

Summer 2012

Cyberbullying and Suicide among a Sample of LGBTQ Young Adults

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CYBERBULLYING AND SUICIDE AMONG A SAMPLE OF LESBIAN, GAY,
BISEXUAL, TRANSGENDER, AND QUESTIONING YOUNG ADULTS

A Dissertation

Submitted to the School of Education

Duquesne University

In partial fulfillment of the requirements for

the degree of Doctor of Philosophy

By

Heather M. Schwickrath

August 2012

DUQUESNE UNIVERSITY
SCHOOL OF EDUCATION
Department of Counseling, Psychology, and Special Education

Dissertation

Submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy (Ph.D.)

School Psychology Doctoral Program

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June 13, 2012

Cyberbullying and Suicide among a Sample of Lesbian, Gay, Bisexual,
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ABSTRACT

CYBERBULLYING AND SUICIDE AMONG A SAMPLE OF LESBIAN, GAY, BISEXUAL, TRANSGENDER, AND QUESTIONING YOUNG ADULTS

By

Heather M. Schwickrath

August 2012

Dissertation supervised by Dr. Laura M. Crothers

After an extensive literature review, results indicated research has been conducted examining the links between traditional bullying and suicide, lesbian, gay, bisexual, transgendered, and questioning (LGBTQ) identification and cyberbullying, as well as LGBTQ identification and suicide. However, it appears as though there is a dearth of studies examining the link between young adults identifying as LGBTQ who have experienced cyberbullying and the subsequent suicidal behaviors. The following research study attempts to answer the question of whether cyberbullying mediates the relationship between cyberbullying and suicidal behaviors.

DEDICATION

This dissertation is dedicated to my family and extended family that have been very supportive of my current endeavor. My true dedication is to my mother. Without your unending love and support of the past five years, and more specifically, the past year, I would not be writing this dedication. I truly appreciate all that you have done for me and the way that you raised me to be a strong, independent woman. This dissertation is dedicated to you for of all that you do for others, not expecting anything in return and for unconditionally loving, sharing, and inspiring me. Thank you for being there when I needed you most, for being my rock, and for believing in me even when I doubted myself. For this, I say thank you for being you and I love you.

ACKNOWLEDGEMENT

I would like to thank my family, extended family, friends, and cohort for their unending support throughout the past five years. Without your support, I would not be at this point. I would also like to thank Mary Jones, my own personal librarian. Thank you for taking the time to help me with that exhaustive literature review. Just when I thought there was only one or two ways to search for articles, you never ceased to amaze me and find more! Another special thank you goes to Eric Fenclau for assisting me in planning the survey for this project. Your talent and perspective was instrumental when it came time to put it all together. And last but not least, I would like to thank my dissertation committee, Dr. Laura Crothers, Dr. David Delmonico, Dr. Ara Schmitt, and Dr. James Schreiber. Thank you for all of your editing skills, votes of confidence, and undying support. Thank you!

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Cyberbullying and Suicide among a Sample of LGBTQ Young Adults

Chapter I: Introduction

Tyler Clementi. Raymond Chase. Seth Walsh. Asher Brown. Billy Lucas. Justin Aaberg. Zach Harrington. Sadly, all of these teens have committed suicide after being bullied because of their sexual identity. It is for this reason that a better understanding regarding the impact of bullying, and in particular, cyberbullying, on the lesbian, gay, bisexual, transgendered, and questioning (LGBTQ) adolescent population needs to be obtained.

Developing Sexuality During a Turbulent Developmental Time

Many individuals develop their sexual identity in the adolescent years. When considering the rapid changes that are occurring in adolescents' physical, emotional, and social growth, it is understandable that the development of one's sexual identity, particularly when it is non-majority, may prove to be a stressor during an already turbulent time. Such adolescents are often referred to as LGBTQ, as they are youth who identify themselves as lesbian, gay, bisexual, transgendered, or questioning. This is also the period of time in which adolescents attempt to resolve the Identity versus Role Confusion crisis, one of the stages of development described in Erikson's Psychosocial Developmental Theory. The process of identity formation during this timeframe is also largely dependent on the social environment (Patchin & Hinduja, 2010). Youth tend to seek behaviors and situations which aid them in their pursuit of valuing the self. Prolonged confusion regarding sexual identity during this timeframe may lead to adverse mental health sequelae.

Risk Factors for LGBTQ Youth

Prior research estimates that between five and six percent of youth identify as LGBTQ, which accounts for approximately two million school-aged children in the United States (Swearer, Turner, Givens, & Pollack, 2008). Russell and Joyner (2001) found that adolescents with same sex attractions were more than twice as likely to attempt suicide when compared to those adolescents with opposite sex attractions. In a recent study conducted by the Massachusetts Youth Risk Behavior Survey group, adolescents who identified as lesbian, gay or bisexual were four times as likely to attempt suicide when compared to heterosexual peers. Those youth who question their sexual identity report higher levels of depression and suicidal thoughts when compared to heterosexual youth, or even those who are openly lesbian, gay, or bisexual (Reynolds, 2011).

Little research has been conducted to find the exact causes of suicide attempts, but certain risk factors for suicide attempts exist among LGBTQ youth. Such theoretical risk factors include “coming out” at a young age, identifying as a certain gender/ethnicity, having low self-esteem or depression, being isolated, abusing substances, running away, and prostituting oneself (Garafalo, Wolf, Wissow, Woods, & Goodman, 1999; Proctor & Groze, 1994; Remafedi, Farrow, & Deisher, 1991).

Unfortunately, the experience of bullying is yet another risk factor that may increase the likelihood of sexual minority youth experiencing adverse mental health outcomes both immediately and later in life. Living within a culture that glorifies violence and does not necessarily recognize the existence of LGBTQ youth may contribute to the bullying of this population (Mishna, Newman, Daley, & Solomon,

2009). This may even lead to the indirect fostering of social stigma related to sexual diversity.

Bullying and Cyberbullying of LGBTQ Adolescents

Jamie Nabozny was continually harassed and physically assaulted by peers throughout his middle and high school tenure. Because of this torment, Jamie attempted suicide on several occasions, dropped out of school, and ran away from home (Blumenfeld & Cooper, 2010). Due to his experiences, Jamie's family filed suit against the school officials when they failed to address the problems. The torture Jamie endured was a violation of his Fourteenth Amendment rights, and is increasingly being seen as a problem requiring legal remedies.

One of the forms of bullying directed at LGBTQ youth is cyberbullying. Cyberbullying, is defined as “willful and repeated harm inflicted through the use of computers, cell phones, and other electronic devices” (Hinduja & Patchin, 2008, p. 131). Smith et al. (2008) posit a second definition of cyberbullying as “an aggressive, intentional act carried out by a group, or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself” (p. 376).

There is a paucity of research specifically regarding cyberbullying within the LGBTQ population. Although this information has not been proven through research to date, it seems plausible that LGBTQ youth experience the same torment and suffer the same consequences as those youth who are bullied via traditional means.

Students of LGBTQ status are more likely than heterosexual peers to be threatened or injured at school, skip school because of safety issues, be violently

attacked, and experience sexual and physical abuse (Berlan, Corliss, Field, Goodman, & Austin, 2010; Crothers & Altman, 2007; Swearer, Turner, Givens, & Pollack, 2008).

These youth are also more likely to have anxiety, depression, and low self esteem (Mishna, Newman, Daley, & Solomon, 2009). Some tend to internalize the bullying and turn to substance use and suicide attempts. Also a result, Mishna and colleagues (2009) indicate these youth often have lower academic performance and tend to drop out of school due to the homophobic bullying.

This problem is not confined to the United States. Rivers (2000) conducted a study and reported that LGB youth in British secondary schools who experience peer victimization are likely to experience mental health difficulties that may last well into adulthood. Jones and Clark (2007) also conducted studies in British secondary schools and found that the bullying at this level tends to be more verbal than physical, with malicious rumors being the most detrimental form of bullying within the sample, followed by relational forms of aggression, being ignored and isolated due to sexuality. With regards to the verbal harassment, Poteat and Rivers (2010) found that homophobic language was part of the bullying behavior and was strongly associated with engaging in bullying behavior; however, this language is not necessarily used by the primary bully. Homophobic language was utilized by several people within their study population at some point in time.

Negative Outcomes Associated with Bullying or Being Bullied

Furthermore, research studies have demonstrated that children and adolescents who are involved in bullying as either the bully or the victim in bully/victim conflicts are more prone to depression, suicidal ideation, and suicide attempts (Birkett, Espelage, &

Koenig, 2009; Carney, 2000; Espelage, Aragon, Birkett, & Koenig, 2008; Wagner, 2007). Wagner (2007) also found that those adolescents who were frequent victims of bullying were five times as likely to have serious suicidal ideation and four times as likely to attempt suicide when compared to those peers who had not been bullied. Even if the bullying was considered to be infrequent, adolescents were found to still have suicidal behavior at twice the rate of those who were not bullied by peers. Additionally, students who bully peers have a significantly higher rate of suicidal ideation, suicidality and self-injurious behaviors (Almeida, Johnson, Corliss, Molnar, & Azrael, 2009; Juvonen, Graham, & Schuster, 2003; Kim, Koh, & Leventhal, 2005). Rigby and Slee (1999), as well as Kaminski and Fang (2009), found that adolescents who are more frequently victimized by peers at school and felt unsupported by others when they had a problem were more likely to experience suicidal ideation than those who did not have such experiences.

Almeida et al. (2009) reported findings that LGBT youth displayed more emotional distress when compared to a heterosexual, non-transgendered population. This then led to significantly higher rates of suicidal ideation and self-harm. Within this study, self harm was found to be more pronounced in LGBT males. The authors also found those youth who felt they had been discriminated against based solely on their sexual orientation were significantly higher at risk for suicidal ideation and had higher levels of depression (Almeida et al, 2009).

Birkett, Espelage, and Koenig (2009) conducted a study and their results indicated that homophobic teasing showed a moderating influence on depression and suicidal thoughts and feelings. This teasing also leads to youth refusing to attend school. Rivers

(2000) reported similar findings which suggested a correlation between high levels of homophobic harassment and elevated levels of absenteeism in school. These same youth were also found to have elevated levels of self-harm and suicidal tendencies.

Negative Outcomes Associated with Being Cyberbullied

Sourander and colleagues (2010) researched psychosocial risk factors for adolescents who have been cyberbullied. The authors found the following risk factors to be indicative of cyberbully or victim status: conduct, hyperactivity, prosocial, emotional, and peer problems. In regard to emotional difficulties, Patchin and Hinduja (2010) reported that both cyberbullying victims and offenders were found to have significantly lower self-esteem when compared to those who have never experienced cyberbullying. Whether low self esteem leads to being cyberbullied or the cyberbullying causes low self esteem has yet to be determined.

Blumenfeld and Cooper (2010) conducted a study examining policy implications for LGBT youth regarding cyberbullying. The youth in their sample reported that internet technology was one of the few ways they were able to connect with other gay, lesbian, bisexual or transgendered youth. It is perhaps ironic that such adolescents can be freer to explore their sexual identity in this environment, yet are not free from bullying. Most youth in the study reported pessimism regarding the possibility that adults or others in positions of authority could do anything to alleviate the problem of cyberbullying. These same youth suggested to the authors that school districts need to implement policies and initiatives to address the issue. Of interest, Blumenfeld and Cooper (2010) noted in their study that they did not find the traditional dyadic view of cyberbullying, but

instead found a whole cast of “actors” who have roles across social and school environments.

Of note, adolescents who are victims of cyberbullying also tend to display symptoms of depression and anxiety, but may engage in greater self-injurious behavior than victims of traditional bullying. When bullying becomes severe or pervasive, children and adolescents may begin to have suicidal thoughts. Hinduja and Patchin (2009, 2010) reported 20% of their sample of 2000 middle school students had seriously thought about attempting suicide, and 19% had attempted suicide as a result of cyberbullying.

