries	Cyberbullies can be one person or various people involving numerous bystanders
Usually face-to-face encounters, the bully and bystanders see the impact of their behavior	No proximity, behind screens, victim and bystander reactions can be invisible to bullies
Power struggles regarding physical strength, relationships, popularity status	Power struggles regarding technological skillsets, anonymity, online friends, social media circles
Victims might be unpopular or have disabilities	Anyone can be a victim
Victims might be unable to ignore it, but can fight back physically, or ask for assistance	Victims can fight back by ignoring, reporting, or blocking perpetrators
Victims may become physically injured	No physical injuries within cyberspace
Some adult oversight, might have real-life punishment	Limited adult oversight, little or no punishment in real-life due to anonymity

Statistics

Cyberbullying research has produced a wide variation of statistical data over many years. In the past 10 years, historical research has suggested 36% of the victims associated with traditional bullying are also victims to cyberbullies (Bonanno & Hymel, 2013). Timm (2015) provided the following statistics:

- The National Education Association projected 160,000 youngsters do not consistently attend school classes because they dread being attacked by fellow students.
- The National School Safety Center proclaimed there were 2.1 million bullies in U.S. schools, and victims totaled 2.7 million.

Other research has indicated the prevalence of cyberbullying is approximately 20% to 40%, and might be significantly greater (Betts et al., 2017).

Statistical data from the 2017 NCVS-SCS revealed 19% of high school students reported being bullied online or via text and middle school students were at 12% (Yanez et al., 2019). Specifically, however, female students reported they were bullied online or via text at 21% compared to 7% for male students (Yanez et al., 2019). The present study provides an opportunity to expand on this literature by examining the latest information from the 2019 NCVS-SCS.

The CDC reported data from the 2019 U.S. Youth Risk Behavior Surveillance (YRBS) revealed 16% of students in grades 9-12 reported they were bullied electronically during the preceding 12 months, and 20% of female students reported they were electronically bullied compared to 11% of male students. Moreover, the percentage of students in grades 9-12 who were electronically bullied in Florida, Georgia, and the District of Columbia was 11% with 20% being reported in New Hampshire (Centers for Disease Control and Prevention, n.d.; National Center for Education Statistics, 2022a).

In the past four years, Irwin et al. (2022) and the National Center for Education Statistics (2022b) recognized public schools were reporting a greater percentage of cyberbullying in 2019-2020 (16%) than during 2009-2010 (8%). Additionally, 16% of the public schools reported cyberbullying occurred between students at least once per week (National Center for Education Statistics, 2022b). The instant study provides an opportunity to expound on this by exploring female cyberbullying in public and private schools using data from the 2019 NCVS-SCS.

Some recent CDC data from the 2021 High School YRBS revealed 20.46% of U.S. female students from all ethnicities and sexual orientations in grades 9-12 were electronically bullied via texts, Instagram, Facebook, or other social media during the preceding 12 months. For example, 22.18% of females in 9th grade, 21.90% in 10th grade, 19.76% in 11th grade, and 17.78% in 12th grade (Centers for Disease Control and Prevention, n.d.). In Nevada, 15.74% of female students from all ethnicities and sexual orientations between grades 9-12 reported they were electronically bullied in 2019, and it increased to 18.12% in 2021 (Centers for Disease Control and Prevention, n.d.). Again, the present study provides an opportunity to compare and contrast these statistics by examining information regarding U.S. female students from the 2019 NCVS-SCS.

Prevalence

The prevalence of cyberbullying appears to render a complex and uneven pattern across various studies within extant literature, and scholars caution others about interpreting and comparing these prevalence rates (Brochado et al. (2017). Until this is accomplished, scholars will continue to forecast the rising dangers among youth cyberbullying as their accessibility to the internet has substantially increased over the years (Navarro & Jasinski, 2012). Consequently,

some researchers noted more adolescents are reporting their engagement with cyberbullying as perpetrators, victims, or both, and its growth as an international epidemic (Giordano et al., 2021).

Generally speaking, McCabe and Strauss (2022) noted prevalence rates from the 2017 YRBS data for electronic bullying among adolescent White females was at 23%, Hispanic females at 17.2%, and Black females at 13.3%. However, this information does not provide a comprehensive picture of the prevalence and ignores contextual and other stimuli that could be influencing cyberbullying activity (McCabe & Strauss, 2022). For instance, Ioannou et al. (2018) indicated the evolution of online social networking and the rising number of adolescents who have experienced cyberbullying as victims, bystanders, or bullies has created a worrying need to advance cyberbullying research. The research community has been scattered over diverse topics among the disciplines of computer science, humanities, social science, and academia as researchers seek to understand and overcome this social menace (Ioannou et al., 2018).

Jiang et al. (2022) commented that cyberbullying has become a global social problem, especially among adolescents, and the high prevalence rates negatively impacted victims. Adolescents are zealous users of technology, and especially when it comes to their internet and social media usage (Camelford & Ebrahim, 2016). Today's youth may have consistent connections to electronics and the internet because it's normal, but sometimes even savvy technological users may cross a fine line and participate in questionable online activities.

Aboujaoude et al. (2015) synthesized several cyberbullying studies across various disciplines and noted cyberbullying was recognized as a significant public health concern affecting children and adolescents alike, with females and minorities ostensibly at higher risks. However, they discovered prevalence rates were difficult to estimate due to unestablished definitions, the variety of study samples, differing methodologies, and questions asking students

about the times they experienced cyberbullying (e.g., the month prior to the study, during the semester, or during their lifetime). Cyberbullies will likely underreport their negative behaviors, and because cyberbullying is easy to conceal, the victims might refuse to report anything due to fear of being punished, embarrassment, losing their access to technology, and being recognized as weak (Aboujaoude et al., 2015). Brochado et al. (2017) believed inaccurate definitions of cyberbullying, language barriers, differing methodologies, perspective, cultural differences, recall periods (one month, last five months, last two years, or lifetime), and how researchers define adolescent ages (e.g., 10-17, 12-18) across studies may undermine true prevalence estimates and increases variability. Nonetheless, they indicated divergent age ranges and youth with varying ages may have dissimilar access to electronics and might inaccurately influence cyberbullying prevalence estimates (Brochado et al., 2017).

Soares et al. (2017) implied the context of cyberbullying could be a significant supplier to its prevalence because violence has complex interactions with social, cultural, biological, economical, and political factors. A country's societal makeup, individual accessibility, predispositions, and technological availability may also be significant contributors to cyberbullying occurrences (Soares et al., 2017). Additionally, their findings suggested victim prevalence appears to be lower among richer countries with more web servers and internet users, and when a high number of individuals are enrolled in secondary and tertiary schools. Adolescents with formal educations are seemingly more prepared to manage cyberbullies, but uneducated youth might publicize themselves with pictures and videos because of their desire for self-promotion (Soares et al., 2017).

Hamm et al. (2015) reviewed 36 cyberbullying studies in 34 publications that comprised male and female adolescent students between the ages of 12 and 18, and reported the prevalence

of cyberbullying was between 4.8% and 73.5% with a median prevalence of 23%. Most of these studies (58.3%) were within the U.S., but the large range could be related to the questions asking if participants ever received inappropriate messages or repetitive and incessant cyberbullying (Hamm et al., 2015).

Aboujaoude et al. (2015) cited data among cyberbullying surveys appeared to be varied but tend to suggest females have higher victimization rates and males have higher rates of perpetration. Additionally, some data has suggested cyberbullying victimization rates may be low at younger ages but increase in marginally older adolescents and rates eventually fall as teenagers mature (Aboujaoude et al., 2015). The present study may be able to address this outcome.

Another study by Connell et al. (2014) discovered cybervictimization and cyberbullying appeared to be more prevalent and primarily done by girls because they typically avoided violence (since cyberbullying limits physical aggression) and were more attracted to humiliating others via rumors and social prohibitions.

What are some adolescent cyberbullying prevalence rates in countries around the globe? An evaluation of 159 studies in 31 countries revealed the prevalence of adolescent cyberbullying appeared mixed across the world (Soares et al., 2017; Steer et al., 2020). According to Soares et al. (2017), the highest rates of cyberbullying victims were reported in Mexico (44.5%) and the lowest in Canada (1.9%), but 64.4% of adolescents in South Korea and 0.5% in Canada reported being both aggressors and victims. Moreover, cyberbullying was greater at younger ages in Sweden, the Netherlands, and the Czech Republic, but higher with older students in the U.S., England, and Belgium (Soares et al., 2017).

A prevalence study by Trompeter et al. (2022) examined cyberbullying trends from 2015-2020 that involved Australian students aged 11-16 years old. This study revealed perpetration and victimization prevalence rates were higher in 2020, and increased perpetration was associated with males, younger ages, and a student's lower socioeconomic status. They discovered cyberbullying perpetration and victimization increased significantly during the 2020 COVID-19 pandemic possibly due to the elevated school restrictions placed upon students (Trompeter et al. (2022).

Students attending traditional schools may comprise extant cyberbullying research, but vocational students are not immune to cyberbullying. For example, recent research has suggested vocational students are a particularly vulnerable population with a higher prevalence of delinquency (e.g., bullying) than adolescents from other types of schools, and females are more involved with cyberbullying and relational bullying possibly because of their higher life stresses (Ouyang et al., 2021; Xu et al., 2022). Perhaps some of these stresses are related to increased schoolwork, balancing relationships, biological changes, mental health development, procuring jobs or training, joining school clubs, obtaining good grades, participating in sports, and the like.

In any event, this research study provides an opportunity to address the prevalence of cyberbullying among U.S. female students between 12 and 18 years old during the 2018-2019 school year.

Types of Cyberbullying

According to Camelford and Ebrahim (2016), adolescents likely have extensive electronic resources within their grasp if they seek nefarious opportunities in cyberspace. For example, cell phones, video game consoles, tablets, computers, and other electronic devices. They indicated cyberbullies might steal passwords, embarrass victims by modifying their profiles

with offensive or derogatory items (e.g., comments or pictures), and pretend to be victims when chatting with others (Camelford & Ebrahim, 2016). Some individuals may even create fake instant messaging or social media accounts to communicate anonymously and identify potential targets (Pelfrey & Weber, 2014).

Adolescents might use their digital devices for flaming (posting insults), sending abusive emails, negative chatroom comments, and posting harassing statements on blogs (Wright, 2017).

There are various forms of cyberbullying that have been defined by adults, but they have similarities with juveniles as well (Aboujaoude et al., 2015). Portmanteau words have been created to describe various types of cyberbullying, and some were defined and summarized by Aceste (2019) and Blain (2017) in Table 2.

Table 2

11 Types of Cyberbullying

Type	Definition
1. Flaming	Sending angry or obscene electronic messages
2. Happy-Slapping	Posting or disseminating offensive pictures or videos
3. Denigration	Spreading rumors or gossip about someone
4. Impersonation	The bully pretends to be someone else
5. Outing	Divulging embarrassing or private information about someone
6. Trickery	The bully tricks a victim into revealing secret information
7. Exclusion	Deliberately excluding someone from formal or informal groups
8. Cyberstalking	Imbue fear by surveilling or monitoring a person's activities
9. Doxing or doxxing	Publishing identifiable or confidential information about someone
10. Self-harming	Anonymously telling someone to harm or injure themselves
11. Cyber harassment	Frequently sending offensive messages so victims fear for their safety

Individual Factors

Jiang et al. (2022) cautioned the factors that lead individuals to engage in cyberbullying activities are diverse and complex. Since the internet is ubiquitous, others have indicated the only way to address this global problem is to better understand the individual characteristics of the perpetrators (Giordano et al., 2021). That being said, school climate, high materialism, and adolescents' poor offline relationships can influence their deviant behaviors online since they are more likely to cyberbully (Wang et al., 2021). Steer et al. (2020) explained some adolescents perceive online banter as acceptable because they interpret emojis, teasing, or humor differently than others. Some youth may consider these behaviors as normal experiences, but it might lead to cyberbullying activity if it's manipulated for odious purposes. Regardless, Steer et al. (2020) suggested even humor and banter can be motivators for adolescents to engage in cyberbullying and act aggressively so they can obtain greater popularity among their peers.

When adolescents seek to cope with the pressures of their lives and negative emotions, they may turn to delinquent activities in cyberspace (Shin & Kim, 2023). Song et al. (2019) expanded upon this by stating cyberbullies with aggressive personal traits in the real world may displace their aggressive behaviors online and vice versa, and the time students spend on the internet significantly correlates with cyberbullying.

Adolescents are particularly vulnerable to cyberattacks because they are the largest consumers of social media and may not have sufficient self-control or maturity to manage potential aggressors by themselves (Soares et al., 2017). According to Zhao et al. (2017), the internet offers a low-cost, easily accessible platform for adolescents to interact and relax, but internet addiction is a rising concern. They conducted a study with 10,574 vocational students (boys and girls) in China and discovered 10.4% were addicted users, and those less than 18 years of age had a higher internet addiction than those over 18 years old (Zhao et al., 2017). Further,

they implied youth who were the only child in their family had higher internet addiction rates because they don't have siblings to express frustrations, surf the internet more because of isolation, and have less academic success (Zhao et al., 2017). If this is accurate, one might infer the longer adolescent students stay online, the greater their chances of perpetrating or becoming victimized by cyberbullying. It is no secret that adolescent students attending vocational schools encounter significant stressors to pass exams and procure employment, and the internet provides an opportunity to extract themselves from life's worries (Zhao et al., 2017).

Researchers have also identified predictive risk factors for perpetuating cyberbullying, which include narcissism, anger, and moral disengagement (Kowalski et al., 2014; Wang et al., 2021). Other evidence suggests addiction to social media, or its problematic usage, is related to cyberbullying perpetration within international studies (Giordano et al., 2021). Online social media platforms may inhibit or encourage cyberbullying for various reasons, but their levels of anonymity might be linked to the severity of cyberbullying (Ioannou et al., 2018).

Connell et al. (2014) stated the media tended to simplify cyberbullying when it reports high-profile cases involving innocent victims, predatory students, and suicide because victims could become cyberbullies or vice versa. Both parties can seemingly swap their roles and retaliate through technological mediums, and maybe technology allows victims easier access to become bullies (Connell et al., 2014). They reasoned older students may possess greater phone and computer skills to conduct cyberbullying more often and younger middle school students may have limited access to social media websites due to age restrictions. However, they suggested cyber victims were typically older, had lower grades, and were victims to other forms of bullying (irrespective of gender), and White females were more likely than their peers to report being victimized (Connell et al., 2014).

Some of the demographic variables in the current study might provide additional insight into individual factors among females such as race, sexual orientation, disabilities, and ethnicity. Connell et al. (2014) stated cyberbullying research pertaining to an individual's race is unclear, but their school climate and academic achievements have been linked to perpetration and victimization. Adolescents appear to be cognizant of internet privacy concerns that distress adults, but adolescents are becoming bolder and disregarding these concerns possibly because of their online anonymity (Connell et al., 2014). Additionally, Ioannou et al. (2018) declared there appeared to be consistent findings that sexual orientation played a role as individuals considered non-heterosexual were targets of traditional bullies and cyberbullies.

Students with physical or chronic disabilities can also be impacted by cyberbullying. For instance, a study by McCabe and Strauss (2022) among U.S. adolescent females with asthma revealed 24.7% of them were electronically bullied while 75.3% were not. Also, age was significant for asthmatic females as they were more likely to experience cyberbullying if they were younger than 16 years old (McCabe & Strauss, 2022). However, there were no significant differences between adolescent females with asthma, race or ethnicity, and cyberbullying (McCabe & Strauss, 2022). This study may provide supplementary information for extant literature since one of the questions asks students about their physical, mental, or developmental disabilities.

Researching gender, social media usage, personal motives, mattering, school connectivity, and mental health issues are pivotal components of cyberbullying perpetration studies (Giordano et al., 2021) and are presented throughout this literature review. However, the instant study seeks to expand upon individual factors by exploring if cyberbullying is related to

female adolescent students' intentions to attend college or vocational schools, and if cyberbullying is related to their intentions to graduate from 4-year college institutions.

Ultimately, individual factors associated with cyberbullying may increase classroom distractions, propel hallway fights, and force adolescent students to transfer schools, but it may also produce life-changing psychological consequences (Pelfrey & Weber, 2014).

Psychological Effects

Adolescent bullying experienced online or at schools poses an overall threat to a student's health and well-being (Brochado et al., 2017; McCabe & Strauss, 2022). Researchers have pointed out there are associations between various facets of mental health (e.g., anxiety, depression) symptomology and cyberbullying perpetrators, but there is a dearth of U.S. adolescent studies (Giordano et al., 2021). Undoubtedly, there are instances of cyberbullying that may have little impact upon adolescents, but serious incidents have resulted in substantial consequences for their emotional and psychological health (Navarro & Jasinski, 2012). Steer et al. (2020) supported this by suggesting there was solid evidence that youth cyberbullying victims incur significant damage and psychological harm.

Studies assessing cyberbullying psychopathology can be limited because they employ self-reported surveys, study moods (e.g., mad, unhappiness) instead of utilizing appropriate psychiatric definitions (e.g., post-traumatic stress or depression disorders), and neglect to implement inclusive psychiatric interviews (Aboujaoude et al., 2015). Still, an increase in psychological problems, internet addiction, precarious online gaming, anxiety, and suicide pacts has changed how people connect with each other despite their superficial linkage (Aboujaoude et al., 2015). Social media platforms place high premiums on the size of an individual's network rather than the bonds within them, and peer pressure favors expanding a person's social circles

(Aboujaoude et al., 2015). One method of expanding an adolescent's social network is utilizing their cell phones. However, a dependency or addiction to mobile phones has become more widespread in industrialized countries and can lead to adverse cyberbullying perpetration (Shin & Kim, 2023).

Hamm et al. (2015) declared there was a consistent relationship across 36 studies between depression and cyberbullying among children and adolescents. However, the effects of cyberbullying with additional mental health conditions were inconsistent (Hamm et al., 2015). They posited the connections adolescents have with social media can leave them with limited capacities to regulate socially and emotionally and are more vulnerable to peer influences. They indicated maturity levels of children and adolescents are still evolving and regular exposure to social media platforms could potentially harm their development (Hamm et al., 2015).

Zhao et al. (2017) cautioned that if the psychological needs of adolescent students are not met, they spend more time in cyberspace to alleviate their negative emotions. However, this can lead to additional aggravation, pressure, and depression, and students become ensnared in a malicious cycle (Zhao et al., 2017). These findings are ironic because young students may seek refuge from their lives by utilizing the internet more often, but this could also increase negative outcomes.

Wang et al. (2021) posited anonymous online environments are much different than offline environments where humans evolved psychologically, but cyberbullying can still be influenced by the effects of natural selection. In other words, cyberbullies might position themselves to compete and survive by displaying their power or control among their online associations and networks. Additionally, some adolescent students may seek personal or monetary benefits with likes, subscribers, and followers through social media networks or

YouTube videos. They may provide information on these platforms to attract fame, advertising, promote personal brands, and entice potential business opportunities with companies. However, the competition to receive more likes and subscribers might turn offensive with dislikes or negative posts from aggressive rivals and ambitious competitors. Collectively, these factors might invoke psychological stressors.

Ouyang et al. (2021) noted few studies have specifically addressed stressful life events and subjective well-being among female adolescents in vocational schools. However, this study provides an opportunity to explore vocational school aspirations among female adolescents and how their goals could be influenced with stressful life events (e.g., cyberbullying). Researchers have suggested female adolescents are vulnerable to adverse and stressful events in their lives with elevated levels of depression and addictive behaviors (Ouyang et al., 2021; Zhao et al., 2017). Some evidence suggests adolescents who have difficulty with emotional regulation are positively associated with being lonely and depressed, and are likely to transfer their negative feelings through cyberbullying activities (Jiang et al., 2022).

When adolescents begin developing their social identities, they start making moral judgments with their individual, interpersonal, and social behaviors (Thomas et al., 2017). However, teenagers might struggle to acquire independence due to the expectations of their significant others, who request access to their computer passwords and cell phones (Thomas et al., 2017). Adolescents' digital contexts are crucial components of their social relationships, development, and well-being, but concerns about bullying, romantic relations, early sexual activity, and sexting explicit images via texts can beset parents, educators, and policymakers (Thomas et al., 2017). To be fair, technology can expand opportunities for connectivity, but it could also generate additional social stressors and intensify aggressive behaviors among

adolescents (Thomas et al., 2017). Adolescents can be extra sensitive to their personal environments because their peer relationships become essential influences during this phase of their lives, and they are besieged with Western cultural portrayals of sexuality (Thomas et al., 2017).

Some of the most disturbing psychological effects associated with cyberbullying are suicidal thoughts or attempts (Camelford & Ebrahim, 2016). As technology continues to reach into the intimate aspects of people's lives and increased connectivity brings them closer together (for better or worse), many societal and mental health concerns have been altered by technology as cyberbullying has taken a toll on vulnerable adolescent populations and its increasing link with suicides (Aboujaoude et al., 2015). For example, adolescent females with asthma who were bullied at school were significantly more likely to have mental health issues by feeling hopeless or sad, contemplate suicide, make suicide plans, use cigarettes, electronic vapor products, alcohol or marijuana, and have contact with illegal drugs at school (McCabe & Strauss, 2022). Adolescent females with asthma might feel more vulnerable with their persistent condition and may try fitting in with their peers by engaging in these risky behaviors (McCabe & Strauss, 2022).