LGBTQ Youth, Cyberbullying, and Suicide

The extant literature base alludes to the fact that the LGBTQ population experiences increased levels of cyberbullying, as well as suicidality; however, there have been no studies identified to examine the direct link. However, studies have been conducted reporting a link between traditional bullying and suicide within the LGBTQ child and adolescent population. According to a study conducted by the U.S. Department of Health and Human Services (Gibson, 1989), youth within the LGBTQ population are two to three times more likely to commit suicide when compared to other youth. Thirty percent of all completed suicides are related to their sexuality. However, there is no research seeking an explanation of LGBTQ identification, cyberbullying, and suicide.

Significance of the Problem

Due to an ever-developing technical age, when bullying peers, adolescents have begun to use a cyber-medium to inflict harm upon others. Most attacks occur with students who are “different” in some way, and one such group is adolescents who

identify as LGBTQ (Crothers & Altman, 2007). Research has shown those LGBTQ adolescents who have been cyberbullied are at a higher risk of committing suicide. However, there is scant research to link cyberbullying to the suicidal acts. Through conducting this research, I wish to determine whether being the victim of cyberbullying renders an LGBTQ adolescent more vulnerable to suicidal behavior. With this knowledge, preventive efforts can be increased to diminish the risk factors for adolescents who identify as LGBTQ.

Problem Statement

There is a paucity of research in the area of cyberbullying as it relates to the LGBTQ population. Many articles have been written regarding LGBTQ and suicide, as well as LGBTQ and cyberbullying, but no research has bridged the gap between the two. Consequently, the purpose of this study is to determine the link, if any, between cyberbullying and suicide within a sample of the LGBTQ population.

Research Question

For this study, I propose one research question: does being cyberbullied mediate the relationship between LGBTQ status and suicidal behavior? I hypothesize that being victimized through cyberbullying is predictive of those who identify as LGBTQ experiencing suicidal behavior. For the purposes of this study, suicidal behavior will be defined as suicidal thoughts and ideations. While suicidal behavior is typically defined as suicide attempts, not all victims of cyberbullying attempt suicide. It is suspected by this researcher that it is more likely that LGBTQ students experience suicidal thoughts and ideations, and do not progress to an actual suicide attempt.

Summary

In this chapter, I have discussed risk factors for LGBTQ youth regarding their sexuality, the effects of bullying and cyberbullying on LGBTQ youth, negative outcomes associated with bullying and the significance of the problem. Due to the lack of relevant literature discussing the linkage between LGBTQ status, cyberbullying, and suicidal behaviors, I propose the above research study. Through this study, I wish to examine whether cyberbullying is a mediating factor between LGBTQ status and suicidal behavior.

Chapter II: Literature Review

Introduction

An increased emphasis of reporting by the American media within the past decade on the longstanding problem of bullying behavior has led many to believe this is a newly emerging form of violence. Unfortunately, bullying has a strong historical context (Olweus, 1993; Rigby & Slee, 1999; Ross, 2003), and recent estimates of the behavior, with prevalence rates ranging from 20-40%, suggest that its occurrence has not diminished (Kim, Koh, & Leventhal, 2005). While bullying is common, the detrimental and potentially lethal effects of this behavior upon victims, including depression and suicidality, suggest that such aggression necessitates intervention. Recent reports have documented that an increasing number of children and adolescents have committed suicide due to the bullying that they have experienced (Hinduja & Patchin, 2009, 2010; Kaminski & Fang, 2009; Rigby & Slee, 1999). This phenomenon has been termed *bullycide*, which refers to the act taken by the victim of bullying to end his or her life (High, 2007). A group of adolescents who may be particularly vulnerable to not only bullying and cyberbullying, but also suicide in response to such peer harassment are youth who identify as lesbian, gay, bisexual, transgendered, or questioning (LGBTQ). The following literature review seeks to review the links between bullying, depression, and suicide within the LGBTQ population.

What is Bullying?

The Centers for Disease Control reports that over 5.7 million teens in the United States, or more than 30% of adolescents, are estimated to be included in one of three roles of bullying behavior: the bully, the victim, or the bully-victim (High, 2007). The bully is

the individual who purposefully utilizes instrumental aggression to harm another, the victim is the intended target, and the bully-victim is the student who bullies some, but is a target for others.

Definitions of bullying have evolved over the years, but arguably the most prominent definition of bullying was proposed by Dan Olweus (1993). This definition entails a student being bullied or victimized when he or she is exposed, repeatedly over time, to negative actions on the part of one or more students. Bullying has four main defining characteristics: violence, intentionality, chronicity, and power imbalance, the last of which is manifested as the bully holding greater power than the victim (Estevez, Murgui, & Musitu, 2009; Ross, 2003). Bullying is an act that takes place in different strata of schools, socioeconomic levels, areas of the country, and areas of the world. It is not an act that is limited to a particular type of child or specific region or culture.

Bullying, according to Olweus (1993), tends to occur over an extended period of time, and it is often erroneously assumed that the victim does something to “deserve” the attacks. Historically, bullying was often seen as a “rite of passage” for students to experience that would assist with their character development. However, there is no evidence for proper character development accomplished through bullying. In fact, all research has indicated quite the opposite (Fekkes, Pijpers, Fredriks, Vogels, & Verloove-Vanhorick, 2006; Herba et al., 2008; Kaltiala-Heino, Frojd, & Marttunen, 2010; Kim, Koh, & Leventhal 2005; Mills, Guerin, Lynch, Daly, & Fitzpatrick, 2004). These authors report that bullying, whether one serves as the victim or perpetrator, does not promote appropriate character development, but rather results in the onset of low self esteem, depression, anxiety, poor social relationships, and even suicidality.

Types of Bullies

In the extant literature, three types of bullies have been identified. These types include aggressive bullies, passive bullies, and the bully-victim (Ross, 2003). Aggressive bullies are the most predominant type of bullies, and have been found to be impulsive, belligerent, fearless, and overconfident. These types of bullies generally have physical strength, a need for power, and have a tendency to overreact, particularly toward individuals who are misperceived as behaving aggressively. Olweus (1993) reported that aggressive bullies tend to be among the most popular among peers in the early school years.

The second type of bully is a passive bully who tends to be less popular than the aggressive bullies, has low self-esteem, and demonstrates few likeable qualities (Ross, 2003). The key trait to the passive bully is that he or she generally does not provoke an attack, but once a bully attack has begun, he or she joins in with enthusiasm. Passive bullies also tend to align themselves with more powerful, aggressive bullies.

The last type of bully is the bully-victim. This is the student bullies certain peers, but is also victimized by other children or adolescents. The bully-victim is generally weaker than those whom aggress upon him or her, but are physically stronger than those whom they aggress upon.

With such high prevalence rates, there are several thoughts as to why bullying occurs.

Aggressive children tend to demonstrate deficiencies in their intellectual processing, which may contribute to the aggressive acts. Researchers have hypothesized that the bully strikes out against vulnerable peers as a defense mechanism in order to avoid being bullied themselves (Piehl, 2009). However, it is important to keep in mind

that there is a marked power differential between the bully and the victim. It is not considered to be bullying when two students, of equal strength, either physically or psychologically, are fighting (Olweus, 1993). Also complicating identification of bullying are the various forms of bullying that can occur, including overt bullying, covert bullying or relational aggression, and cyberbullying. Since cyberbullying is the focus of this study, only this form of bullying will be defined and explored.

Cyberbullying

The United States has become a digitally and technologically advanced society, which has been of enormous benefit in many ways. Students of the digital age are knowledgeable about computers and cell phones, are typically technologically savvy, and often enjoy the accessibility and opportunities that such technological advances have allowed. However, with an increase in such accessibility and opportunities, aggression in the form of bullying has now found a new medium. Simply put, the boundaries of the schoolyard have been eliminated.

Definition of Cyberbullying. The newest form of bullying, cyberbullying, is defined as “willful and repeated harm inflicted through the use of computers, cell phones, and other electronic devices” (Hinduja & Patchin, 2008, p. 131, 2010, p.3). The term, ‘willful,’ shows that the cyberbullying is an intentional act perpetrated by another. Similarly, the element of the definition, ‘repeated,’ indicates that the act of cyberbullying does not tend to occur only once. The aggressor either has multiple targets or has targeted one victim on multiple occasions. ‘Harm’ indicates that the aggressor is perpetrating an act in which the victim perceives as detrimental and hurtful. Perhaps the most important facet of the definition, however, is that modern technology is the medium

by which this bullying occurs, and can include computers, personal digital assistants (PDAs), or cellular phones.

Smith et al. (2008) posit a second definition of cyberbullying as “an aggressive, intentional act carried out by a group, or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself” (p. 376). Although the frequency of cyberbullying is less than that of traditional bullying, it is still reported to be nontrivial and on the rise (Hinduja & Patchin, 2008; Smith et al., 2008; Wang, Iannotti, & Nansel, 2009; Willard, 2007; Williams & Guerra, 2007). Unlike in the definition of traditional bullying, however, there is no discussion of the power imbalance within the definition of cyberbullying (Kiriakidis & Kavoura, 2010).

While traditional bullying typically occurs behind the scenes, cyberbullying occurs “behind the screens” (Spears et al., 2009). Cyberbullying involves sending or posting harmful or cruel text or images using the internet or other digital media. These acts can include stalking, abuse, threats, harassment, impersonation, humiliation, insults, trickery, and exclusion (Feinberg & Robey, 2009; Katzer, Fetchenhauer, & Belschak, 2009; Smith, 2009; Smith et al., 2008; Willard, 2007). Victims may receive cruel, harmful, or angry messages in a repetitive fashion with the intent to threaten, insult, embarrass or discredit them to classmates or friends (Fredrick, 2009; The National Center for Missing and Exploited Children, 2009). Although there is an overlap in characteristics of traditional bullying, there are some bullies who solely perpetrate via electronic means (Katzer, 2009; Raskauskas & Stoltz, 2007).

Types of Cyberbullying. With this emerging trend, Willard (2007) identifies eight main forms of cyberbullying. These forms include: cyberstalking, denigration,

exclusion, flaming, harassment, impersonation, outing, and trickery. Cyberstalking involves repeated threats of harassment, which may include threats of physical harm. Denigration is the form of cyberbullying that involves posting mean or insulting comments on websites, instant messages, emails, chat rooms, or online profiles (Facebook or MySpace) with the intention of humiliating the victim. Exclusion is the act of intentionally leaving someone out of an online group or community. Flaming involves sending angry, rude, or offensive messages, generally through email, instant message, or chat room. Harassment is a constant barrage of mean messages to the victim through the internet. Impersonation involves the bully assuming the identity of another in order to post humiliating, embarrassing, or dangerous content. Outing refers to the bully sharing personal and private information about the victim online in the form of text, pictures, or videos. Finally, trickery involves the bully tricking the victim into giving personal information and then sharing that information online with a large audience (The National Center for Missing and Exploited Children, 2009).

Reach of Cyberbullying. With the increase of students having their own personal computers and cell phones, cyberbullying does not occur solely in the home or school. The boundaries for this type of behavior are limitless. It is possible for a cyberbully to leave a hurtful or insulting comment on a peer's Facebook or MySpace page while walking from class to class (The National Center for Missing and Exploited Children, 2009). For the victim, he or she never knows when the cyberbully will strike because most of these attacks occur online, and the attacks can occur at any time of day or night. The internet allows the cyberbully to attack any time from any location. Smith et al. (2008) indicate that most students report that cyberbullying takes place more so

outside of school due to the fact that cell phones are not permitted in schools and teachers are monitoring cell phone usage. Outside of school, there are fewer monitors of online behavior, which makes it difficult for the victim to elude his or her aggressor.