Ultimately, teenagers are sensitive to their peers' social feedback, and it may be difficult for them to disclose wrongdoings so they can minimize negative reactions, increase supportive responses, and maximize their social acceptability (Thomas et al., 2017). Perhaps female adolescent students are more sentient to their cyberbullying reactions, and these negative inferences could be indirectly connected to their career-making decisions. This study provides an opportunity to explore this gendered possibility and how cyberbullying might influence their postsecondary aspirations.

Gender Differences

Research associated with gender differences and bullying can paint a blended picture (Thomas et al., 2017). Generally speaking, some might believe that adolescent boys are more involved with cyberbullying than adolescent girls. Indeed, some researchers agreed that boys are more frequently identified as the aggressor and victim compared to girls when it comes to bullying behaviors (Carney & Merrell, 2001; Griffin & Gross, 2004), and boys are more likely to cyberbully than girls (Wang et al., 2021). However, some studies have suggested females are more likely to perpetrate and experience cyberbullying than males, and vice versa (Betts et al., 2017). Some research suggested there were no significant gender differences with cyberbullying, and gender was not a reliable predictor with cyberbullying behaviors (Wright, 2017). Another study suggested girls were at a greater risk than boys to experience cyberbullying, but researchers could not answer why this occurred (Navarro & Jasinski, 2013). Ideally, utilizing RAT's approach to cyberbullying may explain how females have intrinsic human needs of belonging and bullying activities might propel their behavior (Bauman & Yoon, 2014).

Gender is frequently examined in cyberbullying research, but some findings have produced mixed results between adolescent males and females (Jackson et al., 2020). For example, females may see themselves similar to males (or females) but also atypical and androgynous regarding perpetration and victimization (Jackson et al., 2020). Research has suggested adolescents with higher same-gender and other-gender identities might experience less victimization because of its protective nature (Jackson et al., 2020).

According to Thomas et al. (2017), aggression and physical violence have a significant history of contextualization through gendered perspectives because males are traditionally framed to be perpetrators and females the victims. Further, portraying women or girls as

wrongdoers can be more complicated, especially when social norms suggest different expectations and ramifications for aggressive females (Thomas et al., 2017). Nevertheless, Camelford and Ebrahim (2016) reported high school females are a population at risk for becoming cyberbullies, victims, and bystanders because of their age, the internet, and their access to social media. However, young men and women conceptualize their online behaviors differently due to social expectations but position themselves in socially normative ways for impression management (Thomas et al., 2017). In other words, females may completely avoid sharing their wrong behaviors or adjust their narratives more often than males to justify their wrongdoings (Thomas et al., 2017).

Navarro and Jasinski (2012) conducted a study of 935 teenagers aged 12-17 years old and confirmed females were more likely to experience cyberbullying than males. Surprisingly, however, teens still experienced cyberbullying even while doing innocuous activities (e.g., conducting research). The researchers did not elaborate, but suggested this finding was potentially another research topic (Navarro & Jasinski, 2012).

Connell et al. (2014) examined bullying and victim experiences with 3,867 middle school students in 14 schools within a northeastern state of the U.S., and their findings suggested females actually engage in cyberbullying more often than males. Further, cybervictimization predicted cyberbullying (irrespective of gender), but cyberbullying was related to cybervictimization for both genders (Connell et al., 2014). Navarro and Jasinski (2012) suggested studies should analyze gender and why adolescent females are at a greater risk of experiencing cyberbullying than males to address ongoing speculation. The present study provides an opportunity to address this concern.

For young females, external school stressors associated with cyberbullying can overflow into their personal lives and impact their learning at school (Betts et al., 2017). The present study could expound upon this information by analyzing if cyberbullying stressors influence female students' decisions to learn at postsecondary schools as well.

A study among male and female students in 9th to 12th grade in Belgium revealed most teens bullied by using their mobile phones to 1) gossip via texts, 2) gossip via phone calls, and 3) send threats or insults to others via texts (Vanden Abeele & De Cock, 2013). Additionally, controversial popular adolescent girls were much more likely to gossip than males, cause damage to reputations, and boost their dominant positions. This may also indicate teenagers strategically utilize their cell phones to augment their status among peers (Vanden Abeele & De Cock, 2013).

A study by Connell et al. (2014) revealed boys were more likely to engage in physical bullying than girls, but girls engaged in more cyberbullying and reported greater levels of cybervictimization. However, they suggested boys were more likely to engage in cyberbullying if they had lower grades and a lower school climate, but both genders were likely to cyberbully others if they reported being victims through technology. Still, boys who implement physical aggression may act to obtain a greater social status among their peers, but females use bullying to influence their social relationships (Connell et al., 2014).

Thomas et al. (2017) conducted a study among U.S. male and female teenagers and found young women were less likely to report their own wrongdoing online than young men. Male adolescents were more likely than female adolescents to admit to wrongdoing online with harassment, threatening, name-calling, cheating, and lying, but both genders were equally likely to report being victims of wrongdoing (Thomas et al., 2017). Their findings suggested adolescents might be internalizing and expressing wrongdoing in gendered ways within

anonymous online settings (Thomas et al., 2017). By extension, female students taking CTE courses could also be at risk and internalize negative online influences. For example, LeBlanc (2010) indicated bullying could be compounded in CTE programs that are generally populated by females (e.g., nursing and cosmetology).

Soares et al. (2017) studied data from 31 countries and reported more boys were involved with cyberbullying in Singapore, Greece, and Turkey, but Finland had more girl participants. They discovered Canada did not have any engagements related to gender, but boys in Sweden, Mexico, Taiwan, New Zealand, Austria, and Italy were more likely to be aggressors. Girls were most likely to be victims in Sweden, Cyprus, Turkey, Australia, the Netherlands, and Italy, but boys were more often the victims in Taiwan and Spain (Soares et al., 2017).

Wang et al. (2021) conducted a study among Chinese middle school students and discovered a significant and positive effect between higher levels of materialism and cyberbullying among boys, but it was not significant for girls.

Giordano et al. (2021) did a study of U.S. adolescents between 13-19 years old (50% female, 49.1% male, .9% other) and concluded gender and the number of hours they spent online were significant causes for cyberbullying. However, they determined age was not a predictor of cyberbullying perpetration (Giordano et al., 2021). Ultimately, Brochado et al. (2017) reported there is inconsistency within extant cyberbullying literature regarding gender variances, and there is an inference that cyberbullying still occurs irrespective of gender. That being said, this study provides an opportunity to address this uncertainty and offer additional clarity regarding female adolescent students.

Responding to cyberbullies has produced some similarities among both genders. For instance, a study by Sarmiento et al. (2019), consisting of male and female students aged 16-35

years old in Spain and Columbia, revealed when they witnessed cyberbullying, their most common response was to simply ignore it. This provided a simple mitigation strategy, but intervention will be discussed in greater detail later on.

Ultimately, Connell et al. (2014) suggested it was important for researchers to determine whether cyberbullying, like traditional forms of bullying, is a gendered activity with participation and victimization so preventive measures can target specific facets of males and females. This literature review provides an opportunity to discuss these prevention measures and addresses intervention strategies.

Intervention

During the literature review, this researcher identified some common themes to thwart adolescent cyberbullying. This study is not entirely about intervention, but listing comprehensive suggestions can provide options for stakeholders to address the problem in their unique settings. Researchers have explored cyberbullying behaviors, but sometimes do not provide sufficient countermeasures or intervention remedies. Most of the literature appeared to focus on understanding the cyberbullying phenomenon, its risks, threats, and possibly suggesting intervention strategies (Ioannou et al., 2018). This researcher aggregated the data in Table 3 for comparison and to provide a closer inspection of intervention suggestions from six peer-reviewed journal articles published from 2011-2017.

Table 3

Comparison of Intervention Solutions

Intervention Solutions	Wong-Lo & Bullock (2011)	Bonanno & Hymel (2013)	Sticca & Perren (2013)	Jan & Husain (2015)	Horner et al. (2015)	Wright (2017)
Education Strategies	x					
Educate Students/Parents/Faculty			x	x		
Parental Supervision	x					
Monitor Kids Internet Activities			x			
News Media						
Public Service Announcements	x					
Community Partnerships						
School & Police Assistance	x			x		
Easy Reporting Methods			x			
Mental Health Support	x					
Familial Support			x		x	x
Reach Out to Victims	x		x	x	x	
Professionals				x		

Using this paradigm, this researcher examined which categories of intervention techniques were being suggested, if any, to counteract student cyberbullies. The left column was organized to list categories of intervention strategies from the articles. The most common pattern was reaching out to victims. The second most common patterns were familial support, educating students/parents/faculty, and school/police assistance. The least common patterns relied on the news media, and community partnerships. Ironically, the oldest article in 2011 appeared to provide more cyberbullying intervention solutions than the article from 2017. Perhaps there was an assumption that intervention techniques had already been sufficiently addressed within previous studies. Alternatively, researchers might be apprehensive about intervention techniques, and elected to target interior and environmental causalities.

Cyberbullying appears to be a substantial concern within today's digital frontier, and sometimes the literature focuses on its characteristics and underlying causes. Investigating intrinsic causes is important, but future studies could elaborate on familial interventions, school/police strategies, and suggest proactive solutions to quell the problem. If female adolescent students are to avert or overcome cyberbullying, perhaps supplemental studies can adequately address preventative measures that can be implemented by students, parents, schools, and policymakers.

Findings from this study could have implications for school programs desiring to decrease cyberbullying among students by strengthening their gender identities and emphasizing clear messages about how cyberbullying is unacceptable, witnesses should stand up for victims, and there are other ways for boys and girls to express themselves than through aggressive behaviors (Jackson et al., 2020).

According to Aboujaoude et al. (2015), a consensus has not emerged from extant literature about comprehensive management or prevention of cyberbullying, but health professionals may provide crucial roles since adolescents might be willing to confide in them instead of their teachers and parents. They recommended confronting the issue on several fronts by asking screening questions about children's online activities, their extreme video game usage, their cyberbullying, recognizing new psychological symptoms, and noticing drops in academic achievement. Still, they suggested parents who monitor their children are critical instruments behind effective cyberbullying intervention strategies (Aboujaoude et al., 2015).

Ioannou et al. (2018) postulated there has been some progress with cyberbullying experiments in real-life settings, but detection is limited, and this makes it difficult to transition into prevention and intervention. If researchers cannot grasp the evolutionary insights of

cyberbullying and how it is fed (Ioannou et al., 2018), then appropriate intervention strategies may be difficult.

Giordano et al. (2021) stated researchers have emphasized adolescents and their connectivity to school is a powerful link among cyberbully perpetrators within varying populations, but their study of U.S. adolescents and empirical data do not completely support this assumed relationship. Still, they suggested school counselors could implement cognitive behavioral therapy, educate students about technology, excessive social media use, the strength of these mediums, and assist with modifying their behavior to obtain positive results (Giordano et al., 2021).

Aboujaoude et al. (2015) suggested researchers (and parents) should stay afloat of varying technological advances to combat cyberbullying as anonymous mobile technologies and social networks have become popular playgrounds for cyberbullying. Likewise, they suggested that as technology changes, so must the intervention programs designed to prevent it (Aboujaoude et al., 2015).

McCabe and Strauss (2022) recommended more training and continuing education for parents, school nurses, faculty, staff, administrators about cyberbullying awareness related to prevention, gender, mental health, and chronic illnesses. These trainings should be periodic and provide guidelines about how to ask adolescent females appropriate questions regarding their substance use and mental health (McCabe & Strauss, 2022). Effective female adolescent strategies might include developing better interpersonal relationships that shield against adverse outcomes activated by stressful events such as cyberbullying (Ouyang et al., 2021).

Thomas et al. (2017) recommended providing females with training to control their impulses, emotional communication exercises, develop conflict resolution skills, be aware of

aggressive behaviors online, build empathy, and provide supportive spaces offline and online for their complex social, interpersonal, and personal decisions. Furthermore, design programs to reduce risky sexual activity among young women who are concerned about sexual decisions through sexting and intercourse, and reinforce healthy romantic relations or sexual behaviors (Thomas et al., 2017).

Research has suggested parents can provide supportive roles to mediate the negative effects of cyberbullies, cybertrolls, and cyberharassment with their children's electronic usage (Wright, 2017). Shin and Kim (2023) indicated parents and teachers could reduce cases of cyberbullying perpetration by actively intervening and promptly addressing physical bullying among adolescents. They indicated these individuals and school counselors could help adolescents develop more restraint, control their emotional volatilities, alleviate interpersonal concerns, and assist those struggling to fit within their school environments. Further, parents and school personnel can encourage students to get involved in their schools and community activities through service or volunteer work to reduce the likelihood of cyberbullying perpetration (Shin & Kim, 2023).

Other researchers suggest assisting female adolescents with high levels of stress to reduce delinquent behaviors associated with cyberbullying by using gender-specific formats in vocational schools (Ouyang et al., 2021; Xu et al., 2022).

Researchers recommended assisting adolescents by creating respectable interpersonal relationships with their peers to prevent them from becoming materialistic in today's consumer-driven society (Wang et al., 2021).

Camelford and Ebrahim (2016) conducted a cyberbullying intervention study at a U.S. high school for girls and suggested females should utilize YouTube videos and role-playing

scenarios for empathy and a better understanding of their peers. Their objective was to educate females in creative ways, break communication barriers between school counselors and students, assist students with better coping strategies, inspire kindness with peers, and to think before posting information online. They hoped to convey empathy, optimism, unity, and ultimately, the intervention resulted in a greater understanding of cyberbullying and empathy toward their peers (Camelford & Ebrahim, 2016).

Some literature advised females to reinforce their social structures, and foster healthier social connections to combat cyberbullies (Betts et al., 2017). Adolescents could adopt new friends, create school anti-cyberbullying groups, revamp their school environment, help victims when they are embarrassed with faculty and friends, and report cyberbullying activities (Horner et al., 2015). Timm (2015) recommended the following:

- educate students about cyberbullying during elementary school
- teach students regarding sexting
- trust resource officers at schools
- create school and community relationships
- be responsible and cultivate safe schools and communities
- create awareness, build character, and help students become productive citizens

Trump (2011) suggested the following recommendations for school administrators:

- teach students about cyberbullying, sexting, and technology
- initiate and reinforce policies if cyberbullying happens during school or activities
- openly discuss with parents, and help share student obligations

To counteract anonymous bullying, administrators, educators, parents, and victims must encourage the reporting of cyberbullying to trusted authorities, defend victims, and learn about

tools to identify the IP address of bullies in cyberspace for rectification in the real-world (Sticca & Perren, 2013).

Additional protections against cyberbullies include parental monitoring, peer social support, empathy, good school climates, and school safety (Kowalski et al., 2014; Wang et al., 2021).

Some researchers mentioned practitioners assisting victims should consider if emojis were used online during their negative interactions (due to their ambiguity) and guide adolescents on the positive and negative effects associated with using emojis (Steer et al., 2020). Indeed, many adolescents likely use emojis during their cell phone interactions for simplicity, expediency, and for expressing their likes and dislikes.

Jiang et al. (2022) emphasized adolescents should learn effective techniques to regulate their emotions so they can view difficulties and negative life events under reasonable conditions to appropriately vent their dissatisfactions and avoid cyberbullying. Likewise, reducing adolescent loneliness, depression, and mental health concerns can significantly reduce or prevent their efforts to cyberbully (Jiang et al., 2022).

Wang et al. (2021) stressed the importance of trying to maintain positive relationships between students and educators to protect against cyberbullies. Moreover, adolescents should also be cautioned about posting any material online because this may deter future bullies from posting sensitive or private material electronically (Sticca & Perren, 2013).

Connell et al. (2014) asserted cyberbullies might be able to empathize with their victims since they were victims at some point, and intervention strategies should focus on this empathy and change the fallacy that cyberbullying is not a problem since everyone does it. Moreover, as new social media websites appear, and technology rapidly evolves, parents and educators should

stay apprised of new trends and assist both genders with their moral development (Connell et al., 2014). Their findings also suggested preventive programs should focus more on female victims and bullies since they communicate differently and engage in greater cyberbullying and cybervictimization. Ultimately, intervention remedies are limited because divergent schools, administrators, legislators, prosecutors, courts, jurisdictions, and public outcry send inconsistent messages, but students should still learn cyberbullying has consequences and cannot be tolerated (Connell et al., 2014).

Sarmiento et al. (2019) pointed out the importance of encouraging bystanders to defend cybervictims against cyberbullies. Additionally, Hamm et al. (2015) stated adolescents need to learn coping strategies and educational efforts can address who they can tell and should focus on bystanders and victims. Conversely, adolescents lack awareness and self-confidence that anything will be done, but parents, teachers, and health care specialists should openly communicate about safe social media usage instead of suggesting no usage at all (Hamm et al., 2015).

Steer et al. (2020) suggested practitioners are guided by internal policies listing the definition of cyberbullying, but this could incorrectly identify victims because they might omit cyberbullying involving humor or jokes. Adolescents' perceptions of online teasing and humorous cyberbullies should be accurately defined for appropriate research studies and intervention strategies (Steer et al., 2020). They cautioned youth should interact online with self-discipline, but need additional support and guidance from older students, parents, and teachers to better comprehend the intricate dynamics associated with online bantering to avoid adverse consequences. Furthermore, even bystanders who witness cyberbullying could incorrectly

distinguish the differences between banter and cyberbullying, especially if the perpetrator and victim are friends (Steer et al., 2020).

According to Navarro and Jasinski (2012), as technology evolves, perhaps it will offer additional avenues that can fulfill the role of responsible guardians. For example, greater tracking capabilities and webcam monitoring for parents (Navarro & Jasinski, 2012).

Many teenagers fail to report incidences of cyberbullying to those in authority. They should be encouraged to communicate about their experiences without fear of reprisal or losing any of their electronic privileges (Navarro & Jasinski, 2012).

Song et al. (2019) proposed some audacious prevention strategies by having parents and schools guide online behavior, avoid indulging within network spaces for extensive periods, sensibly control time spent online, improve moral qualities, cleanse cyberspace, supervise violent video games, and deter copycat cyberbullying behaviors.

According to Ioannou et al. (2018), communication between the social sciences, humanities, and computer science fields is literally nonexistent, but these sectors should collaborate with each other and seek expert advice to address current and future cyberbullying challenges for significant progress to materialize. LeBlanc (2010) echoed this collaboration and suggested female CTE students needed teamwork from parents, counselors, teachers, administrators, and the police due to high female populations in some programs. These parties should remain vigilant and implement anti-gang or anti-terrorist approaches with bullying so key players and leaders are quickly identified and removed (LeBlanc, 2010). Further, establish peer mediation, teen courts, and zero-tolerance protocols so the message becomes clear to other students that bullying behaviors are unacceptable (LeBlanc, 2010).

Pelfrey and Weber (2014) pointed out schools may never be able to completely eradicate cyberbullying, and teenagers will likely belittle each other, but schools can take some necessary steps to reduce the frequency and imprint of these events on their lives. For instance, staff and students should be trained to recognize cyberbullying early, be motivated to intervene before it becomes worse, and implement effective policies to reduce conflict and deter perpetration (Pelfrey & Weber, 2014). Similarly, practitioners should work with adolescent students involved in cyberbullying because its stressors can have negative consequences on how much they value learning and their attitudes toward schools (Betts et al., 2017). If female adolescent students have significant fears or negative associations with learning and schools, they could be reluctant to pursue or graduate from postsecondary institutions.

To reiterate, this study is not exclusively about intervention. The various options discussed in the literature provided comprehensive suggestions for stakeholders to address cyberbullying in their unique venues. If cyberbullying influences prospective students' intentions to attend or graduate from postsecondary institutions, then various stakeholders need sufficient intervention strategies to alleviate and prevent these threats to their educational decisions.

To be clear, the topic of cyberbullying throughout extant literature may induce negative undertones and inferences, but the internet is not completely littered with malfeasance and cyberbullies. The internet provides opportunities for positive connectivity, associations, and learning among students, families, friends, teachers, and school administrators as well. Hopefully, this study will add to the literature and promote additional discussions by inviting future researchers to investigate and understand the effects of female adolescent cyberbullying as they transition into postsecondary institutions, vocational schools, or CTE training.

Summary

This chapter provided a brief overview of extant literature that was synthesized to provide some understanding of female adolescent cyberbullying in the modern era. Related topics included, traditional bullying versus cyberbullying, statistics, prevalence, types of cyberbullying, individual factors, psychological effects, gender differences, and intervention strategies.

Globally, there are numerous studies and methodological tools associated with cyberbullying research, and this literature review provided an opportunity to address nuances and advance the topic. However, this study aims to address a specific gap in the literature by exploring if adolescent cyberbullying is related to female students' intentions to attend a college, postsecondary vocational school, or graduate from a 4-year college. Chapter 3 will discuss the specific methodology of this study in greater detail.

Chapter 3: Methodology

This chapter will provide information regarding the methods associated with this quantitative study. It will discuss the purpose of the study, research questions, research design, participants, sampling, instrumentation, authorization, reliability and validity, data analysis, and ethical considerations.

Purpose

Justification for this study emerged from gaps in the literature regarding female adolescent students and how cyberbullying behaviors may be related to their intentions to attend a college, postsecondary vocational school, or graduate from a 4-year college. This quantitative study sought to extract statistical data and explore cyberbullying among female adolescent students within educational settings in the U.S. using data from the 2019 NCVS-SCS.