In traditional bullying, the end of the school day often means the end of torment for the victim; however, this is not the case with cyberbullying. The cyberbully is able to infiltrate homes via the internet and continue to bully victims at all hours (Hinduja & Patchin, 2008). The audience of the cyberbully may be indefinite. With traditional bullying, the bully gets the attention of the children who are in the immediate proximity of the location when the event occurs. However, in cyberbullying, by posting information over the internet, the cyberbully reaches a much larger audience and there is tremendous difficulty in removing information from the internet once it has been posted. Picture and video clip bullying have been found to have the highest impact on victims, with cell phone bullying being second (Slonje & Smith, 2008). Even though these acts occur off school property, they impact what occurs at school (Raskauskas & Stoltz, 2007) due to the fact that the victim is often still fearful of his or her aggressor and what may occur during school hours. Thus, the emotional toll of cyberbullying frequently affects the victim both socially and psychologically.

Anonymity of Cyberbullying. Some victims of cyberbullying know their aggressors, but most do not. Anonymity is another key factor that separates cyberbullying from traditional bullying. In a sample of 177 7th grade students in a U.S. urban city, Li (2005, 2006) found that 54% of the sample had been victims of traditional bullying and over a quarter of those students had also been cyberbullied. According to these victims, 31.8% were bullied by classmates, 11.4% were bullied by people outside

of the school, 15.9% were bullied by multiple sources, and 40.9% had no idea who was cyberbullying them (Li, 2005, 2006).

Cyberbullies are also better able to conceal their identity online than they could in the “real world.” Identities can be hidden and the avenues to bully are more numerous when compared to face-to-face bullying. Furthermore, the information processed may be much different and seen as impersonal, so the bully can say what he or she wants (Dooley, Pyzalski, & Cross, 2009; Li, 2006; Spears et al., 2009). The cyberbully may also feel less constrained from the pressures of society, conscience, and morality when sending messages from behind the computer screen (Hinduja & Patchin, 2010). Smith et al. (2008), as well as Raskauskas and Stoltz (2007), found that the most common medium for cyberbullying was text messaging, due to its anonymity. This contributes to the assumption that no power differential exists and that cyberbullies are not necessarily stronger than their victim, but are more adept at using their weaponry. Cyberbullies often are unaware of the impact and distress their behavior causes (Kiriakidis & Kavoura, 2010). Some cyberbullies do not view themselves as bullies. This may be a result of their belief that they are sticking up for a friend who is being attacked, as a consequence for being victimized in the school setting, or simply letting off steam (Katzner, 2009; Katzner et al. 2009; Ybarra & Mitchell, 2004).

Frequency of Cyberbullying. In the role of traditional bullying, the frequency of incidents appears to decrease as the students get older. With cyberbullying, the frequency of incidents appears to *increase* as students get older. This may be due in part to the fact that as a student gets older, he or she may have a cell phone and a computer in the bedroom (Raskauskas & Stoltz, 2007; Slonje & Smith, 2008). In a study of Spanish

adolescents, Ortega, Elipe, Mora-Merchan, Calmaestra, and Vega (2009) found a peak in cyberbullying via mobile phone at the age of 14.

Symptoms of Cyberbullies. Signs that a child or adolescent is a cyberbully include: quickly closes programs or switches screens when an adult passes by, uses a computer at various hours through the night, becomes upset if the computer is being used and he/she cannot use it, laughs excessively when using the computer, avoids talking about what he/she is doing on the computer, and uses multiple online accounts, some of which may not be their own (Diamanduros et al., 2008).

Symptoms of Cybervictims. There are often symptoms that are common to those who are being cyberbullied. The signs that someone is being targeted as a cybervictim include: suddenly stops using the computer, appears anxious when new emails or instant messages appear on the screen, seems angry or depressed following computer usage, appears uncomfortable going outside or to school, avoids talking about what he/she is doing on the computer, and becomes withdrawn from friends and family members (Willard, 2007).

International Scope of Cyberbullying. Similar to traditional bullying, cyberbullying occurs around the world. Katzer (2009) conducted a study in Germany and found the frequency of students who were victimized in chat rooms every few months to daily ranged from 5.4% (being blackmailed or put under pressure) to 43.1% (being abused or insulted). In the Czech Republic, Sevcikova and Smahel (2009) noted that adolescents (12-19 years) and young adults (20-26 years) were more often the victims of aggressive online behavior, while younger adolescents (12-15 years) were more likely to be the bullies. Slonje and Smith (2008) conducted a study of Swedish adolescents and

found that 5.8% of their sample was cyberbullied in the school within the past couple of months. When asked specific questions about various types of cyberbullying, 11.7% reported being cyberbullying either inside or outside of school. When asked whether students cyberbullied others, 10.3% of students reported that they had done so.

Grading, Strohmeier, and Spiel (2009) found that in 761 9th grade Austrian students, 7.6% of males and 3.1% females had been involved in cyberbullying and 7.1% had been victimized.

Male versus Female Bullying and Cyberbullying

Both males and females are capable of bullying. In one study, when students were asked to nominate those peers who bullied, physically aggressive males and verbally and/or relationally aggressive females were the most nominated (Lee, 2009). In this same investigation, it was also reported that males do not bully more than females, but their preferred method of victimization was significantly different. Males are more likely to exhibit overt bullying behaviors and females are more likely to exhibit covert or relationally aggressive behaviors.

Cyberbullies and victims tend to be both male and female, and are more likely to be older adolescents, rather than younger children (Feinberg & Robey, 2009). Li (2005, 2006) found that males are more likely to cyberbully than females, with almost 60% of cybervictims being female and 52% of cyberbullies being male. However, in a more recent study by Hinduja and Patchin (2010), the results indicated there were no statistically significant differences between males and females in terms of cyberbullying, whether as an aggressor or victim. However, it is important to note that female cyberbullies tend to act in a group and gang up on a peer or peers (Hinduja and Patchin,

2010). Ang and Goh (2010) conducted a study of 396 adolescents from Singapore and found that males and females with low cognitive empathy and low affective empathy were more likely to cyberbully. Males with high affective empathy and low cognitive empathy scored higher on cyberbullying. For females with high affective empathy and either high or low levels of cognitive empathy, the results were insignificant. This finding suggests that high cognitive empathy buffers the impact of cyberbullying.

Risk and Protective Factors for Cyberbullying

Katzer (2009), Kiriakidis and Kavoura (2010), and Ybarra and Mitchell (2004) report that the risk factors for being an online bully include poor parental relationships/monitoring, high rates of absence in class, high delinquency, positive attitude toward aggression, and a high amount of antisocial online behavior. Adolescents with higher parental support reported less involvement in all types of bullying (Wang, Iannotti, & Nansel, 2009). In addition, Williams and Guerra (2007) found that the causal pathways to bullying are not unique, but mirror the pathways for traditional bullying. Protective factors such as support, empowerment, boundaries and expectations, constructive use of time, commitment to learning, positive values, social competency, and positive identity have been found to decrease the amount of inappropriate behaviors among youth and adolescents (Harlow & Roberts, 2010).

Such research points to the individual characteristics of the bully. However, it is also necessary to consider the impact of parental rearing in the development in the students' aggression. For those students who receive poor or inadequate parenting, or whose parents utilized corporal punishment, there appears to be a greater inclination to bully others in part related to acceptance of aggression (Olweus, 1993; Ross, 2003).

Failure to bond with the caregiver has been associated with a lack of empathy for other children. Parental negative attitudes and lack of warmth increase the risk that a child will later become hostile and aggressive toward others (Olweus, 1993). Children who do not bully typically have loving and involved parents, well-defined limits on behaviors, and non-corporal methods of punishment.

Consequences of Cyberbullying

Most students who experience bullying do not report the incident, due to feeling powerless over the situation or feeling as though reporting the incident to an adult may exacerbate the problem (Fairbairn, 2002). Victims of cyberbullying are significantly less likely to report the abuse; mostly because they fear parents will take away their cell phones, computers, or internet access (Kiriakidis & Kavoura, 2010). When students do seek help or guidance, most report the abuse to a friend rather than to an adult (Feinberg & Robey, 2009). In a survey of fourth through eighth graders, conducted by iSafe America in 2004 (<http://www.isafe.org/> in Fredrick, 2009), 42% of children surveyed had experienced bullying, but over half never exposed the incidents to their parents or other adults. Slonje and Smith (2008) documented similar findings in their study with 50% of victims denying telling anyone, 35.7% telling a friend, 8.9% telling a parent/guardian, and 5.4% telling someone else. All victims denied telling a teacher. In contrast, Li (2006) found that 64.1% of students in the sample believed that adults in the schools tried to cease cyberbullying when they were informed about incidents by students.

Victimization through bullying can lead to health problems, such as depression, anxiety, behavioral difficulties, headaches, abdominal pains, bed wetting, sleep difficulties, school phobia, feelings of insecurity, unhappiness at school, and even

suicidal ideation or attempt (Fekkes et al., 2006; Kaltiala-Heino et al., 2010; Kim, Koh, & Leventhal 2005; Mills et al., 2004). It is reasonable to suspect that emotional problems experienced by victims are both a consequence and reason for the bullying. Indeed, Esbensen and Carson (2009) and Estevez et al. (2009) found that victims of bullying reported lower self-esteem, higher empathy, greater commitment to negative peers, less use of conflict resolution skills, higher fear and perceived risk of victimization, less satisfaction with life, increased levels of stress, and lower levels of perceived school safety.

As evidenced by adverse consequences experienced by cybervictims, it seems likely that such children and adolescents may experience depression due to the stress they experience. Often, when depression goes undiagnosed and untreated, it may manifest in suicidal thoughts or ideation. It is for this reason that cybervictims are at increased risk for depression, suicidal ideation, and potential suicide attempts (Hinduja & Patchin, 2010).

Suicide and Suicide Statistics

Some children and adolescents feel overwhelmed, as though they have nowhere to turn and feel as though their only sense of relief, from various situations, is to end their own lives. The Centers for Disease Control and Prevention (CDC, 2010) report suicide (12%) as the fourth leading cause of death among youth and young adults age 10-24 years, with 13.8% seriously considering attempting suicide, 10.9% making a plan, and 6.3% attempting suicide. The number of children aged 10-14 committing suicide increased 51% between 1981 and 2004 (American Association of Suicidology, 2006). In addition, in a survey conducted by the CDC (2008), 14.5% of U.S. students (18.7% of

females and 10.3% of males) seriously considered attempting suicide in the previous 12 months. The National Youth Violence Prevention Resource Center reports that almost 2,000 teens are successful in their attempts to end their lives each year and the National Institute of Mental Health estimates one-in-six suicide attempts are successful (NIMH in High, 2007).

Bridge and colleagues (2008) conducted an analysis to estimate the trends in suicide from 1996 to 2003, the expected rates in 2004 and 2005, and then compare the expected number to the actual number of deaths. Although the overall suicide rate decreased between 2004 and 2005, the observed rates were still higher than the expected rates, based on the previous years' trend. In 2008, the American Association of Suicidology conducted a survey of the members of the National Association of School Psychologists (NASP) and found that 86% of school psychologists reported counseling a student who threatened or attempted suicide, 35% reported a student in their school had died by suicide, and 62% reported they knew a student in their school who made a nonfatal attempt.

Kessler, Berglund, Borges, Nock, and Wang (2005) have found suicidal behaviors to be elevated in several subgroups, including youth, females, individuals with low education status, and individuals lacking stable relationships or employment. The authors also found that engaging in treatment, due to increased accessibility, decreased the risk for future suicidal behaviors.