Dataset

The data specifically analyzed for this study were procured from the most recent and publicly available 2019 NCVS-SCS. This dataset provided a holistic view of students' circumstances and allowed researchers to reanalyze and identify the impact of student-related victimization inside and outside school settings (BJS, 2021; OMB, 2021a).

The Census Bureau prepared and delivered the files, documentation, and bias report to the BJS and National Center for Education Statistics (NCES) by December 2019, and these two entities were responsible for statistical analyses and releasing the data to the public after approval from the Census Bureau's Disclosure Review Board (OMB, 2021a). The data were eventually provided to the Inter-university Consortium for Political and Social Research (ICPSR) and made publicly available online for downloading in various formats (https://www.icpsr.umich.edu).

For the instant study, the survey data were downloaded from the ICPSR website in a zipped folder in SPSS format, stored on a desktop computer that was password protected to prevent data changes or deletion, and were only accessible to this researcher.

Instrumentation

Since secondary data analysis was used for this study, no instrument was utilized to acquire any raw data. Mining secondary data from large surveys can save researchers significant time, expenses, increase efficiency, and protect respondent anonymity. Collectively, these factors and the large adolescent student populace throughout various schools across the U.S. should allay scholarly concerns about sample diversity, equity, inclusivity, and generalizability.

Research Questions

This study sought to address the following research questions:

1. What were some selected demographics of female adolescent students' experiencing cyberbullying in 2019 (e.g., age, race, ethnicity, grade level, public or private school, school location)?
2. Are different cyberbullying behaviors related to female adolescent students' who have been victims of cyberbullying and their intentions to attend a college or postsecondary vocational school (e.g., Automotive Mechanic Training, Beauty School, Computer Programs)?
3. Are different cyberbullying behaviors related to female adolescent students' who have been victims of cyberbullying and their intentions to graduate from a 4-year college?

Research Design

This study utilized a cross-sectional research design to specifically explore the 2019

School Crime Supplement (SCS) survey data, on one occasion, and without any follow-up (Hulley et al., 2013). This design was appropriate for this quantitative study because the 2019 SCS data were obtained at a specific point in time of the female adolescent students' education during the 2018-2019 school year. The data were used to describe characteristics of females who were victims of electronic bullying behaviors, and if these experiences were related to their aspirations to attend postsecondary institutions or graduate from a 4-year college.

Extant research offered suggestions regarding which variables were likely to influence female cyberbullying, and RAT provided a theoretical lens. To summarize, the ensuing research questions were associated with the following independent variables (IV) and dependent variables (DV). The full text of these relevant questions from the 2019 SCS are provided in Appendix A.

RQ1: Involved questions 2b (1-7), 5a, 22v1.a, 22v1.b, 22v1.c, 22v2a, 22v2b, 22v2c, 22v2d, 28v1 (8), 30v2 (8), 31v1.a, 31v1.b, 31v1.c, 31v1.d, 31v1.f, 31v1.g, 33v2a, 33v2b, 33v2c, 33v2d, 33v2f, and 33v2g.

IV: Gender (female), grade level (between 6-12), school location (region), public or private school, if students felt bad or hurtful by other students using technology (e.g., phone, internet, social media), during the school year did any students from their school make fun of them (e.g., called them names, insulted them in hurtful ways), spread rumors about them or tried making others dislike them, did the student(s) share private information (e.g., photos, videos in hurtful ways), or threaten them with harm, and whether students were bullied online or by text (BJS, 2021). When other student(s) did these things, did you think it was related to your race, religion, ethnic origin, disability (e.g., physical, mental, developmental), sexual orientation (e.g., gay, lesbian, bisexual, straight), or physical appearance (BJS, 2021)?

RQ2: Involved questions 22v1.a, 22v1.b, 22v1.c, 28v1 (8), 31v1.a, 31v1.b, 31v1.c, 31v1.d, 31v1.f, 31v1.g, and 47a.

IV: Involved the nine foregoing bullying questions, and if they occurred online or via text.

DV: Intentions to attend a college or postsecondary vocational school (e.g., Automotive Mechanic Training, Beauty School, Computer Programs)?

RQ3: Involved questions 22v1.a, 22v1.b, 22v1.c, 28v1 (8), 31v1.a, 31v1.b, 31v1.c, 31v1.d, 31v1.f, 31v1.g, and 47b.

IV: Involved the nine foregoing bullying questions, and if they occurred online or via text.

DV: Intentions to graduate from a 4-year college?

According to the BJS (2021), there were 15 questions associated with bullying behaviors in the 2019 SCS, and nine of them were relevant to the research questions for this study (e.g., 22v1.a, 22v1.b, 22v1.c, 31v1.a, 31v1.b, 31v1.c, 31v1.d, 31v1.f, 31v1.g). Additionally, questions 28v1 (answer 8) and 30v2 (answer 8) asked whether the event(s) occurred online or by text. These questions were essential when distinguishing cyberbullying from traditional bullying because it occurs electronically. Only female adolescent students who experienced cyberbullying were selected for the instant study. Those who did not select these answers were not examined and outside the scope of this study. The dependent variables were extrapolated from questions 47a and 47b, which asked students to think about their future after high school, if they will attend college or a vocational school, and if they will graduate from a 4-year college (BJS, 2021).

Participants

According to the BJS (2021), only household members between ages 12-18 and enrolled in grades 6-12 were interviewed for the 2019 SCS immediately after they completed the National Crime Victimization Survey (NCVS) interview in Spanish or English. However, these participants could respond to the NCVS questionnaire and decline the SCS questionnaire (BJS, 2021). If any participants completed the 2019 NCVS interview in other languages (except Spanish and English), they were not asked to participate in the 2019 SCS survey (BJS, 2021; Burns et al., 2022). Interviews for the 2019 SCS questionnaire were conducted during January 2019 to June 2019 by sworn U.S. Census Bureau personnel collecting and processing the data, and administering the questions via telephone or face-to-face interviews (BJS, 2021; OMB, 2021a). Only students who attended school at any time six months before the interview were given the survey, and students who were entirely home-schooled were excluded since the 2019 SCS questions were deemed irrelevant to their circumstances (BJS, 2021).

The 2019 SCS questionnaire was expected to take no longer than 16 minutes to complete, Census Bureau personnel used laptop computers to read the questions and record participant answers, and respondents did not receive any gifts or payments in exchange for their participation (OMB, 2021a).

Only students who were advancing toward high school diplomas and who attended private or public schools (e.g., elementary, middle, high schools, church schools, vocational or trade schools), and home schools (not completely) were included in the survey and located throughout these U.S. geographic regions: Northeast, Midwest, South, and West (BJS, 2021).

Sampling

According to the BJS (2021), there were 14,273 NCVS respondents who were eligible to participate in the 2019 SCS, but only 7,005 respondents (49.1%) completed interviews. The BJS

noted in limited circumstances, if respondents were considered mentally or physically unable to answer survey questions, other household members could answer the questions by proxy on their behalf. These proxy interviews comprised 729 out of the 7,005 interviews conducted during 2019 (BJS, 2021). The remaining sample size should have sufficient statistical power to address the research questions (Creswell & Plano Clark, 2018). Likewise, central limit theorem has posited a sample size of approximately 30 participants is reasonable to obtain a normal distribution (Hinkle et al., 2003).

The 2019 NCVS-SCS employed stratified and multi-stage cluster sample designs (BJS, 2021). Stratified and cluster sampling occurs when the targeted population is divided into subgroups, and clusters of members (not individuals) are randomly selected from these subgroups (Hinkle et al., 2003). To that end, this researcher utilized purposive sampling to select only female respondents, and this reduced the total number of participants for the study. The female responses were specifically chosen to concentrate on the variables associated with the research questions, address gaps in the literature, provide information for various stakeholders, and augment future studies related to female adolescent cyberbullying.

Authorization

A research application for ethical review was submitted to the Institutional Review Board (IRB) at the University of Nevada, Las Vegas for evaluation and authorization. This ensured the study was compliant with federal and state laws, and certified ethical considerations were addressed.

Reliability and Validity

There is an inference that the information and data provided from the 2019 SCS survey should be within satisfactory thresholds of reliability and validity. This infers the data being

measured should be consistent over time, and the survey measured what it purported to measure. By extension, the raw survey data might be considered reliable and valid since it was collected and eventually processed by three credible U.S. government agencies (e.g., Census Bureau, NCES, BJS). To establish sufficient reliability and validity, the 2019 SCS involved statisticians, support contractors, U.S. Census Bureau personnel, expert questionnaire reviews, sample design, instrument development, data collection, data processing, and project management, with estimated costs to the U.S. federal government totaling $1,333,000 (OMB, 2021a).

The SCS survey was first administered on a national level in the U.S. in 1989, then 1995, and biennially since 1999 (BJS, 2021; OMB, 2021a). The 2019 version was the 13th implementation of the SCS, and these surveys continue to be a major source of statistical information regarding school-related victimization (BJS, 2021; OMB, 2021a).

Ironically, the 2019 SCS reduced potential measurement errors by updating how it measured bullying (by removing the word bully) so it could more precisely acquire information associated with the repetition and imbalance of power within the CDC definition (OMB, 2021a). This adjustment helped address preconceived notions adolescent students might have about what constituted bullying (OMB, 2021a). In particular, 60% of the sample received the regular questionnaire (Version 1, wording from the 2017 SCS) and 40% received the alternate questionnaire (Version 2, updated wording), but there were no significant response rate differences between either type (BJS, 2021). Initially, this study planned to utilize both versions, but eventually only used Version 1 from the 2019 SCS questionnaire for research questions two and three.

The 2019 SCS survey was no exception to validity, and caution is advised when interpreting the data from its 35.5% response rate (BJS, 2021). It is no secret that surveys are

imperfect, and the 2019 SCS might contain some sampling or nonsampling errors (BJS, 2021), measurement errors, ecological fallacies, respondent biases, surveyor biases, reliability, validity, and the like.

Astute researchers and scholars know that research studies may reflect direct or indirect biases from the research design, variables, data collection, and the researchers themselves. Sometimes these biases can be challenging to avoid and nearly impossible to fully eradicate. Threats to internal and external validity may impede the purported findings, and undermine the entire study. These are routine concerns, and every effort was made to mitigate subsequent challenges within the instant study. Researchers could abate these concerns by reviewing and reporting all the results, addressing ANOVAs, Cronbach's alpha, normality assumptions, homoscedasticity, and multicollinearity (Trompeter et al., 2022). Adding or removing independent variables for calculation and analyzing their influential relationships with scatterplots may also provide effective data interpretation. Similarly, Creswell and Plano Clark (2018) suggested researchers should implement the following safeguards when mitigating threats to validity:

- review distributions for normalcy and update or recode variables if needed
- recognize and explain quantitative results well
- clarify startling or contradictory results and connect with quantitative findings
- ponder each possibility during explanation of the data
- choose the best data from the quantitative sample which helps explain the research questions appropriately
- quell threats to external validity to generalize results better
- scrutinize all findings that are significant or insignificant

Data Analysis

The large size of the dataset and significant costs to employ specialists to evaluate survey questions and administer the 2019 SCS questionnaire were significant factors when selecting it for this research study. Since the data were nationally representative, they were deemed robust enough to conduct sufficient analyses regarding the appropriate variables and answer the research questions within this study.

A subset of the data was created to eliminate male adolescent students and focus on female participants. This subset had female respondents answering questions specifically relevant to cyberbullying (e.g., questions 28v1 and 30v2, answer eight). However, before any analyses were conducted, missing data were examined (Trompeter et al., 2022) to help improve data rigor and fidelity. Missing data and incomplete responses were expected with the 2019 SCS survey. If female respondents did not complete some questions but completed others, the remaining information was used in the final sample and data analysis.

Data were input, managed, and analyzed using IBM SPSS Statistics (Version 29). It is well known in research settings that SPSS provides a robust and powerful analytical tool to process large, complex datasets and explore relationships among variables. Using SPSS software helped address the demographic variables of the study, provided descriptive statistics, and allowed appropriate regression analyses. Analyzing the relationship between these variables helped explain and address the three quantitative research questions. Equally, this researcher double-checked data protocol procedures in SPSS and listed the quantitative results within data summaries to corroborate the research questions were answered appropriately.

The first research question was quantified in SPSS by producing descriptive statistics (e.g., frequency distributions, central tendencies, variability, etc.). Regression analyses were

conducted for the second and third research questions. This technique allows multiple predictor variables to predict scores on the criterion variable (Hinkle et al., 2003). In other words, multiple independent variables are used to help predict or determine the outcomes of a dependent variable. Case in point, is cyberbullying (IV) related to female adolescent students' intentions to attend postsecondary institutions (DV) or graduate from a 4-year college (DV)?

Using a null hypothesis (H_o) and an alternative hypothesis (H_a) allows researchers to test statistically significant relationships, if any, between variables. For example, (H_o): There is no statistically significant relationship between cyberbullying and female adolescent students' intentions to attend postsecondary institutions or graduate from a 4-year college. (H_a): There is a statistically significant relationship between cyberbullying and female adolescent students' intentions to attend postsecondary institutions or graduate from a 4-year college. The null and alternative hypotheses will be discussed in greater detail in Chapter 4.

Pearson correlational coefficients were applied, and the statistical significance was set at $p < 0.05$. These 95% confidence intervals are common practice within quantitative research studies when determining probability, exploring relationships between variables, and helped analyze if cyberbullying is related to female students' intentions to attend a college, postsecondary vocational school, or graduate from a 4-year college. Correlation coefficients between -1.0 and +1.0 were interpreted utilizing Hinkle et al. (2003) descriptors. They suggested perfectly negative coefficients are -1.0, perfectly positive coefficients are +1.0, and if there is no relationship between variables, the correlation coefficient is zero. To illustrate, little, if any relationship, = -.10 or +.10, and a very strong relationship = -.90 or +.90 (Hinkle et al., 2003).

Ultimately, Creswell and Plano Clark (2018) provided the following guidelines for preparing, exploring, analyzing, representing, interpreting, and validating quantitative data:

- assign numerical values to each survey question

- check for accuracy regarding data entry errors
- recode or update variables
- address missing data
- check for normal distributions
- calculate effects and confidence intervals
- summarize statistical results
- maintain APA guidelines
- provide summarizes of major results in display tables or figures
- compare hypotheses to quantitative results
- identify limitations
- reduce internal validity threats against cause-and-effect associations
- mitigate external validity threats so results can be generalized
- provide implications for future research

Ethical Considerations

Utilizing secondary data for this study sated ethical considerations and confidentiality because participant risks were significantly reduced since this researcher did not have access to the primary data, the respondents, or any personally identifiable information (Pittaro, 2016).

A signed letter from the Director of the Census Bureau was sent to all participants, informing them their participation was voluntary, the main purpose behind the data collection, the various uses of the data after its collection, and how their responses would be kept confidential in accordance with federal statutes (OMB, 2021a).

To protect respondent confidentiality, only sworn Census Bureau employees were allowed to see the survey responses, and the data were maintained in secure and restricted access

locations at the Census Bureau (OMB, 2021a). The BJS sponsored the 2019 NCVS, but they were not allowed to handle or see the raw data, and any identifying or unique information was suppressed or scrambled before it was provided to the NCES and BJS (OMB, 2021a).

Summary

This chapter provided information regarding the methods associated with this quantitative study. It discussed the purpose of the study, research questions, research design, participants, sampling, instrumentation, authorization, reliability and validity, data analysis, and ethical considerations. Chapter 4 will discuss the specific results of this study in greater detail.

Chapter 4: Results

This chapter will provide information regarding the results associated with this cross-sectional study. It will discuss the purpose of the study, research questions, data filters, SPSS variables, provide descriptive statistics for research question one, reliability assessments, test assumptions, model fit, and answer research questions two and three. Lastly, throughout this chapter, the bullying questions from the NCVS-SCS have been summarized, but the exact questions are listed in Appendix A.

Purpose of the Study

The primary tenet behind this quantitative study was to explore cyberbullying among female adolescent students within a K-12 educational system in the U.S. using the 2019 NCVS-SCS. It examined some female adolescent students' demographics and explored if cyberbullying is related to their intentions to attend a college, postsecondary vocational school, or graduate from a 4-year college.

Research Questions

This chapter will report the results from this study and answer three research questions:

1. What were some selected demographics of female adolescent students' experiencing cyberbullying in 2019 (e.g., age, race, ethnicity, grade level, public or private school, school location)?
2. Are different cyberbullying behaviors related to female adolescent students' who have been victims of cyberbullying and their intentions to attend a college or postsecondary vocational school (e.g., Automotive Mechanic Training, Beauty School, Computer Programs)?

3. Are different cyberbullying behaviors related to female adolescent students' who have been victims of cyberbullying and their intentions to graduate from a 4-year college?

Data Filters

Of the total 14,273 participants eligible to complete the NCVS-SCS, 51.9% were male (*n* = 7407), and 48.1% were female (*n* = 6866). However, this study only focused on female respondents who selected answer eight from questions 28v1 and 30v2 within the SCS questionnaire. These two questions had Version 1 (used the word *bullied*) and Version 2 (did not use *bullied*). Both of these questions were critical to identify female victims of electronic bullying. After screening for these two questions, the sample size decreased to 166 female adolescent students involving Version 1 (*n* = 102) and Version 2 (*n* = 64). However, a close inspection of the Version 2 data revealed some variables had outliers and high multicollinearity between many of the bullying-related questions. This was verified by exploring the SPSS data via boxplots, Q-Q (quantile-quantile) plots, *z*-scores, and reviewing the variance inflation factor. These anomalies can significantly impact logistic regression analyses and violate the required assumptions needed to produce valid results (Laerd Statistics, 2018). Hence, the Version 2 data were eliminated from this study.

Research question one included some descriptive statistics comparing both Version 1 and Version 2 questions, but the data from Version 2 were only for informational purposes. Research questions two and three only used data involving Version 1 questions. After checking for blank responses, outliers, and *z*-scores from the Version 1 questions, the final sample size totaled 102 female adolescent students (*n* = 102).

Originally, multiple regression analyses were the method of choice for this study, but the assumptions could not be met, and it was changed to multinomial logistic regression. Both methods are analogous and help provide predictive analyses. However, multinomial logistic regression differs because the dependent variable being predicted is generally nominal and not limited to two categories (Hosmer et al., 2013; IBM, 2024).

SPSS Variables

The following variables in the SPSS dataset were used from the NCVS-SCS: age (V3014); sex (V3018); race (V3023A); Hispanic origin (V3024); grade level (VS0017); public or private school (VS0019); three questions about bullying experiences (VS0073, VS0074, VS0075); cyberbullying screening question (Version 1) - if it occurred online or via text (SCS211); six questions about bullying being related to personal identity (SCS200, SCS201, SCS202, SCS203, SCS205, SCS206); cyberbullying screening question (Version 2) - if it occurred online or via text (SCS264); if students will attend postsecondary institutions (VS0139); if students will graduate from a 4-year college (VS0140); and school region (SCS214).

The race variable (V3023A) was recoded with the following parameters: White only (value = 1), Black only (value = 2), American Indian/Alaska Native only (value = 3), Asian only (value = 4), Hawaiian/Pacific Islander only (value = 5), two or more races (value = 6). Caution is advised when interpreting the Hispanic origin variable (V3024) as it may have overlapped with the race variable. For example, some female student participants may have Hispanic ancestry but identified with another race.

The grade level variable (VS0017) was recoded with the following parameters: grades five or under (value = 0), grades six to eight were allocated to middle school (value = 1), and

grades nine to 12 were allocated to high school (value = 2). The race and grade level variables were recoded for simplicity and to reduce the number of variables in the model to protect against overfitting and obtain appropriate results (Zhang, 2014).

Research Question One

Descriptive statistics in SPSS were used to address the first research question about the demographics of female adolescent students experiencing cyberbullying during the 2018-2019 school year. Table 4 lists the data from the overall sample and both versions of the questions.

Table 4

Selected Demographic Characteristics of the Sample

Variable	Categories	Overall	Version 1	*n* %	Version 2	*n* %
Gender	Female	(*N* = 6866)	(*n* = 102)		(*n* = 64)	
Age in years: 12-18 (*M* ± *SD*)		14.97 ± 2.02	14.82 ± 1.84		14.56 ± 1.82	
Race	Black	765	7	6.9%	4	6.3%
	White	5418	83	81.4%	52	81.3%
	American Indian/AK only	53	0	0%	0	0%
	Asian	336	5	4.9%	2	3.1%
	Hawaiian/PI only	25	0	0%	0	0%
	Two or more	269	7	6.9%	6	9.4%
Hispanic origin	Yes	1500	15	14.7%	10	15.6%
	No	5346	87	85.3%	54	84.4%
	Residue	20	0	0%	0	0%
Grade level	Fifth or under	21	0	0%	0	0%
	Middle school	1216	46	45.1%	22	34.4%
	High school	1695	55	53.9%	40	62.5%
	Missing	3934	1	1%	2	3.1%
School	Public	2700	96	94.1%	61	95.3%
	Private	241	5	4.9%	3	4.7%
	Refused	4	0	0%	0	0%
	Don’t know	1	1	1.0%	0	0%
	Missing/blank	3920	0	0%	0	0%
Region	Northeast	291	21	20.6%	7	10.9%
	Midwest	800	25	24.5%	22	34.4%
	South	1099	28	27.5%	18	28.1%
	West	635	26	25.5%	16	25.0%
	Residue	121	2	2.0%	1	1.6%
	Missing/blank	3920	0	0%	0	0%

Note. AK = Alaska Native; PI = Pacific Islander.