Causes of Suicide

There is some debate as to the causes of suicidality, as it is likely that biological factors, social risk factors, as well as psychological risk factors contribute to a suicidal

behavior. Leenaars (1996) describes suicide as multidimensional, meaning it involves “biological, psychological, intrapsychic, logical, conscious and unconscious, interpersonal, sociological, cultural, and philosophical/existential elements” (p. 221). The person who is contemplating suicide is generally ambivalent, but experiences a fixed thought pattern and sees suicide as a way to extinguish the pain. Particularly with adolescent attempters, internalized and externalizing behaviors, substance use, poor social support, poor parent-child relationships, poor family relationships, recent life events, and history of suicidal ideation and attempt are high risk factors for the behavior (Borowsky, Ireland & Resnick, 2001; Prinstein, Boergers, Spirito, Little, & Grapentine, 2000; Shafii & Shafii, 2003; Wichstrom, 2000). Shafii and Shafii (2003) conducted psychological autopsies on children and adolescents who committed suicide and found 85% of suicide victims had verbalized suicidal ideas to others at least once in the previous year, 55% verbalized suicide threats, and 40% had previously attempted suicide.

Suicidal behavior is often thought of as highly familial and heritable (Bursztein & Apter, 2008; Cash & Bridge, 2009), which would be indicative of its biological influence. To prove this, studies have been conducted controlling for psychiatric disorders, with results suggesting that the behavior is indeed heritable. However, some researchers argue that it is not the suicidality that is heritable, but instead the impulsive aggression. Either way, those families with either significant suicide attempts or completions have been found to have family members with increased suicidal thoughts and attempts (Bursztein & Apter, 2008). Additionally, for both males and females, the onset of puberty may prove to be a risk factor. Late maturing males and early maturing females have been found to have a greater risk for suicidality. This may also account for the differences in

prevalence rates of suicide when comparing males to females (Wichstrom, 2000). This provides further explanation of Nansel and colleagues' (2001) results that indicated belittling about looks/appearance were the foremost reason for bullying.

Social risk factors may also influence suicidal behavior. These factors may include bullying and peer victimization, death of a parent, family discord, lack of support network, and dealing with hostile environments (Cash & Bridge, 2009). Prinstein et al. (2000) found that 50% of suicidal adolescents reported family dysfunction as a precipitating factor to suicidal behavior. Those adolescents who were found to have high social status friendships were less likely to be suicidal. It appears as though low levels of friendship and support may be high risk factor for adolescent suicide.

Psychological risk factors include poor decision making skills, impulsive and aggressive acts, temperament, and emotional regulation. It is important to note that impulsivity and aggression seem to play the most important role as a precursor to suicidal behavior. Suicidal thoughts, ideation, plans, and attempts also tend to co-occur with depressed mood, bipolar disorder, and substance use disorders. However, not all people who experience suicidal thoughts are depressed, and not all who experience depressed mood have suicidal thoughts (Leenaars, 1996), but for some the thoughts are pervasive. In clinically referred patients, 85% diagnosed with either major depression or dysthymia will have suicidal ideation and 32% will make a suicide attempt sometime in adolescence or young adulthood (Cash & Bridge, 2009). Of those, few will make repeated attempts and even fewer will complete suicide. In their research, Shafii and Shafii (2003) found that 95% of the suicide victims in their sample had at least one or more psychiatric

disorders. Major depression and dysthymia were the most prevalent diagnoses.

Additionally, close to 70% were diagnosed with antisocial behaviors.

International Scope of Suicide

In addition to the United States, rates of suicide have increased in other parts of the world. Suicide is considered to be a major social and health issue in Japan (Hidaka, Operario, Takenaka, Omori, Ichikawa, & Shirasaka, 2008). Suicide mortality rates are much higher in Japan when compared to the United States, to the degree that males are twice as likely and females are three times as likely to commit suicide as those in the U.S. A similar study conducted in Norway by Wichstrom (2000) found that adolescent females were almost twice as likely to attempt suicide when compared to adolescent males. The attempters were found to have more suicidal ideation, increased substance use, poorer relationships with parents, less socially accepted, increased loneliness, and lower self-worth and self-perceptions. Finally, in Italy, Baldry and Winkel (2003) found that 20% of their sample of students reported thinking about committing acts of self harm and even suicide. Of this percentage, 40.7% had frequent thoughts regarding suicide, with females more likely to report suicidal thoughts.

How Bullying Contributes to Suicide

When bullying becomes severe or pervasive, children and adolescents may begin to have suicidal thoughts. Rigby and Slee (1999), as well as Kaminski and Fang (2009) found that adolescents who are more frequently victimized by peers at school and feel unsupported by others when they have a problem are more likely to experience suicidal ideation than others. In a similar study, Hinduja and Patchin (2009, 2010) reported that 20% of their sample of 2,000 middle school students had seriously thought about

attempting suicide, and 19% had attempted suicide. Females were more likely to think of attempting and males were more likely actually attempt suicide.

Repeated bullying by peers at school is often publicly humiliating, and can have tragic consequences for the victim. An anti-bullying campaign began in Norway in 1983 following the reports of three boys committing suicide allegedly as a result of bullying by peers. Suicides of schoolchildren in England and Japan have also been linked to adverse peer relations (Rigby & Slee, 1999; Ross, 2003). In December 1986, a 13-year-old boy committed suicide after reporting mental and physical bullying from classmates. On one occasion, the classmates treated him as if he were already deceased and staged a mock funeral for him in the classroom. Some of the teachers even joined in and wrote letters of condolence with the students stating, "Goodbye and have a peaceful sleep." The victim wrote that it was hell on earth for him (Ross, 2003).

Unfortunately, the experience of being bullied can contribute to suicidal behaviors. Children and adolescents, who are involved in bullying as either the bully or victim, are more prone to depression, suicidal ideation, and suicide attempts (Carney, 2000; Wagner, 2007). Wagner (2007) also found those adolescents who were frequent victims of bullying were five times as likely to have serious suicidal ideation and four times as likely to attempt suicide when compared to those peers who had not been bullied. Even if the bullying was considered to be infrequent, adolescents were found to still have twice the rate of suicidal behavior. Furthermore, students who are bully-victims have a significantly higher rate of suicidality and self-injurious behaviors (Juvonen, Graham, & Schuster, 2003; Kim, Koh, & Leventhal, 2005). Severe suicidal ideation was highest for those students reporting being a bully-victim.

More recent media reports regarding children driven to suicide following bullying at school have shown the serious negative mental health consequences of bullying. Even though these cases are rare, when compared with the high rates of children being bullied, they highlight the need for awareness among parents, teachers, and administration (Herba et al., 2008). The need for awareness not only lies in protecting the safety of students involved in bullying conflicts, but also to recognize the signs and symptoms of depression and suicidality.

In considering which comes first, psychopathology or bullying, Klomek and colleagues (2009) conducted a cohort study and examined the association between bullying behaviors at age 8 and suicide attempts and completed suicides by age 25 for both genders. Information was gathered from parent reports, teacher reports, and also self-reports. Of the participants, 47.2% of males reported being bullied “sometimes” and 9% “frequently.” For females, 23.2% reported being bullied “sometimes” and 0.9% “frequently.” The study also found that 40 participants were deceased when it came time for follow up. Of the 24 deaths among males, 13 (54%) were suicides and of the 16 deaths among females, 2 (11%) were suicides. During the time period of the study, 42 participants (17 male and 25 female) were admitted to the hospital for treatment directly related to a suicide attempt.

The authors also found that those males who were bullying or bullied frequently were more likely to be suicidal than those males not involved in such behavior. Among females, those who were frequently victims were more likely to be suicidal than those females who were not victims. The main finding of this study was that bullying behavior at age 8 and future suicide attempts varied by gender. For the males, early bullying and

later suicide attempts or completion were not significantly correlated when controlling for childhood conduct and depression symptoms. For the females, frequent victimization through bullying at age 8 was associated with later suicide attempts or completions, even after controlling for childhood conduct and depression symptoms. Thus, suicidal behavior among males who frequently bully others is more of a function of psychopathology than bullying behavior. For male victims, who did not bully others, later suicidal behaviors were not indicated. If victimization and bullying occurred simultaneously, the increased risk of suicidal behavior was indicated, but was not found to be significant after controlling for the variables of childhood depression and conduct symptoms.

Similar findings were presented by Hidaka and colleagues (2007). These authors reported that 31% of their population had a history of victimization in school. In this same population, 9% eventually attempted suicide. Again, this finding gives credence to this epidemic occurring not just within the United States, but instead throughout the world. In another study, Kaminski and Fang (2009) found females reporting 1.5 to 1.7 times higher suicidal ideation and 1.5 to almost 3 times higher suicidal behavior when compared to males in a representative and diverse population of adolescents within the United States. Female victims of bullying were also at greater risk for suicidal ideation when compared to male counterparts, with females having more acute onset of suicidal ideation than males. Results from the study conducted by Kaltiala-Heino, Rimpela, Marttunen, Rimpela, and Rantanen (1999) indicated that five percent of females and six percent of males in their sample had been bullied weekly. Of those students, severe suicidal ideation was indicated by two percent of females and two percent of males.

Bullying has long been described as power struggles between a student of greater power and a student of lesser power that are repeated over time. Despite some notable research studies examining the link between bullying behavior and suicidality, much is still unknown. Suicidal ideation has been found to be more common among females, older children, and adolescents (Gould, Greenberg, Velting, & Shaffer, 2003). Herba et al. (2008) conducted a study to examine which variables predict suicidal ideation. The first hypothesis of a direct association between victimization through bullying and suicidal ideation was not supported. Further analyses indicated that lower socioeconomic status, lower levels of social well-being among classmates, greater feelings of rejection at home, and higher levels of parental internalizing disorders were significantly related to suicidal ideation. Interestingly, the interaction of victimization and parental internalizing disorders and between victimization and rejection at home were found to be the most significant upon suicidal ideation. Roland (2002) also found bullies tend to suffer from more familial problems than students not involved in bullying. Very limited research has been done to correlate cyberbullying and suicide (Hinduja & Patchin, 2010). Sadly, however, there have been students who have taken their own lives due to cyberbullying.

LGBTQ Identity and Bullying

The bullying of LGBTQ students has come to the forefront of political attention. On February 23, 2010, the Student Nondiscrimination Act of 2010 (H.R. 4530) was introduced by State Representative Jared Polis of Colorado and was then referred to the subcommittee on Higher Education, Lifelong Learning, and Competitiveness. This bill was set forth to “end discrimination based on actual or perceived sexual orientation or gender identity in public schools, and for other purposes” (Govtrack.us, 2010). The

purpose of this act is to ensure that LGBTQ students have the right to a safe educational environment and are free from bullying, harassment, and intimidation. The bill also proposes to provide remedies for those who discriminate within the public school setting.

LGBTQ Identity and Suicide

There is an increasing trend in the media to call attention to those adolescents who have committed suicide as a result of bullying. Some of those adolescents fall into a minority population, which includes those who identify as Lesbian, Gay, Bisexual, Transgendered, or Questioning (LGBTQ). Berlan and colleagues (2010) report bullying occurs more often among sexual minority females, who are more likely than non-sexual-minority females to serve either or both as the victim and perpetrator. However, the authors found no significant differences among male groups. Unfortunately, having experiences such as being bullied may contribute to sexual minority youth experiencing adverse mental health outcomes later in life. In the short term, in the 15-24 year old age range, the incidence of suicide has drastically increased from 4.5 per 100,000 in 1950 to over 13.2 per 100,000 in 1990 (Garafalo, Wolf, Wissow, Woods, & Goodman, 1999) within the LGBTQ community.