To reiterate, this study only focused on female respondents who selected answer eight from questions 28v1 and 30v2 within the SCS questionnaire. These two questions had Version 1 (used the word *bullied*) and Version 2 (did not use *bullied*). Both of these questions were critical

in identifying female victims of electronic bullying, and Table 5 provides the descriptive statistics. Female respondents who did not select these answers were not examined and outside the scope of this study.

Table 5

Did the Bullying occur Online or via Text? (N = 6866)

Categories	Version 1 28v1 (8)	*n* %	Version 2 30v2 (8)	*n* %
Not selected	327	4.8%	198	2.9%
Selected	102	1.5%	64	0.9%

Reliability Assessments

Cronbach's alpha coefficient (α) was used to check for reliability and consistency with the independent and dependent variables. Generally, a Cronbach's (α) value of 0.70 or greater is acceptable when analyzing internal consistency to check if items are related as a group (UCLA, 2021).

The bullying questions in Version 1 were checked along with the dependent variables and listed in Table 6. The second set of bullying questions had a lower Cronbach's (α) value at 0.58. Still, the overall average for Cronbach's (α) was 0.83 and considered acceptable. This indicated the majority of the bullying questions had high reliability or internal consistency.

An additional reliability or internal consistency check was made using McDonald's omega coefficient (ω). Generally, the McDonald's (ω) is considered more robust than Cronbach's (α) and is provided in Table 6 for additional insight (Hayes & Coutts, 2020). The

McDonald's (ω) could not be calculated in SPSS for the two dependent variables because it required three dependent variables, but the overall average was 0.71 and considered acceptable.

Table 6

Reliability Coefficients for Bullying Questions & Dependent Variables (N= 6866)

Variable	α	ω
Version 1 IV: Did another student make fun of you, call you names, or insult you in a hurtful way? IV: Did another student spread rumors about you or try making others dislike you? IV: Did another student threaten you with harm?	0.95	0.95
Version 1 IV: Bullying related to your race? IV: Bullying related to your religion? IV: Bullying related to your ethnicity or national origin? IV: Bullying related to any disability you may have? IV: Bullying related to your sexual orientation? IV: Bullying related to your physical appearance?	0.58	0.46
DV: Think you will attend a college or vocational school? DV: Think you will graduate from a college?	0.97	N/A
Overall average	0.83	0.71

Note. IV = independent variable; DV = dependent variable; N/A = not applicable.

Most of the female adolescent participants from Version 1 and Version 2 were 14-year-olds, and the least number of participants were 18-year-olds. Table 7 specifies the ages and descriptive statistics of these female participants.

Table 7

Age of Female Participants in the Sample

Variable	Version 1	*n* %	Version 2	*n* %
Age in years	(*n* = 102)		(*n* = 64)	
12	12	11.8%	11	17.2%
13	16	15.7%	9	14.1%
14	23	22.5%	12	18.8%
15	9	8.8%	13	20.3%
16	19	18.6%	6	9.4%
17	15	14.7%	10	15.6%
18	8	7.8%	3	4.7%

A correlation matrix table was constructed in SPSS to provide results for the means and standard deviations of each variable. These correlations can help identify positive associations among variables at the $p < 0.05$ level. Correlation does not equal causation, but the results are summarized in Table 8. There was a low, negative relationship (-0.17) between the two variables about students being called names or insulted in a hurtful way and attending postsecondary schools. However, there were no significantly positive associations between race, Hispanic origin, grade level, public or private school, the nine bullying questions, attending postsecondary institutions, or graduating from a 4-year college.

Table 8

Correlation Matrix and Descriptive Statistics of Selected Variables (n = 102)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Race	1.00															
2. Hispanic origin	0.05	1.00														
3. Grade level	**0.18**	**0.18**	1.00													
4. Public/private school	-0.04	0.04	-0.11	1.00												
5. School region	0.03	-0.10	-0.09	-0.13	1.00											
6. Student insulted you?	0.09	0.09	0.30	-0.06	-0.16	1.00										
7. Spread rumors?	-0.07	0.14	0.00	-0.03	-0.02	-0.09	1.00									
8. Threats of harm?	**0.17**	0.10	0.05	0.06	-0.08	**0.17**	0.12	1.00								
9. Bullying/race?	-0.34	-0.04	0.10	0.03	-0.13	0.00	0.01	0.05	1.00							
10. Bullying/religion?	-0.10	-0.06	-0.13	0.01	0.13	-0.06	0.05	-0.08	**0.19**	1.00						
11. Bullying/ethnicity?	-0.32	0.06	-0.08	0.02	-0.09	-0.09	-0.09	0.01	0.61	0.34	1.00					
12. Bullying/disability?	0.01	0.14	-0.03	0.03	-0.03	0.15	0.01	0.13	0.11	-0.05	-0.07	1.00				
13. Bullying/orientation?	0.09	0.29	-0.04	0.03	-0.10	0.11	0.10	0.10	0.03	-0.04	-0.06	0.27	1.00			
14. Bullying/appearance?	-0.04	0.04	0.09	-0.01	-0.05	-0.05	-0.02	0.06	0.04	0.01	0.02	0.04	0.04	1.00		
15. Attend college?	0.00	-0.05	-0.05	-0.03	-0.03	**-0.17**	-0.09	-0.13	0.08	0.04	0.05	-0.01	-0.14	-0.03	1.00	
16. Graduate college?	0.06	0.10	-0.02	-0.04	0.04	-0.07	0.00	0.15	-0.01	-0.09	0.07	-0.14	-0.04	-0.05	0.13	1.00
M	1.56	1.85	1.55	2.01	2.70	1.30	1.11	1.76	1.90	1.98	1.96	1.90	1.92	2.50	1.09	1.19
SD	1.39	0.36	0.50	9.70	1.32	0.46	0.31	0.43	0.30	0.14	0.20	0.30	0.27	9.66	0.35	0.52

Note. Bold = $p < 0.05$.

Testing Assumptions

A multinomial logistic regression analysis was administered to address the second and third research questions to see if the nine independent variables influenced the two dependent variables. Before starting this type of analysis, the data were examined for assumptions. Laerd Statistics (2018) suggested multinomial logistic regression data should pass six required assumptions to obtain appropriate results:

1. the dependent variable should be nominal or ordinal
2. one or more independent variables are nominal, ordinal, continuous, or dichotomous
3. independent observations, and the dependent variable categories should be jointly exclusive and exhaustive

4. no multicollinearity between independent variables
5. there should be a linear relationship between continuous independent variables and the logit transformation of the dependent variable
6. no outliers

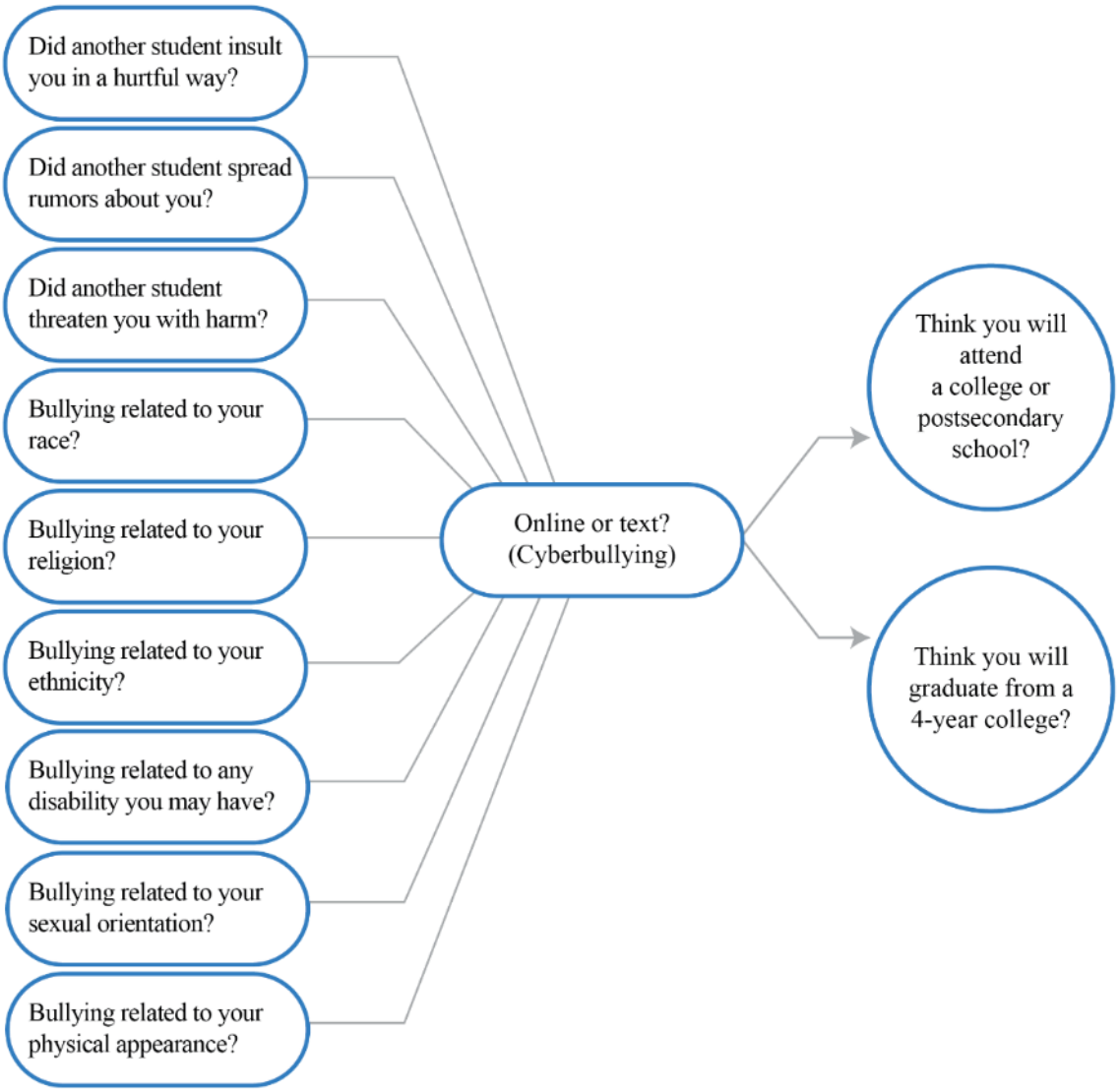
The fifth assumption was not applicable to this study because the independent variables were nominal, not continuous. All of the foregoing assumptions were tested and passed. Since the preceding assumptions passed, there was limited consternation with Type I errors (refusing a true null hypothesis) and Type II errors (failure to refuse a false null hypothesis).

Model Fit

Generally, researchers have suggested 10 participants for each predictor (independent variable) as a guideline for fitting and analyzing logistic regressions (Hosmer et al., 2013; Peng et al., 2002). Others have suggested 10 participants are too conservative and logistic regression results are acceptable with five or more participants per independent variable (Hosmer et al., 2013; Vittinghoff & McCulloch, 2007). Since extant literature has suggested the minimum participants for this study should be approximately 45-90 participants with nine predictor variables, the 102 participants within this study were deemed acceptable. This data will help explore research questions two and three and examine if cyberbullying experiences are related to female adolescent students' aspirations to attend postsecondary institutions and graduate from a 4-year college. Figure 2 illustrates the predictors and dependent variables of the proposed multinomial logistic regression model.

Figure 2

Hypothesized Regression Model



Research Question Two

A multinomial logistic regression analysis was administered to address the second research question and verify if any of the nine independent variables (predictors) influenced the dependent variable. Only data from the Version 1 questions were analyzed for research question

two. This question investigated whether the cyberbullying questions were related to female adolescent students' intentions to attend postsecondary institutions. The null hypothesis stated the cyberbullying predictor variables are not significantly related to female adolescent students' intentions to attend postsecondary institutions. The alternative hypothesis stated the cyberbullying predictor variables are significantly related to female adolescent students' intentions to attend postsecondary institutions.

The multinomial logistic regression data from Table 9 did not yield any statistically significant results with the nine predictor variables and female adolescent students attending postsecondary institutions. The null hypothesis must be retained because the relationship between the independent variables and the dependent variable was not statistically significant overall within the model. Accordingly, there were no statistically significant relationships between cyberbullying and female adolescent students' intentions to attend postsecondary institutions.

Table 9

Multinomial Logistic Regression Results: Research Question Two (n = 102)

Predictors	Responses	*b*	*SE*	*p*
Did another student make fun of you, call you names, or insult you in a hurtful way?	No	-14.90	1083.40	0.989
	Don't know	-12.97	1124.17	0.991
Did another student spread rumors about you or try making others dislike you?	No	-14.90	1767.80	0.993
	Don't know	-11.96	2153.38	0.996
Did another student threaten you with harm?	No	-0.29	1.06	0.785
	Don't know	-1.12	1.61	0.488
Bullying related to your race?	No	15.67	1679.62	0.993
	Don't know	15.34	1832.79	0.993
Bullying related to your religion?	No	14.20	0.00	-
	Don't know	14.03	0.00	-
Bullying related to your ethnicity or national origin?	No	-1.98	0.00	-
	Don't know	-1.02	0.00	-
Bullying related to any disability you may have?	No	-1.45	1.41	0.305
	Don't know	15.56	1780.75	0.993
Bullying related to your sexual orientation?	No	15.99	2259.53	0.994
	Don't know	-2.28	1.64	0.163
Bullying related to your physical appearance?	No	-0.29	0.99	0.773
	Don't know	-11.93	378.97	0.975

Note. $p < 0.05$; Reference category = yes.

Research Question Three

A multinomial logistic regression analysis was administered to address the third research question and verify if any of the nine independent variables (predictors) influenced the dependent variable. Only data from the Version 1 questions were analyzed for research question three. This question investigated whether the cyberbullying questions were related to female adolescent students' intentions to graduate from a 4-year college. The null hypothesis stated the cyberbullying predictor variables are not significantly related to female adolescent students'

intentions to graduate from a 4-year college. The alternative hypothesis stated the cyberbullying predictor variables are significantly related to female adolescent students' intentions to graduate from a 4-year college.

The multinomial logistic regression data from Table 10 only yielded one statistically significant result with the variable associated with *students spreading rumors or trying to make others dislike the female student participants*. Individually, this question might significantly affect female adolescent students' intentions to graduate from a 4-year college, but it is only one predictor variable out of the nine total predicator variables within the model. This statistically significant question might be related to the small sample size of the study which could restrict the overall model from identifying significant effects. The null hypothesis, however, must be retained because the relationship between the predictor variables and the dependent variable was not statistically significant overall within the model. Accordingly, there were no statistically significant relationships between cyberbullying and female adolescent students' intentions to graduate from a 4-year college.

Table 10

Multinomial Logistic Regression Results: Research Question Three (n = 102)

Predictors	Responses	*b*	*SE*	*p*
Did another student make fun of you, call you names, or insult you in a hurtful way?	No	0.67	1.03	0.515
	Don't know	-1.04	1.11	0.351
Did another student spread rumors about you or try making others dislike you?	No	2.09	1.08	**0.053**
	Don't know	-2.63	3.82	0.492
Did another student threaten you with harm?	No	0.21	1.18	0.860
	Don't know	2.51	2.05	0.221
Bullying related to your race?	No	1.60	4.05	0.693
	Don't know	-0.96	1.31	0.460
Bullying related to your religion?	No	2.41	20.54	0.907
	Don't know	13.84	0.00	-
Bullying related to your ethnicity or national origin?	No	4.23	34.86	0.903
	Don't know	1.80	6.23	0.773
Bullying related to any disability you may have?	No	-0.97	1.20	0.417
	Don't know	-1.04	1.42	0.464
Bullying related to your sexual orientation?	No	-1.96	1.24	0.113
	Don't know	2.98	5.04	0.554
Bullying related to your physical appearance?	No	-0.02	0.13	0.910
	Don't know	-0.05	0.26	0.858

Note. Bold = $p < 0.05$; Reference category = yes.

Summary

Data analysis of research question one, Version 1 (n = 102), provided some demographics about the female adolescent students who experienced cyberbullying during the 2018-2019 school year. These female students ranged in age from 12-18, but the most common age group was 14-year-olds. White female students reported the most cyberbullying incidents. Black female students and female students with two or more races reported the second-most cyberbullying incidents. Asian female students reported the third-most cyberbullying incidents.

There were not any American Indian, Alaska Native, Hawaiian, or Pacific Islander female students in the study. Female students who claimed Hispanic origins represented 14.7% of the study sample. Most of the female students were in high school with the majority attending public schools. The most common regional locations of these schools across the U.S. were identified in the following order: South, West, Midwest, and Northeast. Lastly, a correlation analysis revealed there were no significantly positive associations between race, Hispanic origin, grade level, public or private school, the nine bullying questions, attending postsecondary institutions, or graduating from a 4-year college.

Data analysis of research question two did not reveal any statistically significant results from the model predicting if cyberbullying was related to female adolescent students' intentions to attend a college or postsecondary vocational school.

Data analysis of research question three revealed one statistically significant result from the model when it asked female students if a student had spread rumors about them or tried making others dislike them. However, the overall model did not reveal any statistically significant results about predicting if cyberbullying was related to female adolescent students' intentions to graduate from a 4-year college.

This chapter discussed the purpose of the study, research questions, data filters, SPSS variables, provided descriptive statistics from research question one, reliability assessments, tested assumptions, model fit, and the results from research questions two and three. Chapter 5 will provide the discussion, limitations, implications, recommendations for future research, and conclusion.

Chapter 5: Discussion

The purpose of this study was to explore cyberbullying among female adolescent students within a K-12 educational system in the U.S. using the 2019 NCVS-SCS. The findings also helped to answer the research questions:

1. What were some selected demographics of female adolescent students' experiencing cyberbullying in 2019 (e.g., age, race, ethnicity, grade level, public or private school, school location)?
2. Are different cyberbullying behaviors related to female adolescent students' who have been victims of cyberbullying and their intentions to attend a college or postsecondary vocational school (e.g., Automotive Mechanic Training, Beauty School, Computer Programs)?
3. Are different cyberbullying behaviors related to female adolescent students' who have been victims of cyberbullying and their intentions to graduate from a 4-year college?

This chapter will provide concluding remarks associated with this quantitative study and help advance the topic of female adolescent cyberbullying. It will discuss the three research questions, limitations, implications, recommendations for future research, and conclusion.

Research Question One

The first research question examined demographic information of the female adolescent students who experienced cyberbullying during the 2018-2019 school year. The findings indicate approximately 24% of female participants experienced cyberbullying. This is comparable to CDC data from the 2019 YRBS, when 20% of female students reported they were electronically bullied (Centers for Disease Control and Prevention, n.d.). Additionally, the 2017 NCVS-SCS revealed 21% of female students reported being bullied online or via text (Yanez et al., 2019). This

suggests cyberbullying increased slightly from 2017 to 2019, using data from the NCVS-SCS. Limited prevalence may align with the literature about cyberbullying possibly being underreported due to its negative impact and fear of students being disciplined or losing their electronic devices (Aboujaoude et al., 2015). Also, females may completely avoid sharing their cyberbullying behaviors to adjust their narratives or justify wrongdoings (Thomas et al., 2017).

The female participants range in age from 12-18, but the most common age group is 14-year-olds. The least common age group is 18-year-olds. This might suggest as female students age or mature they report less incidents of cyberbullying. This corresponds with the literature that says bullying victimization decreases as children age (Griffin & Gross, 2004; Olweus, 1993). Alternatively, female students might be ignoring or learning how to sufficiently cope with cyberbullying events. This coincides with some of the literature and shows how students may simply ignore acts of cyberbullying (Sarmiento et al., 2019).

White female students report the most cyberbullying incidents. This finding is consistent with the literature because White females are more likely to report being victimized than their peers (Connell et al., 2014) and have higher prevalence rates (McCabe & Strauss, 2022). Black female students and female students with two or more races report the second-most cyberbullying incidents followed by Asian students. Female students claiming Hispanic origins also represent 14.7% of the participants. These findings are similar to the 2017 YRBS data reported by McCabe and Strauss (2022) about the prevalence rates of electronic bullying among adolescent White females (23%), Black females (13.3%), and Hispanic females (17.2%). Further, CDC data from the 2021 High School YRBS suggested 20.46% of U.S. females from all ethnicities in grades 9-12 experience electronic bullying via texts or social media (Centers for Disease Control and Prevention, n.d.). Conversely, the literature also suggests cyberbullying

research about an individual's race is unclear (Connell et al., 2014), and there are no significant differences with ethnicity (McCabe & Strauss, 2022).

Most of the female participants are in high school with the majority attending public schools. There is limited data about the number of private schools from this study (five) and their possible impact on female cyberbullying. Female students experiencing cyberbullying at schools located in the Northeast, Midwest, South, and West regions of the U.S. are fairly consistent within the overall data. The culture of these schools is unknown, but female participants reporting cyberbullying events consistently at these locations implies a school's climate may have links to cyberbullying perpetration and victimization (Connell et al., 2014; Wang et al., 2021).