Research regarding LGBTQ status and suicide has been minimal due to the social stigma attached to such research. Garafalo and colleagues (1999) conducted a study with 17 gay or lesbian, 67 bisexual, and 44 questioning adolescents, of which 9.9% of respondents reported at least one suicide attempt within the previous year. Those who classified themselves as LGBTQ were 3.4 times more likely to report a suicide attempt in the past year when compared to heterosexual counterparts. Lesbian, gay, and bisexual male youth were 6.5 times more likely to report a suicide attempt while lesbian, gay, and

bisexual females were 2.02 times more likely to attempt suicide. Overall, lesbian, gay, and bisexual youth were 3.88 times more likely to attempt suicide when compared to heterosexual counterparts, which is consistent with findings from a study conducted by Saewyc and colleagues (2007). In the Massachusetts Youth Risk Behavior Survey study, youth who identified as lesbian, gay or bisexual were four times as likely to attempt suicide when compared to heterosexual peers (Reynolds, 2011). These findings are similar to those of Garafalo and colleagues almost ten years prior, which suggests the rate of suicide is not escalating, but is stable.

Within the LGBTQ community, those youth who question their sexual identity report higher levels of depression and suicidal thoughts when compared to heterosexual youth, or even those who are openly lesbian, gay, or bisexual (Reynolds, 2011). In an attempt to avoid ridicule and rejection, some youth may hide their sexual orientation, especially if they are still questioning, which often intensifies the sense of confusion and self doubt that these youth already experience (Crothers & Altman, 2007). International studies that have been conducted within the transgendered population reveal a potentially alarming rate of suicides. If these deaths are confirmed suicides, the rates would equal out to 800 suicides per 100,000 post-surgery transsexuals (Haas et al., 2011), which are vastly greater than current suggested suicide rates.

Few studies have conducted research specifically on adolescents identifying as bisexual. Most times these individuals are included in the category of lesbian and gay for statistical analyses and not distinguished as a sexual identity category. Bostwick and colleagues (2010) conducted a study indicating that those individuals who identified as bisexual reported the highest rates of lifetime mood and anxiety disorders, with over half

indicating the presence of a mood disorder. Of the studies conducted regarding bisexuals and suicidality, results indicate that bisexual youth have increased rates of suicidality over their lesbian and gay peers, with a small number of those adolescents being five times more likely to attempt suicide multiple times in their lifetime (Saewyc et al., 2007).

While most lesbian, gay, and bisexual youth cope with stressors in their lives and become healthy, productive adults, it is necessary to understand the interrelationship among demographics, high risk variables, sexual orientation, and suicide risk which in turn will lead to identification of youth at risk (Garafalo, Wolf, Wissow, Woods, & Goodman, 1999). Little research has been conducted to find the exact causes of suicide attempts, but certain risk factors for suicide attempts among LGBTQ youth exist. Theoretical risk factors include “coming out” at a young age, identifying as a certain gender/ethnicity, having low self-esteem or depression, being isolated, abusing substances, running away, prostituting, and other factors (Garafalo et al., 1999; Proctor & Groze, 1994; Remafedi, Farrow, & Deisher, 1991).

Remafedi and colleagues (1991) conducted a study of risk factors for gay and bisexual youth and found that 30% of their study attempted suicide at least once and almost half had multiple attempts. Most of these attempts were achieved through ingestion of prescription or non-prescription medication or self mutilation. The remainder involved hanging, jumping, using a firearm, and automotive crashes. In 44% of cases, the attempt was due to “family problems,” while other factors included personal and interpersonal turmoil over homosexuality, conflict with peers, conflict in a romantic relationship, or substance use. Factors not attributing to suicide attempts included discrimination, violence, loss of friendships, or personal attitudes toward homosexuality.

Participants in this study also reported their first suicide attempt occurred within the first year of identification of homosexuality. Proctor and Groze (1994) reported that youth who neither considered nor attempted suicide possessed internal and external qualities which enabled them to cope well in the face of discrimination, loneliness, and isolation.

LGBTQ Identity, Bullying, and Suicide

As evidenced previously, significant research has been conducted linking LGBTQ status and suicidal ideation. Extant research has also been conducted on LGBTQ status and cyberbullying. Currently, however, there is a dearth of relevant literature regarding cyberbullying, LGBTQ status, and suicide. Since as the research has suggested, victims of cyberbullying are more likely to experience depression, and potential suicidal thoughts, it is imperative that research be conducted to find the link, if any, between cyberbullying, LGBTQ status, and suicide. Armed with this information, increased knowledge of epidemiological factors and the effects of cyberbullying could lead to increased implementation of intervention strategies and the potential for suicidal behaviors could be diminished or eliminated.

Conclusion and Summary

Those students who experience repeated episodes of bullying and have poor parental and peer support are more likely to act on suicidal ideations and attempt suicide more than those students who have strong support systems. Indeed, some of the individuals that may be the most vulnerable both to being bullied and to experiencing suicidal ideations because of such experiences are those students who identify as LGBTQ. Because there is a dearth of research investigating the impact of cyberbullying upon suicidality within the LGBTQ population, it is important to investigate these

relationships further. Existing studies suggest that this population may be particularly at risk for both bullying and suicidal behavior, and thus additional information should be sought to clarify such relationships. It is for this reason I propose the following research study in order to analyze whether cyberbullying mediates the relationship between LGBTQ status and suicidal ideation.

Chapter III: Method

Introduction

Over the last decade, a number of adolescents have committed suicide after being bullied because of their sexual identity. It is for this reason that a better understanding regarding the impact of bullying, and in particular, cyberbullying, on the lesbian, gay, bisexual, transgendered, and questioning (LGBTQ) adolescent population needs to be obtained. In the following pages, research procedures are detailed for gathering data on this subject.

Participants

Through the course of this study, multiple samples were utilized in order to gather a more descriptive overall sample within the LGBTQ population. Participants were solicited through the Gay-Straight Alliance at Duquesne University, as well as community organizations, such as Persad and Parents, Families, and Friends of Lesbians and Gays (PFLAG), and the Cyberbullying Research Center, which were not affiliated with the university in any way.

The researcher contacted Duquesne University undergraduate and graduate students via email distributed via the sponsor of the Gay-Straight Alliance at Duquesne University. The survey instrument was also distributed to various external resources, including the Cyberbullying Research Center, Persad Center and Parents, Families, and Friends of Lesbians and Gays (PFLAG). The Cyberbullying Research Center is an online community, which provides information to the community so as to inform participants about the topic of cyberbullying, how to address the issue, and how to rectify cyberbullying problems. Persad is a counseling center serving the lesbian, gay, bisexual, transgendered, and questioning (LGBTQ) community in the Pittsburgh area. PFLAG is a

support and resource network for the LGBTQ community, which is a national organization, and is also within the Pittsburgh area.

All participants in this research were age 18-24. Most participants identified as LGBTQ; however, there was also a heterosexual control group for this study. In essence, comparisons were made between the LGBTQ and heterosexual groups regarding the possible linkage of cyberbullying to suicidal behaviors. A total of seventy-six participants from Duquesne University, Persad, PFLAG, and the Cyberbullying Research Center were included in this study. Exclusion criteria included those individuals outside of the specified age range and those who did not complete more than 20% of the survey.

The quality sample of one hundred participants was determined based on the assumption that when analyzing three variables in a path analysis, a minimum of twenty participants is needed per variable. In this case, only 60 participants were necessary; however, after the conclusion of data collection, seventy-six responses were recorded.

All surveys were reviewed for accuracy and completeness. Those surveys with greater than 20% of information missing were eliminated from the study; thus, twenty surveys were eliminated due to being incomplete. Nine participants were eliminated due to being outside the specified age range. The remaining 47 participants' surveys were utilized for the analysis.

This survey was developed and disseminated through the survey website, *SurveyMonkey*, and initiated via email. See Appendices A.1 through B for the email solicitation, consent form, and surveys. Participants were given the option of completing a separate form to be entered into a drawing for a \$25 Starbucks gift card in order to

increase the rate of return. This information was kept separate from the original survey and was only used as contact information for the winning participant.

Measures

The survey was disseminated via an email containing a hyperlink to the stimulus page and an encrypted, online survey set up through *SurveyMonkey*. First, the introductory questions of the survey asked participants to identify the demographic variables of age, race, gender, LGBTQ status, and personal income. Following this information, participants viewed fictitious Facebook vignettes designed to elicit a response as to whether such a depiction is an example of LGBTQ cyberbullying. After viewing the vignettes, which were not used for the purpose of this research study and will therefore not be reviewed in this paper, subjects then navigated through web pages in which questions were presented regarding cyberbullying and suicide.

In completing the data packet of survey instruments, participants then answered the Cyberbullying and Online Aggression Survey (Hinduja & Patchin, 2009a). This instrument is used to elicit information regarding whether the participant has been cyberbullied in the past month or if he or she engages in behaviors of a cyberbully. Reliability and validity for this instrument have been determined through three separate studies utilizing 8,000 youth ages 11-18 years old across 50 schools in the United States. Internal reliability was determined for two scales, the cyberbullying victimization scale and the cyberbullying offending scale. For the victimization scale, Cronbach's alpha was found to be 0.93-0.94 and each item loaded with an $r = .68$ to $.89$. Similarly, for the offending scale, Cronbach's alpha was found to be 0.96-0.97 and each item loaded with an $r = .73$ to $.94$. These scales are based on a Likert scale and all item responses are summed. Responses with higher values represent increased involvement in

cyberbullying as the victim and/or perpetrator (Hinduja & Patchin, 2009a). All analyses conducted suggest sufficient reliability and validity for this instrument.

Factor analyses were conducted to determine item loadings for each scale. All items loaded on the two scales. The nine items on the cyberbullying victimization scale accounted for 67.53-68.98% of the variance. Additionally, the nine items on the cyberbullying offending scale accounted for 80.11-81.29% of the variance (Hinduja & Patchin, 2009a).

Finally, participants completed a suicide inventory in order to report regarding whether they have had suicidal thoughts, ideations, or gestures within the past month. This inventory is the 4-item Suicidal Behaviors Questionnaire-Revised (Osman et al., 2001). In completing this inventory, subjects are required to respond to questions regarding thoughts of suicide, whether the participant has vocalized wanting to attempt suicide, and whether he or she feels that he or she will attempt suicide at some point in his or her lifetime. Validation studies conducted on this inventory utilized an adult psychiatric inpatient sample, an adolescent psychiatric inpatient sample, a high school sample, and an undergraduate student sample. Upon analysis, these studies resulted in significant differences among groups when comparing a suicidal subgroup and non-suicidal subgroup (Hotelling's $T^2 = 3.09$, $F(4, 110) = 88.17$, $p < .001$). Follow up analyses of covariance were conducted and results indicated that the suicidal subgroup scored significantly higher than the non-suicidal subgroup on all four items and had a higher total score.

Furthermore, all effect sizes were considered to be large. The effect sizes for the suicidal undergraduate sample ranged from 0.71-3.89 and for the adult inpatient sample

ranged from 1.24-2.32. When analyzing the intercorrelations among the four items, across all four samples, the coefficient alpha was found to be adequate (.76) to moderately high (.88; Osman et al., 2001).

Due to the sensitive nature of the information gathered, all participants were provided with local and national suicide hotline phone numbers. This number was provided to all participants given the anonymity of the survey. Participants residing in Allegheny County could call the re:olve Crisis Network (1-888-7-YOUCAN) or the Allegheny County Peer Support Warmline Network (1-866-661-WARM). For those participants outside of the county, the National Suicide Prevention Lifeline (1-800-273-TALK) could be utilized. These numbers were provided to all participants given the anonymity of the survey and the inability to track which participant had given responses indicating a high suicide risk. The reason for this provision was to provide support for those individuals who were actively suicidal, as well as providing information through duty to warn when an individual was a threat to himself, herself, or others.