Lastly, a correlation analysis revealed there was a low, negative relationship between the two variables about female adolescent students being called names or insulted in a hurtful way and attending postsecondary schools. However, the correlation analysis did not expose any significantly positive associations between any of the female participant demographics regarding their race, Hispanic origin, grade level, public or private school, the nine bullying questions, attending postsecondary institutions, or graduating from a 4-year college. The practical significance of the low, inverse finding suggests if one variable rises, the other may fall. Conversely, if female adolescent students who are being insulted in hurtful ways might avoid enrolling or attending postsecondary campuses. If female students dislike attending middle school or high school due to cyberbullying insults, this may deter them from future academic ambitions involving Automotive Mechanic Training, Beauty School, and Computer Programs. Additionally, if these insults have negatively impacted their grades, female students might forego attending CTE programs or collegiate institutions after high school. Guardians, parents, and

school personnel should educate female adolescent students about the long-term effects of sending insults via texts and online posts to address these concerns.

Research Question Two

The second research question investigated if different cyberbullying behaviors are related to female adolescent students' who have been victims of cyberbullying and their intentions to attend a college or postsecondary vocational school. The model for this study does not show any statistically significant results if cyberbullying predicts female adolescent students' intentions to attend a college or postsecondary vocational school. Therefore, the findings of this study indicate cyberbullying is not related to female adolescent students' intentions to attend postsecondary institutions. There might be other factors that help explain female adolescent students' intentions to attend CTE classes or Automotive Mechanic Training, Beauty School, and Computer Programs. However, just because a study produces insignificant *p* values, it should not undermine the importance of practical significance (Spurlock, 2019). Perhaps insults, rumors, threats, race, religion, ethnicity, disabilities, sexual orientation, and physical appearance have some role in female adolescent student identities, mental health, long-term educational goals, and postsecondary attendance. If cyberbullies negatively exploit these nine tactics, appropriate stakeholders should address female adolescent victims with empathy and options to mitigate them. It is impossible to completely shield female adolescent students from the negative attacks of their peers or anonymous perpetrators 24 hours a day, seven days a week because electronics and the internet are synonymous with their lives. Nurturing hope, positive reinforcement, and postsecondary educational goals should be regularly inculcated to alleviate female student absenteeism from tertiary institutions.

Research Question Three

The third research question investigated if cyberbullying behaviors are related to female adolescent students' who have been victims of cyberbullying and their intentions to graduate from a 4-year college. The data generated one statistically significant result about female students spreading rumors or trying to make others dislike the female student participants. This finding aligns with the research about teenage female students using their mobile devices to text and call others about gossip and to possibly increase their status among peers (Vanden Abeele & De Cock, 2013). Similarly, another study found that students typically spread rumors and gossip through electronic technologies when they spend time together with friends at school (Pelfrey & Weber, 2014). Although this was the only significant variable out of nine predictor variables related to female adolescent students' intentions to graduate from a 4-year college, this outcome suggests using electronics to spread negative rumors and cyberbully classmates should not be fully discarded when examining the relationship between students' intentions and their postsecondary graduation. Some possible reasons this association occurs could be: 1) spreading rumors or making others dislike them undermines student confidence; 2) damages their reputations; 3) induces greater isolation; 4) increases anxieties; 5) limits relationships; 6) lowers self-esteem; or 7) causes depression. Female students might believe these negative events will follow them into tertiary institutions, interfere with their learning, and deter their hopes of graduating. Overcoming these challenges may be difficult when they evaluate future goals, the rigors of postsecondary coursework, successful completion, and graduating with a bachelor's, master's, professional, or doctoral degree. Additional research is recommended to confirm if this variable is a valid predictor. Notwithstanding, the overall findings from this study suggest cyberbullying has a limited association with female adolescent students' intentions to graduate from a 4-year college.

Limitations

There are several limitations in the study, and caution is advised when making inferences about the findings. First, the NCVS-SCS data from 2022 were not publicly available on the ICPSR website until February 28, 2024, and this study had to use the NCVS-SCS data from 2019. Cyberbullying experiences might evolve over time, and the latest information might have been advantageous. While the NCVS-SCS provided information regarding school-related victimization, it is important to understand the questionnaire asks a limited number of questions about cyberbullying.

Second, utilizing secondary data analysis with large datasets can limit a holistic inspection of the data. Whatever data were originally collected is what subsequent researchers have to work with. Hence, this researcher was restricted to using the limited number of bullying questions within the NCVS-SCS.

Third, only a limited number of respondents (n = 102) selected the bullying activities that occurred online or via text. Perhaps a higher number of female participants in the model could produce different results between the independent and dependent variables and not place restrictions on the study. There is an inference the one statistically significant question from research question three might be related to the small sample size of the study and could be restricting the overall model from identifying significant effects. Alleviating statistical instability through variable inclusion or exclusion (Hosmer et al., 2013) may help identify significant relationships between cyberbullying and predicting female adolescent students' intentions to attend or graduate from postsecondary institutions. A larger sample size might have helped the multinomial logistic regression models of this study or allowed a more robust examination of the

data using structural equation modeling. These measures could have enhanced the reliability and validity of the study.

Fourth, this study only focused on female adolescent students attending U.S. schools. Their beliefs, behaviors, responses, and coping mechanisms associated with cyberbullying may not reflect similar conditions with other female adolescent students around the globe. The transferability and generalizability of this study is limited, but collecting data from reliable sources outside the U.S. might be useful to address these concerns and the possibility of an ecological fallacy (Soares et al., 2017).

Fifth, omitting cyberbullying experiences among male adolescent students should not be taken lightly. Studying gender differences can provide unique insights to cyberbullying activities. This includes addressing assumptions that males are more aggressive or malicious with their electronic behaviors than females. However, exploring cyberbullying among male students was outside the scope of this study.

Sixth, a review of the literature revealed many cyberbullying studies employed quantitative methodologies. This study adds to this quantitative quandary. Analyzing data from questionnaires may provide inferences, but likely cannot establish causality between cyberbullying variables and their relation to postsecondary aspirations. This implies a questionnaire could make it challenging when explaining causality or influences among certain variables (Song et al., 2019). Cyberbullying is diverse and complex, and testing for every possibility in one quantitative study is difficult to achieve (Jiang et al., 2022). Quantitative research comes with various reliability and validity limitations that include: possible bragging by students to gain attention; minimizing their events to remove them from the spotlight;

interviewer influences during questioning; biased selections; and underrepresentation of some participants (Pelfrey & Weber, 2014).

Seventh, this study used the NCVS-SCS to inquire about cyberbullying among female adolescents and their experiences related to insults, rumors, harmful threats, race, religion, ethnicity, disabilities, sexual orientation, and their physical appearance. Researchers should be open-minded about continuing and expanding upon this research through qualitative or mixed methodologies, and within a RAT framework. Any research model can include questionnaires, but follow-up interviews should be conducted to meticulously explore the phenomenon. Researchers seeking an inclusive understanding should seek opportunities for a more comprehensive analysis of the data so additional reliability and validity measures can be addressed.

Eighth, since the present study was not longitudinal and utilized a cross-sectional design, it was limited to data collected from female adolescent students at one point in time during the 2018-2019 academic year. These female participants were attending middle school or high school, and may have provided dissimilar information about their cyberbullying experiences.

Lastly, self-reported data may influence the reliability and validity of the study because students might underreport their delinquent activities due to maintaining social desirability (Shin & Kim, 2023). It is possible some females rationalized or embellished their cyberbullying experiences and omitted relevant information. Cyberbullying generally occurs anonymously, in secret, and outside the presence of capable guardians. If cyberbullying acts were brought to light, victims or perpetrators may be reticent to report their electronic activities truthfully during telephonic or in-person interviews. Female participants could have been cautious with unfamiliar Census Bureau workers asking them personal questions over the phone or concerned when they

arrived at their residence because other individuals (especially adults) could be monitoring their responses. Additionally, some cyberbullying questions may have caused participants to become fearful, and this influenced their responses due to possible retaliation from their parents, guardians, relatives, peers, teachers, or school administrators. If these individuals discovered female participants were experiencing problems with cyberbullying, they might pursue disciplinary action or confiscate their electronic devices. Even with promised confidentiality among participant responses, the results could have been affected by a bias of social desirability because female students possibly adjusted their answers due to negative associations with cyberbullying (e.g., it is wrong), and some misinterpreted bullying questions to mean teasing or considered it normal behavior (Vanden Abeele & De Cock, 2013). Understanding the motivations behind the female participants responses was beyond the scope of the instant study, but suggest the foregoing concerns may have influenced participant answers. Conversely, the willingness of female participants to partake in the study might be interpreted to mean they were not concerned about their cyberbullying behaviors (or believe it was a significant problem), and their answers did not reflect individuals who were consistently involved with cyberbullying (Giordano et al., 2021).

Implications

The findings from this study help contribute to the literature and advance the topic of cyberbullying. It could help students, parents, families, teachers, school administrators, practitioners, law enforcement, legislators, and social media website owners to mitigate adolescent cyberbullying through anonymous reporting, mentorships, or other initiatives. One size does not fit all, and these stakeholders must determine which options work best in their unique settings.

First, educate students, parents, faculty, and provide assistance through campus police partnerships (Jan & Husain, 2015; Sticca & Perren, 2013) if female students become involved with cyberbullying. Families should continue providing support (Horner et al., 2015; Sticca & Perren, 2013; Wright, 2017) to students by emphasizing how cyberbullying is unacceptable, and how witnesses should stand up for victims (Jackson et al., 2020). Families should assist adolescent students with their moral development, explain why cyberbullying consequences cannot be tolerated (Connell et al., 2014), and teach them not to insult others, threaten harm, or spread rumors. Parents should stay up-to-date on new mobile technologies and social networks (Aboujaoude et al., 2015), and seek greater tracking capabilities and webcam monitoring (Navarro & Jasinski, 2012) to verify if students are insulting others, spreading rumors, or disrupting academic pursuits. Parents and schools should control the time students spend online, help cleanse cyberspace, supervise violent video games, and deter copycat cyberbullying behaviors (Song et al., 2019). This may help reduce discussions about a student's race, religion, ethnicity, disability, sexual orientation, or physical appearance. Families could help adolescents develop better interpersonal relationships to guard against stressful events and cyberbullying (Ouyang et al., 2021). Youth need additional guidance from parents, older students, and teachers about online bantering (Steer et al., 2020), the negative impact of making fun of students, calling them names, insulting them, and threats.

Second, cyberbullying often exploits anonymity, but it can also assist students and teachers if anonymous reporting is allowed to school administrators. This can be done online through annual school surveys inquiring if students are cyberbullying others due to their race, religion, ethnicity, disabilities, sexual orientation, and physical appearance. Administrators could train students and school staff to identify these acts of cyberbullying early to reduce conflict and

deter perpetration (Pelfrey & Weber, 2014). Training parents, teachers, and school counselors to promptly intervene may help students develop more restraint, help control emotional tendencies, help them fit into school environments, and encourage students to volunteer in their schools and communities (Shin & Kim, 2023). School personnel should teach students about technology and sexting, reinforce school policies, openly discuss with parents, share student obligations (Trump, 2011), create anti-cyberbullying groups, revamp school environments, and help embarrassed victims (Horner et al., 2015). School personnel can teach students about trusting school resource officers, create school and community relationships, cultivate safe schools and communities, create awareness, build student character, and help students become productive citizens (Timm, 2015). Schools should also encourage bystanders to defend against cyberbullies (Sarmiento et al., 2019), especially when it involves threats associated with gender, race, ethnicity, disabilities, and sexual orientation. Students, parents, and school personnel should report cyberbullying to trusted authorities, defend victims, and learn about tools to identify the IP address of cyberbullies for rectification in the real-world (Sticca & Perren, 2013). Increasing peer social support, empathy, good school climates, and school safety should be highlighted (Kowalski et al., 2014; Wang et al., 2021) so students can focus on learning and their postsecondary ambitions. Physical appearance, competition, and popularity among female students can be fierce, but school personnel should create better interpersonal relationships between peers to limit their materialistic stressors (Wang et al., 2021). Students should learn effective techniques to regulate and vent about their emotions to reduce loneliness, depression, and mental health concerns (Jiang et al., 2022). This might be particularly relevant for autistic students, those with special needs, and those with disabilities. Moreover, schools could provide females with training to control their impulses (e.g., insulting or spreading rumors about others), develop conflict resolution

skills (e.g., apologizing, removing online threats), build empathy, provide supportive spaces online and offline to report cyberbullying, design programs to reduce risky sexual activity, and reinforce healthy romantic relationships (Thomas et al., 2017).

Third, it is in the best interests of students, parents, school staff, and administrators to provide comprehensive programs through webinars or workshops that address prevention, management, rectification, and follow-up on cyberbullying activities. Periodic trainings could be implemented for parents, school nurses, staff, faculty, and school administrators about addressing student substance use and mental health concerns (McCabe & Strauss, 2022). Even posting anti-cyberbullying posters around campuses that list definitions, examples, consequences, and contact information for assistance might help. Some students may not fully understand cyberbullying, insults, microaggressions, implicit biases, colorism, spreading rumors, posting explicit images and videos, tacit threats, or the necessary protocols for obtaining supportive measures to address them. Training them to recognize cyberbullying acts can aid student awareness as they mature and contemplate transitioning into postsecondary institutions or pursuing potential CTE courses at vocational schools and colleges. Helping these adolescent students generate long-term goals may have a tremendous impact on their postsecondary plans and success.

Fourth, school counselors should educate students about technology, excessive use of social media, and help modify their behavior towards positive outcomes (Giordano et al., 2021). Practitioners could teach students about the positive and negative effects of emojis online (Steer et al., 2020), work with students to address stressors, their values about learning, attitudes toward school (Betts et al., 2017), and postsecondary institutions. Health professionals could also ask screening questions about children's online activities, and parents should monitor the activities

(Aboujaoude et al., 2015) of their children when they call students names or coerce them to dislike classmates. Practitioners could also offer YouTube videos and role-playing scenarios to increase empathy and understanding (Camelford & Ebrahim, 2016) and the potential long-term impacts of cyberbullying and postsecondary decisions. Adolescents should learn coping strategies, and parents, teachers, and health care specialists should discuss safe social media usage instead of suggesting no usage at all (Hamm et al., 2015).

Fifth, adolescents view the internet and mobile phones today as routine activities and fundamental tools for their social existence (Sticca & Perren, 2013). As their electronic associations surge, adolescents might be creating more arenas for cyber victims and perpetrators (Kowalski & Limber, 2007), but should be deterred from posting sensitive or private material online (Sticca & Perren, 2013). Indeed, the degree of cyberbullying activities can be comprehensive, widespread, and overpowering for parents and school administrators to believe they will ever rectify the issue (Trump, 2011). This should not be a deterrent, and stakeholders should continue reaching out to cyberbullying victims (Horner et al., 2015; Jan & Husain, 2015; Sticca & Perren, 2013; Wong-Lo & Bullock, 2011). Frequent stories about students and their cyberbullying activities (large or small) may induce cyberbullying fatigue among students, parents, teachers, school administrators, practitioners, law enforcement, prosecutors, and legislative stakeholders. If these stakeholders are reluctant or inconsistent with their approaches to reeducating, intervening, alleviating, or disciplining those involved with cyberbullying, the problem may continue in perpetuity. It may also embolden perpetrators. There should be a cultural shift, as cyberbullying tactics may evolve when adolescent students transition into postsecondary students. Laws impeding or protecting students today might be inadequate or replaced tomorrow, but inappropriate acts in cyberspace (especially illegal hate speech, and

death threats) should have consequences in the real world. Female students could work with parents, teachers, counselors, administrators, and the police to implement zero-tolerance protocols, establish peer mediation, and use teen courts to quickly identify and remove cyberbullies (LeBlanc, 2010) from schools and postsecondary campuses. Students are on the front lines of what they experience and should be able to report cyberbullying to those in authority without fear of reprisal or losing electronic privileges (Navarro & Jasinski, 2012). All student voices should be heard and valued, especially female voices and those underrepresented.

Sixth, social media platforms could also benefit from this study. They should provide easily accessible links on their websites for anyone to report incidents of cyberbullying involving sexual harassment, discrimination, racial slurs, misinformation, disparaging pictures, malicious videos, and threats. An open dialogue can help to quell concerns expeditiously. It is imperative for website owners to prevent, intervene, respond swiftly, and discuss remedies across digital networks with students, parents, families, teachers, school administrators, practitioners, law enforcement, prosecutors, and legislators. By increasing communication and collaboration between these stakeholders, including experts in the social sciences, humanities, and computer science fields, this may help address current and future cyberbullying challenges (Ioannou et al., 2018).

Recommendations for Future Research

Additional research is strongly encouraged to explore in greater detail if cyberbullying is related to female adolescent students' intentions to attend a college or postsecondary vocational school. In particular, the negative relationship between the two variables about students being called names or insulted in a hurtful way and attending postsecondary institutions. Furthermore, researchers could investigate the relationship between students spreading negative rumors or

trying to make others dislike them and their intentions to graduate from CTE programs (e.g., Automotive Mechanic Training, Beauty School, and Computer Programs) or postsecondary schools.

Future studies could employ the RAT framework as an appropriate theorem to explore the complex associations between cyberbullying variables. RAT suggests cyberbullying can occur when motivated offenders use electronics and online environments to identify and target potential students without guardians being present. Equally, the findings from this study suggest that when motivated offenders act outside the presence of capable guardians, they may target female adolescent students by spreading negative rumors or making others dislike them, and this could be influencing their intentions to graduate from CTE programs or tertiary institutions. Nevertheless, additional research is recommended.

Ultimately, the female participants in this study may have been more concerned about their present status in school and not worried about postsecondary decisions yet. Conducting follow-up interviews with female students over many years may reveal if cyberbullying truly influences their aspirations to attend or graduate from tertiary institutions. These extensive in-depth interviews could alleviate self-reporting concerns (Shin & Kim, 2023) and provide a richer layer of insight by probing into the experiences of cyberbullies (Giordano et al., 2021) and victims. Cyberbullying research could rely on qualitative models that employ comprehensive examinations of participants viewpoints and real-life experiences through these natural investigations (Ioannou et al., 2018). However, a review of the literature suggests many studies utilize quantitative techniques. Supplemental inquiries should not be limited by quantitative norms. Qualitative designs and mixed methods may seem arduous, time-consuming, and costly, but examining data strands from multiple avenues may increase perspicacity. Investigating the

cyberbullying phenomenon should be multifaceted, and integrating various methodologies or theories could be helpful. Using RAT as a framework, future investigations could incorporate qualitative or mixed methodologies and explore the following empirical gaps:

1. Based on this study, investigate if there are differences between the two groups of female adolescent students who experienced cyberbullying (24%) and those who did not experience cyberbullying (76%).
2. Study the effects of cyberbullying on female adolescent students being called names, spreading negative rumors, postsecondary goals, attendance, and graduation rates.
3. Calculate the frequency and effects of cyberbullying among female adolescent students and postsecondary students worldwide, but especially minorities.
4. Clarify how female adolescent students' postsecondary decisions are influenced by cyberbullies by conducting a mixed methods study of their personal experiences. Conduct qualitative interviews to help explain quantitative results from cyberbullying surveys.
5. Study the diverse ways male and female students internalize cyberbullying experiences at school and whether online experiences have long-term consequences similar to traditional bullying.
6. Conduct a meta-analysis of the NCVS-SCS over the past 10-20 years to explore cyberbullying trends among male and female adolescent students.

Conclusion

This study explored if cyberbullying is related to female adolescent students' intentions to attend a college, postsecondary vocational school, or graduate from a 4-year college. Using the data from the 2019 NCVS-SCS helped provide some insights about cyberbullying and

students' postsecondary aspirations. Undoubtedly, however, there are more experiences and variables that should be investigated and measured. Ancillary research is needed.

These findings should contribute to RAT, group dynamics, social order, group process, and cognitive views because they provide a suitable theoretical lens to explore the multifaceted dynamics associated with cyberbullying. RAT postulates that cyberbullying can occur in online environments because 1) motivated perpetrators observe and identify potential students, 2) texting and the internet provide opportunities to reach and target these students, and 3) absent guardians are not there to monitor or stop it. Electronics, cell phones, and the internet are routine activities many students utilize on a daily basis. The findings from this study suggest female adolescent students might be using their electronics to spread rumors or try to make others dislike them. The outcome from these negative events might be influencing their intentions to graduate from CTE programs (e.g., Automotive Mechanic Training, Beauty School, and Computer Programs) or postsecondary institutions. Again, supplementary research is warranted.

Cyberbullying is a major concern in today's digital environments, but perhaps future research could elaborate on proactive interventions by monitoring students' internet activities, promptly reporting cyberbullying, and providing specific trainings to counteract this hazard. If adolescent students are to avoid or overcome cyberbullying, perhaps future studies can address appropriate solutions so it can be implemented by students, parents, teachers, school administrators, law enforcement, prosecutors, and legislators.

Ultimately, this research study provides a snapshot view of cyberbullying among female adolescent students during the 2018-2019 academic year. As the internet, electronics, and technologies continue to evolve, the effects of cyberbullying should continue to be an area of research across educational landscapes worldwide.

Appendices

Appendix A: School Crime Supplement (English)

2019 SCHOOL CRIME SUPPLEMENT

INTRO_1 - **Now, I would like to ask some questions about your experiences at school. We estimate the survey will take 3 to 15 minutes depending on your circumstances. The law authorizes the collection of this data and requires us not to share your responses with your school or family.**

SCREEN QUESTIONS FOR SUPPLEMENT

E_ATTENDSCHOOL
1a. Did you attend school at any time this school year?

1 ☐ Yes
2 ☐ No - ***SKIP*** *to* ***END***

E_HOMESCHOOL
1b. During that time, were you ever homeschooled? That is, did you receive ANY of that schooling at home, rather than in a public or private school?