Research Design

This study was a randomized sample using participants from the university, community, and online settings and collected data of a qualitative nature. The data was used to determine the correlation between LGBTQ affiliation and suicide rates when the mediator of cyberbullying was interjected.

This study used Pearson correlations, mediation models and Sobel test analyses to determine the correlation of each variable on the others. Variables in this analysis include LGBTQ affiliation as the independent variable, cyberbullying as the mediator, and suicide rates the dependent variable.

Figure 3.1

LGBTQ → cyberbullying → suicide rates

Because the survey conducted for this study was a single event, with no follow up interviews or further surveys to complete, potential threats to internal validity are minimized. The main threat is statistical regression, as the primary group sampled presented with higher scores than the control group, and as such may represent extreme scores. Potential threats to external validity include the fact that this study may not be readily generalizable to the entire LGBTQ population. It may be predicted that most people who identify as LGBTQ and are cyberbullied have higher rates of suicidal behavior, but this may not be the case for all members of the LGBTQ population. Also, because this study focused primarily on participants who identified as members of the LGBTQ population, the results are not readily generalizable to those in the heterosexual community.

Procedures

One survey was compiled, incorporating all of the measures of this study, including questions regarding the demographic variables, the Cyberbullying inventory, and the SBQ-R, which was accessed through the website, *SurveyMonkey*. The survey was disseminated via an email by the faculty advisor of the Duquesne University Gay-Straight Alliance, and contained a hyperlink to the stimulus page and the encrypted, online survey. Also, a hyperlink to the survey was displayed on the Cyberbullying Research Center's Facebook page. In regard to dissemination to the Persad and PFLAG community, an email was sent to administrators of each service agency and those

administrators forwarded the email to those interested. A copy of the survey can be found in Appendices A.1 through A.3.

Because the dissemination of the survey was blind, meaning distributed by a person other than the researcher, the amount of non-responders was unknown. For this reason, it was difficult to send reminders to those who have not responded to the email or posting. Once the survey yielded an adequate number of respondents in the LGBTQ category and in the heterosexual category, the hyperlink was deactivated and analysis began. Participants were given the option of completing a separate form to be entered into a drawing for a \$25 Starbucks gift card. The information was gathered via a separate hyperlink for participants to enter basic contact information. This information was kept separate from the original survey and was only used as contact information for the participant who won the drawing.

Data Analysis

The purpose of the study was to determine whether cyberbullying is a mediating factor between LGBTQ status and suicidal behavior. It is hypothesized that the relationship of those individuals who identify as LGBTQ and are cyberbullied to suicidal behaviors is stronger than those individuals who are not cyberbullied. In order to provide evidence to either support or refute this hypothesis, a mediation model analysis was conducted to determine whether cyberbullying mediates the relationship between LGBTQ status and suicidality. Because these variables are hypothesized to occur in a causal sequence, a mediation model and Sobel test will be conducted.

Because a mediation model analysis was chosen as the means of analysis, the primary model was tested, as well as several alternative models. Prior to conducting the mediation model analysis, Pearson correlations were conducted in order to determine the

strength and significance of one variable on other variables. After completion of the Pearson correlations, the mediated model was conducted and in this case, three regression models were utilized. The first regression analyzed the significance of LGBTQ affiliation predicted cyberbullying (IV \rightarrow mediator). The second regression equation was computed the significance of LGBTQ affiliation and cyberbullying predicted suicide rates (IV + mediator \rightarrow DV). Finally, the third regression determined whether LGBTQ affiliation predicted suicide rates (IV \rightarrow DV). These analyses were conducted in order to determine the impact of each variable on the others.

According to Baron and Kinney (1986; in Tabachnick & Fidell, 2007, p. 160), “a variable is confirmed as a mediator if 1) there is a significant relationship between the IV and DV, 2) there is a significant relationship between the IV and mediator, 3) the mediator still predicts the DV after controlling for the IV, and 4) the relationship of the IV and DV is reduced to zero when the mediator is applied to the equation” (pg. 160). When the mediator is applied to the equation, if the relationship between the IV and DV is reduced to zero, the mediator is said to be a perfect. If the relationship is reduced, but not to zero, the mediator is said to be a partial mediator. In this study, the analysis will determine the relationship between LGBTQ affiliation and suicide rates. The assumption is that when the variable of cyberbullying (mediator) is added to the equation, that the original relationship will be reduced.

The Sobel test was also utilized to determine the strength of the above-mentioned relationships. The Sobel test is a z test, which measures the unstandardized indirect effect of one variable on another through a third variable (Kline, 2005) or the difference between the total effect and direct effect (Tabachnick & Fidell, 2007). The Sobel test

only requires one significance test to determine mediation. This test was utilized to determine the indirect effect of LGBTQ affiliation on suicide rates through cyberbullying.

Due to the causal relationship between LGBTQ affiliation, cyberbullying, and suicide rates, mediation model and Sobel test analyses were conducted utilizing the data collected through the *SurveyMonkey* survey. Results of these analyses will be discussed further in the next chapter.

Summary

In this chapter, I discussed the participants, measures, and research design used in order to develop a plan to collect the appropriate data for this research study. I have also outlined the procedures and data analysis used to determine the results of the data collected. The data collected was gathered as part of a convenience sample from the university and community setting with young adults age 18-24 completing an anonymous online survey. Results from the data collected will be outlined in the next chapter and used to answer the research question of whether cyberbullying mediates the relationship between LGBTQ affiliation and suicidal behaviors.

Chapter IV: Results

Introduction

A mediation model and Sobel test were conducted to determine the significance of the relationships between LGBTQ affiliation, cyberbullying, and suicide rates utilizing the PASW Statistics 18 package, version 18.0.0 (SPSS, Inc., 2009). It is hypothesized that increased cyberbullying among the LGBTQ population leads to higher rates of suicidal behaviors. The following analyses and results attempt to confirm or negate this hypothesis.

Descriptive Statistics

This study elicited a total of 76 responses to the survey, in which data was collected through *SurveyMonkey*. Of those 76 responses, 9 participants were outside the predetermined age range of 18-24. Twenty other participants did not fully complete the survey and ceased answering questions after the first few. These 29 participants and their relevant data were excluded from the final analysis. The end result was a total of 47 total participants, 11 of whom were self-identified as heterosexual and 36 as sexual minority (i.e., LGBTQ; 34 females, 11 males, and 2 transgender individuals (included in LGBTQ total). Table 4.1 illustrates the demographic variables of the participants.

Table 4.1

Frequency Rates for Male vs. Female and Heterosexual vs. Sexual Minority Participants

	Frequency	Percentage
Male	11	23.4
Female	34	72.3
Heterosexual	11	23.4
Sexual Minority	36	76.6

When comparing the heterosexual group to the sexual minority group in regard to cyberbullying and suicide, the sexual minority group had a slightly elevated score in the cyberbullying totals as well as the suicidal behavior totals. Table 4.2 presents the means and standard deviations of cyberbullying and suicidal behavior by sexual orientation.

Scores on the cyberbullying questionnaire ranged from 25 to 125. A minimum score of 25 denotes a non-victim/non-perpetrator of cyberbullying, and a high score would denote being victimized or victimizing others frequently. Scores on the suicide questionnaire, ranged from 4 to 23. A minimum score of 4 would denote no suicidal behaviors (i.e., thoughts, ideations, gestures, or attempts), and scores on the high end denote frequent suicidal behaviors.

Table 4.2

Means and Standard Deviations for Cyberbullying and Suicide of Each Sexual

Orientation

	Heterosexual		Sexual Minority	
	M	SD	M	SD
Cyberbullying	29.45	3.267	33.64	14.116
Suicide	8.64	3.906	10.22	4.079

Preliminary Statistical Analyses

Correlation coefficients were computed among the three variables of sexual orientation, cyberbullying, and suicidal behavior. Using the Bonferroni correction to control for Type I error across the 3 correlations, a p value of less than .008 ($.05/10 = .008$) was required for the relationship to be significant. The results of the correlation analysis illustrated in Table 4.3 show 2 of 6 correlations were statistically significant and were greater than or equal to .35. These results suggest that a person who is cyberbullied tends to exhibit increased suicidal behaviors, as these variables are strongly correlated $r(45) = .426, p < .01$.

Table 4.3

Correlations among Sexual Orientation, Cyberbullying, and Suicidal Behaviors (N = 47)

	Sexual Orientation	Cyberbullying	Suicidal Behaviors
Sexual Orientation	1	.143	.167
Cyberbullying		1	.426**
Suicidal Behaviors			1

** Correlation is significant at $p < .35$

The calculated effect size ($R^2 = .181$) for these variables show that 18.1% of cyberbullying or suicidal behaviors share the variance with the other.

Two other correlations were also conducted. The first was a partial correlation between cyberbullying and suicidal behaviors, controlling for sexual orientation, and results indicated a correlation of .412, $p = .004$. The second was a bivariate correlation between cyberbullying and suicidal behaviors, and results indicated a correlation of .426, $p = .003$.

Primary Statistical Analyses

Due to the causal relationship between LGBTQ affiliation, cyberbullying, and suicidal behaviors, traditional mediation and Sobel tests were conducted to determine whether the hypothesis that cyberbullying mediates the relationship between LGBTQ affiliation and suicidal behavior was, in fact, accurate.

As part of the mediation model, three regression equations were calculated using PASW Statistics 18 package, version 18.0.0 (SPSS, Inc., 2009). These three equations explored whether the relationship between 1) LGBTQ affiliation predicted cyberbullying,

2) LGBTQ affiliation predicted suicidal behaviors, and 3) LGBTQ affiliation and cyberbullying predicted suicidal behaviors.

The first regression equation was conducted to evaluate the relationship between LGBTQ affiliation and cyberbullying. The independent variable (IV) was LGBTQ affiliation and the dependent variable (DV) was cyberbullying. The results were not statistically significant $F(1,45) = .937, p = .338, R = .143$. The effect size for this relationship was $R^2 = .020$. LGBTQ affiliation accounts for 2% of the variation in cyberbullying. Results of this regression equation did not support the hypothesis that LGBTQ affiliation had an effect on cyberbullying. See Table 4.4 for a summary of regression coefficients and significance levels.

Table 4.4

Regression Coefficients for LGBTQ Affiliation on Cyberbullying

	Unstandardized		Standardized		t	Sig.
	Coefficients		Coefficients			
	B	Std. Error	Beta			
(Constant)	25.270	7.848			3.220	.002
LGBTQ affiliation	4.184	4.322	.143		.968	.338

a. Dependent Variable: Cyberbullying

A second regression equation was conducted to evaluate the relationship between LGBTQ affiliation (IV) and suicidal behaviors (DV). The results were not statistically significant $F(1,45) = 1.298, p = .261, R = .167$. The effect size for this relationship was $R^2 = .028$. LGBTQ affiliation accounts for 2.8% of the variation in suicidal behaviors.

Results of the second regression equation did not support the hypothesis that LGBTQ affiliation had an effect on suicidal behaviors. See Table 4.5 for a summary of regression coefficients and significance levels.

Table 4.5

Regression Coefficients for LGBTQ Affiliation on Suicidal Behaviors

	Unstandardized		Standardized		t	Sig.
	Coefficients		Coefficients			
	B	Std. Error	Beta			
(Constant)	7.051	2.528			2.789	.008
LGBTQ						
affiliation	1.586	1.392	.167		1.139	.261

a. Dependent Variable: Suicidal Behaviors

A third regression equation was conducted to evaluate the relationship between LGBTQ affiliation (IV) and cyberbullying (mediator) on suicidal behaviors (DV). The results were statistically significant $F(2,44) = 5.273, p = .009, R = .440$. The effect size for this relationship was $R^2 = .193$. LGBTQ affiliation and cyberbullying account for 19.3% of the variation in suicidal behaviors. Results of the third equation did support the hypothesis that cyberbullying had an effect on suicidal behaviors, but that LGBTQ affiliation did not support the hypothesis. See Table 4.6 for a summary regression coefficients and significance levels.