1 ☐ Yes
2 ☐ No - ***SKIP*** to E_DIFFSCHOOL_ATTENDED

E_ALLHOMESCHOOL
1c. Was all of your schooling this school year homeschooling?

1 ☐ Yes - ***SKIP*** to ***END***
2 ☐ No

E_DIFFSCHOOL_ATTENDED
1d. How many different schools have you attended this school year?

Include your homeschooling as one school. *(Only asked if student answered "yes" to E_HOMESCHOOL.)*

1 ☐ One school
2 ☐ Two schools
3 ☐ Three or more schools

CHECK ITEM A: If student was not homeschooled (E_HOMESCHOOL = "No") Skip to E_WHATGRADE. If student was partially homeschooled (E_ALLHOMESCHOOL = "No") continue with E_HOMESCHOOLGRADE.

E_HOMESCHOOLGRADE
2a. During the time you were homeschooled this school year, what grade would you have been in if you were in a public or private school?

0 ☐ Fifth or under - ***SKIP*** to ***END***
1 ☐ Sixth
2 ☐ Seventh
3 ☐ Eighth
4 ☐ Ninth
5 ☐ Tenth
6 ☐ Eleventh
7 ☐ Twelfth
8 ☐ Other - *Specify*
SKIP *to* INTRO_ 2
9 ☐ College/GED/Post-graduate/ Other noneligible – ***SKIP*** to ***END***

E_HOMESCHOOLGRADE_OTHER
Specify _____

E_WHATGRADE
2b. What grade are you in?

This question refers to the 2018-2019 school year.

0 ☐ Fifth or under - ***SKIP*** *to* ***END***
1 ☐ Sixth
2 ☐ Seventh
3 ☐ Eighth
4 ☐ Ninth
5 ☐ Tenth
6 ☐ Eleventh
7 ☐ Twelfth
8 ☐ Other - *Specify*
SKIP to E_WHATMONTH
9 ☐ College/GED/Post-graduate/ Other noneligible - ***SKIP*** *to* ***END***

E_WHATGRADE_OTHER
Specify _____

Read introduction only if any of the boxes 1-8 are marked in item E_HOMESCHOOLGRADE. **INTRO_2 -The following questions pertain only to your attendance at a public or private school and not to being homeschooled.**	
E_WHATMONTH **3. In what month did your current school year begin?**	1 ☐ August 2 ☐ September 3 ☐ Other – ***ASK*** E_WHATMONTHOTHER ***SKIP*** to F_SCHOOLSTATE
E_WHATMONTHOTHER	1 ☐ January 2 ☐ February 3 ☐ March 4 ☐ April 5 ☐ May 6 ☐ June 7 ☐ July 8 ☐ October 9 ☐ November 10 ☐ December
ENVIRONMENTAL QUESTIONS	
4b. **F_SCHOOLSTATE** **In what state is your school located?** **F_SCHOOLCOUNTY** **In what county is your school located?** **F_SCHOOLCITY** **In what city is your school located?** **F_NAMEOFSCHOOL** **What is the complete name of your school?**	State County City School Name
F_PUBLICORPRIVATE **5a. Is your school public or private?**	1 ☐ Public – ***ASK*** F_REGULARSCHOOL 2 ☐ Private - ***SKIP*** to F_CHURCHRELATED
F_REGULARSCHOOL **5b. Is this the regular school that most of the students in your neighborhood attend?**	1 ☐ Yes 2 ☐ No ***SKIP*** to F_GRADES_LOW
F_CHURCHRELATED **5c. Is your school affiliated with a religion?** *A school affiliated with a religion is defined as an elementary or secondary school that is either partially or fully supported/funded by a church, synagogue, or mosque.*	1 ☐ Yes 2 ☐ No 3 ☐ Don't know

F_GRADES_LOW **6a. What is the lowest grade taught in your school?**	0 ☐ Pre-Kindergarten or Kindergarten 1 ☐ 1st grade 2 ☐ 2nd grade 3 ☐ 3rd grade 4 ☐ 4th grade 5 ☐ 5th grade 6 ☐ 6th grade 7 ☐ 7th grade 8 ☐ 8th grade 9 ☐ 9th grade 10 ☐ 10th grade 11 ☐ 11th grade 12 ☐ H.S. Senior 13 ☐ Post-graduate 20 ☐ All ungraded 30 ☐ All special education
F_GRADES_HIGH **6b. What is the highest grade taught in your school?**	0 ☐ Pre-Kindergarten or Kindergarten 1 ☐ 1st grade 2 ☐ 2nd grade 3 ☐ 3rd grade 4 ☐ 4th grade 5 ☐ 5th grade 6 ☐ 6th grade 7 ☐ 7th grade 8 ☐ 8th grade 9 ☐ 9th grade 10 ☐ 10th grade 11 ☐ 11th grade 12 ☐ H.S. Senior 13 ☐ Post-graduate 20 ☐ All ungraded 30 ☐ All special education
F_GETTOSCHOOL **7. How do you get to school most of the time this school year?** *If multiple modes are used, code the mode in which the student spends the most time.* **F_GETTOSCHOOL_SPECIFY**	1 ☐ Walk 2 ☐ School bus 3 ☐ Public bus, subway, train 4 ☐ Car 5 ☐ Bicycle, motorbike, or motorcycle 6 ☐ Some other way – *Specify* *Specify* _____

F_HOMEFROMSCHOOL **8. How do you get home from school most of the time this school year?** *If multiple modes are used, code the mode in which the student spends the most time.* *If the student volunteers that he or she does not go directly home after school, record the mode that the student uses to get to his or her first destination after school.* **F_HOMEFROMSCHOOL_SPECIFY**	1 ☐ Walk 2 ☐ School bus 3 ☐ Public bus, subway, train 4 ☐ Car 5 ☐ Bicycle, motorbike, or motorcycle 6 ☐ Some other way –*Specify* *Specify* _____

BEGIN SPLIT – The questions about school sponsored activities have two alternate forms, designed for split-sample administration. Version 1 (**F_ACTIVITIES_SPORTS**—**F_ACTIVITIES_OTHER_SPECIFY**) reflects the wording used in the 2017 SCS, and Version 2 (**F_ACTIVITY_SPIRIT**—**F_ACTIVITY_OTHER_SPECIFY**) reflects updated wording for the 2019 SCS.

VERSION 1

	Yes	No
9v1. During this school year, have you participated in any of the following activities sponsored by your school:		
F_ACTIVITIES_SPORTS **a. Athletic teams at school?**	1 ☐	2 ☐
F_ACTIVITIES_SPIRIT **b. Spirit groups, for example, Cheerleading, Dance Team, or Pep Club?**	1 ☐	2 ☐
F_ACTIVITIES_ARTS **c. Performing arts, for example, Band, Choir, Orchestra, or Drama?**	1 ☐	2 ☐
F_ACTIVITIES_ACADEMIC **d. Academic clubs, for example, Debate Team, Honor Society, Spanish Club, or Math Club?**	1 ☐	2 ☐
F_ACTIVITIES_GOVT **e. Student government?**	1 ☐	2 ☐
F_ACTIVITIES_SERVICE **f. [IF GRADES 6, 7, or 8 ASK] Volunteer or community service clubs sponsored by your school, for example, Peer Mediators, Ecology Club, or Recycling Club?** **[IF GRADES 9, 10, 11, or 12 ASK] Volunteer or community service clubs sponsored by your school, for example, Peer Mediators, Ecology Club, Key Club, or Interact? Do not include community service hours required for graduation.**	1 ☐	2 ☐
F_ACTIVITIES_OTHER **g. Other school clubs or school activities?**	1 ☐ ↘	2 ☐
F_ACTIVITIES_OTHER_SPECIFY **What are the other school clubs or school activities you participate in?**	*Specify* _____	***SKIP*** to **F_SAFETY_POLICE**

VERSION 2 9v2. During this school year, have you participated in any of the following activities sponsored by your school:	Yes	No
F_ACTIVITY_SPIRIT a. Spirit groups, for example, Cheerleading, Dance Team, or Pep Club?	1 ☐	2 ☐
F_ACTIVITY_SPORTS b. Athletic teams at school?	1 ☐	2 ☐
F_ACTIVITY_ARTS c. Performing arts, for example, Band, Choir, Orchestra, or Drama?	1 ☐	2 ☐
F_ACTIVITY_ACADEMIC d. Academic clubs, for example, Debate Team, Honor Society, Spanish Club, Math Club, or Computer Club?	1 ☐	2 ☐
F_ACTIVITY_GOVT e. Class council or student government, also known as SGA?	1 ☐	2 ☐
F_ACTIVITY_SERVICE f. [IF GRADES 6, 7, or 8 ASK] Volunteer or community service clubs sponsored by your school, for example, Peer Mediators, Environmental Club, or Recycling Club? [IF GRADES 9, 10, 11, or 12 ASK] Volunteer or community service clubs sponsored by your school, for example, Peer Mediators, Environmental Club, Key Club, or Interact? Do not include community service hours required for graduation.	1 ☐	2 ☐
F_ACTIVITY_OTHER g. Other school clubs or school activities?	1 ☐ ↘	2 ☐
F_ACTIVITY_OTHER_SPECIFY What are the other school clubs or school activities you participate in?	*Specify* _____	***SKIP*** to **F_SAFETY_POLICE**

END SPLIT – Both Version 1 and Version 2 respondents go to **F_SAFETY_POLICE**

10. The next questions are about security measures that some schools take.	Yes	No	Don't know	School does not have lockers
Does your school have:				
F_SAFETY_POLICE **a. Security guards or assigned police officers?**	1 ☐	2 ☐	3 ☐	
F_SAFETY HALLSTAFF **b. Other adults supervising the hallway, such as teachers, administrators, or parent volunteers?**	1 ☐	2 ☐	3 ☐	
F_SAFETY_ METAL_DETECTORS **c. Metal detectors, including wands?** *The definition for the term 'metal detector' is a device used to check for weapons students might be trying to bring onto school property. The metal detector may be in a form of a doorframe, which you are asked to walk through. It may also be in the form of a hand-held metal detector that looks like a wand or paddle, which is moved around your body.*	1 ☐	2 ☐	3 ☐	
F_SAFETY_DOORS_LOCKED **d. Locked entrance or exit doors during the day?**	1 ☐	2 ☐	3 ☐	
F_SAFETY_SIGN_IN **e. A requirement that visitors sign in AND wear visitor badges or stickers?**	1 ☐	2 ☐	3 ☐	
F_SAFETY_LOCKER_CHECKS **f. Locker checks?** *A locker check is the act of school administrators or officials opening a locker and looking though its contents. Depending on the circumstances, administration may choose to search one, several, or all lockers.*	1 ☐	2 ☐	3 ☐	4 ☐
F_SAFETY_STUDENT_ID **g. A requirement that students wear badges or picture identification?**	1 ☐	2 ☐	3 ☐	
F_SAFETY_CAMERAS **h. One or more security cameras to monitor the school?**	1 ☐	2 ☐	3 ☐	
F_SAFETY_CODE_OF_CONDUCT **i. A code of student conduct, that is, a set of written rules or guidelines that the school provides to you?**	1 ☐	2 ☐	3 ☐	

	Yes	No	Don't know
F_REPORT **11. If you hear about a threat to school or student safety, do you have a way to report it without having to give your name?** *Probe:* **Do you have a way to report a threat, such as an anonymous drop box or hotline?**	1 ☐	2 ☐	3 ☐

F_DISTRACTED **12. In your classes, how often are you distracted from doing your schoolwork because other students are misbehaving, for example, talking or fighting?** *Read answer categories*	1 ☐ **Never** 2 ☐ **Almost never** 3 ☐ **Sometimes** 4 ☐ **Most of the time**

13. Thinking about your school, would you strongly agree, agree, disagree, or strongly disagree with the following...?	Strongly Agree	Agree	Disagree	Strongly Disagree
F_RULES_FAIR **a. The school rules are fair.**	1 ☐	2 ☐	3 ☐	4 ☐
F_PUNISHMENT_SAME **b. The punishment for breaking school rules is the same no matter who you are.**	1 ☐	2 ☐	3 ☐	4 ☐
F_RULES_ENFORCED **c. The school rules are strictly enforced.** *Strictly enforced rules means that the school consistently carries out disciplinary actions against any students who break school rules.*	1 ☐	2 ☐	3 ☐	4 ☐
F_PUNISHMENT_KNOWN **d. If a school rule is broken, students know what kind of punishment will follow.**	1 ☐	2 ☐	3 ☐	4 ☐
F_TEACHERS_RESPECT **e. Teachers treat students with respect.**	1 ☐	2 ☐	3 ☐	4 ☐

14. Still thinking about your school, would you strongly agree, agree, disagree, or strongly disagree with the following…?	Strongly Agree	Agree	Disagree	Strongly Disagree
There is a TEACHER or other ADULT at school who…				
F_ADULT_REALLYCARES **a. Really cares about you.**	1 ☐	2 ☐	3 ☐	4 ☐
F_ADULT_LISTENS **b. Listens to you when you have something to say.**	1 ☐	2 ☐	3 ☐	4 ☐
F_ADULT_GOOD_JOB **c. Tells you when you do a good job.**	1 ☐	2 ☐	3 ☐	4 ☐

15. Still thinking about your school, would you strongly agree, agree, disagree, or strongly disagree with the following…?	Strongly Agree	Agree	Disagree	Strongly Disagree
There is a STUDENT at school who…	1 ☐	2 ☐	3 ☐	4 ☐
F_STUDENT_REALLYCARES **a. Really cares about you.**	1 ☐	2 ☐	3 ☐	4 ☐
F_STUDENT_LISTENS **b. Listens to you when you have something to say.**				
F_STUDENT_SUCCESS **c. Believes that you will be a success.**	1 ☐	2 ☐	3 ☐	4 ☐

16. Thinking about the neighborhood where YOU LIVE, would you strongly agree, agree, disagree, or strongly disagree with the following…? **F_CRIME_NEIGHBORHOOD** **There is a lot of crime in the neighborhood where YOU LIVE.** *A neighborhood can be blocks of houses, apartments, and places you spend time at near your home.*	Strongly Agree 1 ☐ Agree 2 ☐ Disagree 3 ☐ Strongly Disagree 4 ☐
17. Thinking about the neighborhood where YOUR SCHOOL is located, would you strongly agree, agree, disagree, or strongly disagree with the following...? **F_CRIME_NEIGHBORHOOD_SCHOOL** **There is a lot of crime in the neighborhood where YOU go to SCHOOL.**	Strongly Agree 1 ☐ Agree 2 ☐ Disagree 3 ☐ Strongly Disagree 4 ☐
18. Thinking about your school, would you strongly agree, agree, disagree, or strongly disagree with the following...? **F_SAFE_IN_SCHOOL** **You feel safe in your school.**	Strongly Agree 1 ☐ Agree 2 ☐ Disagree 3 ☐ Strongly Disagree 4 ☐
SCS_INTRO_3 Now I have some questions about things that happen at school. For this survey, "at school" includes the school building, on school property, on a school bus, or going to and from school. [IF E_DIFFSCHOOL_ATTENDED= 2 or 3: **For the remainder of this survey, think about both/all schools you attended this school year]. Your answers will not be shared with anyone at your school or home.**	
BEGIN SPLIT – The questions about drug availability have two alternate forms, designed for split-sample administration. Version 1 (**F_ALCOHOL—F_OTHER_ILLEGAL**) reflects the wording used in the 2017 SCS, and Version 2 (**F2_ALCOHOL—F2_OTHER_ILLEGAL**) reflects updated wording for the 2019 SCS.	
VERSION 1 **19v1. The following question refers to the availability of drugs and alcohol at your school.** **Is it possible for students at your school to get…**	Yes / No
F_ALCOHOL **a. Alcoholic beverages?**	1 ☐ 2 ☐
F_MARIJUANA **b. Marijuana, also known as pot, weed, or mary jane?**	1 ☐ 2 ☐
F_PRESCRIPTION_DRUGS **c. Prescription drugs illegally obtained without a prescription, such as Oxycontin, Ritalin, or Adderall?**	1 ☐ 2 ☐
F_OTHER_ILLEGAL **d. Other illegal drugs, such as cocaine, uppers, or heroin?** *Do not include tobacco or tobacco products.*	1 ☐ 2 ☐ ***SKIP*** to F_KNOW_DRUGS_OR_ALCOHOL

VERSION 2 **19v2. Is it possible for students to get any of the following while at school…**	Yes No
F2_ALCOHOL **a. Alcoholic beverages?**	1 ☐ 2 ☐
F2_MARIJUANA **c. Marijuana, also known as pot or weed?**	1 ☐ 2 ☐
F2_OPIOIDS **d. Heroin or prescription painkillers illegally obtained without a prescription, such as Codeine, Percocet, or fentanyl? These are also known as opioids.**	1 ☐ 2 ☐
F2_PRESCRIPTION_DRUGS **d. Other prescription drugs illegally obtained without a prescription, such as Xanax, Ritalin, or Adderall?**	1 ☐ 2 ☐
F2_OTHER_ILLEGAL **e. Other illegal drugs, such as cocaine, uppers, or crystal meth?** *Do not include tobacco or tobacco products.*	1 ☐ 2 ☐ ***ASK*** F_KNOW_DRUGS_OR_ALCOHOL
END SPLIT – Both Version 1 and Version 2 respondents go to **F_KNOW_DRUGS_OR_ALCOHOL**.	
F_KNOW_DRUGS_OR_ALCOHOL **20. During this school year, did you see another student who was under the influence of illegal drugs or alcohol while they were at school?**	1 ☐ Yes 2 ☐ No
FIGHTING, BULLYING AND HATE BEHAVIORS	
G_FIGHT_AT_SCHOOL **21a. During this school year, have you been in one or more physical fights at school?**	1 ☐ Yes 2 ☐ No - ***SKIP*** to G_BULLY_MADE_FUN or G_MADE_FUN
G_FIGHT_HOW_OFTEN **21b. During this school year, how many times have you been in a physical fight at school?**	☐☐☐ (Number of times)
BEGIN SPLIT – The questions about bullying have two alternate forms, designed for split-sample administration. Version 1 (**G_BULLY_MADE_FUN—G_BULLYING_APPEARANCE**) reflects the wording used in the 2017 SCS, and Version 2 (**G_MADE_FUN—G_BULLYING**) reflects updated wording for the 2019 SCS.	

VERSION 1 **22v1. Now I have some questions about what students do at school that make you feel bad or are hurtful to you. We often refer to this as being bullied. You may include events you told me about already. During this school year, has any student bullied you?** **That is, has another student...** **G_BULLY_MADE_FUN** **a. Made fun of you, called you names, or insulted you, in a hurtful way?** **G_BULLY_RUMOR** **b. Spread rumors about you or tried to make others dislike you?** **G_BULLY_THREAT** **c. Threatened you with harm?** **G_BULLY_CONTACT** **d. Pushed you, shoved you, tripped you, or spit on you?** **G_BULLY_COERCED** **e. Tried to make you do things you did not want to do, for example, give them money or other things?** **G_BULLY_EXCLUDED** **f. Excluded you from activities on purpose?** **G_BULLY_DESTROYED_PROP** **g. Destroyed your property on purpose?**	Yes / No 1 ☐ / 2 ☐ 1 ☐ / 2 ☐ 1 ☐ / 2 ☐ 1 ☐ / 2 ☐ 1 ☐ / 2 ☐ 1 ☐ / 2 ☐ 1 ☐ / 2 ☐ If all categories a-g are marked "No" ***SKIP*** to G_HATE
G_BULLY_DAY_PLUS **23av1. During this school year, how many days were you bullied?** *Read answer categories*	**1 ☐ One day – *ASK* G_BULLY_TIMES** **2 ☐ Two days** **3 ☐ Three to ten days** **4 ☐ More than ten days** ***SKIP*** to G_BULLY_HAPPEN_AGAIN
G_BULLY_TIMES **23bv1. In that one day, how many times would you say other students did those things that made you feel bad or were hurtful to you?** *Read answer categories 1-4*	**1 ☐ Once** **2 ☐ Two to ten times** **3 ☐ Eleven to fifty times** **4 ☐ More than fifty times** 5 ☐ Too many times to count 6 ☐ Don't know
G_BULLY_HAPPEN_AGAIN **24v1. Did you think the bullying would happen again?**	1 ☐ Yes 2 ☐ No

G_BULLY_MULTI_PERS **25v1. Thinking about the [time/times] you were bullied this school year, did more than one person do [this/these things] to you?**	1 ☐ Yes 2 ☐ No - ***SKIP*** to G_BULLY_STRONGER
G_BULLY_HOW_ACT **26v1. Did these people act alone, together as a team, or both?**	1 ☐ Alone 2 ☐ Together 3 ☐ Both 4 ☐ Don't know
27v1. Now I have some additional questions about the time [another student/ other students] {behavior$_1$}, {behavior$_2$}, and {behavior$_x$...}. Thinking about the [person/ people] who did [this/these things] to you this school year,	
G_BULLY_STRONGER **a. [Was this person/ Were any of these people/ Was anyone in the group] physically bigger or stronger than you?**	Yes 1 ☐ No 2 ☐
G_BULLY_POPULAR **b. [Was this person/ Were any of these people/ Was anyone in the group] more popular than you?**	1 ☐ 2 ☐
G_BULLY_MONEY **c. [Did this person/ Did any of these people/ Did anyone in the group] have more money than you?**	1 ☐ 2 ☐
G_BULLY_INFLUENCE **d. [Did this person/ Did any of these people/ Did anyone in the group] have the ability to influence what other students think of you?**	1 ☐ 2 ☐
G_BULLY_OTHER_POWER **e. [Did this person/ Did any of these people/ Did anyone in the group] have more power than you in another way?**	1 ☐ 2 ☐
G_BULLY_WHERE1 *through* G_BULLY_WHERE8 **28v1. Still thinking about all of the times that you were bullied, where did the bullying occur? Did it occur ...** *Read answer categories, Mark all that apply* **G_BULLY_WHERE_SPECIFY** **Where is the other place where bullying occurred?**	1 ☐ **In a classroom at school?** 2 ☐ **In a hallway or stairwell at school?** 3 ☐ **In a bathroom or locker room at school?** 4 ☐ **In a cafeteria or lunchroom at school?** 5 ☐ **Somewhere else inside the school building? –** *Specify* 6 ☐ **Outside on school grounds?** 7 ☐ **On the way to or from school such as on a school bus or at a bus stop?** 8 ☐ **Online or by text?** *Specify* _____

G_BULLY_ADULT_TOLD **29v1. Did you tell a teacher or some other adult at school about being bullied?**	1 ☐ Yes 2 ☐ No

30v1. This school year, how much has bullying had a NEGATIVE effect on: *Read answer categories*	**Not at all**	**Not very much**	**Somewhat**	**A lot**
G_SCHOOL_WORK **a. YOUR school work?**	1 ☐	2 ☐	3 ☐	4 ☐
G_RELATION_FRIEND_FAMILY **b. YOUR relationships with friends or family?**	1 ☐	2 ☐	3 ☐	4 ☐
G_ABOUT_YOURSELF **c. How you feel about YOURSELF?**	1 ☐	2 ☐	3 ☐	4 ☐
G_PHYSICAL_HEALTH **d. YOUR physical health for example, caused injuries, gave you headaches or stomach aches?**	1 ☐	2 ☐	3 ☐	4 ☐

31v1. When you were bullied in school this year, did you ever think it was related to...	Yes	No	
G_BULLY_RACE **a. YOUR race?**	1 ☐	2 ☐	
G_BULLY_RELIGION **b. YOUR religion?**	1 ☐	2 ☐	
G_BULLY_ETHNIC_ORIGIN **c. Your ethnic background or national origin - for example, people of Hispanic origin?**	1 ☐	2 ☐	
G_BULLYING_DISABILITY **d. Any disability you may have – such as physical, mental, or developmental disabilities?**	1 ☐	2 ☐	
G_BULLYING_GENDER **e. YOUR gender?**	1 ☐	2 ☐	
G_BULLYING_ORIENTATION **f. YOUR sexual orientation - by this we mean gay, lesbian, bisexual, or straight?**	1 ☐	2 ☐	
G_BULLYING_APPEARANCE **g. YOUR physical appearance?**	1 ☐	2 ☐	***SKIP*** to G_HATE

VERSION 2

22v2. **Now I have some questions about what students do at school that make you feel bad or are hurtful to you. These could occur in person or using technologies, such as a phone, the Internet, or social media. During this school year, has any student from your school…**

	Yes	No
G_MADE_FUN **a. Made fun of you, called you names, or insulted you, in a hurtful way?**	1 ☐	2 ☐
G_RUMOR **b. Spread rumors about you or tried to make others dislike you?**	1 ☐	2 ☐
G_SHARED **c. Purposely shared your private information, photos, or videos in a hurtful way?**	1 ☐	2 ☐
G_THREAT **d. Threatened you with harm?**	1 ☐	2 ☐
Has any student from your school…		
G_CONTACT **e. Pushed you, shoved you, tripped you, or spit on you?**	1 ☐	2 ☐
G_COERCED **f. Tried to make you do things you did not want to do, for example, give them money or other things?**	1 ☐	2 ☐
G_EXCLUDED **g. Excluded you from activities, social media, or other communications to hurt you?**	1 ☐	2 ☐
G_DESTROYED_PROP **h. Destroyed your property on purpose?**	1 ☐	2 ☐ If all categories a-h are marked "No" ***SKIP*** to G_HATE

SCS_INTRO 4

[If R said yes to only one item from G_MADE_FUN — G_DESTROYED_PROP]: **When I asked you that last series of questions, you said yes to 1 of those items. Please think about that one thing you just told me about while answering the next few questions.**

[If R said yes to two or more items from G_MADE_FUN — G_DESTROYED_PROP]: **When I asked you that last series of questions, you said yes to __ of those items. Please think about those things you just told me about while answering the next few questions.**

G_MULTI_PERS

23v2. **Thinking about [that thing/those things] you said you experienced this school year, did more than one student do [this/these things] to you?**

1 ☐ Yes
2 ☐ No - ***SKIP*** to G_DAY_PLUS

G_HOW_ACT **24v2. Did these students act alone, together as a team, or both?**	1 ☐ Alone 2 ☐ Together 3 ☐ Both 4 ☐ Don't know
G_MULTI_TIMES **25v2. You said that more than one student did [that thing/those things] to you. Has any student done [that thing/any of those things] to you more than once during this school year?**	1 ☐ Yes 2 ☐ No 3 ☐ Don't know
G_DAY_PLUS **26av2. During this school year, how many days did you experience [that thing/any of those things]?** *Read answer categories*	**1 ☐ One day – *ASK* G_TIMES** **2 ☐ Two to five days** ┐ ***SKIP*** to **3 ☐ Six to ten days** ┘ G_HAPPEN_AGAIN **4 ☐ More than ten days**
G_TIMES **26bv2. In that one day, how many times would you say [another student/other students] did [that thing/any of those things] to you?** *Read answer categories 1-2*	**1 ☐ One time** **2 ☐ Two or more times** 3 ☐ Too many times to count 4 ☐ Don't know
G_HAPPEN_AGAIN **27v2. Did you think [that student/those students] would do hurtful things to you again?**	1 ☐ Yes 2 ☐ No
CHECK ITEM B: 1. Did more than one student do those things? Yes (R answered "Yes" to G_MULTI_PERS) ☐ Skip to CHECK ITEM B QUESTION 2 BELOW No (R answered "No" to G_MULTI_PERS) ☐ Go to G_STRONGER 2. Did any of those students do any of those things more than once? Yes (R answered "Yes" to G_MULTI_TIMES) ☐ Go to G_STRONGER No (R answered "No" to G_MULTI_TIMES) ☐ Go to G_STRONGER	

28v2. [If R answered "Yes" to G_MULTI_TIMES] **You reported that at least one student did [that thing/those things] to you more than once this school year. For the next questions, ONLY think about those students who did something more than once during this school year.** [If R answered "No" to G_MULTI_PERS or "No" to G_MULTI_TIMES] **Still thinking about [that thing/those things] [another student/other students] did to you during this school year…**	
G_STRONGER **a. [Was that student/ Were any of those students] physically bigger or stronger than you?**	Yes 1 ☐ No 2 ☐
G_POPULAR **b. [Was that student/ Were any of those students] more popular than you?**	1 ☐ 2 ☐
G_MONEY **c. [Did that student/ Did any of those students] have more money than you?**	1 ☐ 2 ☐
G_INFLUENCE **d. [Did that student/ Did any of those students] have the ability to influence what other students think of you?**	1 ☐ 2 ☐
G_OTHER_POWER **e. [Did that student/ Did any of those students] have more power than you in another way?**	1 ☐ ↘ 2 ☐
G_OTHER_POWER_SPECIFY **In what other way [did that student/ did any of those students] have more power than you?**	*Specify* _____

CHECK ITEM C:
1. Did more than one student do those things?
   Yes (R answered "Yes" to G_MULTI_PERS SKIP to Items G_WHERE)
   No (R answered "No," "Don't know," or "Refuse" to G_MULTI_PERS ask Items G_RELAT_SIBLING — G_RELAT_OTH_STUDENT)

29v2. **What was your relationship to the student when they did [that thing/those things] to you? Were they…**	
G_RELAT_SIBLING **a. Your brother or sister?**	Yes 1 ☐ No 2 ☐
G_RELAT_DATING **b. Your boyfriend or girlfriend at the time?**	1 ☐ 2 ☐
G_RELAT_EX_DATING **c. Your ex-boyfriend or ex-girlfriend at the time?**	1 ☐ 2 ☐
G_RELAT_OTH_STUDENT **d. Another student from school?**	1 ☐ 2 ☐

G_WHERE1 *through* G_WHERE9 **30v2. Still thinking about [the time/all of the times] that [another student/other students] did [something/those things] to you, where did [it/they] occur? Did [it/they] occur ...** *Read answer categories. Mark all that apply* **G_WHERE_SPECIFY** **Where is the other place [it/they] occurred?**	1 ☐ **In a classroom at school?** 2 ☐ **In a hallway or stairwell at school?** 3 ☐ **In a bathroom or locker room at school?** 4 ☐ **In a gymnasium or weight room at school?** 5 ☐ **In a cafeteria or lunchroom at school?** 6 ☐ **Outside on school grounds?** 7 ☐ **On the way to or from school such as on a school bus or at a bus stop?** 8 ☐ **Online or by text?** 9 ☐ **Somewhere else at school? –** *Specify* *Specify* _____
G_ADULT_TOLD **31v2. Did you tell a teacher or some other adult at school about [this student/these students] doing [that thing/those things] to you?**	1 ☐ Yes 2 ☐ No
32v2. This school year, how much [has that thing/have those things] had a NEGATIVE effect on: *Read answer categories*	**Not at all** / **Not very much** / **Somewhat** / **A lot**
G2_SCHOOL_WORK **a. YOUR school work?**	1 ☐ 2 ☐ 3 ☐ 4 ☐
G2_RELATION_FRIEND_FAMILY **b. YOUR relationships with friends or family?**	1 ☐ 2 ☐ 3 ☐ 4 ☐
G2_ABOUT_YOURSELF **c. How you feel about YOURSELF?**	1 ☐ 2 ☐ 3 ☐ 4
G2_PHYSICAL_HEALTH **d. YOUR physical health for example, caused injuries, gave you headaches or stomach aches?**	1 ☐ 2 ☐ 3 ☐ 4 ☐
33v2. When [another student/other students] did [that thing/those things] to you, did you ever think it was related to...	**Yes** / **No**
G_RACE **a. YOUR race?**	1 ☐ 2 ☐
G_RELIGION **b. YOUR religion?**	1 ☐ 2 ☐
G_ETHNIC_ORIGIN **c. Your ethnic background or national origin - for example, people of Hispanic origin?**	1 ☐ 2 ☐
G_DISABILITY **d. Any disability you may have – such as physical, mental, or developmental disabilities?**	1 ☐ 2 ☐
G_GENDER **e. YOUR gender?**	1 ☐ 2 ☐
G_ORIENTATION **f. YOUR sexual orientation - by this we mean gay, lesbian, bisexual, or straight?**	1 ☐ 2 ☐
G_APPEARANCE **g. YOUR physical appearance?**	1 ☐ 2 ☐

G_BULLYING **34v2** **Do you consider [that thing/those things] that [another student/other students] did to you to be bullying?**	1 ☐ Yes 2 ☐ No 3 ☐ Don't know **ASK** G_HATE
END SPLIT – Both Version 1 and Version 2 respondents go to **G_HATE**.	
G_HATE **35.** **During this school year, has anyone called you an insulting or bad name at school having to do with your race, religion, ethnic background or national origin, disability, gender, or sexual orientation? We call these hate-related words.**	1 ☐ Yes – ***ASK*** G_HATE_RACE 2 ☐ No - ***SKIP*** to G_HATE_WORDS

36. Were any of the hate-related words related to ...	Yes	No	Don't know
G_HATE_RACE **a. Your race?**	1 ☐	2 ☐	3 ☐
G_HATE_RELIGION **b. Your religion?**	1 ☐	2 ☐	3 ☐
G_HATE_ETHNICITY **c. Your ethnic background or national origin – for example, people of Hispanic origin?**	1 ☐	2 ☐	3 ☐
G_HATE_DISABILITY **d. Any disability you may have – such as physical, mental, or developmental disabilities?**	1 ☐	2 ☐	3 ☐
G_HATE_GENDER **e. Your gender?**	1 ☐	2 ☐	3 ☐
G_HATE_SEXUAL_ORIENTATION **f. Your sexual orientation – by this we mean gay, lesbian, bisexual or straight?**	1 ☐	2 ☐	3 ☐

G_HATE_WORDS **37.** **During this school year, have you seen any hate-related words or symbols written in school classrooms, school bathrooms, school hallways, or on the outside of your school building?**	1 ☐ Yes 2 ☐ No

AVOIDANCE		
38. During this school year, did you ever STAY AWAY from any of the following places because you thought someone might attack or harm you there? For example, did you ever stay away from…	Yes	No
H_AVOID_SHORTCUT a. The shortest route to school, because you thought someone might attack or harm you?	1 ☐	2 ☐
H_AVOID_ENTRANCE b. The entrance into the school?	1 ☐	2 ☐
H_AVOID_HALLWAYS c. Any hallways or stairs in school?	1 ☐	2 ☐
H_AVOID_CAFETERIA d. Parts of the school cafeteria or lunchroom?	1 ☐	2 ☐
H_AVOID_RESTROOMS e. Any school restrooms?	1 ☐	2 ☐
H_AVOID_OTHER_PLACES f. Other places inside the school building?	1 ☐	2 ☐
H_AVOID_PARKING_LOT g. School parking lot?	1 ☐	2 ☐
H_AVOID_OTHER_SCHOOL h. Other places on school grounds?	1 ☐	2 ☐
H_SCHOOL_BUS_STOP i. School bus or bus stop?	1 ☐	2 ☐
	1 ☐	2 ☐
H_AVOID_ACTIVITIES **39a.** Did you AVOID any activities at your school because you thought someone might attack or harm you?	1 ☐ Yes 2 ☐ No	
H_AVOID_CLASSES **39b.** Did you AVOID any classes because you thought someone might attack or harm you?	1 ☐ Yes 2 ☐ No	
H_STAY_HOME **39c.** Did you stay home from school because you thought someone might attack or harm you in the school building, on school property, on a school bus, or going to or from school?	1 ☐ Yes 2 ☐ No	
FEAR		
I_INTRO_FEAR: **Sometimes, even if you can't avoid a place, you may still be afraid of what might happen there.**		
I_AFRAID **40a.** How often are you afraid that someone will attack or harm you in the school building or on school property? *Read answer categories*	1 ☐ **Never** 2 ☐ **Almost never** 3 ☐ **Sometimes** 4 ☐ **Most of the time**	
I_AFRAID_ON_BUS **40b.** How often are you afraid that someone will attack or harm you on a school bus or on the way to and from school? *Read answer categories*	1 ☐ **Never** 2 ☐ **Almost never** 3 ☐ **Sometimes** 4 ☐ **Most of the time**	

I_AFRAID_NONSCHOOL **40c. Besides the times you are in the school building, on school property, on a school bus, or going to or from school, how often are you afraid that someone will attack or harm you?** *Read answer categories*	1 ☐ **Never** 2 ☐ **Almost never** 3 ☐ **Sometimes** 4 ☐ **Most of the time**
WEAPONS	
J_INTRO_WEAPON **In the next series of questions we are going to ask you about weapons at your school. Your answers will not be shared with anyone at your school or home.**	
41. Some people bring guns, knives, or objects that can be used as weapons to school for protection. During this school year, did you ever bring the following to school or onto school grounds?	Yes / No
J_WEAPONS_GUN **a. A gun?**	1 ☐ 2 ☐
J_WEAPONS_KNIFE **b. A knife brought as a weapon?**	1 ☐ 2 ☐
J_WEAPONS_OTHER **c. Some other weapon?**	1 ☐ 2 ☐
J_GUN_OTHERS **42a. Do you know of any [other] students who have brought a gun to your school during this school year?**	1 ☐ Yes 2 ☐ No - ***SKIP*** to J_GET_GUN
J_SEE_GUN **42b. Have you actually seen another student with a gun at school during this school year?**	1 ☐ Yes 2 ☐ No 3 ☐ Don't know
J_GET_GUN **43. During this school year, could you have gotten a loaded gun without adult permission, either at school or away from school?**	1 ☐ Yes 2 ☐ No
GANGS	
BEGIN SPLIT – The introduction to the questions about gangs has two alternate forms, designed for split-sample administration. Version 1 (**K_INTRO_GANG**) reflects the wording used in the 2017 SCS, and Version 2 (**K2_INTRO_GANG**) reflects updated wording for the 2019 SCS.	
VERSION 1 **K_INTRO_GANG** **Now, we'd like to know about gangs at your school. You may know these as street gangs, fighting gangs, crews, or something else. Gangs may use common names, signs, symbols, or colors. For this survey, we are interested in all gangs, whether or not they are involved in violent or illegal activity. Your answers will not be shared with anyone at your school or home.** ***SKIP*** to K_GANGS	

VERSION 2

K2_INTRO_GANG

Now, we'd like to know about gangs at your school. You may know these as street gangs, fighting gangs, or something else. Gangs may use common names, signs, symbols, or colors. Your answers will not be shared with anyone at your school or home.

ASK K_GANGS

END SPLIT – Both Version 1 and Version 2 respondents go to **K_GANGS**.

K_GANGS **44a. Are there any gangs at your school?**	1 ☐ Yes 2 ☐ No - ***SKIP*** to L_GRADES 3 ☐ Don't know - ***SKIP*** to L_GRADES
K_GANG_FIGHTS **44b. During this school year, how often have gangs been involved in fights, attacks, or other violence at your school?** *Read answer categories 1 through 5*	1 ☐ **Never** 2 ☐ **Once or twice this school year** 3 ☐ **Once or twice a month** 4 ☐ **Once or twice a week** 5 ☐ **Almost every day**
K_GANG_DRUGS **44c. Have gangs been involved in the sale of drugs at your school during this school year?**	1 ☐ Yes 2 ☐ No 3 ☐ Don't know
STUDENT CHARACTERISTICS	
L_GRADES **45. During this school year, across all subjects have you gotten mostly -** *Read answer categories 1—5*	1 ☐ **A's** 2 ☐ **B's** 3 ☐ **C's** 4 ☐ **D's** 5 ☐ **F's** 6 ☐ School does not give grades/no alphabetic grade equivalent
L_SKIP_CLASSES **46a. During the last 4 weeks of school, did you skip any classes? Again, we would like to remind you that none of your responses will be shared with anyone at your school or home.**	1 ☐ Yes 2 ☐ No - ***SKIP*** to L_SCHOOL_AFTER_SCHOOL 3 ☐ Don't know - ***SKIP*** to L_SCHOOL_AFTER_SCHOOL
L_SKIP_CLASS_DAYS **46b. During the last 4 weeks of school, on how many days did you skip at least one class?**	☐☐ (Number of days)
47. Thinking about the future, do you think you will ... **L_SCHOOL_AFTER_SCHOOL** **a. Attend school after high school, such as a college or technical school?** *This could include:* *-Automotive Mechanic Training* *-Beauty School* *-Computer Technical Programs (less than a two year associate degree)* *-Certificate Programs*	Yes / No / Don't know 1 ☐ / 2 ☐ -- ***END*** / 3 ☐
L_GRADUATE_4YR **b. Graduate from a 4-year college?**	1 ☐ / 2 ☐ / 3 ☐

INTVIEWTYPE **48.** *Were the supplement questions asked in private, or was an adult member of the household or family present during at least part of the questions?* *If not sure or if a telephone interview ask—* **Was an adult member of the household or family present during at least part of these questions?**	1 ☐ Personal interview - No adult present 2 ☐ Personal interview - Adult present 3 ☐ Telephone interview – No adult present 4 ☐ Telephone interview – Adult present 5 ☐ Telephone interview – Don't know

Appendix B: IRB Approval

UNLV

ORI-HS, Non-Committee Review

Notice of Excluded Activity

DATE: November 13, 2023

TO: Chia-Liang Dai
FROM: Office of Research Integrity - Human Subjects

PROTOCOL TITLE: UNLV-2023-617 Female Adolescent Cyberbullying: Exploring Students' Intentions to Pursue a Postsecondary Education
SUBMISSION TYPE: Initial

ACTION: No Human Subjects Research
REVIEW DATE: November 13, 2023
REVIEW TYPE: ADMINISTRATIVE REVIEW

Thank you for your submission of materials for this proposal. This memorandum is notification that the proposal referenced above has been reviewed as indicated in Federal regulatory statutes 45 CFR 46.

The Office of Research Integrity - Human Subjects (ORI-HS) has determined this request does not meet the definition of 'research with human subjects' according to federal regulations, and there is no further requirement for IRB review.

Note: **Since this project does not meet the definition of 'research with human subjects', please replace the terms "research" and "study" to "project" in the consent form, recruitment materials, or any other project-related materials. Also remove the following language from the consent form/information sheet: "*For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted, contact the UNLV Office of Research Integrity – Human Subjects at 702-895-0020 or via email at IRB@unlv.edu.*"**

Any changes to the excluded activity in this proposal could require IRB review. Please contact ORI-HS to discuss any anticipated changes.

If you have questions, please contact the Office of Research Integrity - Human Subjects at IRB@unlv.edu or call 702-895-2794. Please include your project title and project ID in all correspondence.