Table 4.6

Regression Coefficients for LGBTQ Affiliation and Cyberbullying on Suicidal Behaviors

	Unstandardized		Standardized		t	Sig.
	Coefficients		Coefficients			
	B	Std. Error	Beta			
(Constant)	3.693	2.583			1.430	.160
LGBTQ						
affiliation	1.030	1.296	.109		.795	.431
Cyberbullying	.133	.044	.411		3.003	.004

a. Dependent Variable: Suicidal Behaviors

It can be seen from the second to third tables that the regression coefficient for LGBTQ affiliation → Suicidal Behaviors reduces from 1.586 to 1.030 when cyberbullying is added to the regression, suggesting that cyberbullying may be exerting a partial mediating effect.

Application of the Sobel formula, $z\text{-value} = a*b/\text{SQRT}(b^2*s_a^2 + a^2*s_b^2)$, to these unstandardized coefficients and standard error values yielded a $z = .922, p = .357$.

According to this mediation statistic, cyberbullying does not significantly mediate the relationship between LGBTQ affiliation and suicidal behaviors. These results suggest that 35.05% of the effect of cyberbullying mediates the relationship between LGBTQ affiliation and suicidal behaviors. This indicates that there is only a 35.05% chance of cyberbullying acting as the mediator.

Summary

In this chapter, I presented the statistical analyses conducted on the gathered data for this research study. These results show the regression, which evaluated the relationship between LGBTQ affiliation (IV) and cyberbullying (mediator) on suicidal behaviors (DV) was the only statistically significant analysis. Interpretations from the data analyses will be detailed in the next chapter and used to answer the research question of whether cyberbullying mediates the relationship between LGBTQ affiliation and suicidal behaviors.

Chapter V: Discussion

Introduction

In this chapter, the statistical analyses conducted in order to determine whether the relationships between LGBTQ affiliation, cyberbullying, and suicidal behaviors, which are significant, will be reviewed. At the beginning of this study, it was hypothesized that increased cyberbullying among the LGBTQ population would lead to higher rates of suicidal behaviors. The results of this study will be discussed in this chapter.

Findings

This study consisted of the use of an online survey to gather information regarding the behaviors of cyberbullying and suicide within the LGBTQ population. Participants were from a convenience sample of young adults from local universities, community organizations, and online research resources. The study was designed to answer the question of whether cyberbullying mediated the relationship between LGBTQ affiliation and suicidal behaviors. Statistical analyses conducted examined three relationships in an attempt to answer this question. The relationships examined included whether 1) LGBTQ affiliation predicted cyberbullying, 2) whether LGBTQ affiliation predicted suicidal behaviors, and 3) whether LGBTQ affiliation and cyberbullying predicted suicidal behaviors. Results indicated LGBTQ affiliation in isolation did not predict cyberbullying or suicidal behaviors. With that being said, it was thought that the equation of cyberbullying mediating the relationship between LGBTQ affiliation and suicidal behavior would not be significant either. However, results for the analysis examining whether cyberbullying mediated the relationship between LGBTQ affiliation

and suicidal behavior was significant. This could possibly be explained by the large standard deviation ($SD=14.116$) derived within the cyberbullying totals among sexual minorities, which could be explained by the fact that all levels of sexual minorities (i.e. LGBTQ) were combined into one group and not separated into individual levels. Either way, it appears as though cyberbullying does play some role in suicidal behaviors of young adults within the LGBTQ population.

Young adults, aged 18-24, enter a developmental stage termed “emerging adulthood” (Arnett, 2000), which is a period of time in which the youth is no longer identified as an adolescent, but is not yet considered an adult. Within this stage of development, there is identity exploration. This identity exploration often involves the use of technology, which can pose both risks and benefits (Lindsay & Krysik, 2012). This exploration is typical of both heterosexual and LGBTQ youth. To this date, there has been no research conducted to examine the relationship of cyberbullying to LGBTQ affiliation and suicidal behaviors; however, results of the current study are commensurate with findings of studies examining traditional bullying. The extant literature base reveals that studies have been conducted reporting a link between traditional bullying and suicide within the LGBTQ child and adolescent population. According to a study conducted by the U.S. Department of Health and Human Services (Gibson, 1989), youth within the LGBTQ population are two to three times more likely to commit suicide when compared to other youth. Thirty percent of all completed suicides are related to the victims’ sexuality. Garafalo and colleagues (1999), Saewyc and colleagues (2007), and Reynolds (2011) conducted research that found those who classified themselves as LGBTQ were more likely to attempt suicide when compared to heterosexual counterparts.

The current study is one of the first to examine the direct link of cyberbullying on LGBTQ affiliation and suicidal behavior. Although the current study findings are the result of a very small sample, the research question of whether cyberbullying mediates the relationship between LGBTQ affiliation and suicidal behavior has been indicated, even though it is not to a substantial degree. Based on this information, knowledge of these epidemiological factors and the effects of cyberbullying on the LGBTQ population should be made readily available to schools and mental health and community professionals, possibly leading to increased implementation of intervention strategies, especially since an increased number of schools and universities are including cyberbullying into their codes of conduct regarding bullying.

Although the proposed research question was not found to be substantially proven, this is not necessarily a poor outcome. It is rather enlightening that cyberbullying does not automatically increase suicidal behaviors for those within the LGBTQ population. Other confounding variables may be the true reason for the increase in suicidal behavior. It may happen that an individual was also cyberbullied and that was the final act that led to the suicidal behavior. Another possible explanation for the findings of the current study, which is not consistent with the current literature, is that most participants were obtained from community organizations, which are supportive to those within the LGBTQ population. With this increased support from the community and family members, one might expect increased acceptance and less bullying and suicidal behaviors. There is also the possibility that the individual involved with these organizations would also be involved in a therapeutic relationship of some sort. With

that in mind, the individual might be more receptive to discussing any cyberbullying he/she is experiencing.

Limitations

Although well planned, the current study is not without limitations. Areas of limitations include sample size, threats to external validity, issues with the reliability or validity of the study, and the statistics used for analysis. The most prominent limitation in this study was the sample size. It was initially posited that the sample size would be in the range of 60 to 100 participants. Unfortunately, only 49 respondents completed the survey in entirety. Because of the decreased sample size, there were not enough participants in the LGBTQ and heterosexual categories to be analyzed separately (i.e., case and control groups). The two categories were combined into one and an overall analysis was conducted. The decreased sample size also led to limitations in external validity and the statistical analysis conducted.

Regarding external validity, it is necessary to report that the findings from this study cannot be easily generalized to the entire LGBTQ population. Although the findings were significant for cyberbullying mediating the relationship between LGBTQ status and suicidal behaviors, the sample size was not large enough to make any definitive conclusions. Alternately, when the LGBTQ and heterosexual status groups were combined in the analysis, there was not a significant finding for the entire population. In order for this finding to be generalized to the LGBTQ population, the study would have to be completed again with a much larger sample size. In expanding the sample size, correlations could also be conducted to parse out whether one specific subgroup of LGBTQ status sample is more affected by cyberbullying than others. The

ability to break down the various subgroups of LGBTQ would lend an explanation to the large standard deviation previously discussed.

In regard to the statistical analysis conducted, sample size was again a factor. Because the study was seeking to determine whether cyberbullying was a mediator, a mediation model and Sobel test were conducted. Generally, when choosing this form of analysis, a large sample size is necessary. When attempting to complete the analysis on the case and control groups, the analyses could not be conducted because of the small sample size of this study. Based on this information, the LGBTQ and heterosexual groups had to be combined into one large group and the analysis was conducted as such.

Lastly, the final limitation was regarding reliability and validity. Reliability was not a concern as there were no test administrators for the survey. No one was trained for implementation as this was a self-report completed online. As for validity, the fact that the study was based on a self-report, the validity of the information gathered cannot be verified. Whether participants were truthful in their responses is not able to be determined.

Recommendations for Future Research

Recommendations for future research include expanding the sample size, sending the survey invitation to more community organizations, and examining other possible confounding factors. Future research regarding this study should focus primarily on expanding the sample size and conducting separate analyses with an LGBTQ (case) category and a heterosexual (control) category. In doing so, results would better explain whether there is a true significance of cyberbullying as a mediator. Separating the case and control groups would provide a better indication of the effects of cyberbullying on

the specific populations. It is best practice to have a control group for comparison; however, in this case, because the sample was small, this was not possible.

In this study, all levels of LGBTQ affiliation were grouped together. With a much larger sample size, each level of LGBTQ affiliation could be analyzed in regard to cyberbullying and suicidal behavior. An in depth analysis such as this would present a more specific breakdown of which subcategories of LGBTQ individuals are more affected by cyberbullying. In gaining this knowledge, mental health professionals would be more prepared to assist those who are at greater risk for suicidal behavior. With this knowledge, proactive measures could be implemented in the schools, universities, and workplace to address the rate of cyberbullying of those in the LGBTQ community.

In an effort to build sample size, future research may seek to include additional community organizations to partner with in order to distribute increased study surveys. The current study was limited to one university setting, two community organizations, and one online community. Additional community organization involvement would potentially improve participant responses. Consideration should also be given to those community organizations that are not necessarily support groups for the LGBTQ population. A broad, generalized community sample should be sought for inclusion. In extending the invitation to community organizations, it may be necessary to visit the organization and provide an explanation of the study objectives and any possible risks associated with participation.

Future research may also examine whether other confounding factors such as depression, anxiety, or family dynamics may have contributed to the relationship between LGBTQ affiliation and suicidal behavior, instead of merely cyberbullying. When

considering suicidal behavior alone, there are many confounding factors to determine its etiology. Perhaps future research could expand on the survey to include a depression inventory, so as to determine whether depression also mediates the relationship between LGBTQ affiliation and cyberbullying. According to Hinduja and Patchin (2009, 2010), adolescents who are victims of cyberbullying also tend to display symptoms of depression and anxiety, but may engage in greater self-injurious behavior than victims of traditional bullying. When bullying becomes severe or pervasive, children and adolescents may begin to have suicidal thoughts.

With these recommendations for future research, this study could be expanded upon and would potentially provide a better understanding of the relationship between LGBTQ affiliation, cyberbullying, and suicidal behavior. Since as the research has suggested, victims of cyberbullying are more likely to experience depression, and potential suicidal thoughts, it is imperative that further research be conducted to find the link, if any, between cyberbullying, LGBTQ status, and suicide. Armed with this information, increased knowledge of epidemiological factors and the effects of cyberbullying could lead to increased implementation of intervention strategies and the potential for suicidal behaviors could be diminished or eliminated.

Summary

In this chapter, I presented the findings of the statistical analyses conducted on the gathered data, limitations of the study, and recommendations for future research. The main finding was that the relationship between LGBTQ affiliation and cyberbullying on suicidal behaviors was the only statistically significant analysis, although cyberbullying was not proven to be a full mediator. Even though the proposed research question was

not fully proven, the results did not suggest a poor outcome. It is a relief to know that cyberbullying is not the main indicator of suicidal behavior within the LGBTQ population. Due to the small sample for the current study, results are not easily generalizable to the broader population, whether heterosexual or LGBTQ. In essence, recreating the current study with a larger sample would potentially answer the question of whether cyberbullying truly mediates the relationship between LGBTQ affiliation and suicidal behaviors.

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Appendix A.1

1. What is your sex?
 - a. Female _____
 - b. Male _____

2. What is your race/ethnicity?
 - a. African American _____
 - b. American Indian or Alaska native _____
 - c. Asian _____
 - d. Caucasian/Non-Hispanic _____
 - e. Hispanic _____
 - f. Native Hawaiian or Other Pacific Islander _____
 - g. Other _____

3. What is your age? _____

4. What is your sexual orientation?
 - a. Heterosexual _____
 - b. Gay _____
 - c. Lesbian _____
 - d. Bisexual _____
 - e. Questioning _____
 - f. Other _____

5. Are you transgender?
 - a. No
 - b. Yes, male to female
 - c. Yes, female to male

6. In your opinion, how likely are students who are gay to be bullied?

1-----2-----3-----4-----5
Never Rarely Sometimes Often Always

7. In your opinion, how likely are students who are lesbian to be bullied?

1-----2-----3-----4-----5
Never Rarely Sometimes Often Always

8. In your opinion, how likely are students who are bisexual to be bullied?

1-----2-----3-----4-----5
Never Rarely Sometimes Often Always

9. In your opinion, how likely are students who are transgender to be bullied?

1-----2-----3-----4-----5
Never Rarely Sometimes Often Always

10. In your opinion, how big of a problem is the bullying of sexually-diverse students in the US?

1-----2-----3-----4-----5
Never Rarely Sometimes Often Always

11. In your opinion, how big of a problem is the bullying of sexually-diverse students on this campus?

1-----2-----3-----4-----5
Never a problem Rarely Sometimes Often Always

Appendix A.2

**Cyberbullying and Online Aggression Survey Instrument
2009 Version**

By Dr. Sameer Hinduja and Dr. Justin Patchin

****Cyberbullying is when someone repeatedly harasses, mistreats, or makes fun of another person online or while using cell phones or other electronic devices.**

Cyberbullying Victimization	Never	Once	A few times	Several Times	Many Times
1. I have seen other people being cyberbullied.					
2. In my lifetime, I have been cyberbullied.					
3. In the last 30 days, I have been cyberbullied.					
4. In the last 30 days, I have been cyberbullied in these ways:					
○ Someone posted mean or hurtful comments about me online					
○ Someone posted a mean or hurtful picture online of me					
○ Someone posted a mean or hurtful video online of me					
○ Someone created a mean or hurtful web page about me					
○ Someone spread rumors about me online					
○ Someone threatened to hurt me through a cell phone text message					
○ Someone threatened to hurt me online					
○ Someone pretended to be me online and acted in a way that was mean or hurtful to me					
5. In the last 30 days, I have been cyberbullied in these online environments:					
○ In a chat room					
○ Through email					
○ Through computer instant messages					
○ Through cell phone text messages					
○ Through cell phone					
○ PictureMail or VideoMail					

○ On MySpace					
○ On Facebook					
○ On a different social networking web site (other than MySpace or Facebook)					
○ On Twitter					
○ On YouTube					
○ In virtual worlds such as Second Life, Gaia, or Habbo Hotel					
○ While playing a massive multiplayer online game such as World of Warcraft, Everquest, Guild Wars, or Runescape					
○ While playing online with Xbox, Playstation, Wii, PSP or similar device)					

****Cyberbullying is when someone repeatedly harasses, mistreats, or makes fun of another person online or while using cell phones or other electronic devices.**

Cyberbullying Offending	Never	Once	A few times	Several Times	Many Times
1. In my lifetime, I have cyberbullied others.					
2. In the last 30 days, I have cyberbullied others.					
3. In the last 30 days, I have cyberbullied others in these ways:					
○ I posted mean or hurtful comments about someone online					
○ I posted a mean or hurtful picture online of someone					
○ I posted a mean or hurtful video online of someone					
○ I spread rumors about someone online					
○ I threatened to hurt someone online					
○ I threatened to hurt someone through a cell phone text message					
○ I created a mean or hurtful web page about someone					

○ I pretended to be someone else online and acted in a way that was mean or hurtful to them					
4. In the last 30 days, I have cyberbullied others in these online environments:					
○ In a chat room					
○ Through email					
○ Through computer instant messages					
○ Through cell phone text messages					
○ Through cell phone					
○ PictureMail or VideoMail					
○ On MySpace					
○ On Facebook					
○ On a different social networking web site (other than MySpace or Facebook)					
○ On Twitter					
○ On YouTube					
○ In virtual worlds such as Second Life, Gaia, or Habbo Hotel					
○ While playing a massive multiplayer online game such as World of Warcraft, Everquest, Guild Wars, or Runescape					
○ While playing online with Xbox, Playstation, Wii, PSP or similar device)					

Appendix A.3
The Suicide Behaviors Questionnaire-Revised (SBQ-R)

Osman et al (1999)

1. Have you ever thought about or attempted to kill yourself?	(check one only)	
	1. Never	
	2. It was just a brief passing thought	
	3a. I have had a plan at least once to kill myself but did not try to do it.	
	3b. I have had a plan at least once to kill myself and really wanted to die.	
	4a. I have attempted to kill myself, but did not want to die.	
	4b. I have attempted to kill myself, and really hoped to die.	
2. How often have you thought about killing yourself in the past year?	(check one only)	
	1. Never	
	2. Rarely (1 time)	
	3. Sometimes (2 times)	
	4. Often (3-4 times)	
	5. Very often (5 or more times)	
3. Have you ever told someone that you were going to commit suicide, or that you might do it?	(check one only)	
	1. No	
	2a. Yes, at one time, but did not really want to die.	

	2b. Yes, at one time, and really wanted to die.	
	3a. Yes, more than once, but did not want to do it.	
	3b. Yes, more than once, and really wanted to do it.	
4. How likely is it that you will attempt suicide someday?	(check one only)	
	0. Never	
	1. No chance at all	
	2. Rather unlikely	
	3. Unlikely	
	4. Likely	
	5. Rather likely	
	6. Very likely	



Appendix B

DUQUESNE UNIVERSITY

600 FORBES AVENUE ♦ PITTSBURGH, PA 15282

June 8, 2011

Dear Participant:

I am conducting a study in which I am asking undergraduate students and non-collegiate young adults to participate in an investigation about cyberbullying within the lesbian, gay, bisexual, transgender, and questioning population. I have been granted approval by the Duquesne University Institutional Review Board for the Protection of Human Subjects to work with young adults.

Consequently, I am writing to seek your permission to participate in this study. In doing so, you will click on a hyperlink (<https://www.surveymonkey.com/s/2SQZZ3L>) and view vignettes of fictional conversations between individuals on a social media site. After reading these vignettes, you will be presented with questions regarding the fictional scenarios. You will also complete questionnaires regarding the behaviors of cyberbullying, suicide, and relational aggression. All of these surveys will be accessed through the one hyperlink provided. The survey will take no more than 20-30 minutes of your time. Your participation in the study is completely voluntary and you may withdraw at any time without penalty.

Your responses will be anonymous, as no identifying information will be asked. Your responses will not be linked in any way to your identity. If you decide not to participate in the study, you may do so at any time, and any information you provided will be discarded.

Although there is no compensation for participation in the study, participants will be given the option of submitting basic contact information to be eligible for a \$25 Starbucks gift card. Contact information, including your name and address, will be submitted via a separate hyperlink and will not be linked in any way to your survey responses. Thus, your identity will be anonymous.

If you would like to participate in this study, the consent form is the first page you will see on the survey. By reading the consent form and completing the subsequent survey, you are consenting to be a participant in the study. Further, if you have any question about the information provided here, or would like to receive additional information about the study, please feel free to call me at (412) 897-8624, or e-mail me at: hschwick@msn.com Thank you for your time and consideration.

Sincerely,

Heather M. Schwickrath, M.S.Ed.
Duquesne University Doctoral Student



DUQUESNE UNIVERSITY

600 FORBES AVENUE ♦ PITTSBURGH, PA 15282

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

TITLE: Cyberbullying and Suicidal Behavior among a Sample of Lesbian, Gay, Bisexual, Transgender, and Questioning Young Adults

INVESTIGATORS: Heather M. Schwickrath, M.S.Ed.
20 Andrews Avenue
Jeannette, PA 15644
412-897-8624

Eric Fenclau, M.S.Ed.
600 Forbes Avenue
Pittsburgh, PA 15282
585-469-9334

ADVISOR: Laura M. Crothers, D.Ed.
G3B Canevin Hall
600 Forbes Avenue
Pittsburgh, PA 15282
412-396-1409

SOURCE OF SUPPORT: This study is being performed as partial fulfillment of the requirements for the doctoral degree in education at Duquesne University.

PURPOSE: You are being asked to voluntarily participate in a research project in which we are investigating the relationship between cyberbullying and suicide within the lesbian, gay, bisexual, transgendered, and questioning population. If you elect to participate in this study, you will be asked to complete four surveys, which explore your thoughts, ideas, and perceptions regarding cyberbullying and suicide. All instruments will take between 20 and 30 minutes to complete. You will have the opportunity to complete the instruments at your leisure. Data for this study will be collected via SurveyMonkey, a Web-based survey site. SurveyMonkey transmits data via Secure Sockets Layer (SSL), which provides the 128 bit encryption, to protect the data

from being accessed by those other than the researchers. Data transmitted to *SurveyMonkey* will be downloaded to the researchers' computers for analysis and will be destroyed 5 years following completion of the research.

These are the only requests that will be made of you.

RISKS AND BENEFITS:

This project is not expected to involve any risks of harm any greater than those ordinarily encountered in daily life. Possible risks associated with participating in this study may include strong thoughts or feelings that are associated with the opinions that are expressed. The researchers (Dr. Crothers, Ms. Schwickrath, and Mr. Fenclau) will be available to discuss any strong thoughts or feelings that may have arisen as a result of completing the questionnaires. If, after talking with the researchers, you decide that you want to talk with an additional person at the school, a referral will be made to the Counseling Center on campus, or in the community, so that you can meet with him or her to continue to talk about your thoughts and feelings.

To date, there is no known research to link cyberbullying and suicide. The intention of this study is to determine whether there is a connection between the two.

COMPENSATION:

There is no compensation for completion of this study. Once the survey is completed, if you wish to provide basic contact information for a chance to win a \$25 Starbucks gift card, a separate link will be provided. The information obtained for eligibility to win the gift card will be kept separate from all survey responses and no identifiable information will be linked. Additionally, participation in the project will require no monetary cost to you.

CONFIDENTIALITY:

Your personal identity, thoughts, and opinions will never be revealed to anyone who evaluates or reads this research. While a number will be assigned to your responses so that the responses can be linked,

that number will never be connected with your name in any form or in any place. Your name will never appear on any survey or research instruments. No identity will be made in the data analysis. Your response(s) will only appear in statistical data summaries. Based on federal guidelines, all materials will be destroyed 5 years following completion of the research.

RIGHT TO WITHDRAW:

You are under no obligation to participate in this study. You are free to withdraw your consent to participate at any time, without penalty. If you choose to withdraw from this study, any data already collected will not be used for the research.

SUMMARY OF RESULTS:

A summary of the results of this research will be supplied to you, at no cost, upon request.

VOLUNTARY CONSENT:

I have read the above statements and understand what is being requested of me. I also understand that my participation is voluntary and that I am free to withdraw my consent at any time, for any reason. On these terms, I certify that I am willing to participate in this research project.

I understand that should I have any further questions about my participation in this study, I may call Dr. Joseph Kush, Chair of the Duquesne University Institutional Review Board (412) 396-6326.

In addition, you can contact, Heather Schwickrath at (412) 897-8624, as researcher or her advisor, Dr. Crothers at (412) 396-1409 if you have any questions.

I acknowledge that I have read this form and, by clicking the “next” button and completing the online survey, it reflects my consent to participate in this study.