Office of Research Integrity - Human Subjects
4505 Maryland Parkway. Box 451047. Las Vegas, Nevada 89154-1047
(702) 895-2794. IRB@unlv.edu

References

Aboujaoude, E., Savage, M. W., Starcevic, V., & Salame, W. O. (2015). Cyberbullying: Review of an old problem gone viral. *Journal of Adolescent Health, 57*(1), 10–18. https://doi.org/10.1016/j.jadohealth.2015.04.011

Aceste, A. M. (2019). *A critical examination of 21st century cyberbullying in New Jersey* (Publication No. 13901365) [Doctoral dissertation, Fielding Graduate University]. ProQuest Dissertations and Theses Global.

Advance CTE. (n.d.-a). *Career clusters*. https://careertech.org/career-clusters/

Advance CTE. (n.d.-b). *About*. https://careertech.org/about/

Aivazpour, Z. (2020). *Toward a theoretical framework for cyberbullying: (The impact of power imbalance, neutralization and communication medium)* (Publication No. 28089589) [Doctoral dissertation, The University of Texas at San Antonio]. ProQuest Dissertations and Theses Global.

Bauman, S., & Yoon, J. (2014). This issue: Theories of bullying and cyberbullying. *Theory Into Practice, 53*(4), 253-256. https://doi.org/10.1080/00405841.2014.947215

Betts, L. R., Spenser, K. A., & Gardner, S. E. (2017). Adolescents' involvement in cyber bullying and perceptions of school: The importance of perceived peer acceptance for female adolescents. *Sex Roles, 77*(7), 471-481. https://doi.org/10.1007/s11199-017-0742-2

Blain, C. V. (2017, October 7). *11 common types of cyberbullying*. Avvo. https://www.avvo.com/legal-guides/ugc/10-types-of-cyberbullying

Bonanno, R. A., & Hymel, S. (2013). Cyber bullying and internalizing difficulties: Above and beyond the impact of traditional forms of bullying. *Journal of Youth and Adolescence, 42*(5), 685-697. https://doi.org/10.1007/s10964-013-9937-1

Brochado, S., Soares, S., & Fraga, S. (2017). A scoping review on studies of cyberbullying prevalence among adolescents. *Trauma, Violence, & Abuse, 18*(5), 523–531. https://doi.org/10.1177/1524838016641668

Bryce, J., & Fraser, J. (2013). "It's common sense that it's wrong": Young people's perceptions and experiences of cyberbullying. *Cyberpsychology, Behavior & Social Networking, 16*(11), 783-787. https://doi.org/10.1089/cyber.2012.0275

Bureau of Justice Statistics (2021). *National crime victimization survey: School crime supplement, [United States], 2019* (ICPSR 37816; Version V1) [Data set and code book]. ICPSR. https://doi.org/10.3886/ICPSR37816.v1

Burns, E., Zolnik, E., Yanez, C., & Mann, R. (2022). *Testing new items about bullying and other school experiences in the 2019 school crime supplement to the national crime victimization survey* (NCES Publication No. 2022033). U.S. Department of Education, National Center for Education Statistics. https://nces.ed.gov/pubs2022/2022033.pdf

Cadigan, R. J. (2002). *Scrubs: An ethnographic study of peer culture and harassment among sixth graders in an urban middle school* (Publication No. 3058487) [Doctoral dissertation, University of California, Los Angeles]. ProQuest Dissertations and Theses Global.

Camelford, K. G., & Ebrahim, C. (2016). The cyberbullying virus: A psychoeducational intervention to define and discuss cyberbullying among high school females. *Journal of*

Creativity in Mental Health, *11*(3-4), 458–468. https://doi.org/10.1080/15401383.2016.1183545

Carney, A. G., & Merrell, K. W. (2001). Bullying in schools: Perspectives on understanding and preventing an international problem. *School Psychology International*, *22*(3), 364–382. https://doi.org/10.1177/0143034301223011

Centers for Disease Control and Prevention. (n.d.). *1991-2021 High school youth risk behavior survey data*. https://nccd.cdc.gov/youthonline

Cohen, L. E., & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. *American Sociological Review*, *44*(4), 588-608. https://doi.org/10.2307/2094589

Connell, N. M., Schell-Busey, N. M., Pearce, A. N., & Negro, P. (2014). Badgrlz? Exploring sex differences in cyberbullying behaviors. *Youth Violence and Juvenile Justice*, *12*(3), 209–228. https://doi.org/10.1177/1541204013503889

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and Conducting Mixed Methods Research* (3rd ed.). Sage.

Dictionary.com. (n.d.). Postsecondary. In *Dictionary.com dictionary*. Retrieved March 6, 2023, from https://www.dictionary.com/browse/postsecondary

Evans, C. B. R., & Smokowski, P. R. (2016). Theoretical explanations for bullying in school: How ecological processes propagate perpetration and victimization. *Child & Adolescent Social Work Journal*, *33*(4), 365–375. https://doi.org/10.1007/s10560-015-0432-2

Giordano, A. L., Prosek, E. A., & Watson, J. C. (2021). Understanding adolescent cyberbullies: Exploring social media addiction and psychological factors. *Journal of Child and Adolescent Counseling*, *7*(1), 42-55. https://doi.org/10.1080/23727810.2020.1835420

Greene, M. B. (2000). Bullying and harassment in schools. In R. S. Moser, & C. E. Franz (Eds.), *Shocking violence: Youth perpetrators and victims—a multidisciplinary perspective* (pp. 72–101). Charles C. Thomas.

Griffin, R. S., & Gross, A. M. (2004). Childhood bullying: Current empirical findings and future directions for research. *Agression and Violent Behavior*, *9*(4), 379-400. https://doi.org/10.1016/S1359-1789(03)00033-8

Hamm, M. P., Newton, A. S., Chisholm, A., Shulhan, J., Milne, A., Sundar, P., Ennis, H., Scott, S. D., & Hartling, L. (2015). Prevalence and effect of cyberbullying on children and young people: A scoping review of social media studies. *JAMA Pediatrics*, *169*(8), 770-777. https://doi.org/10.1001/jamapediatrics.2015.0944

Hawker, D. S. J., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: A meta-analytic review of cross-sectional studies. *Journal of Child Psychology and Psychiatry*, *41*(4), 441–455. https://doi.org/10.1111/1469-7610.00629

Hayes, A. F., & Coutts, J. J. (2020). Use omega rather than Cronbach's alpha for estimating reliability. But… *Communication Methods and Measures*, *14*(1), 1–24. https://doi.org/10.1080/19312458.2020.1718629

Hinkle, D. E., Wiersma, W., & Jurs, S. G. (2003). *Applied statistics for the behavioral sciences* (5th ed.). Houghton Mifflin.

Horner, S., Asher, Y., & Fireman, G. D. (2015). The impact and response to electronic bullying and traditional bullying among adolescents. *Computers in Human Behavior*, *49*, 288-295. https://doi.org/10.1016/j.chb.2015.03.007

Hosmer, D. W., Lemeshow, S., & Sturdivant, R. X. (2013). *Applied logistic regression* (3rd ed.). Wiley.

Hulley, S. B., Cummings, S. R., Browner, W. S., Grady, D. G., & Newman, T. B. (2013). *Designing clinical research* (4th ed.). Lippincott Williams & Wilkins.

IBM. (2024, February 8). *Multinomial logistic regression*. SPSS Statistics. https://www.ibm.com/docs/en/spss-statistics/29.0.0?topic=regression-multinomial-logistic

Ioannou, A., Blackburn, J., Stringhini, G., De Cristofaro, E., Kourtellis, N., & Sirivianos, M. (2018). From risk factors to detection and intervention: A practical proposal for future work on cyberbullying. *Behaviour & Information Technology, 37*(3), 258–266. https://doi.org/10.1080/0144929X.2018.1432688

Irwin, V., Wang, K., Cui, J., & Thompson, A. (2022). *Report on indicators of school crime and safety: 2021* (NCES Publication No. 2022092). U.S. Department of Education, National Center for Education Statistics. https://nces.ed.gov/pubs2022/2022092.pdf

Jackson, E. F., Bussey, K., & Trompeter, N. (2020). Over and above gender differences in cyberbullying: Relationship of gender typicality to cyber victimization and perpetration in adolescents. *Journal of School Violence, 19*(4), 623–635. https://doi.org/10.1080/15388220.2020.1808790

Jan, A., & Husain, S. (2015). *Bullying in elementary schools: Its causes and effects on students* (EJ1079521). ERIC. https://files.eric.ed.gov/fulltext/EJ1079521.pdf

Jiang, J., Zhao, F., Xie, X., Wang, X., Nie, J., Lei, L., & Wang, P. (2022). Difficulties in emotion regulation and cyberbullying among Chinese adolescents: A mediation model of

loneliness and depression. *Journal of Interpersonal Violence, 37*(1-2), NP1105–NP1124. https://doi.org/10.1177/0886260520917517

Kowalski, R. M., Giumetti, G. W., Schroeder, A. N., & Lattanner, M. R. (2014). Bullying in the digital age: A critical review and meta-analysis of cyberbullying research among youth. *Pyschological Bulletin, 140*(4), 1073-1137. https://doi.org/10.1037/a0035618

Kowalski, R. M., & Limber, S. P. (2007). Electronic bullying among middle school students. *Journal of Adolescent Health, 41*(6), S22-S30. https://doi.org/10.1016/j.jadohealth.2007.08.017

Laerd Statistics. (2018). *Multinomial logistic regression using SPSS statistics*. https://statistics.laerd.com/spss-tutorials/multinomial-logistic-regression-using-spss-statistics.php

LeBlanc, D. M. (2010). Curbing bullying among teenage girls. *Techniques - Association for Career and Technical Education, 85*(7), 8-9. https://www.acteonline.org/publications/techniques/techniques-archives/?rnd=1712425641

Lenhart, A. (2015, April 9). *Teens, social media & technology overview 2015*. Pew Research Center. https://www.pewresearch.org/internet/2015/04/09/teens-social-media-technology-2015/

Lowry, P. B., Zhang, J., Wang, C., & Siponen, M. (2016). Why do adults engage in cyberbullying on social media? An integration of online disinhibition and deindividuation effects with the social structure and social learning model. *Information Systems Research, 27*(4), 962-986. https://doi.org/10.1287/isre.2016.0671

McCabe, E. M., & Strauss, S. M. (2022). Risk factors associated with bullying at school and electronic bullying in U.S. adolescent females with asthma. *The Journal of School Nursing*, *38*(4), 380–386. https://doi.org/10.1177/1059840520951635

Merriam-Webster. (n.d.). Vocational school. In *Merriam-Webster.com dictionary*. Retrieved February 21, 2023, from https://www.merriam-webster.com/dictionary/vocational%20school

National Center for Education Statistics. (2022a). *Bullying at school and electronic bullying*. U.S. Department of Education, Institute of Education Sciences. https://nces.ed.gov/programs/coe/pdf/2021/a10_508c.pdf

National Center for Education Statistics. (2022b). *Discipline problems reported by public schools*. U.S. Department of Education, Institute of Education Sciences. https://nces.ed.gov/programs/coe/pdf/2022/a07_508.pdf

Navarro, J. N., & Jasinski, J. L. (2012). Going cyber: Using routine activities theory to predict cyberbullying experiences. *Sociological Spectrum, 32*(1), 81-94. https://doi.org/10.1080/02732173.2012.628560

Navarro, J. N., & Jasinski, J. L. (2013). Why girls? Using routine activities theory to predict cyberbullying experiences between girls and boys. *Women & Criminal Justice, 23*(4), 286-303. https://doi.org/10.1080/08974454.2013.784225

Office of Management and Budget. (2021a, January 20). *2019 SCS OMB supporting statement a_final* (OMB Report No. 1121-0184). The White House, Executive Office of the President. https://omb.report/icr/201810-1121-001/doc/86932401

Office of Management and Budget. (2021b, September 13). *2022 SCS OMB supporting statement a_final* (OMB Report No. 1121-0184). The White House, Executive Office of the President. https://omb.report/icr/202109-1121-001/doc/114712200

Olweus, D. (1993). *Bullying at school: What we know and what we can do*. Wiley-Blackwell.

Olweus, D. (1994). Bullying at school: Basic facts and effects of a school based intervention program. *Journal of Child Psychology and Psychiatry*, *35*(7), 1171-1190. https://doi.org/10.1111/j.1469-7610.1994.tb01229.x

Olweus, D. (2012). Cyberbullying: An overrated phenomenon? *European Journal of Developmental Psychology*, *9*(5), 520-538. https://doi.org/10.1080/17405629.2012.682358

Olweus, D., & Limber, S. P. (2018). Some problems with cyberbullying research. *Current Opinion in Psychology*, *19*, 139–143. https://doi.org/10.1016/j.copsyc.2017.04.012

Ouyang, M., Gui, D., Cai, X., Yin, Y., Mao, X., Huang, S., Zeng, P., & Wang, P. (2021). Stressful life events and subjective well-being in vocational school female adolescents: The mediating role of depression and the moderating role of perceived social support. *Frontiers in Psychology*, *11*, 603511. https://doi.org/10.3389/fpsyg.2020.603511

Patchin, J. W., & Hinduja, S. (2006). Bullies move beyond the schoolyard; A preliminary look at cyberbullying. *Youth Violence and Juvenile Justice*, *4*(2), 148–169. https://doi.org/10.1177/1541204006286288

Pelfrey, W. V., Jr., & Weber, N. (2014). Talking smack and the telephone game: Conceptualizing cyberbullying with middle and high school youth. *Journal of Youth Studies*, *17*(3), 397–414. https://doi.org/10.1080/13676261.2013.830702

Peng, C.-Y. J., So, T.-S. H., Stage, F. K., & St. John, E. P. (2002). The use and interpretation of logistic regression in higher education journals: 1988-1999. *Research in Higher Education*, *43*(3), 259–293. https://doi.org/10.1023/A:1014858517172

Pittaro, M. L. (2016). *Cyberbullying victimization and reporting: A correlational analysis based on the national crime victimization survey of 2012* (Publication No. 10137885) [Doctoral dissertation, Capella University]. ProQuest Dissertations and Theses Global.

Salmivalli, C. (2001). Feeling good about oneself, being bad to others? Remarks on self-esteem, hostility, and aggressive behavior. *Aggression and Violent Behavior*, *6*(4), 375–393. https://doi.org/10.1016/S1359-1789(00)00012-4

Salmivalli, C., Huttunen, A., & Lagerspetz, K. M. J. (1997). Peer networks and bullying in schools. *Scandinavian Journal of Psychology*, *38*(4), 305–312. https://doi.org/10.1111/1467-9450.00040

Salmivalli, C., Lagerspetz, K., Björkqvist, K., Österman, K., & Kaukiainen, A. (1996). Bullying as a group process: Participant roles and their relations to social status within the group. *Aggressive Behavior*, *22*(1), 1–15. https://doi.org/10.1002/(SICI)1098-2337(1996)22:1<1::AID-AB1>3.0.CO;2-T

Sarmiento, A., Herrera-López, M., & Zych, I. (2019). Is cyberbullying a group process? Online and offline bystanders of cyberbullying act as defenders, reinforcers and outsiders. *Computers in Human Behavior*, *99*, 328–334. https://doi.org/10.1016/j.chb.2019.05.037

Shin, W., & Kim, H.-W. (2023). Problematic mobile phone use and cyberbullying perpetration in adolescents. *Behaviour & Information Technology*, *42*(4), 424–443. https://doi.org/10.1080/0144929X.2022.2104756

Slonje, R., & Smith, P. K. (2008). Cyberbullying: Another main type of bullying? *Scandinavian Journal of Psychology*, *49*(2), 147–154. https://doi.org/10.1111/j.1467-9450.2007.00611.x

Smith, P. K. (2013). School bullying. *Sociologia, Problemas e Práticas*, *71*, 81-98. https://journals.openedition.org/spp/988

Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: Its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry*, *49*(4), 376–385. https://doi.org/10.1111/j.1469-7610.2007.01846.x

Soares, S., Brochado, S., Barros, H., & Fraga, S. (2017). Does cyberbullying prevalence among adolescents relate with country socioeconomic and development indicators? An ecological study of 31 countries. *Violence and Victims*, *32*(5), 771–790. https://doi.org/10.1891/0886-6708.VV-D-15-00139

Song, M., Zhu, Z., Liu, S., Fan, H., Zhu, T., & Zhang, L. (2019). Effects of aggressive traits on cyberbullying: Mediated moderation or moderated mediation? *Computers in Human Behavior*, *97*, 167–178. https://doi.org/10.1016/j.chb.2019.03.015

Spurlock, D., Jr. (2019). Defining practical significance is hard, but we should do it anyway. *Journal of Nursing Education*, *58*(11), 623–626. https://doi.org/10.3928/01484834-20191021-02

Steer, O. L., Betts, L. R., Baguley, T., & Binder, J. F. (2020). "I feel like everyone does it"-adolescents' perceptions and awareness of the association between humour, banter, and cyberbullying. *Computers in Human Behavior*, *108*, 106297. https://doi.org/10.1016/j.chb.2020.106297

Sticca, F., & Perren, S. (2013). Is cyberbullying worse than traditional bullying? Examining the differential roles of medium, publicity, and anonymity for the perceived severity of bullying. *Journal of Youth and Adolescence*, *42*(5), 739-750. https://doi.org/10.1007/s10964-012-9867-3

Subedi, K. K. P. (2020). Theoretical perspective of bullying. *International Journal of Health Sciences and Research, 10*(8), 83-89. https://www.ijhsr.org/IJHSR_Vol.10_Issue.8_Aug2020/14.pdf

Teräsahjo, T., & Salmivalli, C. (2003). "She is not actually bullied." The discourse of harassment in student groups. *Aggressive Behavior*, *29*(2), 134–154. https://doi.org/10.1002/ab.10045

Thomas, S. E., Weinstein, E., & Selman, R. L. (2017). Did I cross the line?: Gender differences in adolescents' anonymous digital self-reports of wrongdoing in an online anonymous context. *Sex Roles*, *77*(1-2), 59-71. https://doi.org/10.1007/s11199-016-0684-0

Timm, P. (2015). *School security: How to build and strengthen a school safety program*. Butterworth-Heinemann.

Trompeter N., Jackson, E., Sheanoda, V., Luo, A., Allison, K., & Bussey, K. (2022). Cyberbullying prevalence in Australian adolescents: Time trends 2015-2020. *Journal of School Violence*, *21*(3), 252–265. https://doi.org/10.1080/15388220.2022.2075881

Trump, K. S. (2011). *Proactive school security and emergency preparedness planning*. Corwin.

Tudge, J. R. H., Payir, A., Merçon-Vargas, E., Cao, H., Liang, Y., Li, J., & O'Brien, L. (2016). Still misused after all these years? A reevaluation of the uses of Bronfenbrenner's bioecological theory of human development. *Journal of Family Theory & Review*, *8*(4), 427–445. https://doi.org/10.1111/jftr.12165

UCLA: Statistical Consulting Group (2021). *What does Cronbach's alpha mean? SPSS FAQ*. https://stats.oarc.ucla.edu/spss/faq/what-does-cronbachs-alpha-mean/

Vanden Abeele, M., & De Cock, R. (2013). Cyberbullying by mobile phone among adolescents: The role of gender and peer group status. *Communications - The European Journal of Communication Research*, *38*(1). https://doi.org/10.1515/commun-2013-0006

Vittinghoff, E., & McCulloch, C. E. (2007). Relaxing the rule of ten events per variable in logistic and Cox regression. *American Journal of Epidemiology*, *165*(6), 710–718. https://doi.org/10.1093/aje/kwk052

Wang, P., Wang, X., & Lei, L. (2021). Gender differences between student-student relationship and cyberbullying perpetration: An evolutionary perspective. *Journal of Interpersonal Violence*, *36*(19-20), 9187–9207. https://doi.org/10.1177/0886260519865970

Wong-Lo, M., & Bullock, L. M. (2011). Digital aggression: Cyberworld meets school bullies. *Preventing School Failure: Alternative Education for Children and Youth*, *55*(2), 64-70. https://doi.org/10.1080/1045988X.2011.539429

Wright, M. F. (2017). Parental mediation, cyberbullying, and cybertrolling: The role of gender. *Computers in Human Behavior*, *71*, 189-195. https://doi.org/10.1016/j.chb.2017.01.059

Xu, S., Ren, J., Li, F., Wang, L., & Wang, S. (2022). School bullying among vocational school students in China: Prevalence and associations with personal, relational, and school factors. *Journal of Interpersonal Violence*, *37*(1-2), NP104–NP124. https://doi.org/10.1177/0886260520907360

Yanez, C., Seldin, M., & Mann, R. (2019). *Electronic bullying: Online and by text* (NCES Publication No. 2020042). U.S. Department of Education, National Center for Education Statistics.

https://bjs.ojp.gov/sites/g/files/xyckuh236/files/media/document/nces_scs_datapoint_bullying_2020042.pdf

Zhang, Z. (2014). Too much covariates in a multivariable model may cause the problem of overfitting. *Journal of Thoracic Disease, 6*(9), E196–E197. https://doi.org/10.3978/j.issn.2072-1439.2014.08.33

Zhao, F., Zhang, Z.-H., Bi, L., Wu, X.-S., Wang, W.-J., Li, Y.-F., & Sun, Y.-H. (2017). The association between life events and internet addiction among Chinese vocational school students: The mediating role of depression. *Computers in Human Behavior*, *70*, 30–38. https://doi.org/10.1016/j.chb.2016.12.057

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